



UNITED ARAB EMIRATES
MINISTRY OF HEALTH & PREVENTION

THE STATE OF HEALTH RESEARCH IN THE UNITED ARAB EMIRATES

A bibliometric study of research outputs
as a measure of health research activity, quality
and international engagement from 2014 to 2018

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DATA SOURCES

The data in this report was extracted from three sources:

- **PubMed database**, National Library of Medicine (Bethesda, Maryland, United States). <http://www.ncbi.nlm.nih.gov/pubmed> (referred to throughout the report as “*PubMed*”).
- **SciVal® database**, Elsevier B.V., <http://www.scival.com> (referred to throughout the report as “*SciVal*®”).
- **ClinicalTrials database**, National Library of Medicine (Bethesda, Maryland, United States). <http://www.clinicaltrials.gov> (referred to throughout the report as “*ClinicalTrials.gov*”).

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SUMMARY

MEASURING RESEARCH EXCELLENCE

Quality research is considered an essential part of any advanced health system to ensure that it functions at world's best standard. Any strategies designed to enhance research standards within the United Arab Emirates need a clear understanding of the extent of current activities, areas of strength and how these relate to national health priorities.

This study presents a picture of the main areas of activity and quality in health research in the UAE during the five-year period spanning 2014 to 2018.

An internationally recognised method of quantitating research activity and quality is through the use of bibliometric data that measures research outputs in the form of publications and registered clinical trials. Quality of research was assessed by use of citation data sourced from industry standard databases, which measure the number of times publications are referred to by other researchers and is a well-recognised measure of publication quality. The performance of the UAE was assessed against global performance as well as a select group of countries representing the Gulf Region and the world's largest economies.

The data presented in this study suggests an emerging health research culture in the UAE that has the potential to further develop into a highly reputable and productive regional leader for health research excellence.

The UAE health research sector is growing at an impressive rate. The number of health research publications has increased more than two and a half times over the period, a rate markedly higher than much larger states with a strong and well-established reputation for health research. Significant growth was measured for the UAE across most of the discipline areas examined. However, the UAE tends to produce fewer health research outputs per capita compared to other countries. The UAE health research sector is collaborating with international researchers at a much higher rate than other countries, presenting an opportunity to better leverage these connections into more formal, strategic partnerships than can feed the growth of the UAE health research ecosystem.

Clinical trial activity almost doubled over the study period and showed a healthy level of international and commercial engagement, with over half being sponsored by industry. Almost half of the clinical trials active in the UAE addressed the national health priorities of diabetes and obesity, cardiovascular disease and cancer.

In addition to significant growth across the health research sector, this study identifies several disciplines where UAE researchers are producing significant quantities of publications that are also above world average in quality. These include general medicine, cell biology, cancer and oncology, emergency medicine, pulmonary and respiratory medicine, and developmental and cognitive neuroscience.

This study also examined performance in a select group of UAE institutions and revealed that they are actively working on national health research priorities, with some institutions showing areas of research strength that could be the basis of national centres of research excellence. The data on institutions serves as a starting point to identify research talent and leadership, excellent infrastructure, and high-quality partnerships of strategic value.

Careful consideration is being given to developing policies that will encourage excellence and support growth in areas that directly address national health research priorities. A useful activity to support this process would be periodic measurements of the state of health research in the UAE through a co-ordinated, national benchmarking exercise. These can be based on existing models from other countries but should be developed in a way that best fits the UAE research environment. National benchmarking would not only serve to inform policy and investment decisions, but also aim to inspire UAE researchers towards continuous improvement and be part of a unified, strong health research culture equal to the best in the world.

INTRODUCTION

THE STRATEGIC VALUE OF RESEARCH

Research is fundamental to the operation of a high quality healthcare sector and is integral to the operation of a continuously learning health system. Not only playing a key role in sustaining human health and well-being, research drives the creation and expansion of scientific knowledge that leads to improved medical evidence and increased community confidence in health care services.

In a broader sense, an innovation-based economy is supported by active, strategically resourced research programs carried out by a network of high-quality universities and healthcare institutions – a health research ecosystem. Government, universities and healthcare providers all have a role to play to ensure a healthy research culture, one that recognises and supports areas of strength while investing in building critical mass in areas of strategic importance including emerging technologies that can address public health priorities.

The UAE's signature strategic statement, the *Vision 2021 National Agenda*, is broadly articulated across four pillars – *responsibility, destiny, knowledge and prosperity*. The *National Agenda* is further mapped into six national priorities, several of which benefit from an active health research culture (listed in Appendix A1). Health research directly addresses the priority for a world class healthcare system for the UAE and also strengthens other priorities such as education, the knowledge economy, and society. Health research has a clear role to play in the UAE's vision to transform its national economy to one driven by knowledge and innovation, where a quality higher education system that delivers first class training in health sciences is an essential foundation. A first-rate education system can be facilitated with a tightly interlinked healthcare and academic system, delivering new technologies, treatments and medicines toward the continuous improvement of clinical practice. Building research excellence will produce a pipeline of successes that build a sense of national pride and growing international esteem, within the region and the world.

Health also features prominently in other national strategies that support *Vision 2021*. The UAE's *National Advanced Science Agenda 2031* describes eight science objectives, one of which is preventing and treating the UAE's top health challenges through a national scientific system. The eight objectives are to be addressed through a set of core competences, one of which is 'healthcare and biomedical intersections'.

The *National Innovation Strategy* also provides further detail on how to realise the vision of transforming the UAE into a knowledge-based economy.

National health research priorities

The *National Agenda* emphasises several public health priority areas that aim for the UAE to be among the best countries in the world in terms of quality of healthcare in the coming decade. These include efforts to reduce cancer and lifestyle-related diseases such as childhood obesity, diabetes and cardiovascular diseases, with a particular emphasis on preventive medicine. Achieving this will ensure a longer, healthier life for citizens. Goals include reducing the prevalence of smoking and increasing the healthcare system's readiness to deal with epidemics and health risks. The UAE also plans to take full advantage of the digital technologies transforming healthcare and health research, particularly with respect to developing advanced healthcare systems and population databases. Complementing the *National Agenda* is the Department of Health – Abu Dhabi's *Healthcare Strategic Plan and Public Health Priorities and Goals*, and the Dubai Health Authority's *Health Strategy 2016 – 2021* which describe similar and additional priorities.

The overlapping health priorities from these strategy documents are summarised in Appendix A1. It is important to ensure that all institutions active in health research demonstrate a clear contribution to the *National Agenda*, in support of long-term goals to deliver better outcomes for the health of UAE society.

Supporting a national health research strategy

The delivery of near and long-term strategic objectives relating to societal health needs to be supported by a culture of continuous and sustainable improvement in research capacity and excellence. This requires the measurement of research performance across the UAE health research ecosystem. To this end, the UAE Ministry of Health and Prevention (MoHaP) and Monash University in Melbourne, Australia have designed and carried out a study to assess the state of health research in the UAE, through the analysis of publications and registered clinical trials as evidence of research activity and quality.

The work presented here may be used to inform the wider research, healthcare and policy-making community on the strengths and status of health research in the UAE.

THE VALUE OF BIBLIOMETRIC DATA

Academic quality is the cornerstone of a healthy, productive and internationally respected research ecosystem. Quality can be measured in several ways; the most common approach is to use bibliometric data to benchmark academic output and determine whether other researchers are referring to published studies by citing them in other publications. Similarly, clinical trials demonstrate the application of discovery research into the healthcare setting and provide a good indication of the extent of research translation.

The Organisation for Economic Co-operation and Development (OECD) defines bibliometric data as the “statistical analysis of books, articles, or other publications”, where studies use “data on numbers and authors of scientific publications and on articles and the citations therein to measure the “output” of individual researchers, teams, institutions, and countries, to identify national and international networks, and to map the development of new fields of science and technology”. Throughout this study, the terms ‘output’ and ‘publication’ are used interchangeably. In this case registered clinical trials are also regarded as a form of research output.

Bibliometric data can be a powerful tool for benchmarking research performance against local, regional and international institutions. Benchmarking data provides stakeholders with detailed, discipline-based information about research performance at academic and healthcare institutions. In the government context, benchmarking data is regularly used to inform policy advice and to develop initiatives across the relevant health, science, education and economic portfolios. For universities, the data guides strategic planning and decision making and assists with promotional activities locally and internationally. Allowing the general public to openly access benchmarking data can also raise awareness of local research efforts, build public confidence and encourage new collaborations with local and international partners.

Bibliometric data is also used to determine the international ranking of academic institutions. As detailed in Appendix A2, the methodologies behind four of the most widely used international university ranking surveys – Academic Ranking of World Universities (formerly the Shanghai Jiao Tong University ranking), QS World University Rankings, Times Higher Education University Rankings and the US News and World Report Best Global Universities – all assign a significant percentage of their ranking score (from 20% to 75%) directly to publications and their citations, and to international collaboration.

This underscores the value of collecting and analysing bibliometric data as a means of developing strategies to improve academic performance, driving a longer-term trend toward improved performance in university ranking surveys and enhancing the international reputation of research in the UAE. This study uses several of the measures used by the surveys listed in Appendix A2.

A point that is made repeatedly throughout this report is that bibliometric data has its limitations, and this is discussed later in the context of methodology and data interpretation. Although much can be extracted from these analyses, the data serves as a starting point for further enquiry. A more thorough picture of genuine research quality requires deeper study of successful researchers and research networks, and how these can be used to strengthen the UAE health research ecosystem as a whole. It is also important to recognise that search platforms can draw from different data sources, apply different definitions to research outputs and search methods, and can therefore show different results. The source of the data and analytical methods should therefore be clearly articulated in any analytical work.

PURPOSE OF THIS STUDY

The purpose of this study is to provide a snapshot of the current state of health research in the UAE by:

- Presenting a detailed analysis of the UAEs health research under four broad themes (quantity, quality, international engagement and institutional activity), focusing on outputs in nine disciplines and ten sub-disciplines of health research. Clinical trial activity is also examined as a measure of health research translation.
- Providing organisations and institutions with baseline performance data and encourage wider awareness of the value of benchmarking exercises, both at the institutional and national level.
- Show different approaches to analysis with a view to demonstrating the power and utility of bibliometric data in the development of policy and decision-making processes.

The measures and analysis presented here should not be considered as the only means of assessing quality and success. They are however useful for providing objective numbers for individual countries, institutions and disciplines using highly reputable databases and standardised metrics, both of which are necessary to carry out benchmarking exercises.

RATIONALE AND METHODOLOGY

SCOPE OF ANALYSIS

Study questions

The state of health research in the UAE was analysed using two primary measures – research outputs, in the form of publications, and registered clinical trials. The data generated for this study was used to explore a series of questions (Figure 1).

Study reference period

A reference period of five years covering 2014 to 2018 was selected for this study in order to provide a recent picture of the state of health research. In the case of publications, this includes all outputs published during this period. For the clinical trials data, the list of studies includes all registered clinical trials that were active at any point within the reference period.

DATA SOURCES

Overall publication trends

PubMed is a public database that includes over 29 million citations for biomedical literature from MEDLINE, life science journals and online books. It is regarded as one of the most comprehensive health research databases available. *PubMed* is administered by the National Centre for Biotechnology Information, within the National Library of Medicine at the United States National Institutes of Health.

PubMed was used to extract publications attributed to selected UAE institutions, including universities, hospitals and other research-active institutions. For this study, the following search criteria were applied:

- all article types with a date of publication within the five-year reference period of 2014 to 2018 (including either electronic or hard-copy publication), as assigned by *PubMed*.
- all articles with authors listing an affiliation with institutions from the “United Arab Emirates” or “UAE”. As with any database, UAE-based authors who had not credited their institution as belonging to the UAE will not be found using the applied search criteria.

STUDY QUESTIONS

What are the overall trends for the growth and activity of health research in the UAE, generally and by specific disciplines, and how do these compare internationally?

How does the quality of health research in the UAE compare internationally, and what are the areas of globally recognised strength in the UAE?

What medical conditions and health research areas are actively studied according to the UAE’s clinical trials data? Are these in alignment with the UAEs known health research priorities?

What is the extent of international collaboration with UAE researchers and how does this compare globally?
Who are the main international partners for UAE researchers, for both research publications and clinical trials?

FIGURE 1. Questions explored in this bibliometric study of health research in the UAE.

The main limitation of *PubMed* is its narrow analytical functionality for exploring research performance in selected subject areas. For this reason, *PubMed* data was only used to provide an overall picture of the numbers of health research outputs and trends over the five-year reference period, and how these compare internationally. More detailed analysis was performed using the *SciVal*® database described below.

Detailed analysis of health research subjects and institutions

The *SciVal*® database, by Elsevier, is a comprehensive online platform with data for over 12,000 research institutions and 230 countries and regions. *SciVal*® was developed specifically for generating rich data for benchmarking and analysing the performance of individual researchers, institutions and countries according to specific subject areas, making it ideal for in-depth analysis of health-related fields of research.

For this study, *SciVal*® was chosen as the main analytical tool for assessing the quantity and quality of research outputs in specific disciplines. The database was used to extract information on all health research outputs under the following search criteria:

- scholarly outputs for the five-year reference period of 2014 to 2018. Outputs include articles (published and in press), books, chapters, conference papers, editorials, *erratum*, letters, notes and reviews.
- authors listing an affiliation with institutions from the “United Arab Emirates”, as automatically assigned by *SciVal*®. Further data was extracted for a selected group of UAE institutions known to be active in health research, listed in Figure 4. *SciVal*® automatically assigns outputs to both countries and institutions.
- Nine subject areas and ten sub-disciplines covering health research (listed in Figure 2) were analysed in detail.

Clinical trial activity

The *ClinicalTrials.gov* database was accessed to measure and analyse clinical trial activity in the UAE. *ClinicalTrials.gov* is a companion database to *PubMed* and is also maintained by the National Library of Medicine at the National Institutes of Health in the United States. Other widely used databases were considered for use, such as the World Health Organization’s *International Clinical Trials Registry Platform*, but the analytical functionality of *ClinicalTrials.gov* was deemed the most suitable for this study.

An important limitation to *ClinicalTrials.gov* is the data is voluntarily provided and updated by the sponsor or principal investigator of the clinical study. Not all studies are required by local laws or funding bodies to be registered, therefore the extent of data may vary greatly according to different jurisdictions. Nevertheless

ClinicalTrials.gov is considered the leading source of international data available with over 300,000 trials registered. The assumption for this study is that most major clinical trials run in the UAE will be registered in the database and the data should therefore offer a reasonable picture of clinical trial activity.

For the purpose of this study, only trials that were designated under the following categories were included:

- *Not yet recruiting*: studies that have not started recruiting participants.
- *Recruiting*: studies currently recruiting participants.
- *Enrolling by invitation*: studies selecting their participants from a population, or group of people, decided on by the researchers in advance. These studies are not open to everyone who meets the eligibility criteria but only to people in that particular population, who are specifically invited to participate.
- *Active, not recruiting*: studies that are ongoing, and participants are receiving an intervention or being examined, but potential participants are not currently being recruited or enrolled.
- *Completed*: studies that ended normally, and participants are no longer being examined or treated.

The data was further curated to focus analysis on trials that were active during the 2014 to 2018 reference period, according to their registered start and completion dates, including:

- Studies commenced before 2014, and concluded or still ongoing by 2018;
- Studies commenced after 2014, and concluded or still ongoing by 2018.

ANALYTICAL METHODS

Selection of comparator countries for benchmarking

An important element of this study was the comparison of health research in the UAE against international data. As a young country with a relatively small and highly urbanised population, the UAE presents a challenge when it comes to identifying similar countries for making comparisons. The approach we took in this study was to benchmark the UAE according to its broader ambitions – to be a regional leader; to have an advanced, prosperous economy; and to be recognised for research and technological excellence. With these aims in mind, two groups of countries were chosen for benchmarking:

- *The Cooperation Council for the Arab States of the Gulf*, also known as the *Gulf Cooperation Council (GCC)* – which includes the UAE and its neighbours Bahrain, Kuwait, Oman, Qatar and Saudi Arabia. The GCC was chosen as a collective of states representing the Gulf Region. These countries enjoy close cultural, political and economic ties. If the UAE aspires to be a regional leader in health, benchmarking against its regional partners will allow the identification of its top performers and opportunities for the UAE to consider what policies work best in the regional context.
- *Group of Twenty (G20)* – representing the largest economies in the world, the G20 includes Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, the United Kingdom and the United States. The European Union is also a member but was excluded from the analysis because separate data was not available or complete and four of its members (including the United Kingdom) are in the G20 in their own right. Collectively, the G20 economies account for around 90% of the gross world product, 80% of world trade and two-thirds of the world's population. G20 states share some of the UAEs societal health issues arising from a modern, urban lifestyle. G20 states also have a strong reputation in health research and are home to most of the world's top ranked universities. The G20 was included as an example of how the world's largest economies perform and could serve as an aspirational target for the UAE in the longer term as its own economy diversifies and grows.
- World-wide data was used for additional benchmarking against UAE data where available from *PubMed* and *SciVal®*.

Defining health research subjects for analysis

Unlike *PubMed*, *SciVal®* categorises scholarly outputs for all disciplines as defined by the All Science Journal Classification (ASJC) codes used by Elsevier. Individual outputs are classified in *SciVal®* along these discipline areas via a combination of keywords and journal indexation using standardised practices by the output's publisher. Authors can also choose keywords themselves, which, in their opinion, best reflect the contents of their published work. *SciVal®* has no influence over the choice of keywords assigned to outputs in its databases.

For this study, nine disciplines focussing on subject areas that fall under the broad scope of health research were chosen for more detailed analysis (Figure 2). One of these nine disciplines, Medicine, was further broken down into an additional ten sub-disciplines. These subject areas represent the research activities that address the health priorities of the UAE (Appendix A1), either as enabling disciplines (such as biochemistry or immunology) or those directly related to diseases and conditions (as in cardiovascular disease or diabetes). The subjects chosen may not offer complete coverage for all fields of health research (for example, social work, medical engineering, multidisciplinary research) but should account for the vast majority of publications and therefore provide a thorough picture of the state of health research in the UAE.

The main limitation of *SciVal®* is the inability to analyse outputs from multiple subject areas as a single cohort of publications. This is primarily because most health research journal articles can be categorised under more than one of the subject areas listed above. Therefore, with all *SciVal®* data it is important to recognise that any analysis relating to a particular subject area should be viewed in isolation, and any observations and conclusions relate specifically to that field. This is the reason why the data is structured and analysed by discipline.

Measuring research activity

The number of outputs for health research overall and by each subject listed in Figure 2 was assessed for the reference period 2014 to 2018. The main value of this data comes not from focussing on raw numbers but to observe trends over the reference period, and how these compare to what is happening internationally.

Further analytical value came from benchmarking the UAEs research activity to other countries by calculating two measures, adjusted for discipline and population:

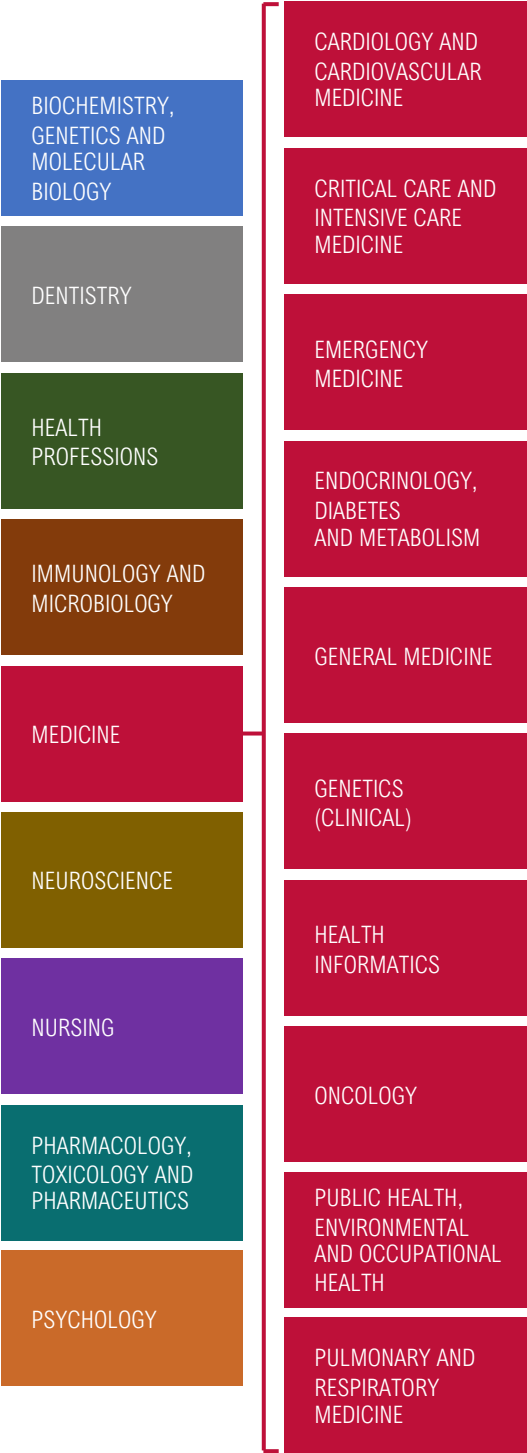


FIGURE 2. Nine disciplines related to health research, plus a further ten sub-disciplines under medicine (as defined by the All Science Journal Classification (ASJC) system) were examined using SciVal®.

- *Subject-weighted research activity:* This metric is a simple measure of the proportion of research outputs for a given field, divided by the total outputs for that country over the reference period

and expressed as a percentage. This is a means of assessing the relative amount of outputs and comparing these percentages to other countries.

- *Population-weighted research activity:* In order to account for the vast differences in population size amongst the GCC and G20 comparator countries, a new metric, termed population-weighted research activity, was developed for this study. The total number of outputs for a given field for the whole world over the reference period were divided by the world population to generate the number of outputs per million population. This figure was then compared to the same measure for UAE outputs and those of the GCC and G20 comparator countries. Country figures were divided by the world figure to generate a simple ratio where the world is 1.00. Anything above 1.00 means that a particular country is producing more of these publications per capita than the global per capita figure. Conversely, a figure less than 1.00 shows that outputs in that subject area are lower than the world per capita figure.

Measuring research quality

It is important to appreciate the difference in assessing research by measuring quantity, expressed here by the number of publications, versus quality or impact. Benchmarking publication numbers only give an indication of the productivity of the academic workforce and does not offer any information on how these outputs are regarded by the global research community.

A basic measure of research quality is to analyse the number of citations received to date by each output that is part of a particular data set over the reference period. It answers the question of how many citations a country or institution's outputs have each received on average, as a proxy for the academic impact of these outputs. In other words, a large number of publications may be attracting a small number of citations, meaning the research is either not relevant to the global community or not considered of good quality. A small number of papers can be heavily cited, indicating relatively low activity but high influence, relevance and approval from peers.

The data showing citations per publication are perhaps most useful for identifying fields that attract the most attention from global academia, but as discussed below, this may only reflect the publication culture of a particular field. Citation metrics normalised for their fields circumvent this limitation and were therefore used as the primary analytical tool of research quality in this study.

Extending the utility of raw citation metrics is Elsevier's *Field-Weighted Citation Impact* (FWCI) metric. FWCI is the ratio of the total citations of a set of outputs against the global total citations that would be expected based on the average of the relevant field of research. This translates to a scale where:

- FWCI = 1.00 means that the output or set of outputs performs just as expected for the global average;
- FWCI > 1.00 means that the output or set of outputs is more cited than expected according to the global average; for example, 1.50 means 50% more cited than expected;
- FWCI < 1.00 means that the output or set of outputs is cited less than expected according to the global average; for example, 0.50 means 50% as many citations as expected.

FWCI takes into account the differences in research behaviour across disciplines. Researchers working in fields such as medicine and biochemistry typically produce more outputs with more co-authors and longer reference lists than researchers working in fields such as mathematics and education; this is merely a reflection of research culture rather than performance. FWCI is one of a suite of Snowball Metrics designed to become the international standard in research metrics by a steering group that included the University of Oxford, the University of Cambridge, University College London, and Elsevier.

Throughout this study, FWCI is graphically represented by four arbitrary colour-coded categories that give a quick visual indication of research quality for a given data set (Figure 3).

Complementing the FWCI data was a measure of the proportion of publications that appear in the top 10% in the world according to their citation numbers. This data addresses the question of what percentage of an institution's outputs are in the elite tier of publications globally; put simply, the higher the percentage of papers in this elite category, the higher the quality, reputation and impact of research.

Measuring international collaboration

It is widely accepted that international collaboration improves the quality and reputation of research. In general, papers with international co-authors attract more citations than papers with only domestic authors. Data on the percentage of UAE outputs that have international co-authors was generated and benchmarked against the GCC, G20 and global data. A further measure of international engagement is

FWCI	INTERPRETATION
≤ 0.99	Citations are below world average for that data set, indicating disciplines that may be targets for additional resources and strategies to improve quality.
1.00 – 1.49	Citations are at or above world average (up to 49% higher) for that data set, representing areas where performance is good but can be improved.
1.50 – 1.99	Citations are comfortably above world average (50-99% higher) for that data set, representing areas where quality is at a good standard.
≥ 2.00	Citations are well above (over double) world average for that data set, identifying internationally recognised areas of excellence in health research.

FIGURE 3. Interpretation of Field-Weighted Citation Impact (FWCI) data provided by SciVal®.

to look at which countries provide the UAEs most co-authors, identifying areas where strong, active partnerships already exist and can be leveraged for building closer research ties. Conversely, countries that are of strategic interest to the UAE but show a relatively low level of research collaboration can be engaged to encourage closer cooperation. To inform these decisions, lists of the UAEs most active collaborating countries for each discipline were generated.

In the case of clinical trials, data on trials with study sites both in the UAE and internationally were used as a marker of international engagement. Industry sponsors of trials active in the UAE were also identified; in most cases, these are foreign or multinational pharmaceutical or medical technology companies.

Institutional focus

The data extracted for this study was also used to assess the performance of selected UAE institutions that are known to be major contributors to the country's health research outputs. This kind of analysis can be

useful in identifying hot spots of research excellence in specific disciplines and may be applied to the design and selection of centres of health research excellence and leadership for the UAE. The 14 institutions selected for this study are listed in Figure 4, representing seven universities and seven healthcare providers across the Emirates of Abu Dhabi, Ajman, Dubai and Sharjah.

It is acknowledged that other institutions, both universities and healthcare providers, are also actively carrying out and publishing health research. The institutions listed here were selected because they had been assigned as searchable organisations in *SciVal*®, allowing institution-specific data to be extracted and benchmarked. It is assumed that the 14 institutions chosen for analysis will cover the majority of the UAEs health research activity. Each institution was assessed for its health research activity and quality according to the subject areas described in Figure 2.

FURTHER DATA: APPENDIX

The data in this report is presented in a summarised form. The full data set is included as an Appendix. Further data on the UAE and selected institutions is included, plus data on each of the countries used for international benchmarking.

Throughout the report, references are made to specific sections of the Appendix to allow the reader to examine the data in greater detail. The appendix also includes a list of the top ten publications, ranked by FWCI, for each of the nine disciplines and ten sub-disciplines. The full list of clinical trials that make up the data set for this study is also included.

INSTITUTIONAL FOCUS
Al Ain Hospital (AAH)
Al Mafraq Hospital (AMH)
Dubai Hospital (DH)
Gulf Medical University (GMU)
Khalifa University of Science and Technology (KUST)
Ministry of Health and Prevention (MOHAP)
Mohammed Bin Rashid University of Medicine and Health Sciences (MBRU)
NYU Abu Dhabi (NYUAD)
Sheikh Khalifa Medical City (SKMC)
Tawam Hospital (TH)
United Arab Emirates University (UAEU)
University of Sharjah (UoS)
Zayed Military Hospital (ZMH)
Zayed University (ZU)

FIGURE 4. List of selected UAE institutions (presented in alphabetical order) chosen for detailed bibliometric analysis of health research outputs. Institutions were chosen based on searchability in *SciVal*® and do not represent all health research actors in the UAE. Abbreviations for each institution, used for brevity in Figure 18, are shown. Overall publication data on other institutions not examined in detail in this study is included as a part of Appendix A15.

ANALYSIS

RESEARCH ACTIVITY

Total health research outputs

UAE authors produced a total of 5914 health-related outputs over the reference period (Figure 5). Importantly, the numbers of outputs have steadily increased over the past five years, from 678 in 2014 to 1747 in 2018. This represents a 157.7% increase over the period, or over 2.5 times. This trend is indicative of a health research community that is rapidly growing and productive.

When the equivalent data was extracted for comparator countries, the UAEs growth in health research outputs over the reference period remained impressive (Figure

6). At 157.7% growth over the reference period, the UAE was the best performing country in the GCC (86.5% average). The UAE growth rate was significantly higher than the G20 countries (55.4% average) and all publications worldwide (12.5%). This data shows that the UAE health research sector is growing at a healthy rate by international standards. Of the countries examined, the only state that showed a higher growth rate than the UAE was Indonesia at 224%, which interestingly had a similar number of outputs to the UAE over the reference period.

The total health research outputs from 2014 to 2018 for the institutions listed in Figure 4, according to *PubMed* data, is separately included in Appendix A15.

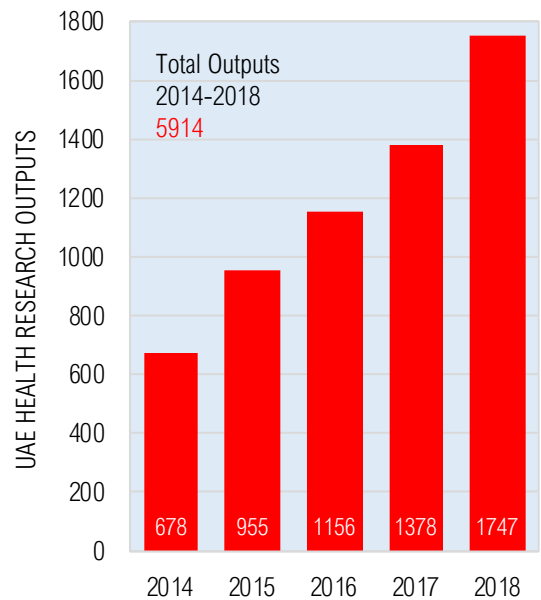


FIGURE 5. Health research outputs from authors affiliated with UAE institutions, 2014 to 2018. Data source: *PubMed*, 17 October 2019. See Appendix A3. Further data on selected UAE institutions is included in Appendix A15.

Number of outputs by discipline

The number of research outputs broken down by all ASJC disciplines was examined (Figure 7). The UAE is actively publishing in all of the selected fields of health research. In terms of absolute numbers, medicine was the largest health-related category with 4504 outputs, and third largest overall behind engineering and computer science. Biochemistry, genetics and molecular biology (1999 outputs) and pharmacology (691 outputs) were the next two highest health-related disciplines.

When examining the medicine discipline in greater detail, the sub-disciplines with the over 200 outputs each were general medicine, cardiology and cardiovascular medicine, public health, and endocrinology, diabetes and metabolism. Conversely, the niche area of critical care and intensive care medicine was the only subject area to show less than 100 outputs during the reference period.

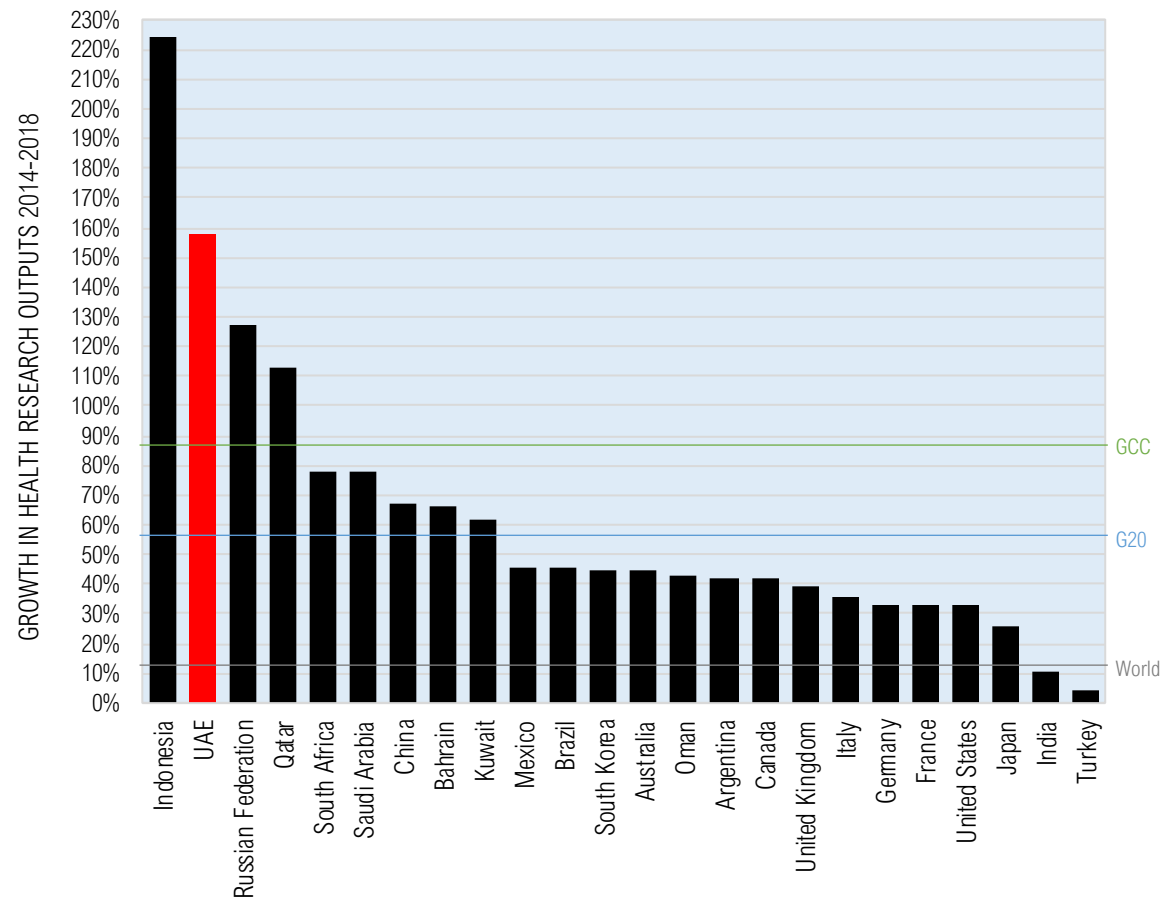


FIGURE 6. Comparison of health research publications from authors affiliated institutions from the UAE, GCC and G20, 2014 - 2018. Horizontal lines indicate averages for the GCC (86.5%), G20 (55.4%) and all publications globally (12.5%). Data source: *PubMed*, 17 October 2019. See Appendix A3.

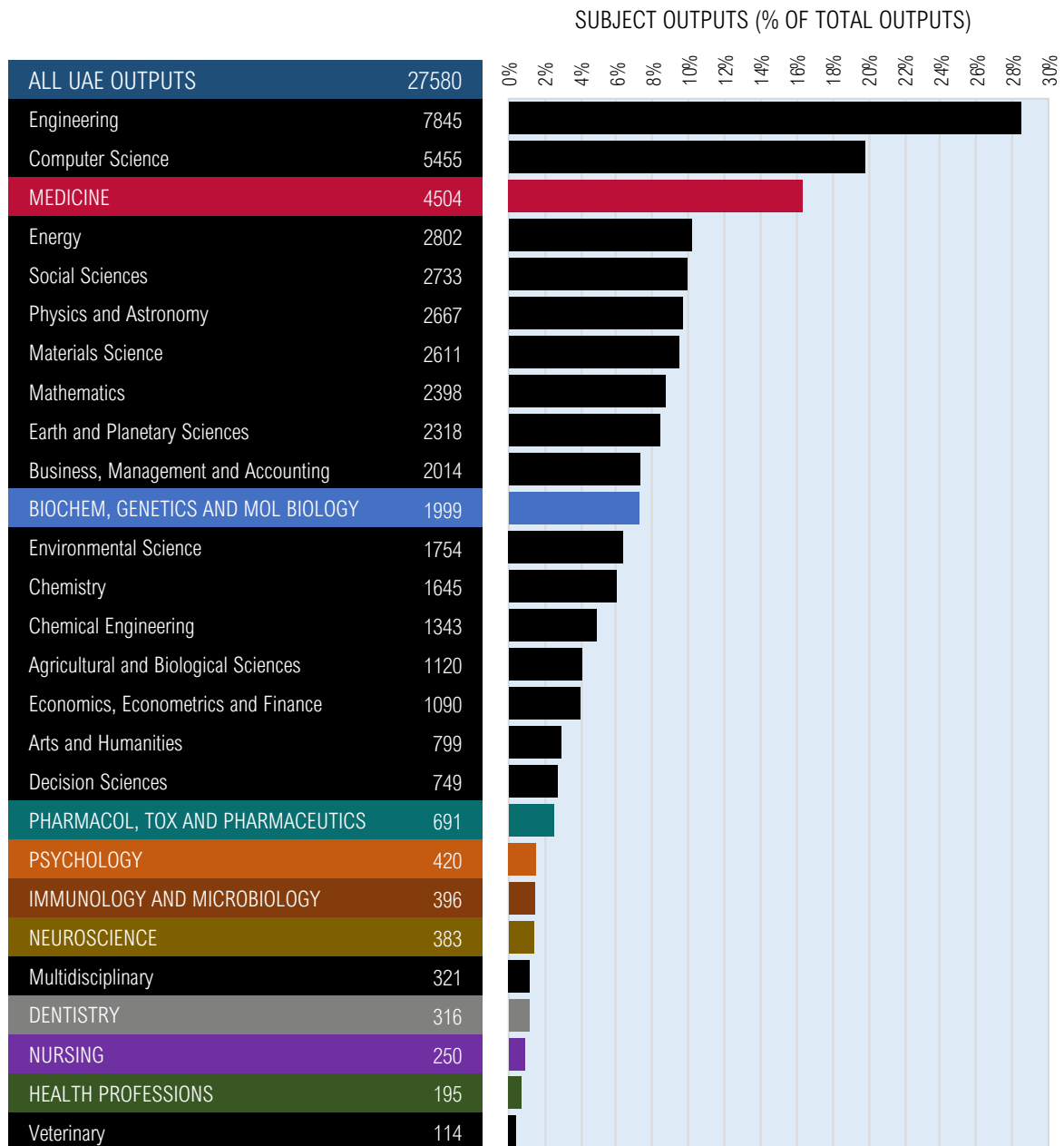


FIGURE 7. Outputs from authors affiliated with UAE institutions, per ASJC discipline, 2014 to 2018. Data source: *SciVal*®, 20 September 2019. See Appendix A4.

SciVal® was used to assess the growth in publication numbers for specific health-related disciplines over the reference period (Figure 8). The most encouraging observation is that for the health-related fields, publication numbers have steadily grown over the reference period at a greater rate than the UAE average of 91.7% for all ASJC disciplines (according to *SciVal*®). Outputs in dentistry, medicine, nursing, pharmacology and psychology all more than doubled over the reference period. In contrast, immunology and microbiology (50.8%) and neuroscience (45.6%) were well below the UAE average growth figure.

MEDICINE SUB-DISCIPLINES	
GENERAL MEDICINE	759
CARDIOL AND CARDIOVASC MEDICINE	350
PUBLIC HEALTH, ENV AND OCC HEALTH	290
ENDOCRIN, DIABETES AND METABOLISM	289
HEALTH INFORMATICS	172
GENETICS (CLINICAL)	171
ONCOLOGY	168
PULMONARY AND RESPIRATORY MED	109
EMERGENCY MEDICINE	102
CRITICAL CARE AND INTENSIVE MEDICINE	71

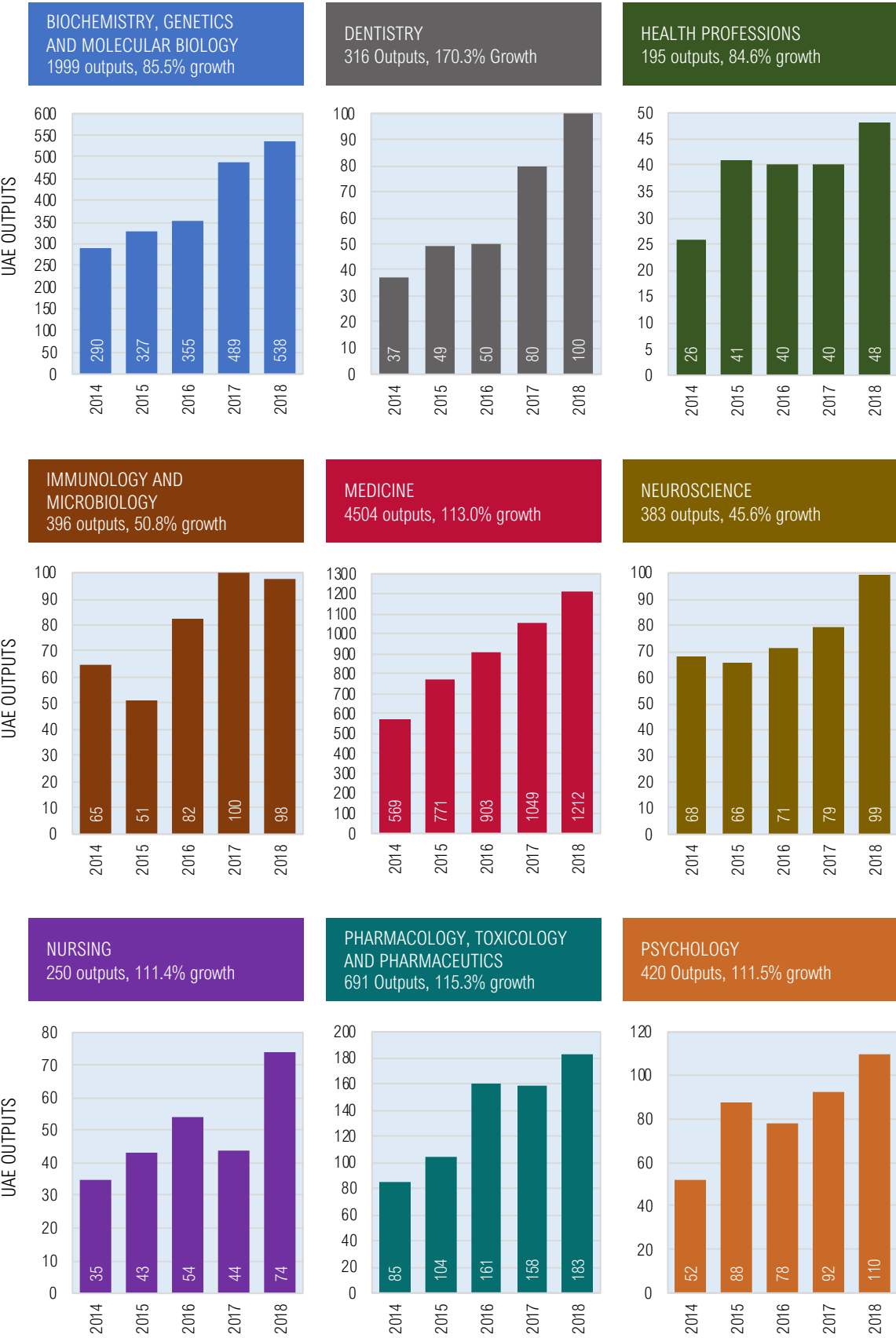


FIGURE 8. Growth in publication numbers for ASJC health-related disciplines, 2014 to 2018. The national average growth in output numbers for all ASJC disciplines over the period is 91.7%. Data source: SciVal®, 20 September 2019. See Appendix A5.

In order to measure the intensity of health-related research disciplines as a proportion of outputs from all subjects, the amount of health research outputs as a proportion of total outputs was determined and benchmarked against averages for the GCC, G20 and all global outputs (Figure 9). The UAE was generally lower than both the GCC and G20 averages, indicating that health research forms a smaller part of the overall academic environment of the comparator countries. This may be explained by the dominant proportion of outputs for engineering and computer science for the UAE, which can make other disciplines appear disproportionately smaller. The number of outputs for these non-health-related disciplines was not examined for the other states. Dentistry, emergency medicine, endocrinology, clinical genetics and health informatics were the exceptions, rating higher than the G20 or world averages. This indicates that as a proportion of its overall research outputs, the UAE health priorities of diabetes, trauma medicine, genetics and health data are relatively well supported in terms of research activity.

Population-adjusted data examining health research outputs per capita can be used as a crude way to quantify the research-active workforce in a country. Health research disciplines were benchmarked to normalised international data for analysis (Figure 10). The data show that the UAE produce generally less health research outputs than the normalised G20 average, and in most cases closer to the GCC average. Oncology was the least represented discipline at approximately half the normalised world ratio. This observation suggests that the UAE health research sector appears proportionally smaller than that of the comparator states, indicating a need for investment in training and talent to boost activity. There are however some exceptions when comparing disciplines to normalised global averages. Clinical genetics, health informatics and endocrinology and metabolism were all double the world ratio, indicating areas of high research activity in the UAE. Emergency medicine was also approaching double the world ratio. These observations link well with the UAEs known research priorities.

It is worth noting that the research activity per capita varies greatly within the G20 states (see Appendix A14). Countries with highly developed, reputable health research ecosystems – namely Australia, Canada, the United Kingdom and United States – typically show two to five times the number of outputs per capita compared to the G20 average. Australia is consistently the top performer with respect to number of outputs per capita across all of the fields analysed, indicating a large and productive research workforce relative to its population size.

Clinical trial activity

Measuring the number of clinical trials provides a different view of research activity. Publications are a better picture of academic activity where collaboration with healthcare providers and industry may or may not be evident. On the other hand, clinical trial activity is a direct reflection of research activity in healthcare providers such as hospitals, clinics and other organisations that engage directly with research end-users and consumers.

The UAE hosted 115 clinical trials over the reference period (Figure 11). Of these trials, 49 were classified as interventional and 66 were observational. Encouragingly, the number of active clinical trials almost doubled over the period (93% growth), indicating that the UAE is becoming an increasingly popular destination for clinical trial work. This is important as two thirds of these trials were carried out with sites in other countries. The clinical trial infrastructure and expertise available in the UAE will need to be of world standard to continue to attract international sponsors. In terms of domestic location, the bulk of studies were located in Abu Dhabi, Dubai and Sharjah, consistent with these Emirates accounting for the vast majority of the UAEs population and clinical trial infrastructure.

The clinical trial data was categorised according to diseases or conditions being investigated (Figure 12). Approximately one third of the 115 trials were focussed on investigating diabetes and obesity (23) and cardiovascular diseases (18), two major health research priorities for the UAE. Trials for cancer (15) and female reproduction (13) were also prominent. Health priorities that were underrepresented over the reference period included genetic conditions (2 trials), and trauma, injury and ageing (2 trials for surgery, 2 for musculoskeletal conditions, 6 for neurodegeneration). These may be target areas for attracting greater clinical trial activity to the UAE.

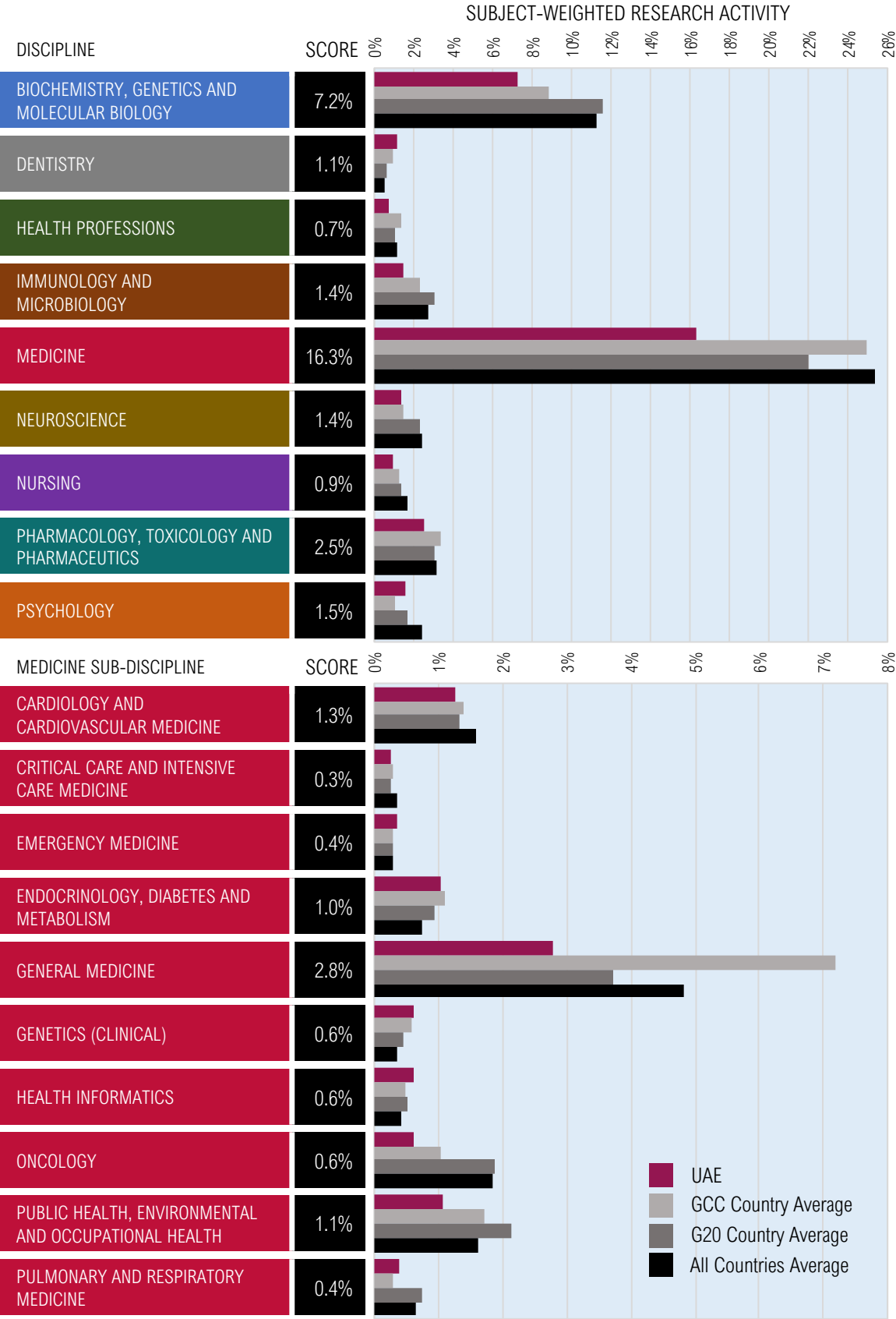


FIGURE 9. Subject-weighted research activity for ASJC health-related disciplines, 2014 - 2018. The number of outputs per discipline were divided by the total outputs for all ASJC disciplines to give a percentage, then shown against averages for the GCC, G20 and all countries. Data source: *SciVal®*, 13 September 2019. See Appendix A6 and A14.

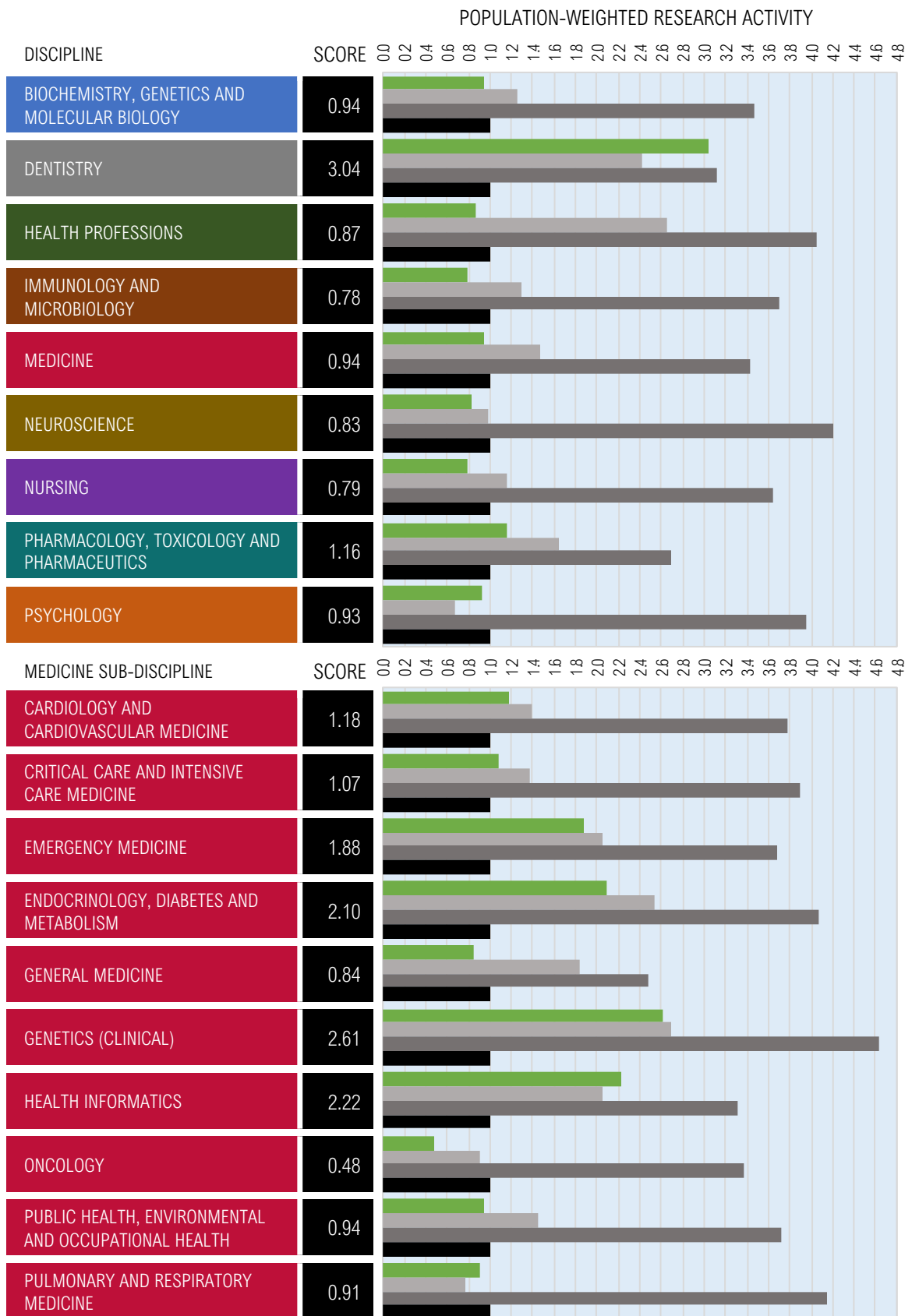


FIGURE 10. Population-weighted research activity for ASJC health-related disciplines, 2014 - 2018. The number of outputs per discipline were divided by the country's population. Country figures were divided by the world figure to generate a ratio where the world is normalised at 1.00. Data source: SciVal®, 13 September 2019. See Appendix A7 and A14.



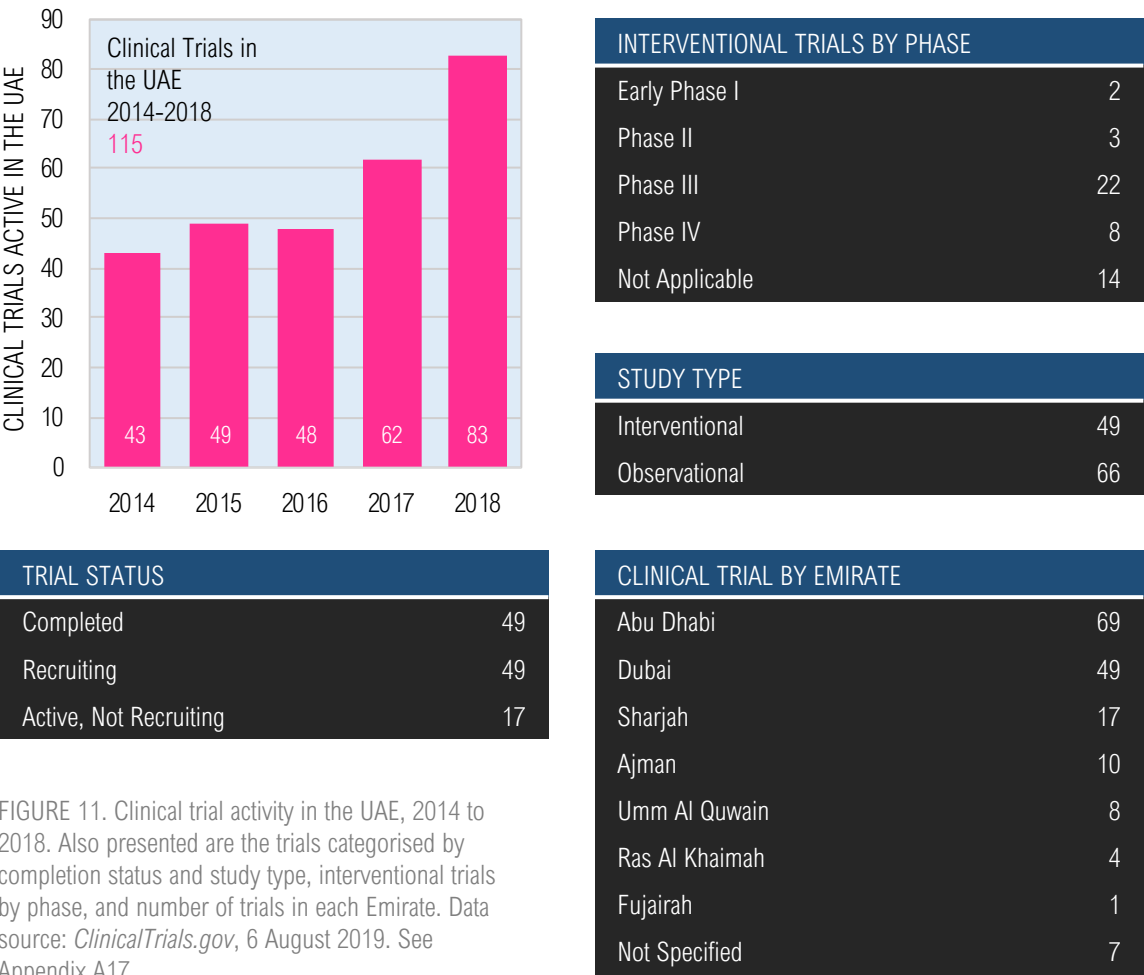


FIGURE 11. Clinical trial activity in the UAE, 2014 to 2018. Also presented are the trials categorised by completion status and study type, interventional trials by phase, and number of trials in each Emirate. Data source: *ClinicalTrials.gov*, 6 August 2019. See Appendix A17.

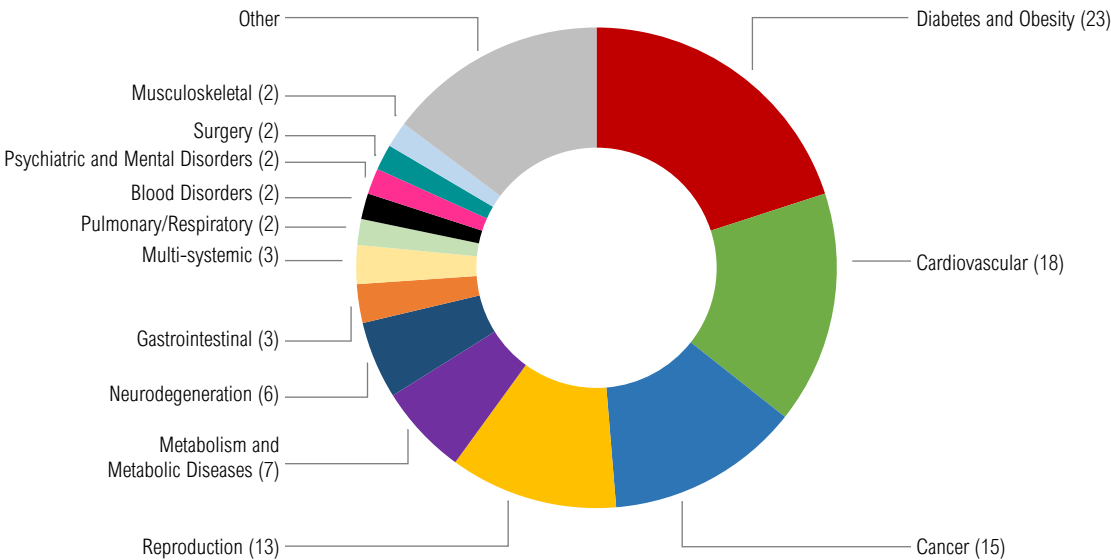


FIGURE 12. Clinical trial activity in the UAE, categorised by disease/condition, 2014 to 2018. Data source: *ClinicalTrials.gov*, 6 August 2019. See Appendix A17.

RESEARCH QUALITY

Quality by field-weighted citations

The number of health research publications increasing approximately 2.5 times in the UAE over the past five years demonstrates that research activity is rising at an impressive and globally competitive rate (see Figure 6). However, this does not offer any information on the quality, influence, impact or relevance of the research. This is why assessing research quality, through readily available metrics such as citations, is necessary to provide a balanced picture of the UAEs research strengths.

Based on an analysis of FWCI for each health research discipline, the quality of UAE publications in health research is better than the global average for many of the subjects examined and generally better than the G20 averages, indicating potential areas of world-class, high quality research (Figure 13). The best performer was medicine, citing over double the world average and well above the G20 average while also showing strong performance in several of its sub-disciplines.

In contrast, dentistry, pharmacology, critical care, clinical genetics, and health informatics all rated below the G20 citation average. Further, health informatics, public health, dentistry and pharmacology all rated below the world average over the reference period, identifying areas that may need extra attention for improving performance. Pharmacology as a discipline is a good demonstration that a high level of activity through publications – almost 700 during the reference period – does not directly indicate quality.

The quantity and quality of outputs were directly compared for each health research discipline and their sub-disciplines (Figure 14). This analysis provides greater detail as to which disciplines are highly active, high quality, or ideally both. It is purely subjective as to how ‘good quantity’ can be defined – perhaps those areas with over 100 outputs over the period – but the quality data is weighted so offers a more objective measure.

The data presented in Figure 14 can be used to consider both quantity and quality together to find genuine areas of research strength in the UAE:

- *Biochemistry, Genetics and Molecular Biology* – cancer research and cell biology are the standout areas of good quantity and high quality. Developmental biology is also a high-quality field but produced a low number of papers overall.
- *Dentistry* – oral surgery shows good quality but relatively few papers for the discipline.

- *Health Professions* – speech and hearing and medical laboratory technologies are the most likely areas of strength, although the number of outputs is low.
- *Immunology and Microbiology* – virology and immunology are the best performing areas.
- *Medicine* – general medicine is the clear standout, with large numbers of outputs and seven times the global citation rate for the subject. As discussed earlier, oncology, pulmonary and respiratory medicine, and emergency medicine are strong performers.
- *Neuroscience* – cognitive neuroscience is a strong performer, with a relatively large proportion of the disciplines publications and a strong citation score.
- *Nursing* – although there are some highly citing subject areas, the publication numbers are quite low and may point to an individual or group that is producing the high quality work.
- *Pharmacology, Toxicology and Pharmaceutics* – despite a good volume of publications, each of the sub-disciplines rate at or below world standard, suggesting no overall strength in the discipline. Quality will have to be identified at the individual or group level.
- *Psychology* – developmental and educational psychology, experimental and cognitive psychology, and social psychology are all strong performers.

One of the key limitations to citation-based data is the potential for very high citing papers to skew the average FWCI in a data set. While these high-performing papers may point to genuine research quality, it is also possible these papers are, for example, global disease burden reports with hundreds of authors reporting data from many countries. These papers (and their errata, which also count as distinct outputs) often become a major source of citations for an entire discipline. Appendix A16 includes a list of the top 10 UAE publications by FWCI for each of the nine ASJC disciplines and the ten sub-disciplines within medicine. It is evident that the top-citing outputs in several subjects are the many-author ‘mega papers’ described above, and some of these highly citing publications are classified in more than one discipline area. In any case, having a citation index many times greater than expected does not necessarily point to the best work or best researcher. This highlights the importance of using bibliometric data as a starting point for more detailed examination of perceived areas of research excellence.

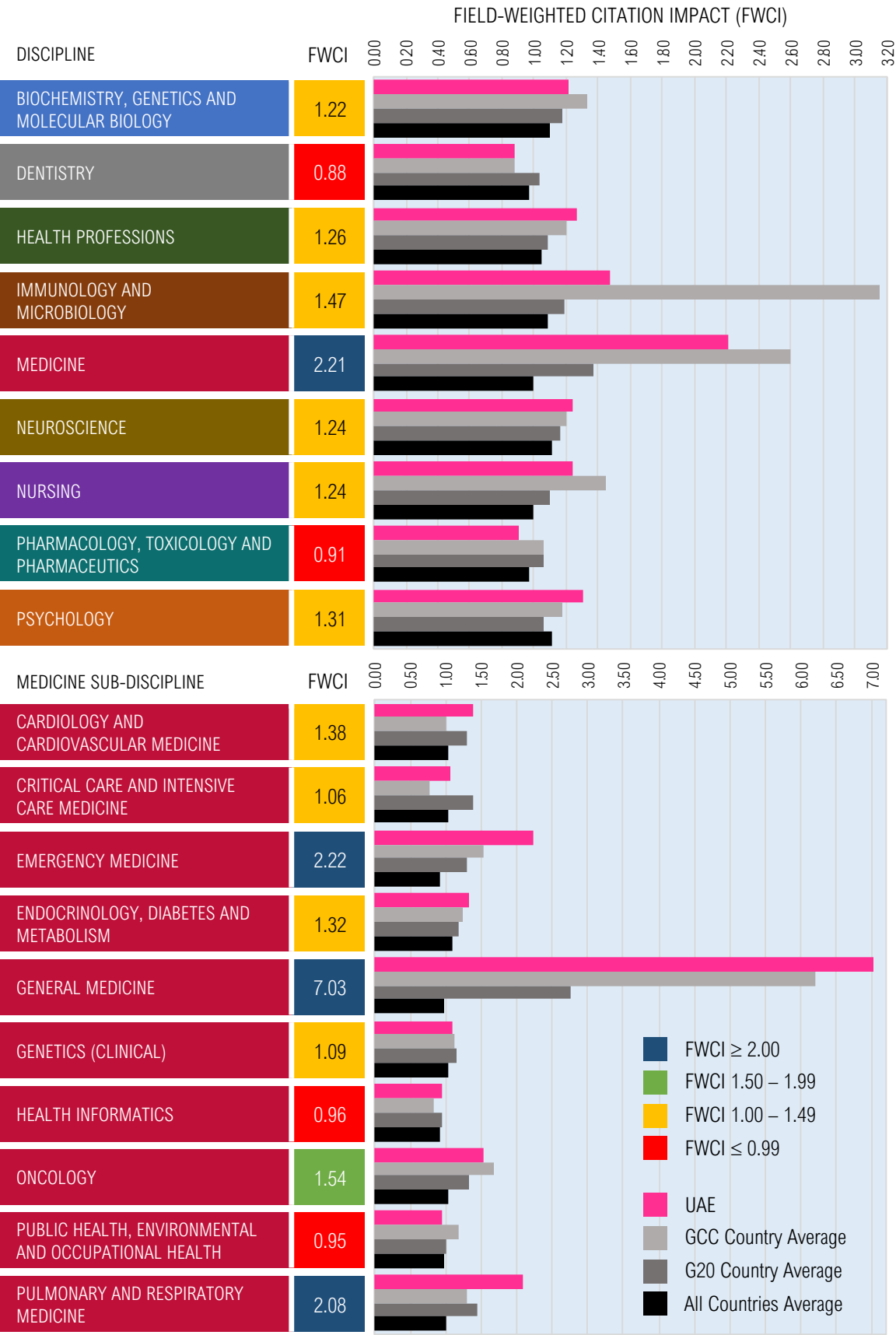


FIGURE 13. Field-Weighted Citation Impact (FWCI) by discipline, 2014 – 2018. UAE outputs are benchmarked against averages for the GCC, G20 and all countries. FWCI measures number of citations for a field against the world average for the same field. FWCI ranges are represented by the colours described in Figure 3. Data source: *SciVal*®, 13 September 2019. See Appendix A8, A14.

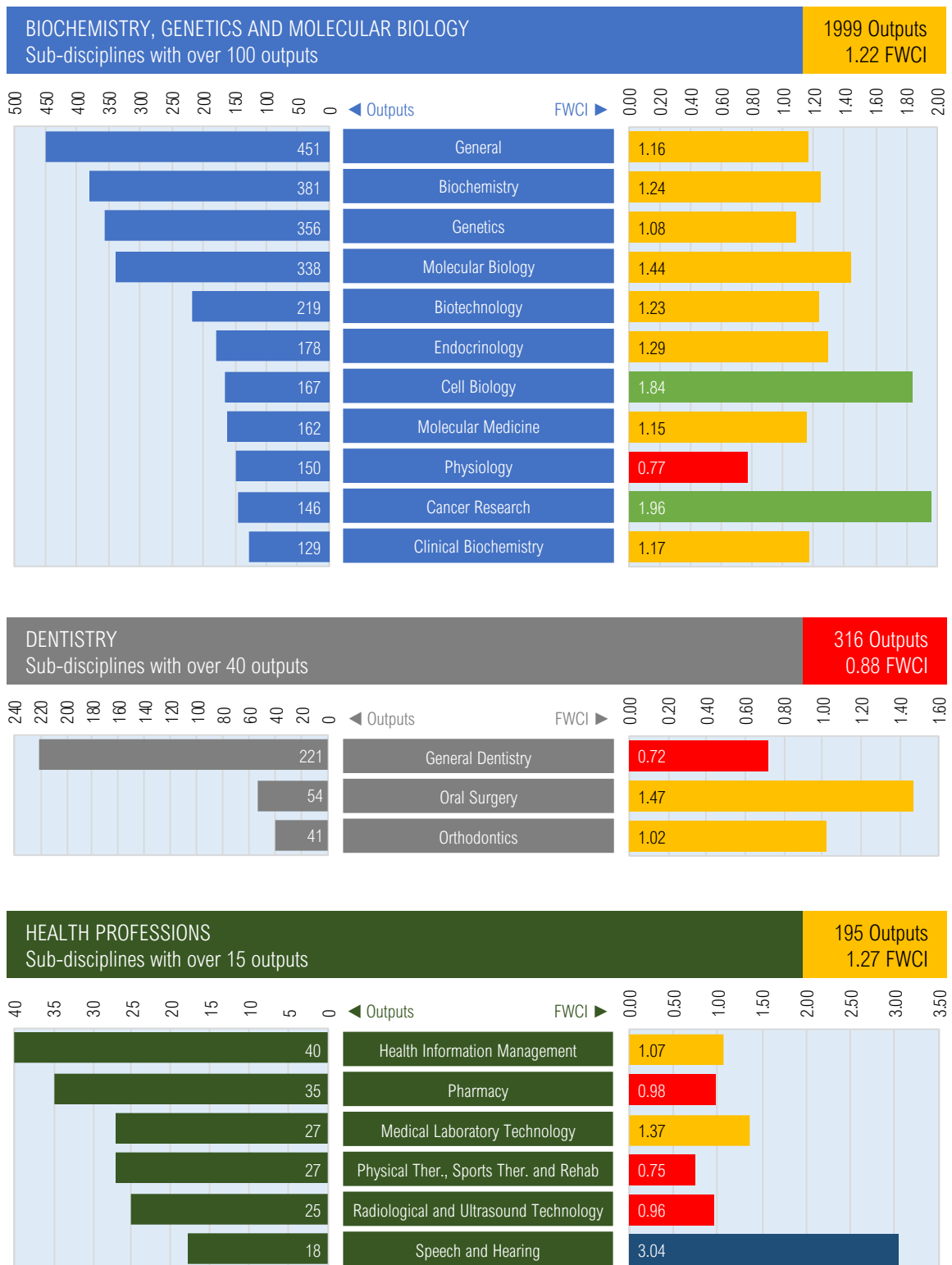
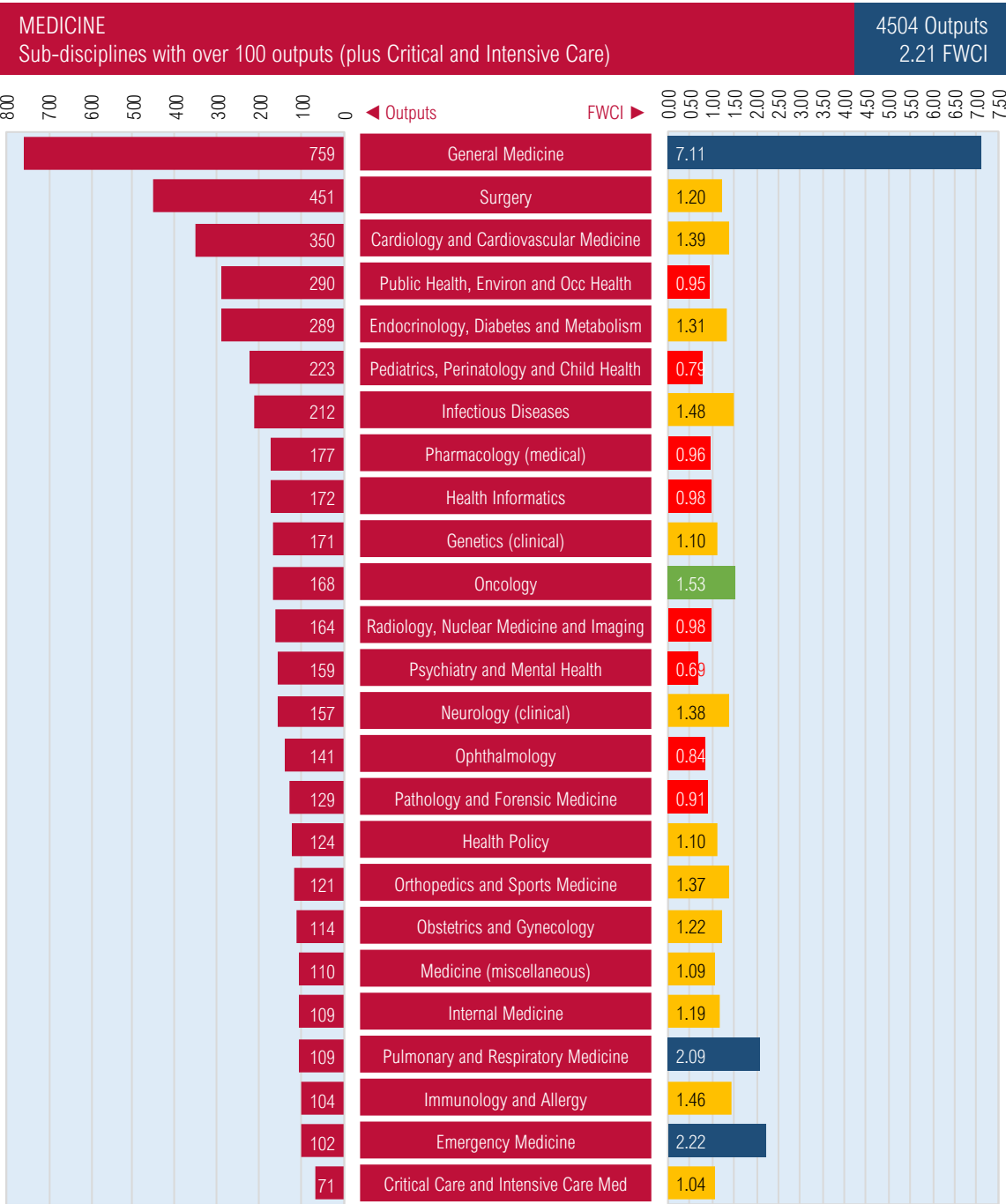
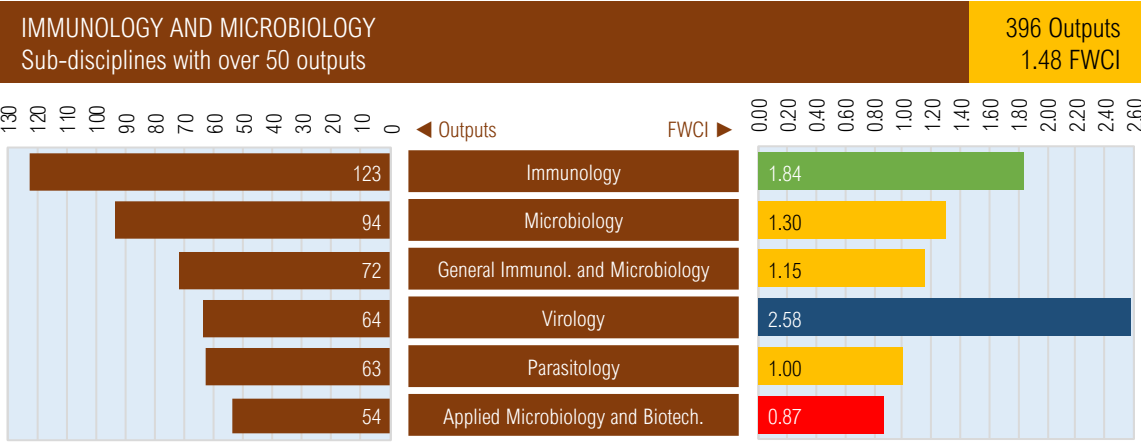
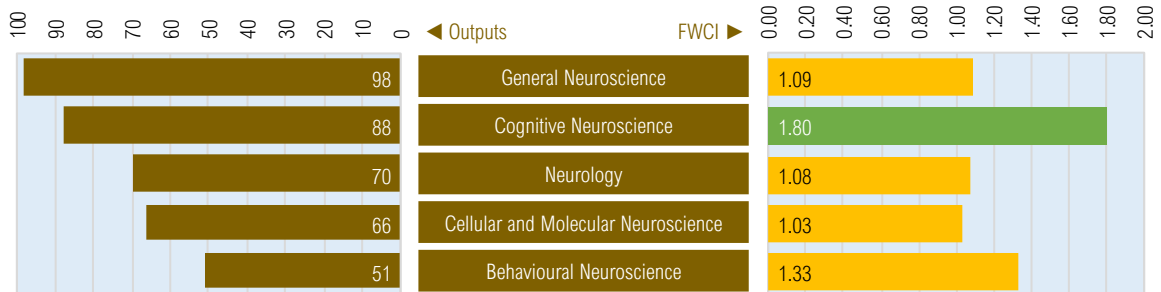


FIGURE 14 (continued on following pages). Number of outputs and Field-Weighted Citation Impact (FWCI) by health research discipline and corresponding sub-disciplines, 2014 to 2018. FWCI measures number of citations for a discipline against the overall average for the same discipline. Note the overall FWCI and number of outputs for each subject is also listed. FWCI ranges are represented by the colours described in Figure 3. Data source: *SciVal®*, 20 September 2019. See Appendix A12 for further data on all sub-disciplines.



NEUROSCIENCE

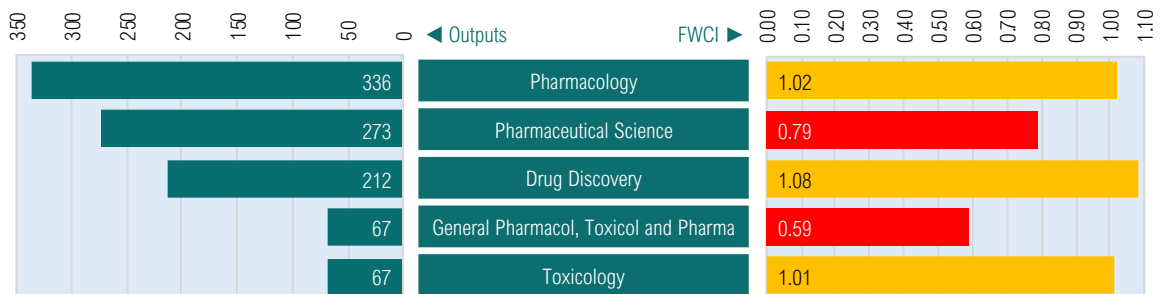
Sub-disciplines with over 50 outputs

383 Outputs**1.24 FWCI****NURSING**

Sub-disciplines with over 10 outputs

250 Outputs**1.21 FWCI****PHARMACOLOGY, TOXICOLOGY AND PHARMACEUTICS**

Sub-disciplines with over 50 outputs

691 Outputs**0.91 FWCI****PSYCHOLOGY**

Sub-disciplines with over 50 outputs

420 Outputs**1.31 FWCI**

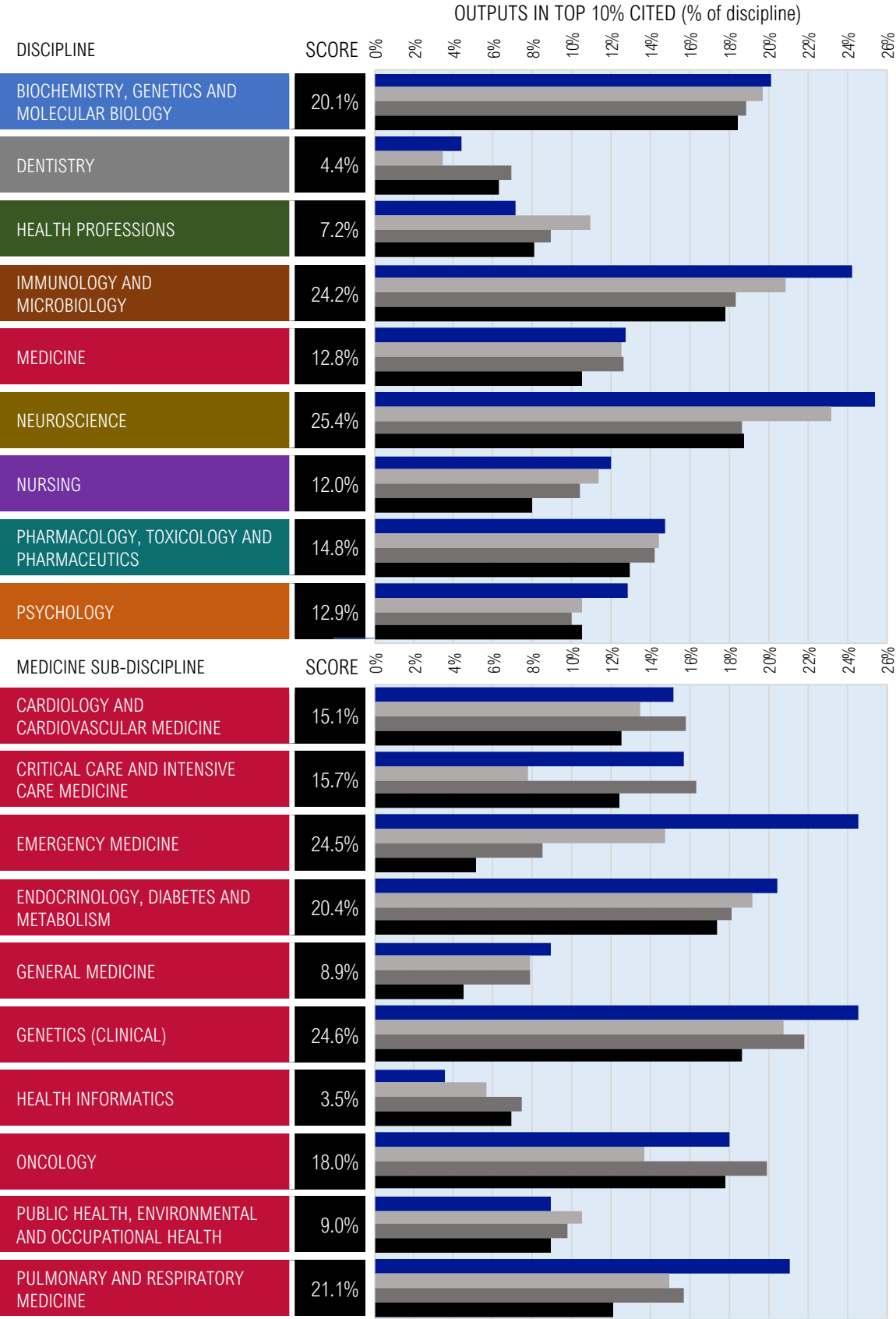


FIGURE 15. Proportion of outputs in the top 10% cited outputs globally, by discipline, 2014 to 2018. UAE outputs are benchmarked against averages for GCC, G20 and all countries. Data source: *SciVal*®, 24 July 2019. See Appendix A9 and A14.

Quality by number of outputs in the global top 10% of cited publications

FWCI metrics provide a good overall impression of research quality across all publications within a discipline. An alternate quality measure presented here is one that focusses the analysis on elite publications, defined here as those that are within the top 10% of publications globally according to their citation numbers. This is a useful way of showing relative quality within the best performing publications. The proportion of all publications for a field that appear in the top 10% globally was benchmarked against the GCC, G20 and world averages (Figure 15).

The UAE performed strongly, matching or surpassing the GCC, G20 or world averages in most fields. Seven of the disciplines examined showed a rate of over 20% of the outputs in that field being in the global top 10% most cited papers: neuroscience, clinical genetics, emergency medicine, immunology and microbiology, pulmonary and respiratory medicine, endocrinology, diabetes and metabolism, and biochemistry, genetics and molecular biology. This is consistent with the conclusions drawn from the FWCI data, confirming the quality of outputs from these subject areas.

INTERNATIONAL COLLABORATION

International co-authorships on publications

International collaboration raises the profile of UAE research and its measured performance. It is therefore important for UAE researchers to foster and maintain international linkages that result in co-authorships with international authors. International collaboration was examined in two ways; firstly, by the proportion of UAE health research publications with foreign co-authors, and secondly, by the impact of international co-authorship on the FWCI of these co-publications.

Publications from the UAE and the GCC show a considerably higher proportion of international co-authorships compared to the G20 averages across all fields (in many cases double) and the world averages, indicating that the region is highly active with international partnerships (see Appendix A10 and A14). International co-authors are listed on over 70% of the UAEs outputs in most of the disciplines examined. General medicine was slightly lower at 62%, which is still considerably higher than the averages for the G20 (approximately 30-60% across all health research disciplines) and the world (10-30%). It is clear that the UAE have successfully engaged with international researchers and should be encouraged to continue to collaborate with the best in the world.

A further measure of international engagement is to look at which countries provide the UAEs most co-authors. This data was then compared to the FWCI for all UAE outputs per discipline to see which partnerships result in the most impact on FWCI measures. Figure 16 presents the top 10 co-authoring countries per discipline in terms of number of outputs, plotted against the FWCI for co-publications with the UAE.

In all of the health research fields assessed, the United States was the UAEs top partner with the most co-publications. The United Kingdom is the second most co-published partner, while Saudi Arabia is clearly the most important regional partner for the UAE. Canada, Germany and Australia are also prominent partners across the disciplines.

This data demonstrates the positive impact of international co-authorships on UAE publications. With very few exceptions, co-authorship with the countries listed in Figure 16 resulted in FWCI scores higher than the overall score for the UAE average for that field. This data can be useful in identifying which countries are the preferred partners of choice for delivering higher citations, enhancing the reputation of UAE health research. The collaborating countries with the most impact on uplifting the UAEs quality scores for each discipline are highlighted:

- *Biochemistry, Genetics and Molecular Biology* – publications with most of the UAEs top 10 co-authoring countries led to an FWCI increase of two to four times over the UAE average.
- *Dentistry* – collaboration with the United States and Greece resulted in good quality scores, well above the UAE average.
- *Health Professions* – most collaborating countries contributed to improved quality, especially publications co-authored with researchers from Canada, Egypt, the United Kingdom, Australia and the United States.
- *Immunology and Microbiology* – Australia, Egypt and China were the most impactful collaborators for improving quality scores, but all top 10 countries produced an uplift in quality.
- *Medicine* – most of the top 10 collaborating countries resulted in co-publications at 10 to 20 times the world average and well above the UAE average.
- *Neuroscience* – co-publications with Italy, Saudi Arabia, Australia, Germany and Canada resulted in the most improved quality scores.

- *Nursing* – co-publications with Thailand, Malaysia and Italy resulted in the most significant uplift in quality.
- *Pharmacology, Toxicology and Pharmaceuticals* – co-publications with researchers from Oman, Germany and the United Kingdom lifted this discipline to double the quality score of the UAE as a whole.
- *Psychology* – collaboration with Australia, Saudi Arabia, Thailand, Netherlands, Canada and Italy produced publications with significant improvements in quality.

As with the skewing effect of low numbers of high citing publications, any analysis of international collaboration metrics should be complemented with a deeper dive into the nature of the collaboration. Co-authorship may represent minimal contribution to the published work (for example, supplying reagents used in studies based in other countries) and therefore not be reflective of actual expertise or experience in the UAE or collaborating country. Conversely, a co-authorship may reflect a genuine collaboration based on shared expertise. One measure of true collaboration and research leadership is to assess how many UAE researchers are listed as first or senior authors on publications with international partners. These questions can only be explored by looking at individual collaborations in further detail, and would benefit policy makers in identifying local research champions with a global reputation.

International clinical trial collaboration

Of the 115 clinical trials active in the UAE within the reference period for this study, 78 (67.8%) also hosted trial sites internationally. The top 10 countries sharing trial sites with the UAE are shown in Figure 17. Lebanon and Saudi Arabia are the only regional countries in the top 10 with 40 and 38 trials shared with the UAE respectively, although Egypt (31 trials) and Kuwait (21) are also important regional partners.

Another measure of international collaboration in clinical trials is analysing the extent of industry sponsorship. Of the 115 trials in the UAE over the reference period, 66 (57.4%) were sponsored by industry. All 66 were multinational trials, and an additional 5 multinational trials had industry co-sponsoring with non-industry organisations. AstraZeneca, Roche and Novo Nordisk were the top sponsors throughout the reference period with 9 trials each. This underscores the dominant role of industry in bringing major, multinational studies to the UAE and the importance of positioning the UAE as a destination of choice for major clinical trials.

INSTITUTIONAL FOCUS

Comparing quantity against quality

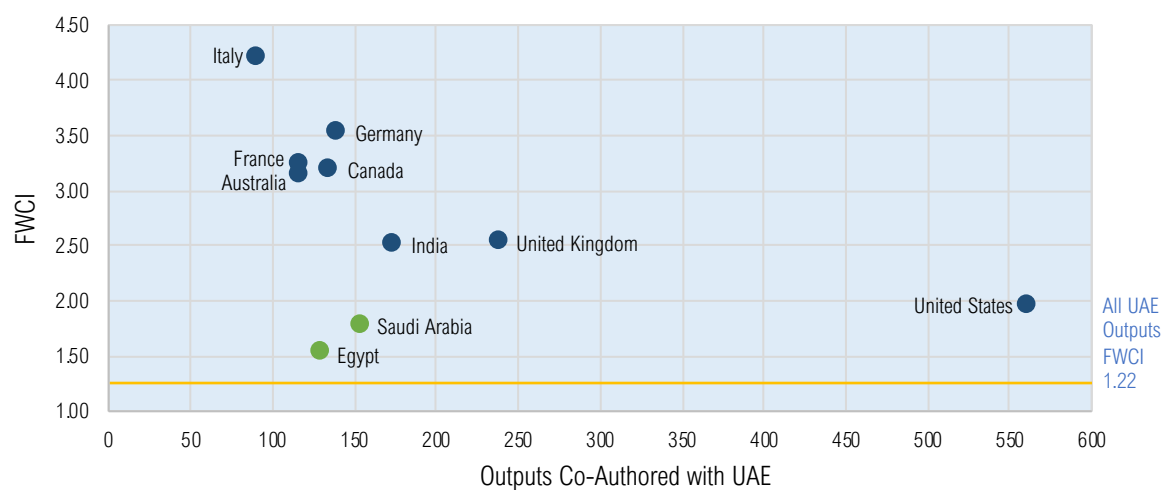
The analytical approach to assessing the UAEs outputs at the national level was applied to a group of seven universities and seven healthcare providers, selected based on their searchability in the *SciVal*® database (see Figure 4). The number of publications and the institution's FWCI score was measured to assess quantity and quality with a view to identifying which institutions showed strong performance for each discipline (Figure 18). The analysis is not intended as a critique on the research activity or strategic priorities of each institution. Rather, the data can be useful in identifying 'hot spots' of research excellence in disciplines that can service the health research priorities of the UAE, and may be useful in the design and selection of centres of health research excellence and leadership for the UAE. As with the analysis of international partnerships, the data serves as a starting point to inform further inquiry and its interpretation would be better informed by local knowledge of the research ecosystem and its key researchers.

As discussed earlier the balance between quantity and quality needs to be considered when interpreting the data. Ideally, an institution with high quantity and high quality would make a good candidate for a centre of excellence. In disciplines where this is not clear, then institutions with a high number of outputs but a relatively low-quality score could partner with institutions that have high quality scores but lower outputs, where research talent or valuable collaborations exist but there is limited capacity, to mutual benefit.

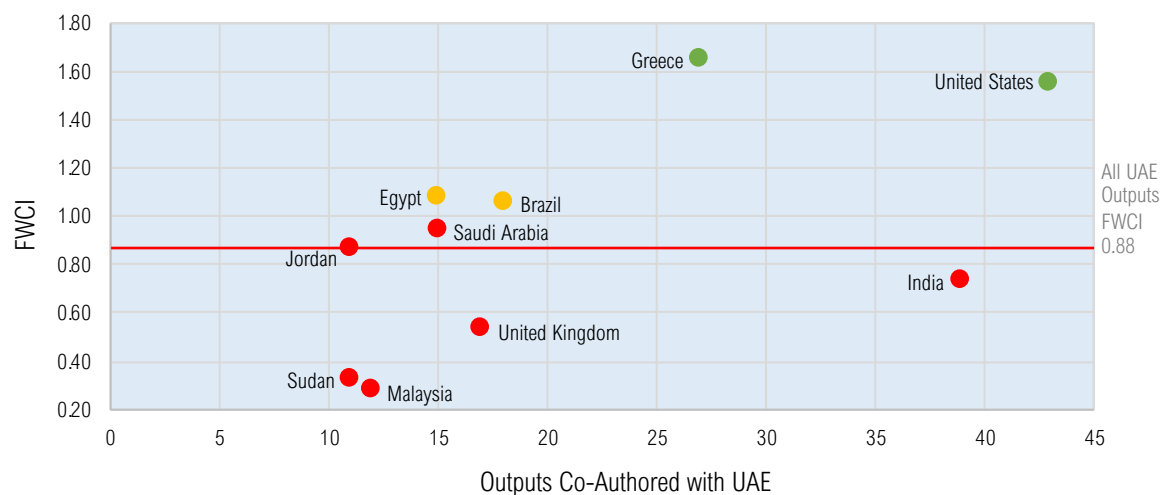
It is acknowledged that the research activity at each institution can vary greatly and depend on the core function of that institution. Researchers at universities are expected to produce more published outputs, depending on the size of the institution, while researchers in the clinical setting would have a smaller research programme than their colleagues in academia. The age of the institution is also an important consideration, as a low number of outputs over the reference period combined with a high FWCI score may reflect good quality in a newly established institution or nascent research programme.

FIGURE 16 (following pages). Impact of international co-authorships on publication quality. For each discipline, the top 10 countries co-publishing with UAE authors are plotted for number of co-publications and their corresponding FWCI. FWCI ranges are represented by the colours described in Figure 3. The horizontal lines in each chart show the FWCI for all UAE outputs for each discipline. Data source: *SciVal*®, 24 July 2019. See Appendix A10.

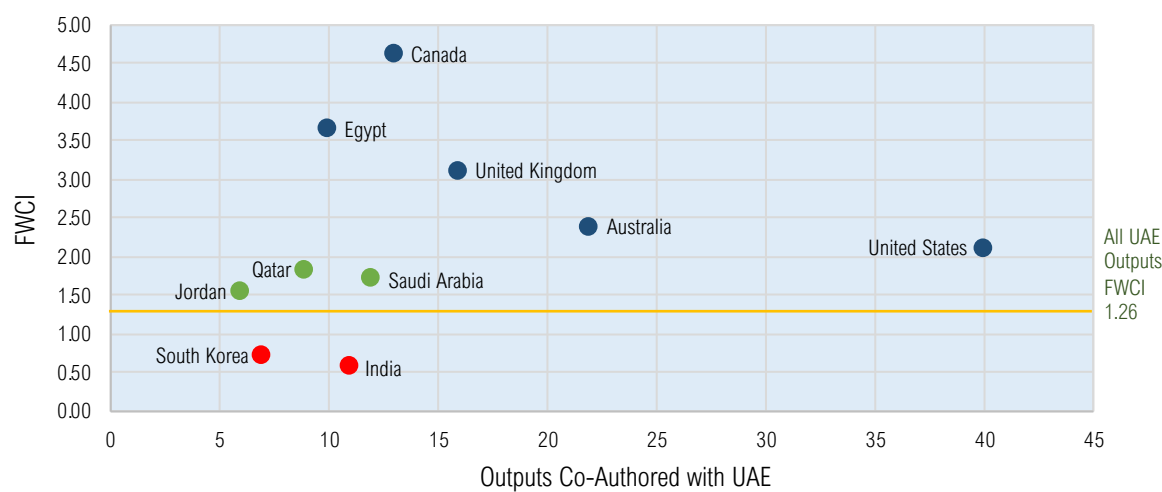
BIOCHEMISTRY, GENETICS AND MOLECULAR BIOLOGY



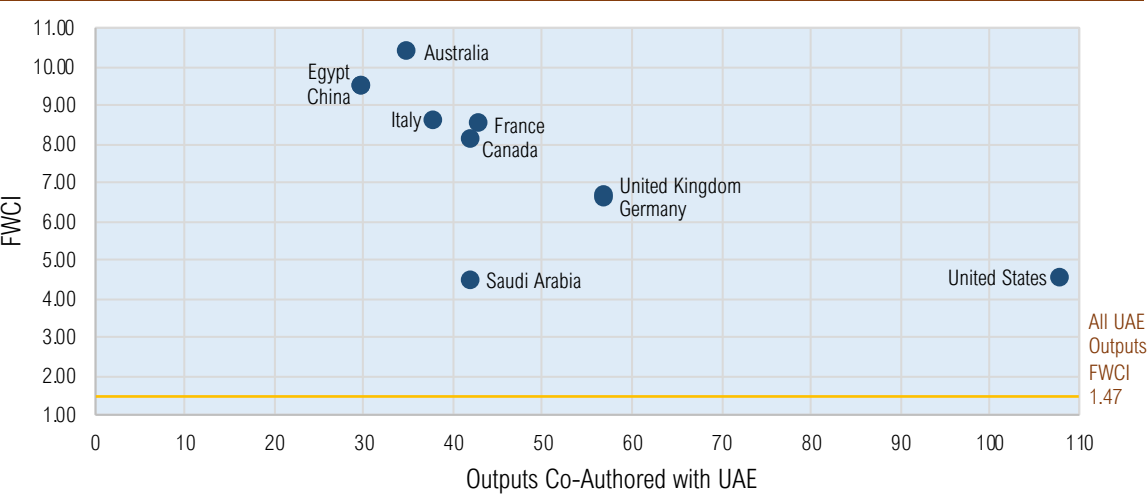
DENTISTRY



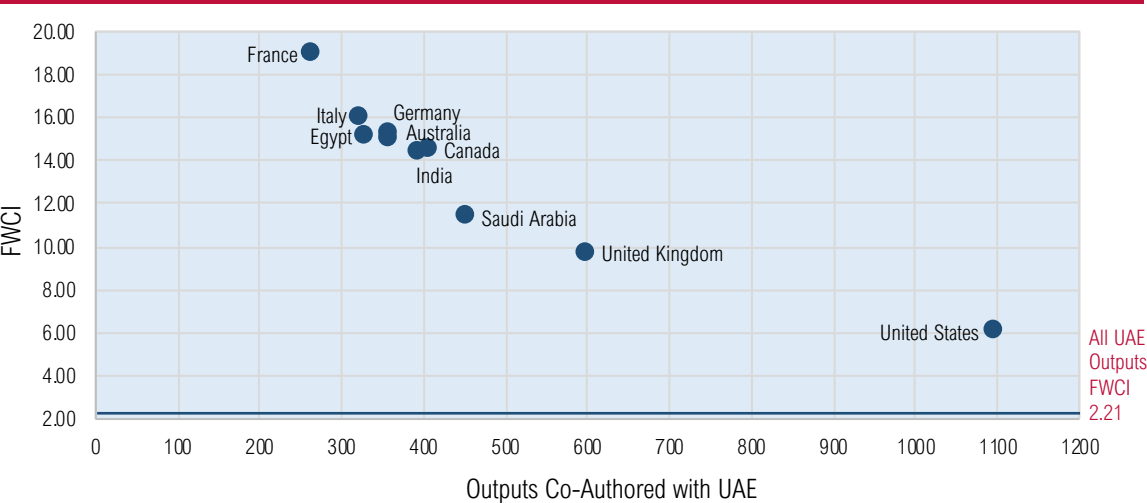
HEALTH PROFESSIONS



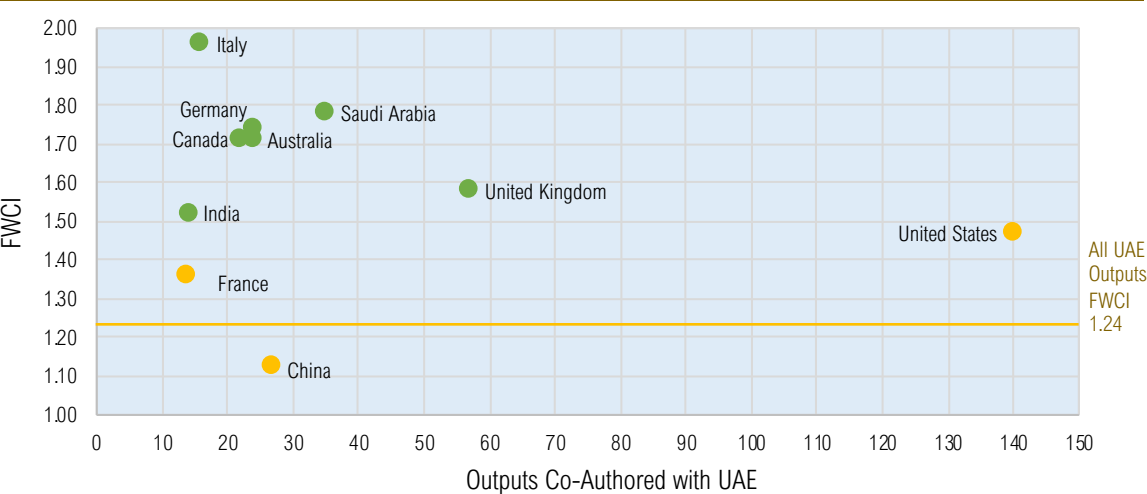
IMMUNOLOGY AND MICROBIOLOGY



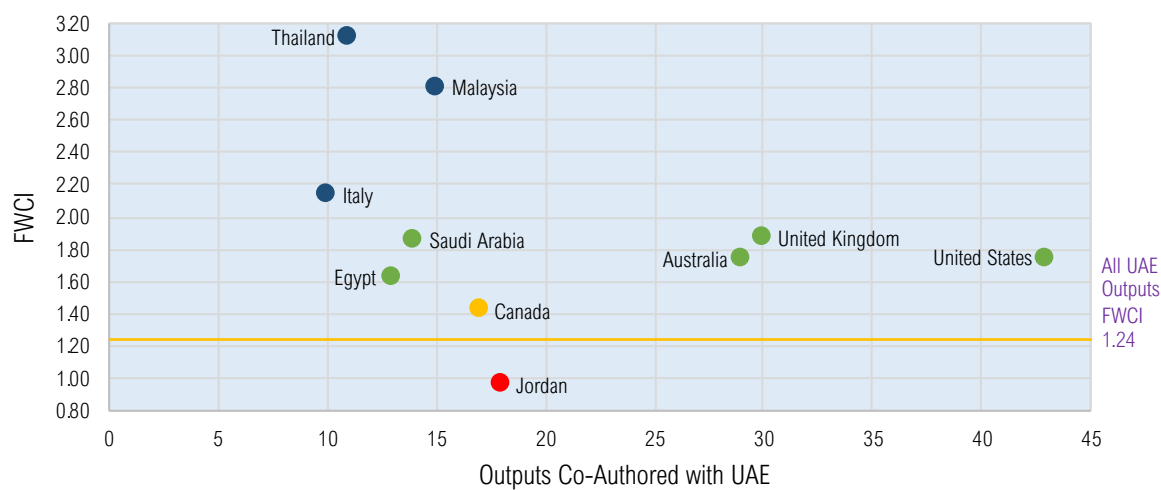
MEDICINE



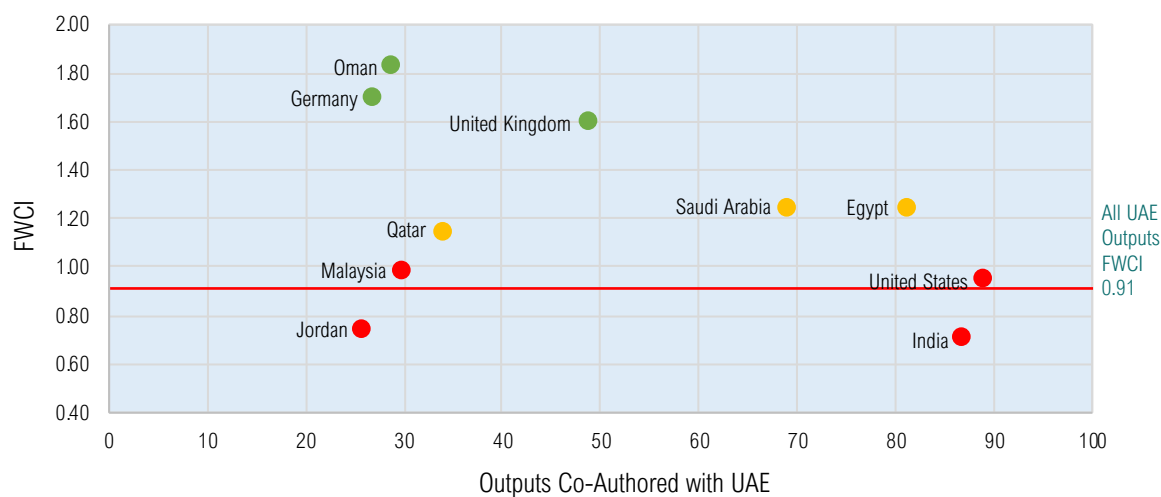
NEUROSCIENCE



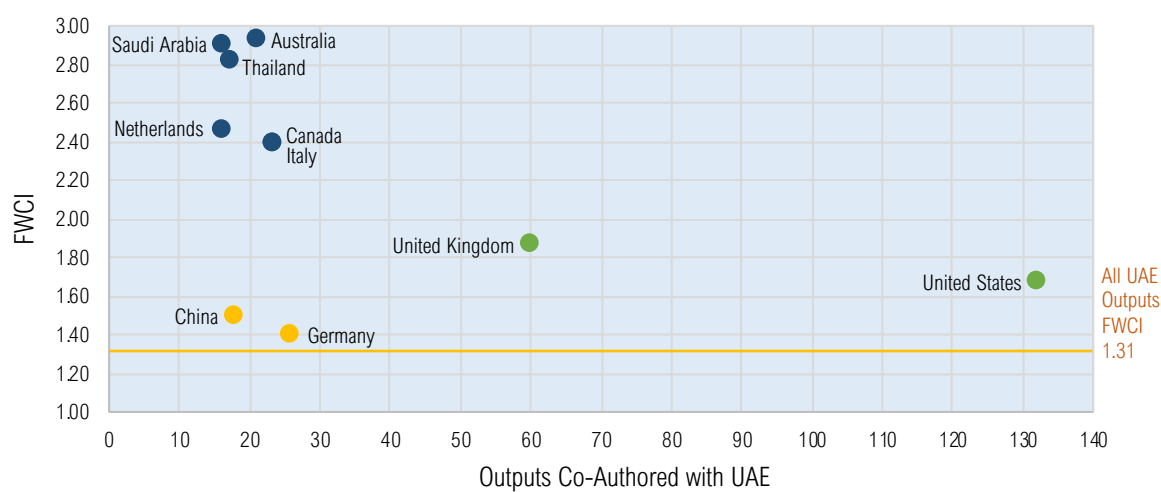
NURSING



PHARMACOLOGY, TOXICOLOGY AND PHARMACEUTICS



PSYCHOLOGY



TOP 10 CLINICAL TRIAL INTERNATIONAL PARTNERS		TOP 10 CLINICAL TRIAL INDUSTRY SPONSORS	
Lebanon	40	AstraZeneca	9
Russian Federation	39	Roche	9
Saudi Arabia	38	Novo Nordisk	9
Germany	36	Bayer	7
Italy	35	Sanofi	7
United States	35	Novartis	5
Argentina	33	Janssen	4
Mexico	33	Medtronic	4
United Kingdom	33	Pfizer	4
Brazil	32	Boehringer Ingelheim	3

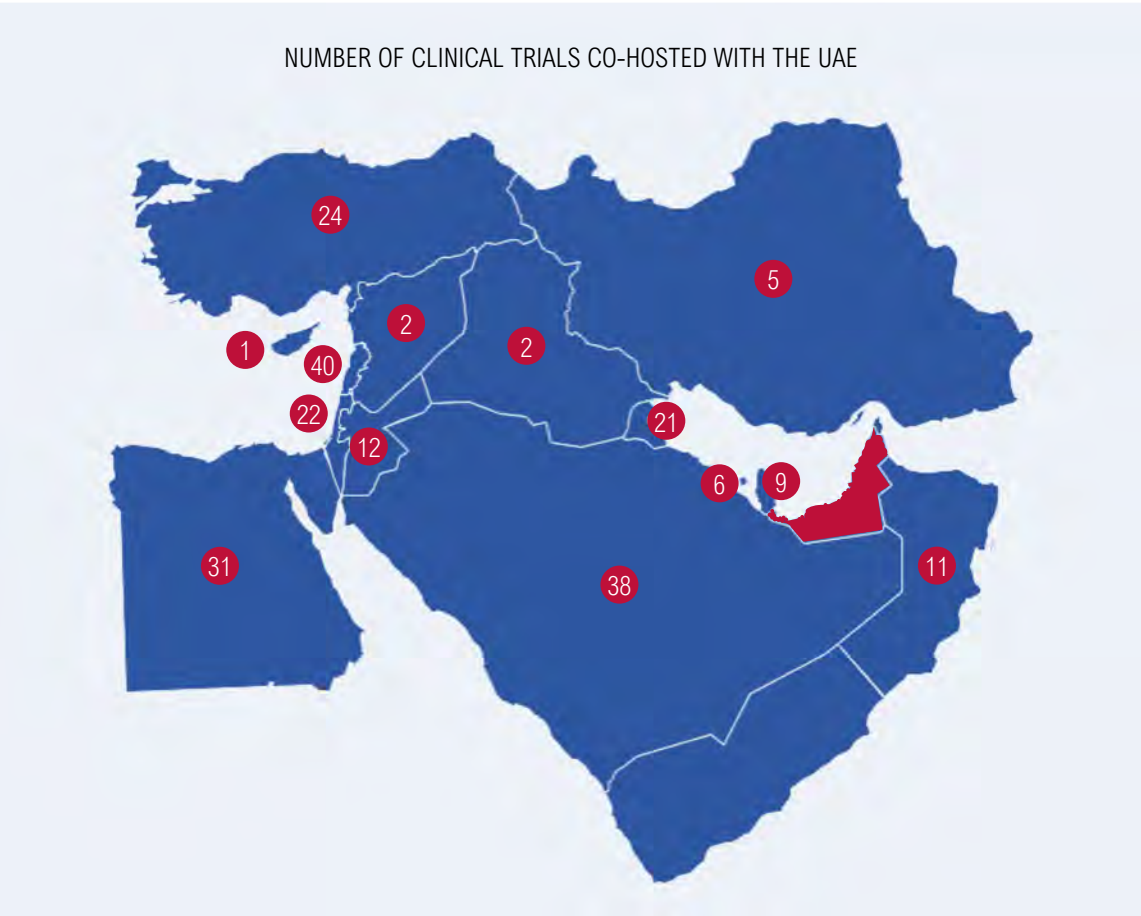
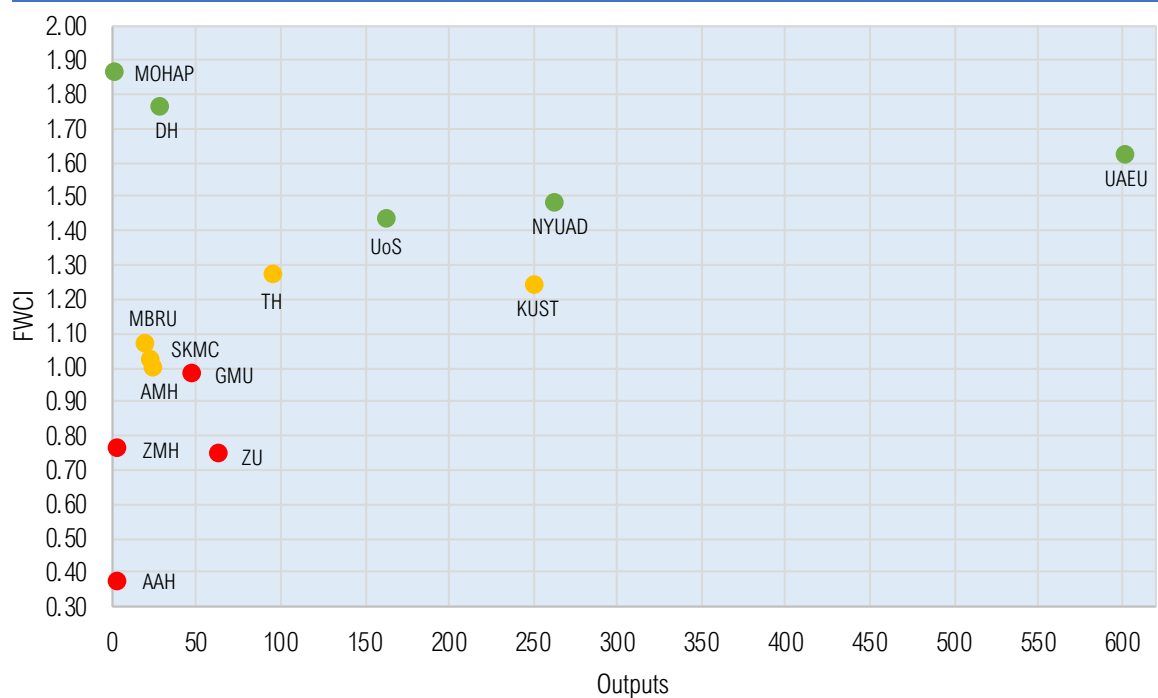


FIGURE 17. UAE clinical trials with international partner sites. The top 10 co-hosting countries are listed for the 78 multinational trials hosted in the UAE. Numbers of co-hosted trials in the Middle East region are also shown as a geographical schematic. A list of the top 10 industry sponsors for all trials hosted in the UAE are also shown. Data source: *ClinicalTrials.gov*, 6 August 2019. See Appendix A17 and A18.

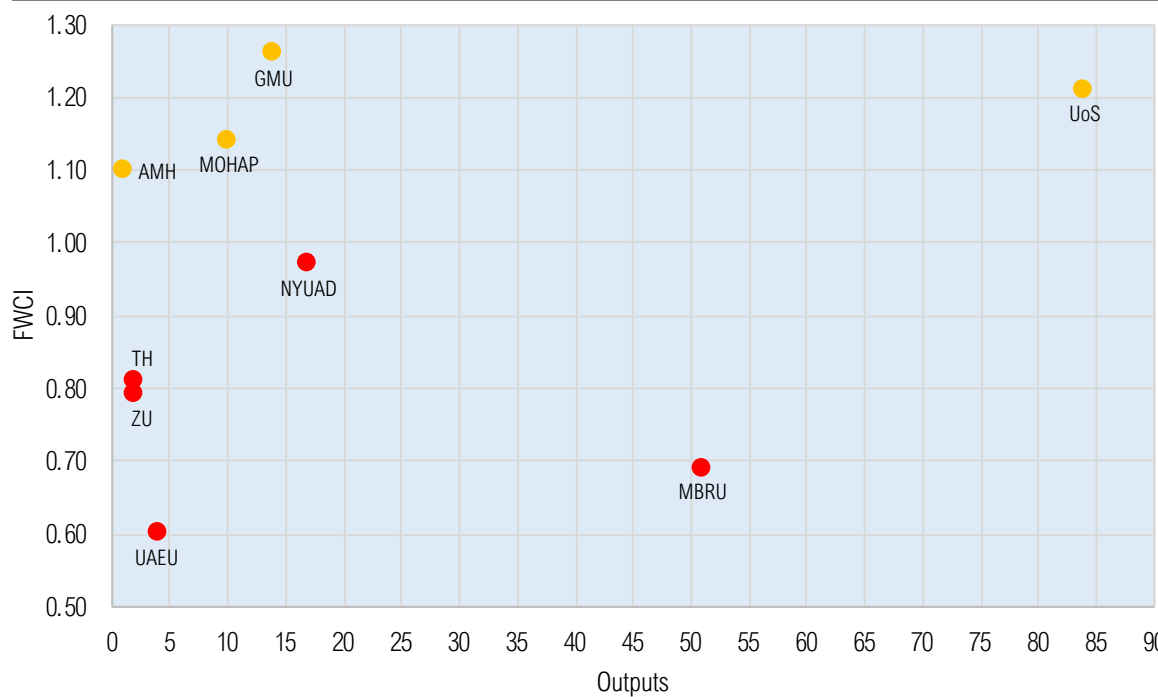
FIGURE 18 (following pages). Publication outputs and FWCI data for 14 selected institutions, 2014 to 2018. For each discipline, the number of outputs for each institution were plotted against their corresponding FWCI. FWCI ranges are represented by the colours described in Figure 3. The acronyms used for each institution are listed in Figure 4. Top 3 institutions by number of outputs and by FWCI are also shown. Data source: *SciVal*®, 24 July 2019. See Appendix A15.

BIOCHEMISTRY, GENETICS AND MOLECULAR BIOLOGY



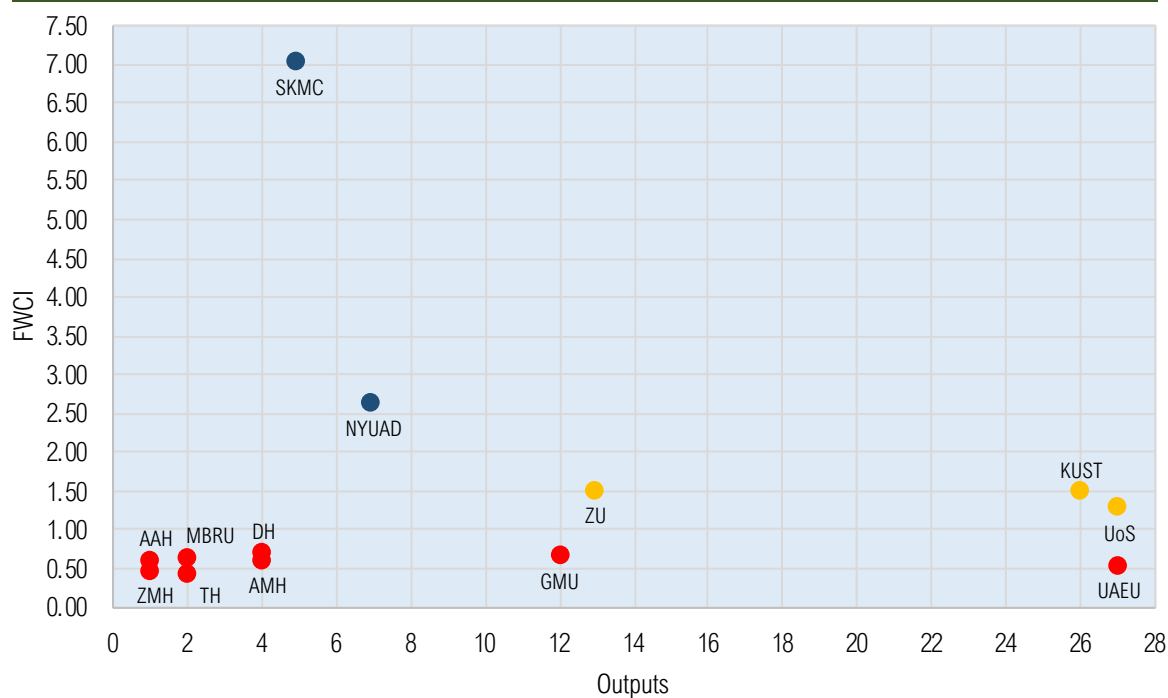
Top 3 by outputs	UAE University	603	Top 3 by FWCI	MoHaP	1.86
	NYU Abu Dhabi	264		Dubai Hospital	1.76
	Khalifa University	250		UAE University	1.62

DENTISTRY



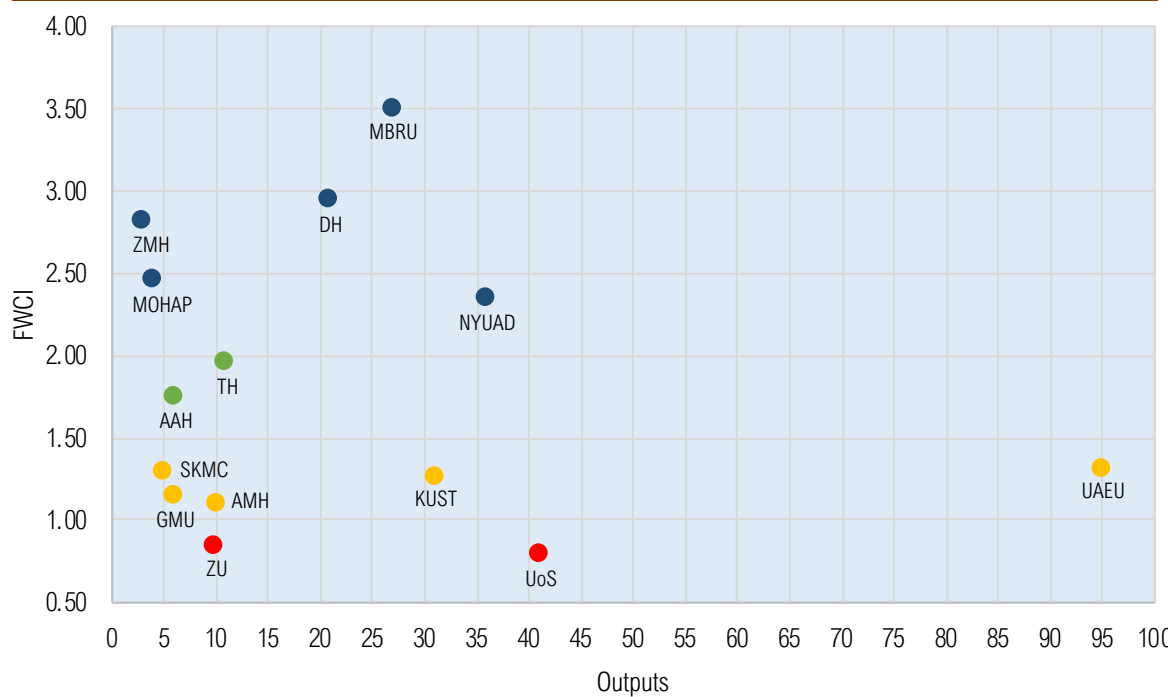
Top 3 by outputs	University of Sharjah	84	Top 3 by FWCI	Gulf Medical Uni	1.26
	MBRU	51		University of Sharjah	1.21
	NYU Abu Dhabi	17		MoHaP	1.14

HEALTH PROFESSIONS



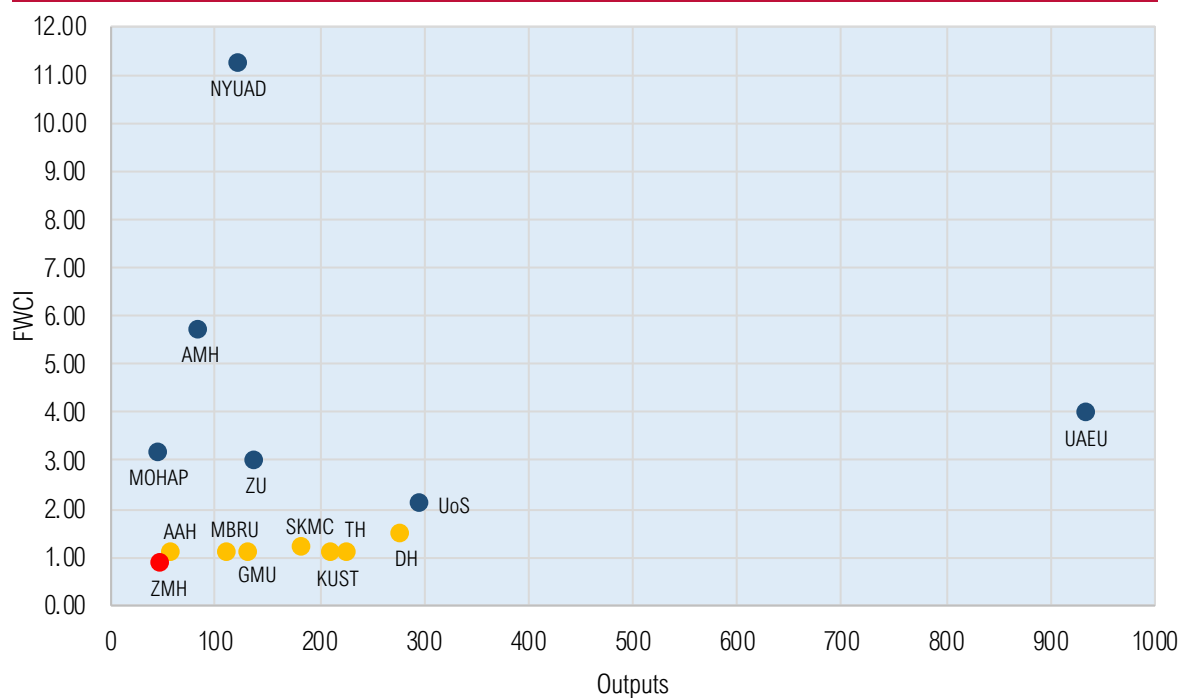
Top 3 by outputs	UAEU, Uni Sharjah	27	Top 3 by FWCI	Sheikh Khalifa MC	7.00
	Khalifa University ST	26		NYU Abu Dhabi	2.60
	Zayed University	13		Zayed University	1.49

IMMUNOLOGY AND MICROBIOLOGY



Top 3 by outputs	UAE University	95	Top 3 by FWCI	MBRU	3.50
	University of Sharjah	41		Dubai Hospital	2.94
	NYU Abu Dhabi	36		Zayed Military Hosp	2.82

MEDICINE



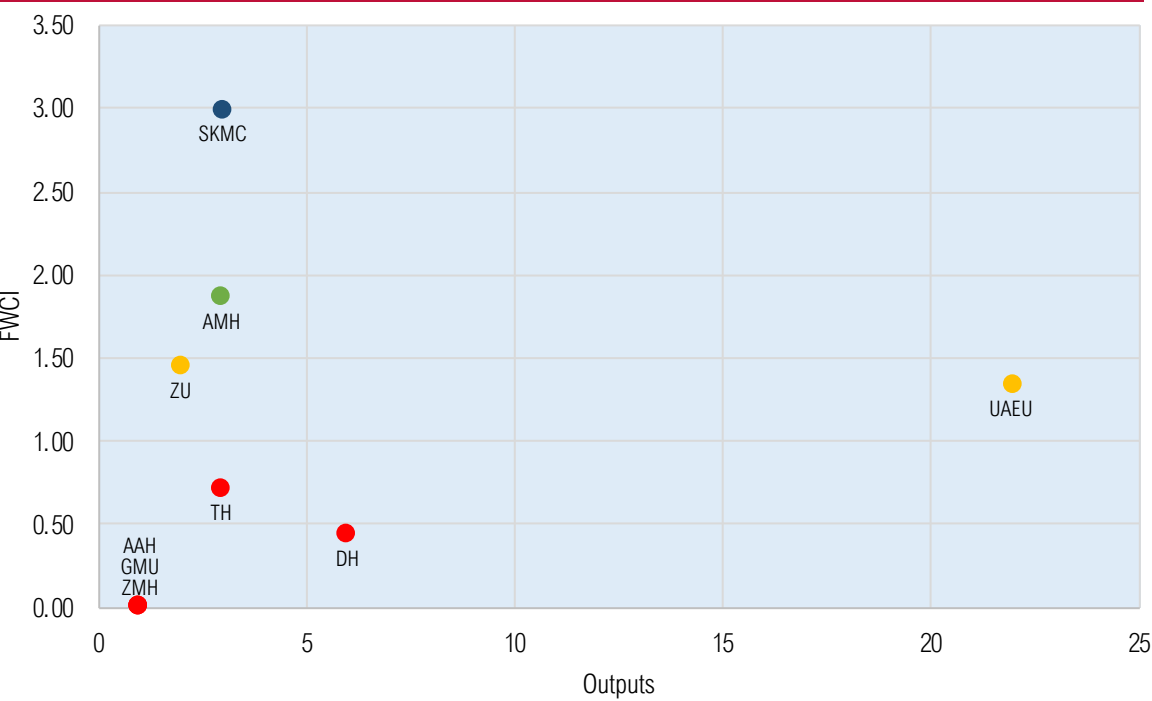
Top 3 by outputs	UAE University	933	Top 3 by FWCI	NYU Abu Dhabi	11.21
	University of Sharjah	296		Al Mafraq Hospital	5.67
	Dubai Hospital	278		UAE University	3.94

MEDICINE – CARDIOLOGY AND CARDIOVASCULAR MEDICINE



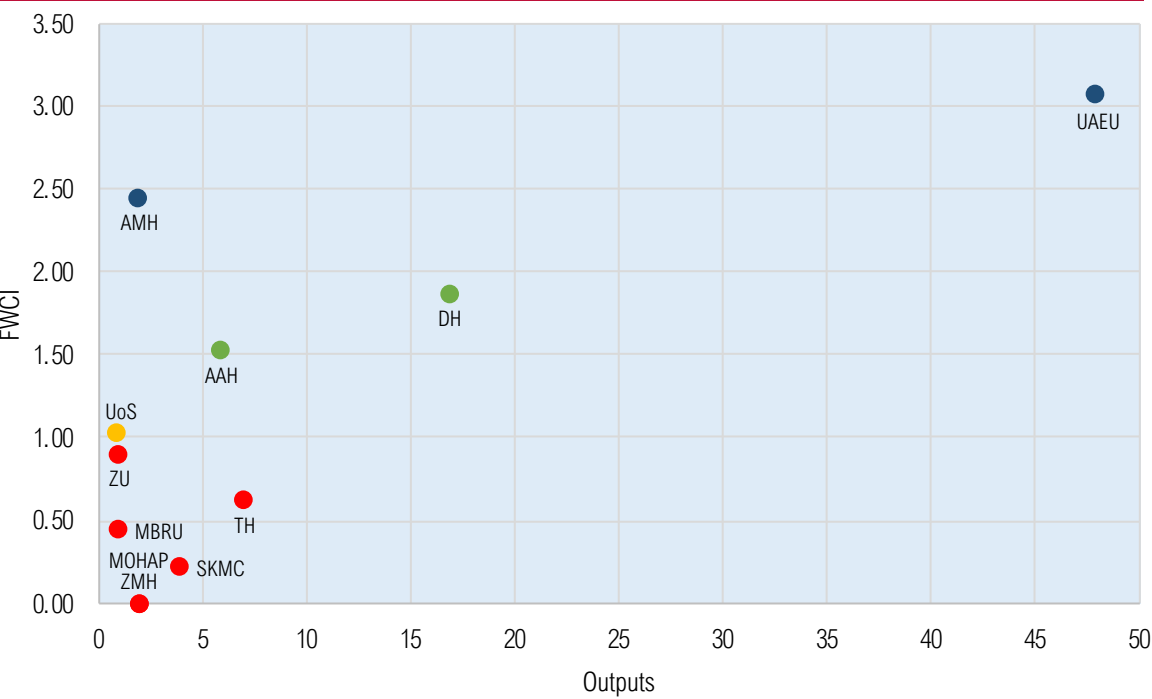
Top 3 by outputs	UAE University	51	Top 3 by FWCI	MoHaP	4.25
	Dubai Hospital	39		Dubai Hospital	2.13
	Sheikh Khalifa MC	31		UAE University	1.52

MEDICINE – CRITICAL CARE AND INTENSIVE CARE MEDICINE



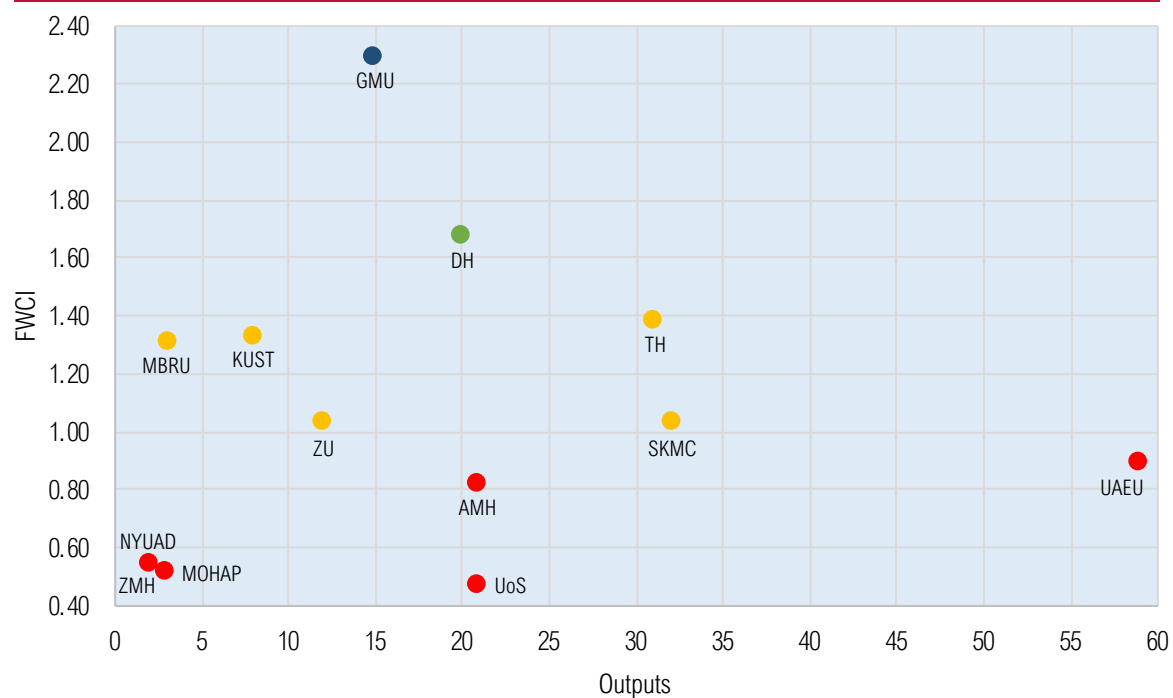
Top 3 by outputs	UAE University	22	Top 3 by FWCI	Sheikh Khalifa MC	2.99
	Dubai Hospital	6		Al Mafrq Hospital	1.86
	Al Mafrq Hospital	3		Zayed University	1.45

MEDICINE – EMERGENCY MEDICINE



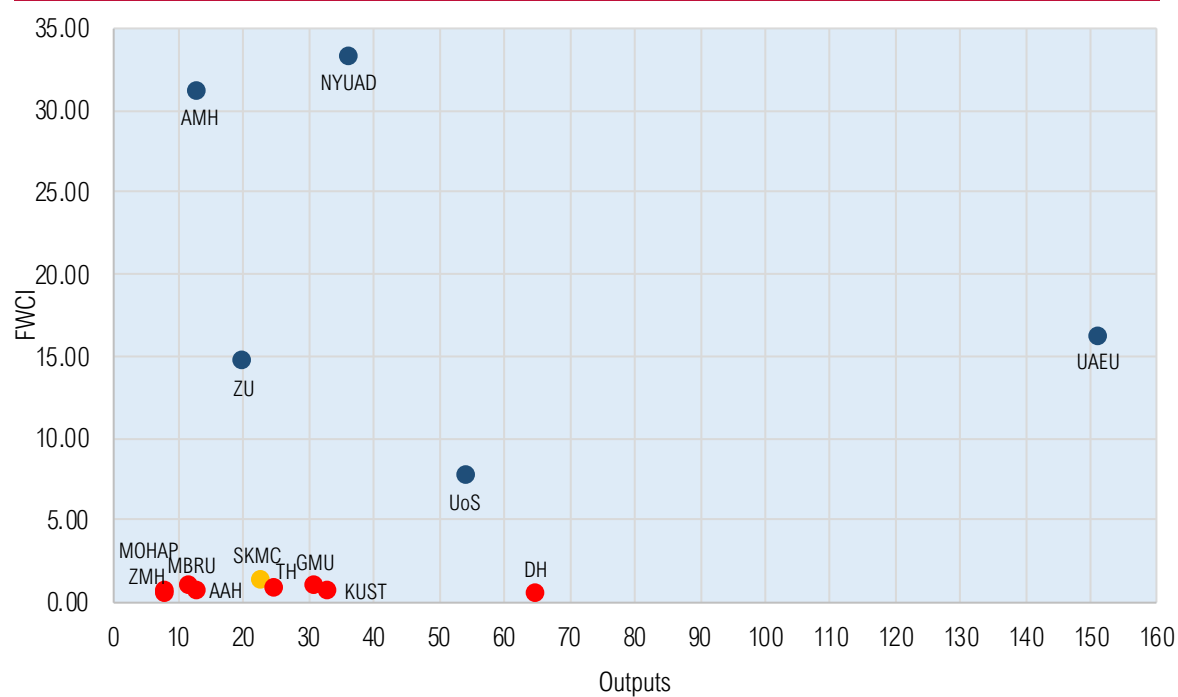
Top 3 by outputs	UAE University	48	Top 3 by FWCI	UAE University	3.06
	Dubai Hospital	17		Al Mafrq Hospital	2.44
	Tawam Hospital	7		Dubai Hospital	1.86

MEDICINE – ENDOCRINOLOGY, DIABETES AND METABOLISM



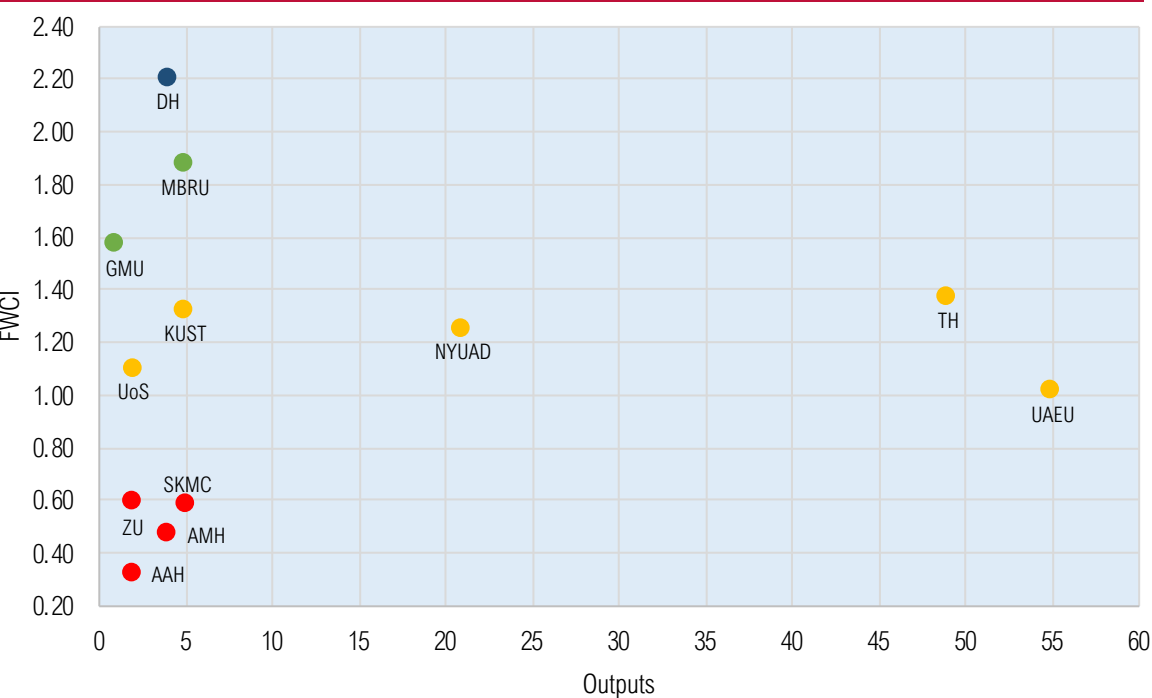
Top 3 by outputs	UAE University	59	Top 3 by FWCI	Gulf Medical Uni	2.29
	Sheikh Khalifa MC	32		Dubai Hospital	1.87
	Tawam Hospital	31		Tawam Hospital	1.38

MEDICINE – GENERAL MEDICINE



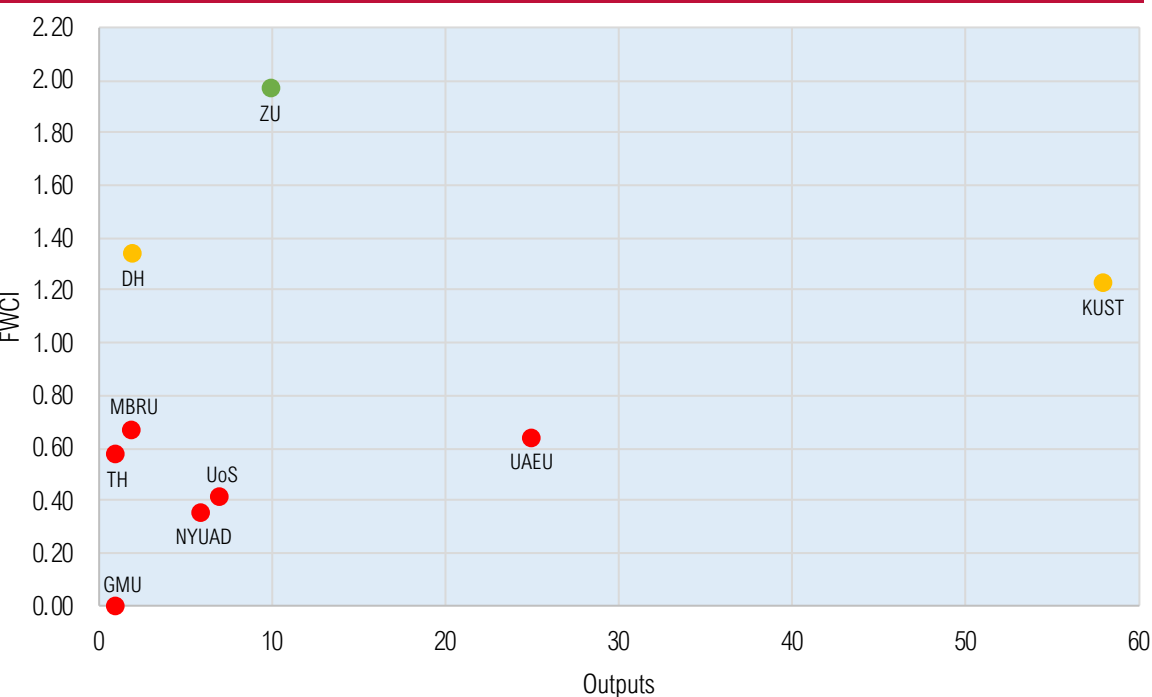
Top 3 by outputs	UAE University	48	Top 3 by FWCI	NYU Abu Dhabi	33.19
	Dubai Hospital	17		Al Mafraq Hospital	31.02
	University of Sharjah	7		UAE University	16.14

MEDICINE – GENETICS (CLINICAL)



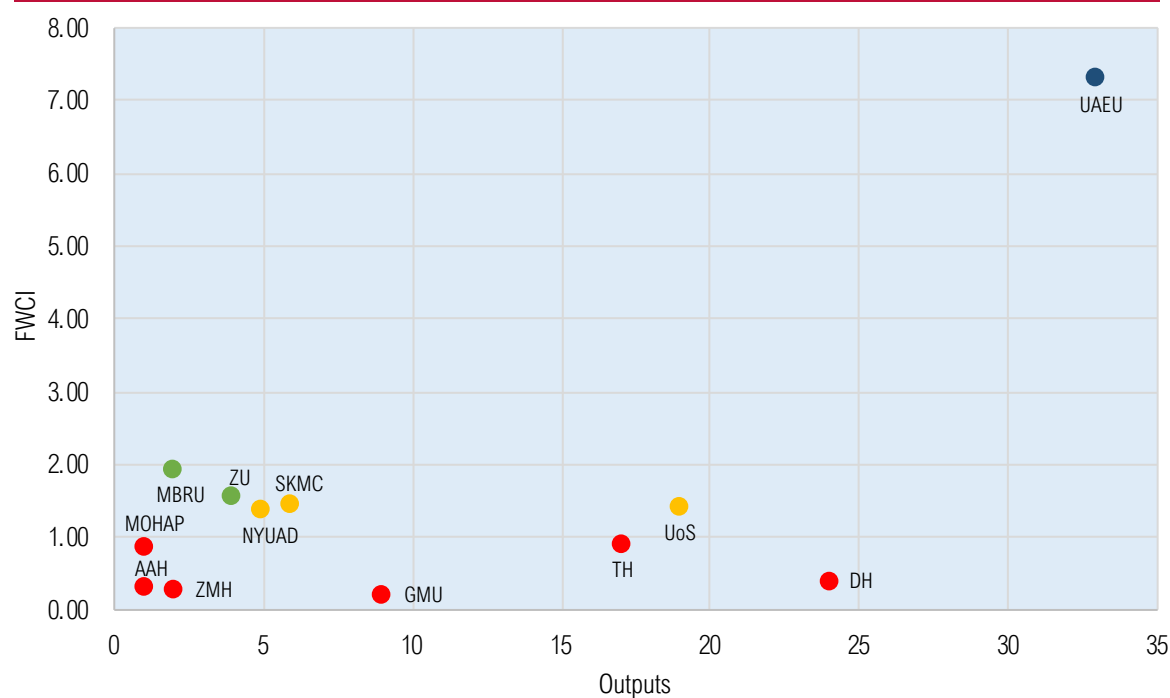
Top 3 by outputs	UAE University	55	Top 3 by FWCI	Dubai Hospital	2.20
	Tawam Hospital	49		MBRU	1.88
	NYU Abu Dhabi	21		Gulf Medical Uni	1.57

MEDICINE – HEALTH INFORMATICS



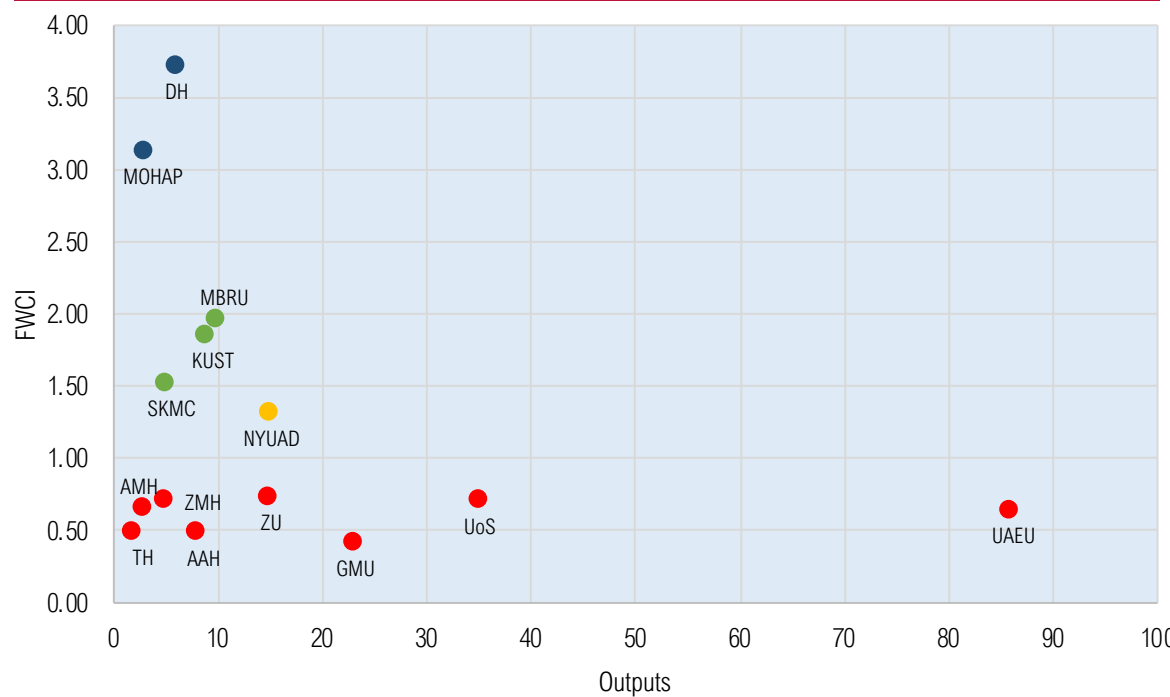
Top 3 by outputs	Khalifa University ST	58	Top 3 by FWCI	Zayed University	1.96
	UAE University	35		Dubai Hospital	1.33
	Zayed University	10		Khalifa University ST	1.22

MEDICINE – ONCOLOGY



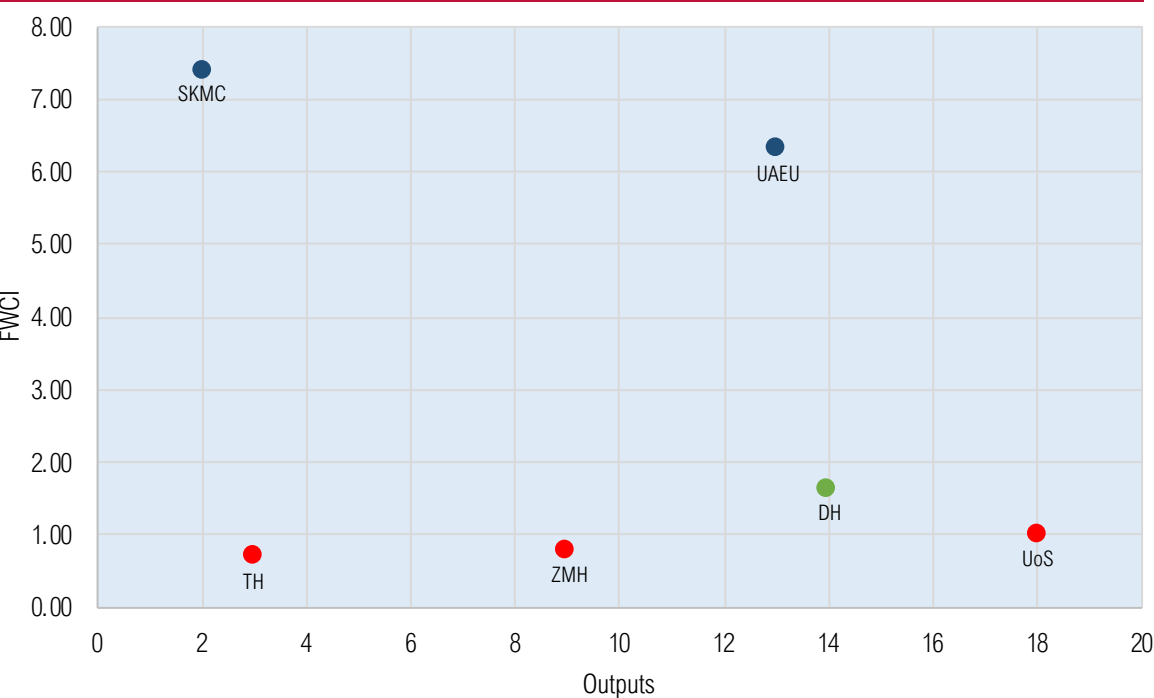
Top 3 by outputs	UAE University	33	Top 3 by FWCI	UAE University	7.27
	Dubai Hospital	24		MBRU	1.89
	University of Sharjah	19		Zayed University	1.52

MEDICINE – PUBLIC HEALTH, ENVIRONMENTAL AND OCCUPATIONAL HEALTH



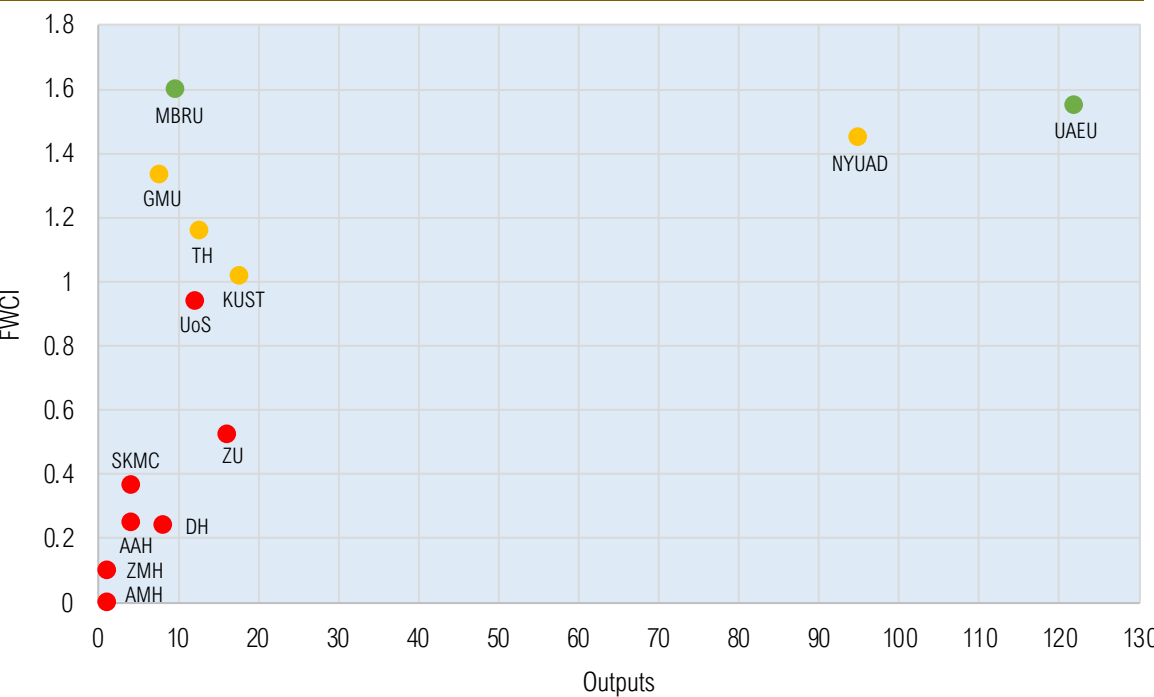
Top 3 by outputs	UAE University	86	Top 3 by FWCI	Dubai Hospital	3.71
	University of Sharjah	35		MoHaP	3.12
	Gulf Medical Uni	23		MBRU	1.98

MEDICINE – PULOMONARY AND RESPIRATORY MEDICINE



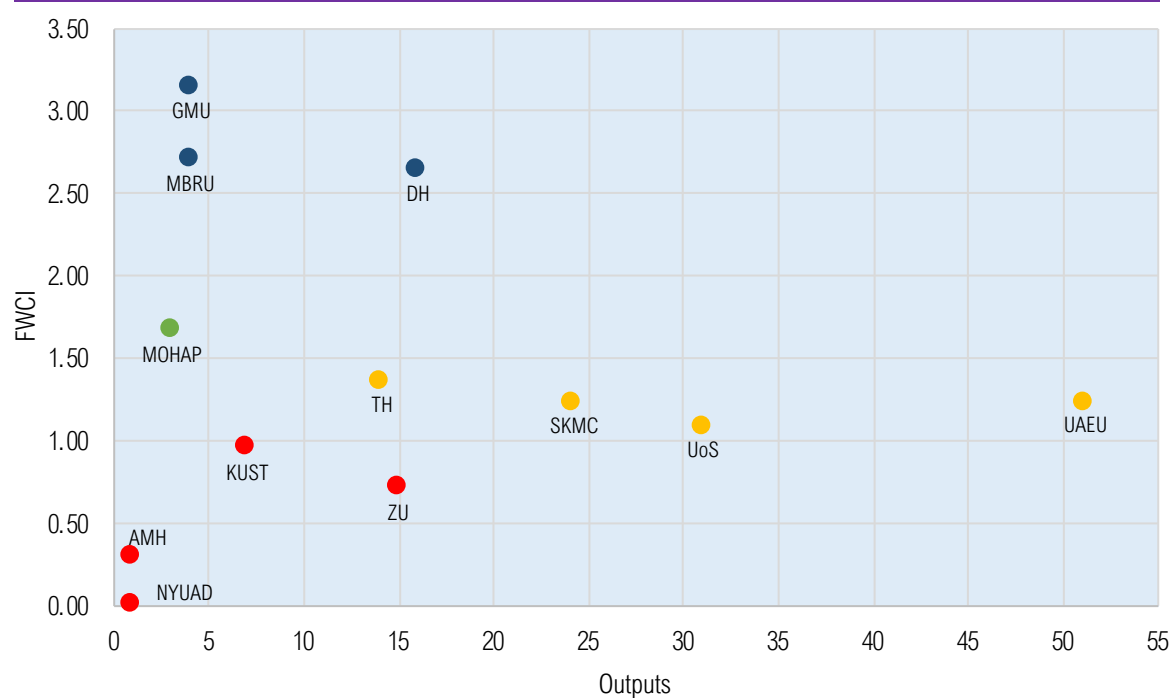
Top 3 by outputs	University of Sharjah	18	Top 3 by FWCI	Sheikh Khalifa MC	7.42
	Dubai Hospital	14		UAE University	6.34
	UAE University	13		Dubai Hospital	1.63

NEUROSCIENCE



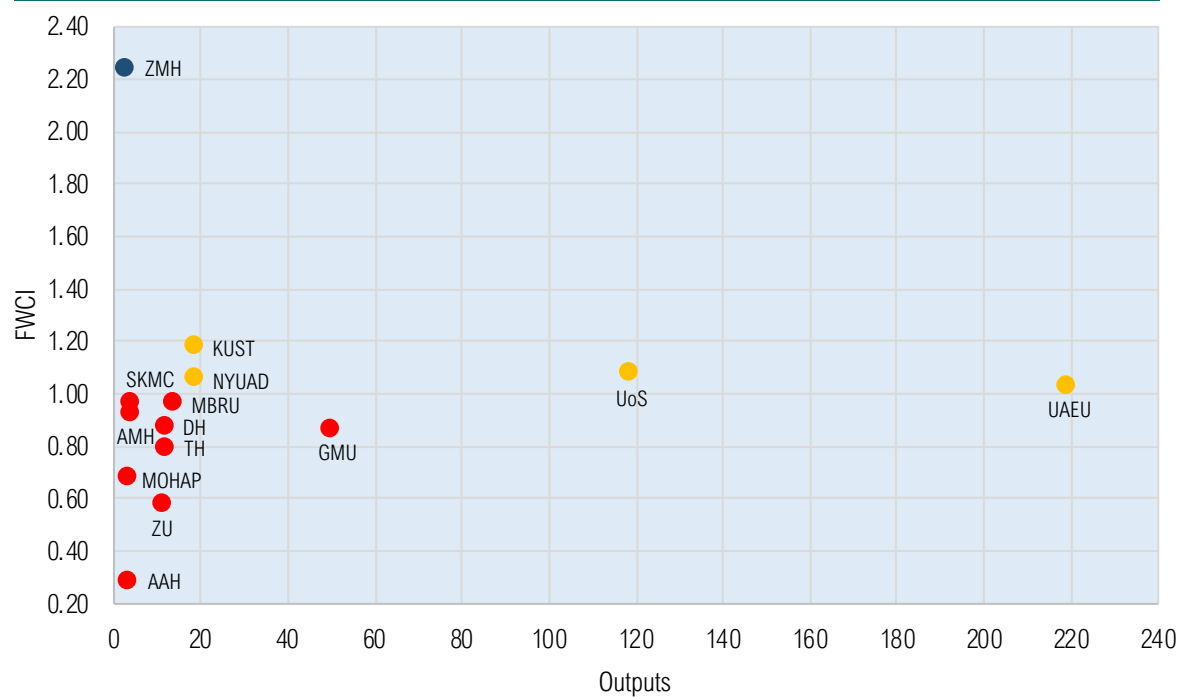
Top 3 by outputs	UAE University	122	Top 3 by FWCI	MBRU	1.59
	NYU Abu Dhabi	95		UAE University	1.54
	Khalifa University ST	18		NYU Abu Dhabi	1.44

NURSING

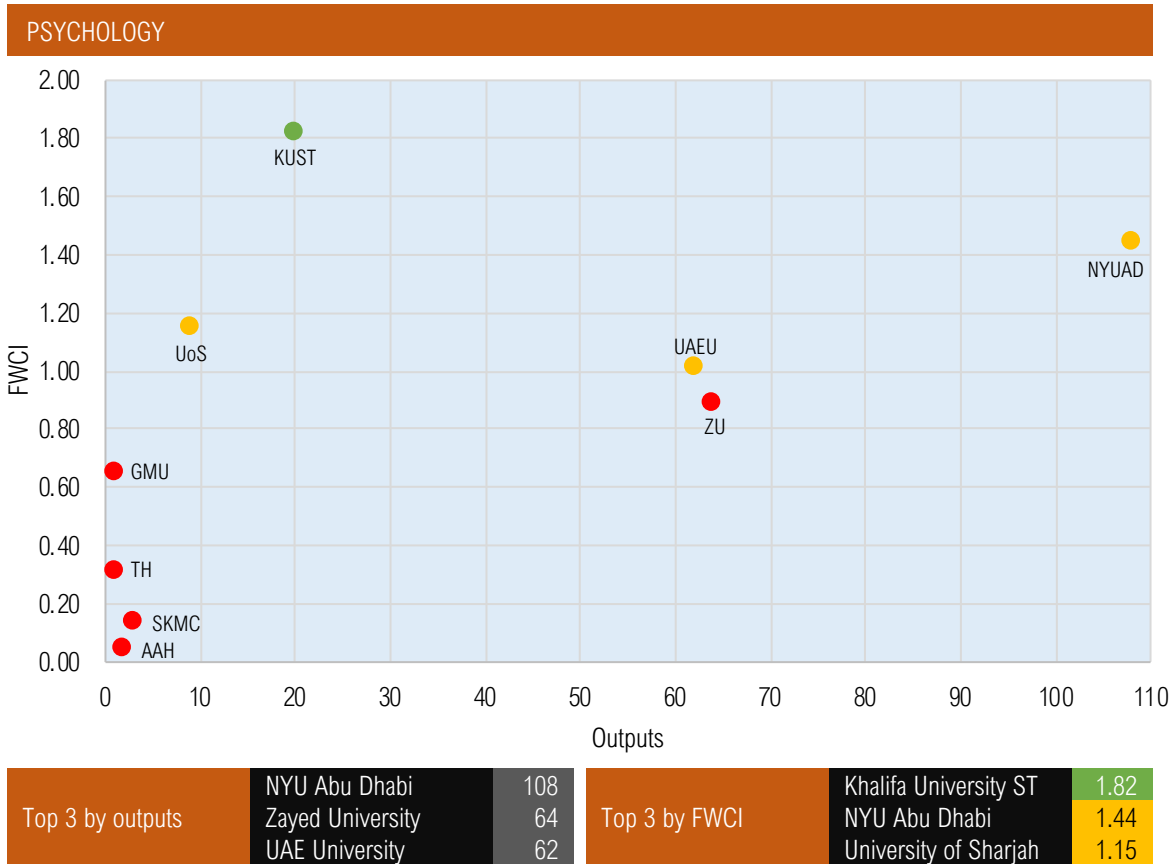


Top 3 by outputs	UAE University	51	Top 3 by FWCI	Gulf Medical Uni	3.14
	University of Sharjah	31		MBRU	2.71
	Sheikh Khalifa MC	24		Dubai Hospital	2.65

PHARMACOLOGY, TOXICOLOGY AND PHARMACEUTICS



Top 3 by outputs	UAE University	219	Top 3 by FWCI	Zayed University	2.34
	University of Sharjah	119		Khalifa University ST	1.18
	Gulf Medical Uni	50		University of Sharjah	1.08



Mapping institutional research performance against national health priorities

The data can be explored to identify possible foci of research excellence in the context of the UAEs health research priority areas:

- *Cancer* - data for the oncology discipline shows UAE University as a clear leader in this discipline, having the highest number of outputs and highest FWCI.
- *Cardiovascular, Diabetes and Obesity* – for the cardiology and cardiovascular medicine discipline, UAE University and Dubai Hospital both show a balance of quantity and quality. For the endocrinology, diabetes and metabolism discipline, there is no clear standout with UAE University having the most outputs but a relatively low FWCI. Gulf Medical University shows the highest FWCI with 15 outputs; Tawam Hospital (31 outputs) and Dubai Hospital (20 outputs) also score well for quality.
- *Dental and Oral Health* – in the discipline of dentistry, University of Sharjah is on balance the best performer being ranked first for outputs and close second in FWCI.
- *Environmental Health and Emergencies* – for public, environmental and occupational health, there is no clear frontrunner as the top three for outputs all rank below the average for the discipline. These institutions, particularly UAE University as the dominant source for outputs, stand to mutually benefit from greater collaboration with those that rate high for quality.
- *Genetics and Personalised Medicine* – in the clinical genetics discipline, Tawam Hospital has a good mix of quantity (ranking second with 49 outputs) and quality. Both Tawam Hospital and UAE University can benefit from greater collaboration with the institutions with the highest quality scores, such as Dubai Hospital, Mohammed bin Rashid University and Gulf Medical University. The health informatics discipline can also feed this priority; Khalifa University and Zayed University can explore closer ties in this discipline to mutual benefit.
- *Health Systems* – the health informatics discipline is probably the best fit for this priority, as discussed above for genetics and personalised medicine.

- *Infectious Diseases* – for the immunology and microbiology discipline, UAE University has the most outputs but ranks below other institutions on the quality score. NYU Abu Dhabi shows a more balanced performance that should be explored further. Mohammed Bin Rashid University showed the highest quality score and ranked fourth for outputs, so may be an emerging research leader.
- *Neuroscience and Mental Health* – in the neuroscience discipline, UAE University and NYU Abu Dhabi both have a good balance of output and quality. Mohammed Bin Rashid University ranks highest for quality with a small number of outputs. In psychology, NYU Abu Dhabi again shows a good balance of output and quality, while Khalifa University ranks first for quality.
- *Respiratory Disease, Smoking and Tobacco Use* – for the pulmonary and respiratory medicine discipline, UAE University shows a good balance of quantity and quality, with Dubai Hospital also performing well. The public health discipline also applied to this priority, where there are no clear leaders in the discipline. Both of these disciplines had relatively small numbers of outputs and may be an area for building greater research capacity.
- *Road Safety and Trauma* – UAE University is a clear leader in the emergency medicine discipline. For critical care and intensive care medicine, UAE University is also the main source of outputs but in terms of quality may benefit from greater collaboration with Sheikh Khalifa Medical City and Al Mafraq Hospital, who despite a small number of publications show good quality scores.
- *Women and Children's Health* – this priority was not specifically examined through the lens of disciplines as it can encompass a broad range of subject areas. The data on the large number of sub-disciplines presented in Figure 14 can give an overall picture. Pediatrics (223 outputs, FWCI 0.79), reproductive medicine (45 outputs, FWCI 1.36), and pediatric nursing (16 outputs, FWCI 0.71) indicate the overall field is not well represented by outputs or quality and may need some capacity building. The relatively large proportion of clinical trial activity in the UAE devoted to female reproduction (Figure 12) indicates this as an important area of activity and should be examined further.

CONCLUDING REMARKS

The overarching purpose of this study is to present a snapshot of the current state of health research in the UAE. The bibliometric data presented here provides a rich source of information on research activity and quality at a national and institutional level. However, the interpretation of the data has limitations and is best used as a starting point to explore interesting observations on what the UAE does well, where it needs to build greater capacity, and which institutions can provide leadership in areas of strategic priority or research excellence – with the long-term aim of excellent research that directly addresses national health priorities.

The development of policies and initiatives to address national health priorities through research cannot be informed by data alone. This is particularly true when it comes to mapping institutional research intensity and quality against health priority areas. The data must be complemented with a strategic examination of existing and potential research partnerships, exploring questions such as:

- How can the research talent at institutions with high numbers of outputs but low-quality scores be better supported, equipped or trained to deliver research that is internationally recognised? How could strategic collaborations deliver better quality?
- What is the underlying reason for high quality outputs coming from institutions that produce a low number of publications? Is it due to a small number of high-quality projects? Is it due to collaborations with a high-quality partner? What is the nature of this collaboration; is the UAE researcher playing an active or leading role in the research?

One possible outcome of this study is to use the data to energise discussion amongst the health research community and encourage stakeholder engagement. The data can inform the establishment of focus groups themed by the health priorities. Membership of these groups can be a mix of the institutions that contribute the most outputs – such as the top producers listed in this study – and the institutions that are producing quality in low numbers. Engaging directly with the researchers will provide a more holistic view of the strengths and opportunities in the UAEs health research ecosystem.

It is also important to recognise that bibliometric data is best reserved for measuring research performance and the state of the health research ecosystem. Measuring how the UAE is tracking on its public health priorities will rely more on measures of research translation, including population health statistics, major leaps in technology or practice, and economic impact.

One of the objectives of this study is to demonstrate the potential of using bibliometric data to assess the state of health research in the UAE. This will inform discussion about the need, purpose and design of a national health research benchmarking exercise. MoHaP can play a central role in designing and coordinating national bibliometric surveys. Once established, national surveys can be carried out regularly, perhaps every two years. These government-led surveys could not only cover research outputs but also include research funding and workforce data as measures of activity and capacity.

Whichever model is considered for a national bibliometric exercise, it is important to ensure that its design and purpose offers clear benefit to all of the UAEs health research ecosystem and full engagement by all its participants.

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A1. NATIONAL HEALTH PRIORITIES

VISION 2021 NATIONAL AGENDA

UNITED IN RESPONSIBILITY

confident and socially responsible Emiratis;
cohesive and prosperous families; strong and
active communities; vibrant culture

UNITED IN DESTINY

upholding the legacy of the Nation's founding
fathers; safe and secure nation; enhanced
international standing

UNITED IN KNOWLEDGE

harness the full potential of human capital;
sustainable and diversified economy; knowledge-
based and highly productive economy

UNITED IN PROSPERITY

long and healthy lives; first rate education; well-
rounded lifestyles; well preserved natural
environment

First-rate education system
World class healthcare
Safe public and fair judiciary
Sustainable environment and infrastructure
Competitive knowledge economy
Cohesive society and preserved identity

NATIONAL AND LOCAL HEALTH PRIORITIES

	National Agenda	Department of Health Abu Dhabi	Dubai Health Authority
Cancer	●	●	●
Cardiovascular, Diabetes and Obesity	●	●	●
Dental and Oral Health		●	●
Environmental Health and Emergencies	●		●
Genetics and Personalised Medicine		●	
Health Systems	●	●	●
Infectious Diseases	●	●	
Neuroscience and Mental Health		●	●
Respiratory Disease, Smoking and Tobacco Use	●	●	●
Road Safety and Trauma		●	●
Women and Children's Health		●	

A2. UNIVERSITY RANKING SYSTEM METHODOLOGY

Ranking System	Weighting for Research Outputs	Description	Data Source
Academic Ranking of World Universities	60%	<ul style="list-style-type: none"> • Number of highly cited researchers (20%) • Number of papers published in Nature and Science (20%) • Number of publications (articles only) (20%) 	Clarivate Analytics
QS World University Rankings	20%	<ul style="list-style-type: none"> • Citations per institution (20%) 	Elsevier Scopus
Times Higher Education World University Rankings	38.5%	<ul style="list-style-type: none"> • Research influence – normalised citations (30%) • Research productivity – number of papers published in journals indexed by Scopus per academic staff (6%) • International outlook - proportion of internationally co-authored research papers (2.5%) 	Elsevier Scopus
US News and World Report Best Global Universities	75%	<ul style="list-style-type: none"> • Number of publications (journal articles) (10%) • Number of books (2.5%) • Number of conference proceedings (2.5%) • Normalised citation impact (10%) • Total citations (7.5%) • Number of publications among the top 10% most cited (12.5%) • Percentage of total publication among the top 10% most cited (10%) • International Collaboration (5%) • Percentage of total publications with international collaboration (5%) • Number of highly cited papers in the Top 1% most cited (5%) • Percentage of total publication among Top 1% most highly cited papers (5%) 	Clarivate Analytics

A3. HEALTH RESEARCH PUBLICATIONS, 2014-2018 (*PubMed*, 17 October 2019)

State	2014	2015	2016	2017	2018	Total	% Growth
Argentina	3934	4458	4863	5106	5577	23938	41.8%
Australia	32213	37311	41440	43233	46588	200785	44.6%
Bahrain	112	120	195	174	186	787	66.1%
Brazil	20195	22633	25100	26623	29326	123877	45.2%
Canada	35451	40599	44718	47170	50185	218123	41.6%
China	106898	126432	141680	156478	178455	709943	66.9%
France	35609	41152	45094	46613	47379	215847	33.1%
Germany	51054	58091	63411	66037	68000	306593	33.2%
India	34801	36566	38103	37919	38448	185837	10.5%
Indonesia	644	930	1191	1334	2088	6187	224.2%
Italy	38531	42879	47013	49023	52339	229785	35.8%
Japan	46217	49810	52643	55639	58135	262444	25.8%
Kuwait	380	435	495	553	614	2477	61.6%
Mexico	7133	8211	9154	9821	10404	44723	45.9%
Oman	413	468	520	528	589	2518	42.6%
Qatar	683	1005	1264	1354	1455	5761	113.0%
Russian Federation	4798	7439	8923	9813	10898	41871	127.1%
Saudi Arabia	4495	5820	6909	7264	7990	32478	77.8%
South Africa	4537	5650	6717	7157	8073	32134	77.9%
South Korea	15065	17422	18641	20384	21838	93350	45.0%
Turkey	14950	16856	17660	14916	15637	80019	4.6%
United Arab Emirates	678	955	1156	1378	1747	5914	157.7%
United Kingdom	64470	75507	82996	85048	89953	397974	39.5%
United States	172862	192740	209104	219589	229274	1023569	32.6%
All World	1042397	1090391	1113933	1122425	1173021	5542167	12.5%
Average GCC States							86.5%
Average G20 States							55.4%

A4. UAE OUTPUTS BY ASJC SUBJECT, 2014-2018 (*SciVal*®, 20 September 2019)

All Publications	27580
Engineering	7845
Computer Science	5455
Medicine	4504
Energy	2802
Social Sciences	2733
Physics and Astronomy	2667
Materials Science	2611
Mathematics	2398
Earth and Planetary Sciences	2318
Business, Management and Accounting	2014
Biochemistry, Genetics and Molecular Biology	1999
Environmental Science	1754
Chemistry	1645
Chemical Engineering	1343
Agricultural and Biological Sciences	1120
Economics, Econometrics and Finance	1090
Arts and Humanities	799
Decision Sciences	749
Pharmacy, Toxicology and Pharmaceuticals	691
Psychology	420
Immunology and Microbiology	396
Neuroscience	383
Multidisciplinary	321
Dentistry	316
Nursing	250
Health Professions	195
Veterinary	114

A5. UAE HEALTH RESEARCH PUBLICATIONS BY ASJC SUBJECT (SciVal®, 20 September 2019)

	2014	2015	2016	2017	2018	Total	% growth
All Publications (all disciplines)	3743	4793	5493	6374	7177	27580	91.7%
Biochemistry, Genetics and Molecular Biology	290	327	355	489	538	1999	85.5%
Dentistry	37	49	50	80	100	316	170.3%
Health Professions	26	41	40	40	48	195	84.6%
Immunology and Microbiology	65	51	82	100	98	396	50.8%
Medicine	569	771	903	1049	1212	4504	113.0%
Neuroscience	68	66	71	79	99	383	45.6%
Nursing	35	43	54	44	74	250	111.4%
Pharmacology, Toxicology and Pharmaceuticals	85	104	161	158	183	691	115.3%
Psychology	52	88	78	92	110	420	111.5%

A6. SUBJECT-WEIGHTED RESEARCH ACTIVITY, 2014 – 2018 (SciVal®, 20 September 2019)

ASJC Subject	UAE	GCC State Average	G20 State Average	World
Biochemistry, Genetics and Molecular Biology	7.2%	8.8%	11.6%	11.2%
Dentistry	1.1%	1.0%	0.7%	0.6%
Health Professions	0.7%	1.4%	1.1%	1.2%
Immunology and Microbiology	1.4%	2.3%	3.1%	2.7%
Medicine	16.3%	25.0%	22.0%	25.4%
Cardiology and Cardiovascular Medicine	1.3%	1.4%	1.3%	1.6%
Critical Care and Intensive Medicine	0.3%	0.3%	0.3%	0.3%
Emergency Medicine	0.4%	0.3%	0.3%	0.3%
Endocrinology, Diabetes, and Metabolism	1.0%	1.1%	0.9%	0.7%
General Medicine	2.8%	7.2%	3.7%	4.8%
Genetics (Clinical)	0.6%	0.6%	0.5%	0.3%
Health Informatics	0.6%	0.5%	0.5%	0.4%
Oncology	0.6%	1.0%	1.9%	1.8%
Public Health, Environmental and Occupational Health	1.1%	1.7%	2.1%	1.6%
Pulmonary and Respiratory Medicine	0.4%	0.3%	0.7%	0.6%
Neuroscience	1.4%	1.4%	2.3%	2.4%
Nursing	0.9%	1.2%	1.4%	1.7%
Pharmacology, Toxicology and Pharmaceuticals	2.5%	3.4%	3.0%	3.2%
Psychology	1.5%	1.1%	1.7%	2.4%

A7. POPULATION-WEIGHTED RESEARCH ACTIVITY, 2014 – 2018 (SciVal®, 20 September 2019)

ASJC Subject	UAE	GCC State Average	G20 State Average	World
Biochemistry, Genetics and Molecular Biology	0.94	1.26	3.47	1.00
Dentistry	3.04	2.43	3.12	1.00
Health Professions	0.87	2.65	4.04	1.00
Immunology and Microbiology	0.78	1.30	3.70	1.00
Medicine	0.94	1.47	3.44	1.00
Cardiology and Cardiovascular Medicine	1.18	1.39	3.78	1.00
Critical Care and Intensive Medicine	1.07	1.37	3.90	1.00
Emergency Medicine	1.88	2.04	3.68	1.00
Endocrinology, Diabetes, and Metabolism	2.10	2.54	4.06	1.00
General Medicine	0.84	1.83	2.48	1.00
Genetics (Clinical)	2.61	2.68	4.62	1.00
Health Informatics	2.22	2.06	3.31	1.00
Oncology	0.48	0.92	3.37	1.00
Public Health, Environmental and Occupational Health	0.94	1.45	3.72	1.00
Pulmonary and Respiratory Medicine	0.91	0.76	4.14	1.00
Neuroscience	0.83	0.98	4.20	1.00
Nursing	0.79	1.16	3.65	1.00
Pharmacology, Toxicology and Pharmaceuticals	1.16	1.65	2.70	1.00
Psychology	0.93	0.67	3.95	1.00

A8. FIELD-WEIGHTED CITATION IMPACT, 2014 – 2018 (SciVal®, 20 September 2019)

ASJC Subject	UAE	GCC State Average	G20 State Average	World
Biochemistry, Genetics and Molecular Biology	1.22	1.33	1.17	1.10
Dentistry	0.88	0.88	1.04	0.97
Health Professions	1.26	1.20	1.08	1.04
Immunology and Microbiology	1.47	3.16	1.18	1.08
Medicine	2.21	2.60	1.37	1.00
Cardiology and Cardiovascular Medicine	1.38	1.02	1.29	1.04
Critical Care and Intensive Medicine	1.06	0.77	1.39	1.04
Emergency Medicine	2.22	1.54	1.30	0.91
Endocrinology, Diabetes, and Metabolism	1.32	1.24	1.19	1.11
General Medicine	7.03	6.20	2.76	0.98
Genetics (Clinical)	1.09	1.12	1.16	1.03
Health Informatics	0.96	0.83	0.95	0.93
Oncology	1.54	1.68	1.33	1.04
Public Health, Environmental and Occupational Health	0.95	1.19	0.99	0.97
Pulmonary and Respiratory Medicine	2.08	1.31	1.44	1.02
Neuroscience	1.24	1.21	1.16	1.11
Nursing	1.24	1.45	1.10	1.00
Pharmacology, Toxicology and Pharmaceutics	0.91	1.06	1.05	0.97
Psychology	1.31	1.18	1.06	1.11

A9. OUTPUTS IN WORLD TOP 10% CITED, 2014 – 2018 (SciVal®, 20 September 2019)

ASJC Subject	UAE	GCC State Average	G20 State Average	World
Biochemistry, Genetics and Molecular Biology	20.1%	19.6%	18.8%	18.4%
Dentistry	4.4%	3.4%	6.9%	6.3%
Health Professions	7.2%	11.0%	9.0%	8.1%
Immunology and Microbiology	24.2%	20.9%	18.4%	17.8%
Medicine	12.8%	12.5%	12.6%	10.5%
Cardiology and Cardiovascular Medicine	15.1%	13.4%	15.8%	12.5%
Critical Care and Intensive Medicine	15.7%	7.7%	16.3%	12.4%
Emergency Medicine	24.5%	14.7%	8.5%	5.1%
Endocrinology, Diabetes, and Metabolism	20.4%	19.2%	18.1%	17.3%
General Medicine	8.9%	7.9%	7.8%	4.5%
Genetics (Clinical)	24.6%	20.7%	21.8%	18.6%
Health Informatics	3.5%	5.6%	7.5%	6.9%
Oncology	18.0%	13.7%	19.9%	17.8%
Public Health, Environmental and Occupational Health	9.0%	10.5%	9.7%	8.9%
Pulmonary and Respiratory Medicine	21.1%	14.9%	15.6%	12.0%
Neuroscience	25.4%	23.1%	18.6%	18.7%
Nursing	12.0%	11.3%	10.4%	8.0%
Pharmacology, Toxicology and Pharmaceutics	14.8%	14.4%	14.2%	12.9%
Psychology	12.9%	10.5%	9.9%	10.5%

A10. OUTPUTS WITH INTERNATIONAL CO-AUTHORS, 2014 – 2018 (SciVal®, 20 September 2019)				
ASJC Subject	UAE	GCC State Average	G20 State Average	World
Biochemistry, Genetics and Molecular Biology	80.9%	77.1%	45.4%	24.7%
Dentistry	70.3%	74.6%	35.5%	18.8%
Health Professions	71.8%	73.9%	36.8%	18.6%
Immunology and Microbiology	85.6%	79.7%	47.6%	27.5%
Medicine	73.6%	64.0%	35.4%	17.2%
Cardiology and Cardiovascular Medicine	80.9%	75.0%	39.8%	18.5%
Critical Care and Intensive Medicine	77.1%	55.3%	38.1%	17.2%
Emergency Medicine	70.6%	65.7%	31.3%	11.1%
Endocrinology, Diabetes, and Metabolism	72.7%	74.8%	40.5%	22.2%
General Medicine	62.4%	47.8%	25.4%	9.6%
Genetics (Clinical)	80.7%	83.3%	58.7%	32.7%
Health Informatics	69.8%	68.0%	35.5%	19.0%
Oncology	80.2%	65.2%	43.3%	18.8%
Public Health, Environmental and Occupational Health	76.2%	70.9%	38.8%	21.5%
Pulmonary and Respiratory Medicine	75.2%	54.1%	39.4%	17.6%
Neuroscience	80.4%	80.3%	46.7%	26.0%
Nursing	70.0%	70.4%	32.5%	14.0%
Pharmacology, Toxicology and Pharmaceutics	78.2%	76.6%	38.9%	18.9%
Psychology	72.4%	67.7%	41.9%	19.8%

A11. OUTPUTS WITH INTERNATIONAL CO-AUTHORS, 2014 – 2018 (SciVal®, 20 September 2019)						
BIOCHEMISTRY, GENETICS AND MOLECULAR BIOLOGY						
Top 10 Collaborating Countries (by Co-Authorship)	Outputs	FWCI	Citations	Citations/Output	Country Authors	UAE Authors
United States	561	1.94	12076	21.5	2865	622
United Kingdom	238	2.52	7601	31.9	759	276
India	174	2.51	6161	35.4	432	184
Saudi Arabia	154	1.78	3539	23.0	374	165
Germany	139	3.52	6196	44.6	555	154
Canada	135	3.19	5616	41.6	444	130
Egypt	130	1.52	2429	18.7	218	164
Australia	117	3.14	4655	39.8	461	159
France	116	3.24	5001	43.1	279	129
Italy	91	4.21	5738	63.1	443	83

DENTISTRY						
Top 10 Collaborating Countries (by Co-Authorship)	Outputs	FWCI	Citations	Citations/Output	Country Authors	UAE Authors
United States	43	1.55	413	9.6	71	31
India	39	0.73	77	2	102	34
Greece	27	1.65	158	5.9	44	15
Brazil	18	1.06	135	7.5	31	3
United Kingdom	17	0.53	49	2.9	28	16
Egypt	15	1.08	66	4.4	12	21
Saudi Arabia	15	0.94	83	5.5	18	24
Malaysia	12	0.28	10	0.8	31	11
Jordan	11	0.86	50	4.5	9	15
Sudan	11	0.32	13	1.2	9	3

HEALTH PROFESSIONS

Top 10 Collaborating Countries (by Co-Authorship)	Outputs	FWCI	Citations	Citations/ Output	Country Authors	UAE Authors
United States	40	2.1	400	10	147	79
Australia	22	2.38	230	10.5	53	22
United Kingdom	16	3.11	159	9.9	40	25
Canada	13	4.62	203	15.6	41	12
Saudi Arabia	12	1.7	56	4.7	21	15
India	11	0.56	47	4.3	32	20
Egypt	10	3.64	141	14.1	12	9
Qatar	9	1.82	50	5.6	10	9
South Korea	7	0.71	20	2.9	29	9
Jordan	6	1.54	24	4	13	14

IMMUNOLOGY AND MICROBIOLOGY

Top 10 Collaborating Countries (by Co-Authorship)	Outputs	FWCI	Citations	Citations/ Output	Country Authors	UAE Authors
United States	108	4.54	2184	20.2	573	170
Germany	57	6.62	1657	29.1	125	68
United Kingdom	57	6.67	1798	31.5	193	50
France	43	8.5	1351	31.4	176	53
Canada	42	8.09	1405	33.5	102	32
Saudi Arabia	42	4.49	712	17	122	65
Italy	38	8.59	1592	41.9	160	30
Australia	35	10.38	1562	44.6	92	68
China	30	9.48	1245	41.5	83	31
Egypt	30	9.51	671	22.4	46	36

MEDICINE

Top 10 Collaborating Countries (by Co-Authorship)	Outputs	FWCI	Citations	Citations/ Output	Country Authors	UAE Authors
United States	1096	6.07	31997	29.2	4227	1094
United Kingdom	600	9.72	27393	45.7	1427	556
Saudi Arabia	452	11.38	22491	49.8	893	453
Canada	407	14.5	27053	66.5	871	269
India	394	14.4	25772	65.4	952	329
Australia	360	15.01	24646	68.5	704	316
Germany	357	15.31	25576	71.6	896	290
Egypt	329	15.18	21525	65.4	459	386
Italy	323	16.07	24097	74.6	827	214
France	265	18.94	22763	85.9	537	205

NEUROSCIENCE

Top 10 Collaborating Countries (by Co-Authorship)	Outputs	FWCI	Citations	Citations/ Output	Country Authors	UAE Authors
United States	140	1.47	2046	14.6	429	151
United Kingdom	57	1.58	725	12.7	103	58
Saudi Arabia	35	1.78	705	20.1	61	54
China	27	1.12	252	9.3	45	26
Australia	24	1.71	298	12.4	56	24
Germany	24	1.74	449	18.7	44	41
Canada	22	1.71	327	14.9	66	24
Italy	16	1.96	312	19.5	54	17
France	14	1.36	137	9.8	25	14
India	14	1.52	260	18.6	32	11

NURSING						
Top 10 Collaborating Countries (by Co-Authorship)	Outputs	FWCI	Citations	Citations/ Output	Country Authors	UAE Authors
United States	43	1.74	539	12.5	128	50
United Kingdom	30	1.87	237	7.9	74	48
Australia	29	1.74	184	6.3	49	36
Jordan	18	0.96	44	2.4	36	34
Canada	17	1.42	189	11.1	57	16
Malaysia	15	2.81	233	15.5	23	15
Saudi Arabia	14	1.86	135	9.6	40	28
Egypt	13	1.62	183	14.1	18	20
Thailand	11	3.12	194	17.6	15	10
Italy	10	2.14	111	11.1	20	15

PHARMACOLOGY, TOXICOLOGY AND PHARMACEUTICS						
Top 10 Collaborating Countries (by Co-Authorship)	Outputs	FWCI	Citations	Citations/ Output	Country Authors	UAE Authors
United States	89	0.94	611	6.9	257	151
India	87	0.7	442	5.1	229	75
Egypt	81	1.25	600	7.4	140	98
Saudi Arabia	69	1.25	557	8.1	139	86
United Kingdom	49	1.59	492	10	102	77
Qatar	34	1.15	227	6.7	36	55
Malaysia	30	0.98	131	4.4	50	30
Oman	29	1.82	367	12.7	50	38
Germany	27	1.69	284	10.5	38	31
Jordan	26	0.74	69	2.7	54	36

PSYCHOLOGY						
Top 10 Collaborating Countries (by Co-Authorship)	Outputs	FWCI	Citations	Citations/ Output	Country Authors	UAE Authors
United States	132	1.67	1178	8.9	264	71
United Kingdom	60	1.86	556	9.3	82	53
Germany	26	1.4	227	8.7	36	20
Canada	23	2.39	275	12	35	18
Italy	23	2.39	218	9.5	31	10
Australia	21	2.93	254	12.1	29	22
China	18	1.49	111	6.2	37	11
Thailand	17	2.82	175	10.3	7	4
Netherlands	16	2.47	239	14.9	14	12
Saudi Arabia	16	2.9	142	8.9	15	11

A12. CITATION DATA FOR UAE OUTPUTS BY ASJC DISCIPLINE, 2014 – 2018 (SciVal®, 20 September 2019)

BIOCHEMISTRY, GENETICS AND MOLECULAR BIOLOGY

	Outputs	FWCI	Citations	Authors	Citations/ Output
Biochemistry, Genetics and Molecular Biology	1999	1.22	23437	2180	11.7
General	451	1.16	4678	720	10.4
Biochemistry	381	1.24	4548	541	11.9
Genetics	356	1.08	3126	402	8.8
Molecular Biology	338	1.44	5345	485	15.8
Biotechnology	219	1.23	1840	361	8.4
Endocrinology	178	1.29	1872	278	10.5
Cell Biology	167	1.84	3989	283	23.9
Molecular Medicine	162	1.15	1136	253	7.0
Physiology	150	0.77	1248	191	8.3
Cancer Research	146	1.96	3826	250	26.2
Clinical Biochemistry	129	1.17	887	212	6.9
Biophysics	87	1.27	974	143	11.2
Developmental Biology	42	1.95	799	66	19.0
Structural Biology	33	0.96	255	53	7.7
Ageing	27	1.42	421	43	15.6
Miscellaneous	10	1.24	46	27	4.6

DENTISTRY

	Outputs	FWCI	Citations	Authors	Citations/ Output
Dentistry	316	0.88	1297	301	4.1
General Dentistry	221	0.72	737	244	3.3
Oral Surgery	54	1.47	333	51	6.2
Orthodontics	41	1.02	157	38	3.8
Periodontics	15	0.95	108	15	7.2
Miscellaneous	14	2.49	91	20	6.5

HEALTH PROFESSIONS

	Outputs	FWCI	Citations	Authors	Citations/ Output
Health Professions	195	1.27	1129	311	5.8
Health Information Management	40	1.07	235	51	5.9
Pharmacy	35	0.98	111	64	3.2
Medical Laboratory Technology	27	1.37	161	66	6.0
Physical Therapy, Sports Therapy and Rehabilitation	27	0.75	92	33	3.4
Radiological and Ultrasound Technology	25	0.96	139	55	5.6
Speech and Hearing	18	3.04	241	15	13.4
General	12	0.37	3	18	0.3
Miscellaneous	4	6.60	132	4	33.0
Podiatry	4	0.50	10	5	2.5
Optometry	3	0.41	5	5	1.7
Chiropractics	1	0.83	2	1	2.0
Complementary and Manual Therapy	1	0.00	0	1	0.0

IMMUNOLOGY AND MICROBIOLOGY

	Outputs	FWCI	Citations	Authors	Citations/ Output
Immunology and Microbiology	396	1.48	4733	542	12.0
Immunology	123	1.84	2273	159	18.5
Microbiology	94	1.30	858	139	9.1
General Immunology and Microbiology	72	1.15	511	121	7.1
Virology	64	2.58	1334	114	20.8
Parasitology	63	1.00	424	80	6.7
Applied Microbiology and Biotechnology	54	0.87	448	124	8.3
Miscellaneous	6	1.29	38	22	6.3

MEDICINE					
	Outputs	FWCI	Citations	Authors	Citations/ Output
Medicine	4504	2.21	51261	4610	11.4
General Medicine	759	7.11	22486	1141	29.6
Surgery	451	1.20	2590	510	5.7
Cardiology and Cardiovascular Medicine	350	1.39	3379	354	9.7
Public Health, Environmental and Occupational Health	290	0.95	1563	517	5.4
Endocrinology, Diabetes and Metabolism	289	1.31	2716	425	9.4
Pediatrics, Perinatology and Child Health	223	0.79	943	350	4.2
Infectious Diseases	212	1.48	2495	357	11.8
Pharmacology (medical)	177	0.96	1249	304	7.1
Health Informatics	172	0.98	556	222	3.2
Genetics (clinical)	171	1.10	1304	190	7.6
Oncology	168	1.53	2667	254	15.9
Radiology, Nuclear Medicine and Imaging	164	0.98	836	214	5.1
Psychiatry and Mental Health	159	0.69	728	204	4.6
Neurology (clinical)	157	1.38	1592	214	10.1
Ophthalmology	141	0.84	501	111	3.6
Pathology and Forensic Medicine	129	0.91	649	177	5.0
Health Policy	124	1.10	720	196	5.8
Orthopedics and Sports Medicine	121	1.37	835	132	6.9
Obstetrics and Gynecology	114	1.22	814	175	7.1
Medicine (miscellaneous)	110	1.09	711	194	6.5
Internal Medicine	109	1.19	1013	197	9.3
Pulmonary and Respiratory Medicine	109	2.09	1649	135	15.1
Immunology and Allergy	104	1.46	1531	145	14.7
Emergency Medicine	102	2.22	892	106	8.7
Gastroenterology	94	1.84	1111	107	11.8
Microbiology (medical)	88	1.62	1162	183	13.2
Epidemiology	86	2.01	1464	199	17.0
Otorhinolaryngology	85	1.44	378	81	4.4
Anesthesiology and Pain Medicine	77	1.13	448	88	5.8
Critical Care and Intensive Care Medicine	71	1.04	468	89	6.6
Physiology (medical)	71	0.97	762	102	10.7
Nephrology	65	1.61	522	66	8.0
Urology	60	0.79	338	63	5.6
Dermatology	58	1.00	312	103	5.4
Histology	56	0.71	324	80	5.8
Anatomy	49	0.62	249	31	5.1
Complementary and Alternative Medicine	49	1.51	309	115	6.3
Hematology	48	0.91	356	81	7.4
Reproductive Medicine	45	1.36	361	61	8.0
Rheumatology	45	1.49	404	44	9.0
Hepatology	39	2.99	891	61	22.8
Biochemistry (medical)	27	0.98	200	62	7.4
Rehabilitation	24	1.09	127	32	5.3
Geriatrics and Gerontology	23	1.76	242	27	10.5
Transplantation	14	0.93	109	24	7.8
Embryology	8	1.64	119	16	14.9
Family Practice	8	2.75	35	19	4.4
Drug Guides	1	3.59	10	3	10.0

NEUROSCIENCE					
	Outputs	FWCI	Citations	Authors	Citations/ Output
Neuroscience	383	1.24	4674	436	12.2
General Neuroscience	98	1.09	1082	145	11.0
Cognitive Neuroscience	88	1.80	1661	81	18.9
Neurology	70	1.08	885	102	12.6
Cellular and Molecular Neuroscience	66	1.03	803	108	12.2
Behavioural Neuroscience	51	1.33	571	61	11.2
Sensory Systems	32	0.83	148	48	4.6
Biological Psychiatry	24	1.03	211	43	8.8
Developmental Neuroscience	14	1.09	101	22	7.2
Miscellaneous	11	0.92	35	25	3.2
Endocrine and Autonomic Systems	10	1.32	139	23	13.9

NURSING

	Outputs	FWCI	Citations	Authors	Citations/ Output
Nursing	250	1.21	1625	401	6.5
Nutrition and Dietetics	113	1.24	943	185	8.3
General Nursing	38	1.22	134	63	3.5
Paediatrics	16	0.71	27	27	1.7
Psychiatric Mental Health	15	0.66	43	41	2.9
Community and Home Care	15	0.74	40	30	2.7
Advanced and Specialised Nursing	12	2.47	226	16	18.8
Emergency Nursing	11	2.93	147	19	13.4
Leadership and Management	9	0.72	19	17	2.1
Issues, Ethics and Legal Aspects	8	0.58	17	9	2.1
Miscellaneous	5	0.32	8	9	1.6
Maternity and Midwifery	3	2.19	9	8	3.0
Critical Care Nursing	3	0.36	7	3	2.3
Oncology (nursing)	3	0.08	3	2	1.0
Care Planning	2	0.43	1	5	0.5
Licensed Practising/Vocational Nursing	2	1.07	13	5	6.5
Fundamentals and Skills	1	4.91	5	1	5.0
Gerontology	1	0.65	4	1	4.0
Research and Theory	1	0.30	1	1	1.0

PHARMACOLOGY, TOXICOLOGY AND PHARMACEUTICS

	Outputs	FWCI	Citations	Authors	Citations/ Output
Pharmacy, Toxicology and Pharmaceutics	691	0.91	4507	867	6.5
Pharmacology	336	1.02	2758	475	8.2
Pharmaceutical Science	273	0.79	1498	374	5.5
Drug Discovery	212	1.08	1709	299	8.1
General Pharmacology, Toxicology and Pharmaceutics	67	0.59	137	116	2.0
Toxicology	67	1.01	569	123	8.5
Miscellaneous	11	0.33	22	16	2.0

PSYCHOLOGY

	Outputs	FWCI	Citations	Authors	Citations/ Output
Psychology	420	1.31	2942	339	7
General Psychology	110	1.15	743	110	6.8
Developmental and Educational Psychology	97	1.56	595	78	6.1
Experimental and Cognitive Psychology	78	1.60	882	66	11.3
Social Psychology	76	1.50	418	66	5.5
Applied Psychology	56	1.12	273	56	4.9
Clinical Psychology	45	1.16	263	49	5.8
Neuropsychology and Physiological Psychology	23	0.96	343	38	14.9
Miscellaneous	4	2.98	42	4	10.5

A13. TOP UAE INSTITUTIONS BY OUTPUT, BY ASJC DISCIPLINE, 2014 – 2018 (SciVal®, 24 July 2019)

BIOCHEMISTRY, GENETICS AND MOLECULAR BIOLOGY

Top 10 UAE Institutions	Outputs	FWCI	Citations	Authors	Citations/ Output
United Arab Emirates University	603	1.62	10360	599	17.2
NYU Abu Dhabi	264	1.48	3456	212	13.1
Khalifa University of Science and Technology	250	1.24	2773	264	11.1
University of Sharjah	164	1.43	2626	163	16
Tawam Hospital	95	1.27	869	65	9.1
Zayed University	64	0.74	292	45	4.6
Gulf Medical University	48	0.98	439	40	9.1
American University of Sharjah	47	0.92	413	47	8.8
Dubai Hospital	29	1.76	369	29	12.7
Al Mafraq Hospital	24	1.00	148	26	6.2

DENTISTRY

Top 10 UAE Institutions	Outputs	FWCI	Citations	Authors	Citations/ Output
University of Sharjah	84	1.21	390	80	4.6
Mohammed Bin Rashid University of Med. and Health Sci.	51	0.69	94	37	1.8
Ajman University of Science and Technology	31	0.77	127	56	4.1
European University College	23	0.92	51	13	2.2
NYU Abu Dhabi	17	0.97	115	2	6.8
Gulf Medical University	14	1.26	21	9	1.5
Ras Al Khaimah Medical and Health Sciences University	12	0.86	31	13	2.6
Ministry of Health United Arab Emirates	10	1.14	64	3	6.4
United Arab Emirates University	4	0.60	15	4	3.8
Tawam Hospital	2	0.81	11	5	5.5

HEALTH PROFESSIONS

Top 10 UAE Institutions	Outputs	FWCI	Citations	Authors	Citations/ Output
United Arab Emirates University	27	0.55	95	39	3.5
University of Sharjah	27	1.26	65	30	2.4
Khalifa University of Science and Technology	26	1.47	165	29	6.3
Zayed University	13	1.49	102	12	7.8
Gulf Medical University	12	0.66	17	10	1.4
Ajman University of Science and Technology	8	0.93	20	8	2.5
NYU Abu Dhabi	7	2.60	99	13	14.1
Sheikh Khalifa Medical City	5	7.00	124	8	24.8
Al Mafraq Hospital	4	0.62	22	9	5.5
Al Ain University of Science and Technology	4	0.83	6	7	1.5

IMMUNOLOGY AND MICROBIOLOGY

Top 10 UAE Institutions	Outputs	FWCI	Citations	Authors	Citations/ Output
United Arab Emirates University	95	1.32	1096	168	11.5
University of Sharjah	41	0.78	307	29	7.5
NYU Abu Dhabi	36	2.35	620	47	17.2
Khalifa University of Science and Technology	31	1.27	340	43	11
Mohammed Bin Rashid University of Med. and Health Sci.	27	3.50	451	4	16.7
Dubai Hospital	21	2.94	549	11	26.1
American University of Sharjah	11	0.52	71	12	6.5
Tawam Hospital	11	1.96	215	15	19.5
Al Mafraq Hospital	10	1.11	134	6	13.4
Zayed University	10	0.84	65	5	6.5

MEDICINE

Top 10 UAE Institutions	Outputs	FWCI	Citations	Authors	Citations/ Output
United Arab Emirates University	933	3.94	19078	756	20.4
University of Sharjah	296	2.08	1535	267	5.2
Dubai Hospital	278	1.44	2700	339	9.7
Tawam Hospital	229	1.08	1550	194	6.8
Khalifa University of Science and Technology	212	1.04	1068	175	5
Sheikh Khalifa Medical City	185	1.15	1118	171	6
Zayed University	138	2.96	1459	121	10.6
Gulf Medical University	133	1.08	1009	107	7.6
NYU Abu Dhabi	122	11.21	4585	115	37.6
Mohammed Bin Rashid University of Med. and Health Sci.	113	1.08	440	38	3.9

NEUROSCIENCE

Top 10 UAE Institutions	Outputs	FWCI	Citations	Authors	Citations/ Output
United Arab Emirates University	122	1.54	2051	136	16.8
NYU Abu Dhabi	95	1.44	1244	82	13.1
Khalifa University of Science and Technology	18	1.01	135	21	7.5
Zayed University	16	0.53	40	25	2.5
Tawam Hospital	13	1.15	94	11	7.2
University of Sharjah	12	0.94	137	15	11.4
Mohammed Bin Rashid University of Med. and Health Sci.	10	1.59	76	4	7.6
Gulf Medical University	8	1.33	106	5	13.3
Dubai Hospital	8	0.24	21	12	2.6
American University of Sharjah	7	0.95	38	5	5.4

NURSING

Top 10 UAE Institutions	Outputs	FWCI	Citations	Authors	Citations/ Output
United Arab Emirates University	51	1.25	405	79	7.9
University of Sharjah	31	1.10	119	49	3.8
Sheikh Khalifa Medical City	24	1.24	83	22	3.5
Dubai Hospital	16	2.65	161	33	10.1
Zayed University	15	0.72	70	16	4.7
Tawam Hospital	14	1.38	85	23	6.1
Khalifa University of Science and Technology	7	0.96	26	13	3.7
American University of Sharjah	4	0.65	22	3	5.5
Gulf Medical University	4	3.14	114	4	28.5
Mohammed Bin Rashid University of Med. and Health Sci.	4	2.71	15	6	3.8

PHARMACY, TOXICOLOGY AND PHARMACEUTICS

Top 10 UAE Institutions	Outputs	FWCI	Citations	Authors	Citations/ Output
United Arab Emirates University	219	1.03	1715	271	7.8
University of Sharjah	119	1.08	600	96	5
Gulf Medical University	50	0.87	235	32	4.7
Al Ain University of Science and Technology	48	0.73	273	40	5.7
Ajman University of Science and Technology	47	0.66	80	53	1.7
Ras Al Khaimah Medical and Health Sciences University	35	0.36	63	45	1.8
Dubai Pharmacy College	27	0.55	87	24	3.2
Khalifa University of Science and Technology	19	1.18	104	27	5.5
NYU Abu Dhabi	19	1.06	155	33	8.2
American University of Sharjah	18	1.27	193	25	10.7

PSYCHOLOGY					
Top 10 UAE Institutions	Outputs	FWCI	Citations	Authors	Citations/ Output
NYU Abu Dhabi	108	1.44	783	55	7.3
Zayed University	64	0.90	295	47	4.6
United Arab Emirates University	62	1.01	408	61	6.6
American University of Sharjah	36	1.57	188	23	5.2
Khalifa University of Science and Technology	20	1.82	127	21	6.3
Abu Dhabi University	13	6.51	130	13	10
Middlesex University, Dubai, UAE	12	1.87	177	7	14.8
University of Sharjah	9	1.15	71	10	7.9
American University in Dubai	8	1.19	45	5	5.6
Higher Colleges of Technology	5	0.81	34	5	6.8

A14. INTERNATIONAL BENCHMARKING DATA, BY ASJC DISCIPLINE, 2014 – 2018 (SciVal®, 13 Sept. 2019)

BIOCHEMISTRY, GENETICS AND MOLECULAR BIOLOGY										
Country	Total outputs in all disciplines	Subject Weighted Research Activity (% discipline outputs from total outputs)	Total outputs in discipline	Field Weighted Citation Impact	Citations per publication	Outputs in Top 10% citation percentile	% international collaborators	Population (2016)	Per capita outputs (per million)	Population Weighted Research Activity
Argentina	69930	13.5%	9469	1.02	9.4	14.5%	51.5%	43590368	0.00022	0.96
Australia	494302	11.3%	55728	1.57	14.9	27.3%	60.2%	24190907	0.00230	10.17
Bahrain	2562	7.2%	185	1.62	15.5	14.6%	70.3%	1425791	0.00013	0.57
Brazil	374558	11.1%	41704	0.99	8.8	13.9%	38.9%	206163058	0.00020	0.89
Canada	536412	12.7%	68164	1.45	13.8	24.4%	55.4%	36109487	0.00189	8.33
China	2587717	12.7%	329684	1.08	9.7	19.0%	23.3%	1378665000	0.00024	1.06
France	606241	12.3%	74452	1.45	14.0	25.3%	60.0%	66859768	0.00111	4.91
Germany	878930	13.2%	116365	1.53	14.8	26.9%	57.9%	82348669	0.00141	6.24
India	752392	11.2%	84489	0.76	6.6	10.7%	19.4%	1324509589	0.00006	0.28
Indonesia	82124	5.3%	4379	0.65	4.6	7.6%	41.0%	261554226	0.00002	0.07
Italy	572770	12.9%	73671	1.39	13.0	24.6%	48.6%	60627498	0.00122	5.36
Japan	656260	15.3%	100685	1.01	9.6	15.8%	29.2%	126994511	0.00079	3.50
Kuwait	8138	7.5%	614	1.23	10.7	18.2%	63.5%	3956873	0.00016	0.68
Mexico	116091	11.7%	13570	0.97	8.6	13.2%	43.8%	123333376	0.00011	0.49
Oman	8660	8.8%	760	0.98	8.3	16.4%	79.3%	4479219	0.00017	0.75
Qatar	17610.00	9.3%	1646.00	1.47	13.3	25.9%	88.7%	2570000	0.00064	2.83
Russian Federation	399823	7.6%	30390	0.66	5.9	9.2%	30.8%	144342396	0.00021	0.93
Saudi Arabia	104173	12.6%	13134.00	1.44	13.4	22.5%	79.7%	32442572	0.00040	1.79
South Africa	113388	8.6%	9720	1.27	10.9	19.1%	62.0%	56203654	0.00017	0.76
South Korea	414499	14.1%	58526	1.06	10.1	17.0%	28.8%	51245707	0.00114	5.04
Turkey	221534	8.3%	18414	0.88	8.0	11.2%	27.3%	79821724	0.00023	1.02
United Arab Emirates	27579	7.2%	1997	1.22	11.6	20.1%	80.9%	9360980	0.00021	0.94
United Kingdom	1022511	11.5%	117550	1.64	15.8	29.1%	64.2%	65595565	0.00179	7.91
United States	3360453	13.7%	461130	1.48	14.6	26.4%	41.1%	323071342	0.00143	6.30
World	14961710	11.2%	1682536	1.10	10.2	18.4%	24.7%	7426103221	0.00023	1.00
Average GCC States	28120.33	8.8%	3056.00	1.33	12.1	19.6%	77.1%		0.00029	1.26
Average G20 States	703374.11	11.6%	88485.47	1.17	10.9	18.8%	45.4%		0.00079	3.47

DENTISTRY

Country	Total outputs in all disciplines	Subject Weighted Research Activity (% discipline outputs from total outputs)	Total outputs in discipline	Field Weighted Citation Impact	Citations per publication	Outputs in Top 10% citation percentile	% international collaborators	Population (2016)	Per capita outputs (per million)	Population Weighted Research Activity
Argentina	69930	0.2%	125	0.78	3.8	4.0%	43.2%	43590368	0.00000	0.26
Australia	494302	0.4%	1755	1.28	6.4	9.3%	49.1%	24190907	0.00007	6.54
Bahrain	2562.00	0.4%	9.00	0.67	4.2	0.0%	77.8%	1425791	0.00001	0.57
Brazil	374558	2.7%	10056	1.05	5.2	7.5%	25.5%	206163058	0.00005	4.40
Canada	536412	0.4%	1886	1.38	7.1	10.8%	58.4%	36109487	0.00005	4.71
China	2587717	0.2%	3889	1.20	6.5	9.4%	32.0%	1378665000	0.00000	0.25
France	606241	0.2%	1391	1.17	5.6	8.5%	34.8%	66859768	0.00002	1.88
Germany	878930	0.5%	4279	1.46	7.8	12.9%	39.6%	82348669	0.00005	4.69
India	752392	0.9%	7008	0.54	2.6	1.8%	12.1%	1324509589	0.00001	0.48
Indonesia	82124	0.7%	552	0.50	1.5	1.6%	13.0%	261554226	0.00000	0.19
Italy	572770	0.7%	3964	1.40	6.8	11.6%	36.9%	60627498	0.00007	5.90
Japan	656260	0.8%	4982	0.84	4.1	4.6%	22.5%	126994511	0.00004	3.54
Kuwait	8138	1.9%	158	1.09	4.7	5.7%	71.5%	3956873	0.00004	3.60
Mexico	116091	0.3%	324	0.75	3.3	2.2%	39.2%	123333376	0.00000	0.24
Oman	8660	0.1%	10	0.72	3.3	0.0%	90.0%	4479219	0.00000	0.20
Qatar	17610	0.3%	45	1.00	2.9	4.4%	75.6%	2570000	0.00002	1.58
Russian Federation	399823	0.0%	58	1.09	4.6	8.6%	50.0%	144342396	0.00000	0.04
Saudi Arabia	104173	1.9%	1998	0.93	4.3	6.0%	62.5%	32442572	0.00006	5.55
South Africa	113388	0.2%	177	0.92	4.2	4.0%	42.4%	56203654	0.00000	0.28
South Korea	414499	0.6%	2591	1.01	5.4	5.8%	21.2%	51245707	0.00005	4.56
Turkey	221534	1.3%	2885	0.98	5.0	5.3%	17.2%	79821724	0.00004	3.26
United Arab Emirates	27579.00	1.1%	316.00	0.88	4.1	4.4%	70.3%	9360980	0.00003	3.04
United Kingdom	1022511	0.6%	6047	1.18	5.4	7.8%	36.3%	65595665	0.00009	8.31
United States	3360453	0.5%	15246	1.24	6.0	9.0%	38.7%	323071342	0.00005	4.26
World	14961710	0.6%	82332	0.97	4.7	6.3%	18.8%	7426103221	0.00001	1.00
Average GCC States	28120.33	1.0%	422.67	0.88	3.9	3.4%	74.6%		0.00003	2.43
Average G20 States	703374.11	0.7%	3642.79	1.04	5.0	6.9%	35.5%		0.00003	3.12

HEALTH PROFESSIONS

Country	Total outputs in all disciplines	Subject Weighted Research Activity (% discipline outputs from total outputs)	Total outputs in discipline	Field Weighted Citation Impact	Citations per publication	Outputs in Top 10% citation percentile	% international collaborators	Population (2016)	Per capita outputs (per million)	Population Weighted Research Activity
Argentina	69930	0.6%	388	1.05	5.3	8.2%	46.4%	43590368	0.00001	0.37
Australia	494302	2.6%	12764	1.59	7.9	14.4%	43.9%	24190907	0.00053	21.91
Bahrain	2562	0.8%	20	0.83	4.5	5.0%	70.0%	1425791	0.00001	0.58
Brazil	374558	1.9%	7116	0.89	4.6	6.4%	30.2%	206163058	0.00003	1.43
Canada	536412	1.9%	10282	1.36	7.0	11.8%	41.6%	36109487	0.00028	11.83
China	2587717	0.3%	6821	1.16	6.9	12.1%	38.7%	1378665000	0.00000	0.21
France	606241	1.0%	6174	1.16	6.3	10.2%	39.4%	66859768	0.00009	3.83
Germany	878930	1.0%	8867	1.25	6.8	11.8%	44.4%	82348669	0.00011	4.47
India	752392	0.6%	4174	1.03	4.5	8.5%	21.9%	1324509589	0.00000	0.13
Indonesia	82124	0.2%	187	0.80	3.3	5.3%	52.9%	261554226	0.00000	0.03
Italy	572770	1.0%	5666	1.36	6.9	13.4%	42.8%	60627498	0.00009	3.88
Japan	656260	0.9%	5744	0.73	3.8	4.8%	18.0%	126994511	0.00005	1.88
Kuwait	8138	0.9%	73	0.75	3.6	2.7%	65.8%	3956873	0.00002	0.77
Mexico	116091	0.5%	543	0.75	3.8	3.9%	47.0%	123333376	0.00000	0.18
Oman	8660	0.7%	58	0.97	7.0	15.5%	77.6%	4479219	0.00001	0.54
Qatar	17610	4.2%	742	2.09	11.4	22.5%	87.3%	2570000	0.00029	11.99
Russian Federation	399823	0.9%	3703	0.31	1.4	1.4%	10.7%	144342396	0.00003	1.07
Saudi Arabia	104173	0.8%	882	1.27	5.9	12.8%	70.8%	32442572	0.00003	1.13
South Africa	113388	1.4%	1616	1.45	6.6	11.1%	51.2%	56203654	0.00003	1.19
South Korea	414499	0.4%	5661	0.83	4.9	5.6%	16.2%	51245707	0.00011	4.59
Turkey	221534	2.6%	3039	0.75	3.9	3.9%	14.8%	79821724	0.00004	1.58
United Arab Emirates	27579	0.7%	195	1.26	5.7	7.2%	71.8%	9360980	0.00002	0.87
United Kingdom	1022511.00	0.3%	15843.00	1.54	7.9	14.1%	46.0%	65595665	0.00024	10.03
United States	3360453.00	1.6%	55162.00	1.31	6.8	10.7%	22.9%	323071342	0.00017	7.09
World	14961710	1.2%	178820	1.04	5.3	8.1%	18.6%	7426103221	0.00002	1.00
Average GCC States	28120.33	1.4%	328.33	1.20	6.4	11.0%	73.9%		0.00006	2.65
Average G20 States	703374.11	1.1%	8138.53	1.08	5.5	9.0%	36.8%		0.00010	4.04

IMMUNOLOGY AND MICROBIOLOGY										
Country	Total outputs in all disciplines	Subject Weighted Research Activity (% discipline outputs from total outputs)	Total outputs in discipline	Field Weighted Citation Impact	Citations per publication	Outputs in Top 10% citation percentile	% international collaborators	Population (2016)	Per capita outputs (per million)	Population Weighted Research Activity
Argentina	69930	5.4%	3771	1.09	9.2	14.0%	47.2%	43590368	0.00009	1.60
Australia	494302	2.8%	13962	1.58	14.9	27.7%	59.4%	24190907	0.00058	10.70
Bahrain	2562	2.1%	53	1.28	10.1	18.9%	79.3%	1425791	0.00004	0.69
Brazil	374558	4.1%	15541	1.04	8.4	13.8%	35.9%	206163058	0.00008	1.40
Canada	536412	2.9%	15522	1.49	13.9	25.3%	57.8%	36109487	0.00043	7.97
China	2587717	2.5%	65493	0.93	7.7	14.5%	24.6%	1378665000	0.00005	0.88
France	606241	3.5%	21308	1.55	14.5	26.5%	62.6%	66859768	0.00032	5.91
Germany	878930	3.3%	29293	1.60	15.1	28.3%	60.3%	82348669	0.00036	6.59
India	752392	2.4%	17960	0.82	6.6	10.3%	23.3%	1324509589	0.00001	0.25
Indonesia	82124	1.4%	1110	0.83	6.7	10.7%	57.0%	261554226	0.00000	0.08
Italy	572770	3.3%	18678	1.44	13.4	25.1%	47.8%	60627498	0.00031	5.71
Japan	656260	3.0%	19434	1.03	9.6	15.9%	36.3%	126994511	0.00015	2.84
Kuwait	8138	2.6%	209	1.70	15.7	19.6%	62.7%	3956873	0.00005	0.98
Mexico	116091.00	4.1%	4804.00	1.05	9.1	13.9%	44.3%	123333376	0.00004	0.72
Oman	8660	2.6%	223	1.30	12.9	22.9%	79.4%	4479219	0.00005	0.92
Qatar	17610	2.1%	375	12.10	94.0	23.8%	89.3%	2570000	0.00015	2.70
Russian Federation	399823.00	1.6%	6218.00	0.72	5.8	8.8%	32.2%	144342396	0.00004	0.80
Saudi Arabia	104173	2.9%	3018	1.08	9.8	15.9%	81.9%	32442572	0.00009	1.72
South Africa	113388	3.9%	4419	1.34	10.7	18.9%	66.5%	56203654	0.00008	1.46
South Korea	414499	1.1%	15063	0.87	7.7	11.7%	26.0%	51245707	0.00029	5.45
Turkey	221534	6.8%	4228	0.94	8.1	11.6%	30.7%	79821724	0.00005	0.98
United Arab Emirates	27579	1.4%	396	1.47	11.8	24.2%	85.6%	9360980	0.00004	0.78
United Kingdom	1022511	0.4%	31442	1.63	15.4	29.3%	67.4%	65595565	0.00048	8.88
United States	3360453	3.3%	110751	1.47	14.2	26.5%	43.8%	323071342	0.00034	6.35
World	14961710	2.7%	400668	1.08	9.8	17.8%	27.5%	7426103221	0.00005	1.00
Average GCC States	28120.33	2.3%	712.33	3.16	25.7	20.9%	79.7%		0.00007	1.30
Average G20 States	703374.11	3.1%	21158.68	1.18	10.6	18.4%	47.6%		0.00020	3.70

MEDICINE										
Country	Total outputs in all disciplines	Subject Weighted Research Activity (% discipline outputs from total outputs)	Total outputs in discipline	Field Weighted Citation Impact	Citations per publication	Outputs in Top 10% citation percentile	% international collaborators	Population (2016)	Per capita outputs (per million)	Population Weighted Research Activity
Argentina	69930	23.1%	16151	1.58	9.7	12.5%	43.9%	43590368	0.00037	0.73
Australia	494302	29.3%	145052	1.82	11.7	18.9%	47.4%	24190907	0.00600	11.73
Bahrain	2562	41.4%	1061	5.24	25.5	10.6%	51.7%	1425791	0.00074	1.46
Brazil	374558	24.8%	93031	1.15	7.3	9.6%	30.2%	206163058	0.00045	0.88
Canada	536412	30.6%	164378	1.83	11.9	19.2%	49.3%	36109487	0.00455	8.91
China	2587717	13.6%	351333	0.88	6.2	10.8%	19.4%	1378665000	0.00025	0.50
France	606241	25.1%	152000	1.69	11.5	17.7%	42.4%	66859768	0.00227	4.45
Germany	878930.00	25.5%	224116.00	1.54	10.6	17.4%	42.3%	82348669	0.00272	5.33
India	752392.00	17.1%	128527.00	0.77	4.5	5.6%	16.7%	1324509589	0.00010	0.19
Indonesia	82124	8.8%	7191	1.62	8.0	6.7%	36.8%	261554226	0.00003	0.05
Italy	572770	30.5%	174515	1.63	11.0	18.6%	40.2%	60627498	0.00288	5.63
Japan	656260	28.2%	185266	0.99	6.7	9.7%	17.5%	126994511	0.00146	2.85
Kuwait	8138	25.1%	2042	1.65	8.8	11.8%	57.6%	3956873	0.00052	1.01
Mexico	116091	21.4%	24790	1.16	7.1	8.8%	34.7%	123333376	0.00020	0.39
Oman	8660	22.7%	1962	2.33	13.0	9.5%	55.3%	4479219	0.00044	0.86
Qatar	17610	25.2%	4439	2.76	15.3	18.7%	81.4%	2570000	0.00173	3.38
Russian Federation	399823	9.3%	37172	0.91	5.3	5.6%	21.3%	144342396	0.00026	0.50
Saudi Arabia	104173	19.1%	19881	1.41	8.8	11.7%	64.4%	32442572	0.00061	1.20
South Africa	113388	22.3%	25255	1.89	11.0	15.3%	57.5%	56203654	0.00045	0.88
South Korea	414499	6.1%	94712	1.15	7.7	10.3%	19.1%	51245707	0.00185	3.62
Turkey	221534	42.8%	82012	0.74	4.6	4.5%	12.2%	79821724	0.00103	2.01
United Arab Emirates	27579	16.3%	4507	2.21	11.2	12.8%	73.6%	9360980	0.00048	0.94
United Kingdom	1022511	8.0%	298255	1.79	11.6	19.6%	49.0%	65595565	0.00455	8.90
United States	3360453	32.2%	1082161	1.49	9.8	16.7%	28.2%	323071342	0.00335	6.55
World	14961710	25.4%	3795035	1.00	6.5	10.5%	17.2%	7426103221	0.00051	1.00
Average GCC States	28120.33	25.0%	5648.67	2.60	13.8	12.5%	64.0%		0.00075	1.47
Average G20 States	703374.11	22.0%	173989.37	1.37	8.7	12.6%	35.4%		0.00176	3.44

MEDICINE – CARDIOLOGY AND CARDIOVASCULAR MEDICINE

Country	Total outputs in all disciplines	Subject Weighted Research Activity (% discipline outputs from total outputs)	Total outputs in discipline	Field Weighted Citation Impact	Citations per publication	Outputs in Top 10% citation percentile	% international collaborators	Population (2016)	Per capita outputs (per million)	Population Weighted Research Activity
Argentina	69930	2.1%	1466	0.92	7.3	11.1%	34.9%	43590368	0.00003	1.06
Australia	494302	1.4%	7065.00	1.90	14.4	24.4%	54.1%	24190907	0.00029	9.22
Bahrain	2562	1.8%	47	0.74	7.0	10.6%	87.2%	1425791	0.00003	1.04
Brazil	374558	1.2%	4413.00	1.03	7.7	12.5%	36.4%	206163058	0.00002	0.68
Canada	536412	2.2%	11729	1.88	14.4	25.8%	55.0%	36109487	0.00032	10.26
China	2587717	0.6%	14478	0.96	7.5	13.5%	28.3%	1378665000	0.00001	0.33
France	606241	1.7%	10180	1.83	14.4	22.9%	47.9%	66859768	0.00015	4.81
Germany	878930	2.0%	17758	1.69	12.9	22.3%	45.0%	82348669	0.00022	6.81
India	752392	0.6%	4609	0.61	4.5	6.3%	23.3%	1324509589	0.00000	0.11
Indonesia	82124	0.2%	166	1.50	10.7	15.7%	69.9%	261554226	0.00000	0.02
Italy	572770	3.1%	17572	1.56	11.6	19.1%	43.2%	60627498	0.00029	9.15
Japan	656260	2.6%	17247	0.89	6.7	10.3%	14.7%	126994511	0.00014	4.29
Kuwait	8138	1.0%	81	0.85	6.2	14.8%	72.8%	3956873	0.00002	0.65
Mexico	116091	0.9%	1063	0.75	5.8	8.7%	33.5%	123333376	0.00001	0.27
Oman	8660	1.6%	135	0.78	5.4	8.1%	57.8%	4479219	0.00003	0.95
Qatar	17610	1.6%	284	1.28	9.7	17.6%	84.9%	2570000	0.00011	3.49
Russian Federation	399823	0.9%	3596	0.80	6.3	5.9%	18.3%	144342396	0.00002	0.79
Saudi Arabia	104173	1.0%	1060	1.11	8.7	14.2%	66.3%	32442572	0.00003	1.03
South Africa	113388	0.7%	804	2.01	17.5	25.9%	64.1%	56203654	0.00001	0.45
South Korea	414499	0.2%	5482	1.06	8.1	13.6%	24.5%	51245707	0.00011	3.38
Turkey	221534	2.5%	7688	0.66	5.2	3.8%	8.6%	79821724	0.00010	3.04
United Arab Emirates	27579	1.3%	351	1.38	9.6	15.1%	80.9%	9360980	0.00004	1.18
United Kingdom	1022511	0.8%	17969	1.92	14.1	25.2%	58.4%	65595665	0.00027	8.65
United States	3360453	0.5%	76994	1.39	10.3	18.9%	29.5%	323071342	0.00024	7.53
World	14961710	1.6%	235127	1.04	7.5	12.5%	18.5%	7426103221	0.00003	1.00
Average GCC States	28120.33	1.4%	326.33	1.02	7.8	13.4%	75.0%		0.00004	1.39
Average G20 States	703374.11	1.3%	11649.42	1.29	9.9	15.8%	39.8%		0.00012	3.78

MEDICINE – CRITICAL CARE AND INTENSIVE MEDICINE

Country	Total outputs in all disciplines	Subject Weighted Research Activity (% discipline outputs from total outputs)	Total outputs in discipline	Field Weighted Citation Impact	Citations per publication	Outputs in Top 10% citation percentile	% international collaborators	Population (2016)	Per capita outputs (per million)	Population Weighted Research Activity
Argentina	69930	0.3%	220	1.68	13.5	20.0%	68.6%	43590368	0.00001	0.72
Australia	494302	0.5%	2537	1.71	12.3	21.2%	50.2%	24190907	0.00010	15.05
Bahrain	2562	0.5%	13	0.17	0.8	0.0%	46.2%	1425791	0.00001	1.31
Brazil	374558	0.3%	1213	1.49	10.4	16.2%	38.8%	206163058	0.00001	0.84
Canada	536412	0.6%	3219	1.99	14.3	26.3%	56.5%	36109487	0.00009	12.80
China	2587717	0.1%	3073	0.86	6.1	10.6%	17.3%	1378665000	0.00000	0.32
France	606241	0.5%	3265	1.97	12.8	22.8%	42.9%	66859768	0.00005	7.01
Germany	878930	0.4%	3467	1.46	9.8	16.4%	35.8%	82348669	0.00004	6.04
India	752392	0.2%	1642	0.74	5.3	5.8%	13.9%	1324509589	0.00000	0.18
Indonesia	82124	0.0%	41	0.68	4.4	9.8%	34.2%	261554226	0.00000	0.02
Italy	572770	0.3%	1975	2.27	15.8	28.0%	57.8%	60627498	0.00003	4.68
Japan	656260	0.2%	1177	1.64	11.6	18.2%	24.2%	126994511	0.00001	1.33
Kuwait	8138	0.2%	13	0.43	2.9	0.0%	61.5%	3956873	0.00000	0.47
Mexico	116091	0.1%	143	1.86	16.3	20.3%	56.6%	123333376	0.00000	0.17
Oman	8660	0.2%	14	0.73	8.4	7.1%	28.6%	4479219	0.00000	0.45
Qatar	17610	0.3%	61	1.06	5.1	8.2%	62.3%	2570000	0.00002	3.41
Russian Federation	399823	0.1%	216	0.57	4.1	7.4%	16.2%	144342396	0.00000	0.21
Saudi Arabia	104173	0.3%	339	1.19	8.3	15.3%	56.3%	32442572	0.00001	1.50
South Africa	113388	0.3%	339	1.19	8.3	15.3%	56.3%	56203654	0.00001	0.87
South Korea	414499	0.1%	503	1.68	12.2	15.9%	22.3%	51245707	0.00001	1.41
Turkey	221534	0.2%	1246	0.53	3.8	5.0%	12.0%	79821724	0.00002	2.24
United Arab Emirates	27579	0.3%	70	1.06	6.6	15.7%	77.1%	9360980	0.00001	1.07
United Kingdom	1022511	0.1%	5052	1.51	9.4	17.6%	39.5%	65595665	0.00008	11.05
United States	3360453	0.2%	17158	1.43	9.9	18.5%	24.1%	323071342	0.00005	7.62
World	14961710	0.3%	51739	1.04	6.8	12.4%	17.2%	7426103221	0.00001	1.00
Average GCC States	28120.33	0.3%	85.00	0.77	5.4	7.7%	55.3%		0.00001	1.37
Average G20 States	703374.11	0.3%	2464.47	1.39	9.9	16.3%	38.1%		0.00003	3.90

MEDICINE – EMERGENCY MEDICINE

Country	Total outputs in all disciplines	Subject Weighted Research Activity (% discipline outputs from total outputs)	Total outputs in discipline	Field Weighted Citation Impact	Citations per publication	Outputs in Top 10% citation percentile	% international collaborators	Population (2016)	Per capita outputs (per million)	Population Weighted Research Activity
Argentina	69930	0.1%	44	1.89	7.0	9.1%	50.0%	43590368	0.00000	0.17
Australia	494302	0.4%	2187	1.31	5.6	8.5%	31.6%	24190907	0.00009	15.61
Bahrain	2562	0.5%	12	2.78	13.3	25.0%	66.7%	1425791	0.00001	1.45
Brazil	374558	0.1%	301	2.01	7.6	15.9%	44.5%	206163058	0.00000	0.25
Canada	536412	0.4%	2008	1.52	6.1	11.2%	39.6%	36109487	0.00006	9.60
China	2587717	0.1%	1958	0.68	3.0	4.2%	12.5%	1378665000	0.00000	0.25
France	606241	0.4%	2319	0.79	3.0	4.2%	14.1%	66859768	0.00003	5.99
Germany	878930	0.4%	3863	0.76	3.5	4.2%	17.5%	82348669	0.00005	8.10
India	752392	0.1%	684	0.88	3.2	4.4%	19.4%	1324509589	0.00000	0.09
Indonesia	82124	0.0%	35	1.43	5.6	8.6%	45.7%	261554226	0.00000	0.02
Italy	572770	0.3%	1537	1.66	7.2	10.5%	30.1%	60627498	0.00003	4.38
Japan	656260	0.1%	865	1.24	4.9	8.7%	18.2%	126994511	0.00001	1.18
Kuwait	8138	0.1%	8	0.22	1.5	0.0%	50.0%	3956873	0.00000	0.35
Mexico	116091	0.0%	50	2.43	9.9	18.0%	62.0%	123333376	0.00000	0.07
Oman	8660	0.1%	11	1.61	4.9	18.2%	63.6%	4479219	0.00000	0.42
Qatar	17610	0.6%	110	1.35	6.3	13.6%	70.9%	2570000	0.00004	7.39
Russian Federation	399823	0.0%	129	1.14	2.9	10.1%	22.5%	144342396	0.00000	0.15
Saudi Arabia	104173	0.1%	142	1.08	4.6	7.0%	72.5%	32442572	0.00000	0.76
South Africa	113388	1.9%	308	1.48	5.4	10.4%	47.7%	56203654	0.00001	0.95
South Korea	414499	0.5%	760	1.20	5.1	7.8%	12.8%	51245707	0.00001	2.56
Turkey	221534	0.3%	1740	0.66	2.7	2.7%	5.8%	79821724	0.00002	3.76
United Arab Emirates	27579	0.4%	102	2.22	8.7	24.5%	70.6%	9360980	0.00001	1.88
United Kingdom	1022511	0.2%	2816	1.39	6.4	9.5%	33.5%	65595565	0.00004	7.41
United States	3360453	0.1%	15980	1.11	4.6	6.8%	14.4%	323071342	0.00005	8.54
World	14961710	0.3%	42997.00	0.91	3.8	5.1%	11.1%	7426103221	0.00001	1.00
Average GCC States	28120.33	0.3%	64.17	1.54	6.6	14.7%	65.7%		0.00001	2.04
Average G20 States	703374.11	0.3%	1985.58	1.30	5.2	8.5%	31.3%		0.00002	3.68

MEDICINE – ENDOCRINOLOGY, DIABETES AND METABOLISM

Country	Total outputs in all disciplines	Subject Weighted Research Activity (% discipline outputs from total outputs)	Total outputs in discipline	Field Weighted Citation Impact	Citations per publication	Outputs in Top 10% citation percentile	% international collaborators	Population (2016)	Per capita outputs (per million)	Population Weighted Research Activity
Argentina	69930	1.1%	764	1.07	9.0	15.3%	42.8%	43590368	0.00002	1.19
Australia	494302	1.0%	4952	1.69	14.9	27.9%	55.7%	24190907	0.00020	13.92
Bahrain	2562	1.0%	26	0.67	6.0	3.8%	65.4%	1425791	0.00002	1.24
Brazil	374558	0.9%	3414	1.00	9.1	15.2%	31.9%	206163058	0.00002	1.13
Canada	536412	1.0%	5473	1.66	14.6	25.4%	50.1%	36109487	0.00015	10.30
China	2587717	0.3%	8790	1.11	9.2	17.5%	29.1%	1378665000	0.00001	0.43
France	606241	0.9%	5234	1.35	11.9	20.9%	45.3%	66859768	0.00008	5.32
Germany	878930	0.8%	7432	1.45	12.8	23.8%	51.5%	82348669	0.00009	6.14
India	752392	0.4%	3216	0.85	7.5	11.9%	24.0%	1324509589	0.00000	0.17
Indonesia	82124	0.2%	128	0.69	5.8	10.2%	50.8%	261554226	0.00000	0.03
Italy	572770	1.5%	8487	1.47	12.3	22.9%	37.6%	60627498	0.00014	9.52
Japan	656260	0.9%	5920	1.07	9.0	15.1%	19.6%	126994511	0.00005	3.17
Kuwait	8138.00	1.8%	149.00	1.19	9.3	19.5%	66.4%	3956873	0.00004	2.56
Mexico	116091	0.6%	751	1.09	9.0	15.8%	44.8%	123333376	0.00001	0.41
Oman	8660.00	0.4%	37.00	1.22	11.9	24.3%	81.1%	4479219	0.00001	0.56
Qatar	17610	1.6%	278	1.89	13.6	28.1%	90.7%	2570000	0.00011	7.35
Russian Federation	399823	0.2%	1326	0.47	3.8	5.4%	17.6%	144342396	0.00001	0.62
Saudi Arabia	104173	0.7%	689	1.17	10.3	18.9%	72.3%	32442572	0.00002	1.44
South Africa	113388	4.4%	565	1.48	12.4	22.7%	63.9%	56203654	0.00001	0.68
South Korea	414499	1.2%	2927	1.14	9.9	16.3%	19.8%	51245707	0.00006	3.88
Turkey	221534	1.3%	2318	0.61	5.2	6.7%	17.0%	79821724	0.00003	1.97
United Arab Emirates	27579	1.0%	289	1.32	9.3	20.4%	72.7%	9360980	0.00003	2.10
United Kingdom	1022511	0.2%	10124	1.67	14.2	26.7%	57.2%	65595565	0.00015	10.49
United States	3360453	0.3%	30223	1.52	13.5	25.3%	37.8%	323071342	0.00009	6.36
World	14961710	0.7%	109241	1.11	9.5	17.3%	22.2%	7426103221	0.00001	1.00
Average GCC States	28120.33	1.1%	244.67	1.24	10.1	19.2%	74.8%		0.00004	2.54
Average G20 States	703374.11	0.9%	5407.00	1.19	10.2	18.1%	40.5%		0.00006	4.06

MEDICINE – GENERAL MEDICINE

Country	Total outputs in all disciplines	Subject Weighted Research Activity (% discipline outputs from total outputs)	Total outputs in discipline	Field Weighted Citation Impact	Citations per publication	Outputs in Top 10% citation percentile	% international collaborators	Population (2016)	Per capita outputs (per million)	Population Weighted Research Activity
Argentina	69930	3.5%	2458	4.15	17.1	7.4%	30.4%	43590368	0.00006	0.58
Australia	494302	3.7%	18436	3.52	15.6	12.8%	37.6%	24190907	0.00076	7.83
Bahrain	2562	19.0%	487	9.37	40.7	8.2%	31.2%	1425791	0.00034	3.51
Brazil	374558	3.0%	11265	2.37	10.4	6.3%	22.3%	206163058	0.00005	0.56
Canada	536412	3.9%	20977	3.71	16.3	12.9%	38.4%	36109487	0.00058	5.97
China	2587717	2.3%	59911	0.89	4.6	4.6%	9.6%	1378665000	0.00004	0.45
France	606241	2.6%	15922	3.83	16.3	11.3%	35.2%	66859768	0.00024	2.45
Germany	878930	3.0%	26668	2.94	14.1	11.4%	31.2%	82348669	0.00032	3.33
India	752392	3.0%	22598	1.16	5.0	3.3%	14.4%	1324509589	0.00002	0.18
Indonesia	82124	1.5%	1207	5.89	26.3	7.3%	24.9%	261554226	0.00000	0.05
Italy	572770	3.6%	20577	2.73	12.4	9.8%	30.1%	60627498	0.00034	3.49
Japan	656260	3.6%	23393	1.58	7.4	5.3%	13.3%	126994511	0.00018	1.89
Kuwait	8138	5.5%	451	3.71	12.6	8.0%	43.9%	3956873	0.00011	1.17
Mexico	116091	3.4%	3891	2.98	13.2	6.5%	24.3%	123333376	0.00003	0.32
Oman	8660	8.2%	710	4.50	22.9	4.5%	35.5%	4479219	0.00016	1.63
Qatar	17610	3.4%	606	10.23	48.4	12.2%	67.7%	2570000	0.00024	2.42
Russian Federation	399823	0.6%	7012	2.12	9.4	3.4%	12.0%	144342396	0.00005	0.50
Saudi Arabia	104173	4.2%	4388	2.34	11.5	5.4%	46.2%	32442572	0.00014	1.39
South Africa	113388	16.3%	4463	4.10	18.3	11.9%	42.2%	56203654	0.00008	0.82
South Korea	414499	4.4%	10689	2.37	11.0	6.2%	15.0%	51245707	0.00021	2.14
Turkey	221534	4.8%	16320	0.98	4.7	2.3%	6.6%	79821724	0.00020	2.10
United Arab Emirates	27579	2.8%	763	7.03	29.0	8.9%	62.4%	9360980	0.00008	0.84
United Kingdom	1022511	1.6%	50272	2.68	11.4	11.0%	30.3%	65595565	0.00077	7.88
United States	3360453	1.5%	160187	2.07	9.1	9.6%	19.3%	323071342	0.00050	5.10
World	14961710	4.8%	722447	0.98	4.4	4.5%	9.6%	7426103221	0.00010	1.00
Average GCC States	28120.33	7.2%	1234.17	6.20	27.5	7.9%	47.8%		0.00018	1.83
Average G20 States	703374.11	3.7%	25296.53	2.76	12.3	7.8%	25.4%		0.00024	2.48

MEDICINE – GENETICS (CLINICAL)

Country	Total outputs in all disciplines	Subject Weighted Research Activity (% discipline outputs from total outputs)	Total outputs in discipline	Field Weighted Citation Impact	Citations per publication	Outputs in Top 10% citation percentile	% international collaborators	Population (2016)	Per capita outputs (per million)	Population Weighted Research Activity
Argentina	69930	0.4%	292	1.19	12.3	21.6%	64.0%	43590368	0.00001	0.96
Australia	494302	0.5%	2431	1.50	15.7	29.2%	68.8%	24190907	0.00010	14.38
Bahrain	2562	0.4%	11	0.52	5.6	0.0%	81.8%	1425791	0.00001	1.10
Brazil	374558	0.4%	1335	0.95	8.8	15.9%	55.8%	206163058	0.00001	0.93
Canada	536412	0.6%	3431	1.38	14.2	26.5%	65.3%	36109487	0.00010	13.60
China	2587717	0.2%	5966	0.81	7.6	14.2%	33.5%	1378665000	0.00000	0.62
France	606241	0.6%	3591	1.40	14.4	28.6%	68.1%	66859768	0.00005	7.69
Germany	878930	0.5%	4594	1.35	14.3	28.2%	71.8%	82348669	0.00006	7.98
India	752392	0.2%	1327	0.71	7.1	10.6%	37.4%	1324509589	0.00000	0.14
Indonesia	82124	0.1%	72	1.04	12.2	16.7%	70.8%	261554226	0.00000	0.04
Italy	572770	0.6%	3366	1.26	12.8	24.4%	58.0%	60627498	0.00006	7.95
Japan	656260	0.4%	2298	1.06	11.0	21.5%	42.8%	126994511	0.00002	2.59
Kuwait	8138	0.5%	42	1.26	11.0	28.6%	81.0%	3956873	0.00001	1.52
Mexico	116091	0.4%	412	1.03	10.6	18.9%	58.3%	123333376	0.00000	0.48
Oman	8660	0.6%	54	0.90	7.9	14.8%	81.5%	4479219	0.00001	1.73
Qatar	17610	0.7%	121	1.60	13.1	30.6%	96.7%	2570000	0.00005	6.74
Russian Federation	399823.00	0.1%	506.00	1.06	8.7	17.6%	58.7%	144342396	0.00000	0.50
Saudi Arabia	104173	0.5%	544	1.34	12.7	25.7%	78.3%	32442572	0.00002	2.40
South Africa	113388.00	2.1%	293.00	1.26	11.9	23.9%	78.2%	56203654	0.00001	0.75
South Korea	414499	0.6%	824	1.12	12.7	18.2%	46.4%	51245707	0.00002	2.30
Turkey	221534	0.4%	1085	0.85	8.5	15.4%	42.7%	79821724	0.00001	1.95
United Arab Emirates	27579	0.6%	171	1.09	7.5	24.6%	80.7%	9360980	0.00002	2.61
United Kingdom	1022511	0.1%	6254	1.49	15.5	31.3%	72.1%	65595565	0.00010	13.65
United States	3360453	0.2%	20084	1.30	14.0	25.6%	44.9%	323071342	0.00006	8.90
World	14961710	0.3%	51883	1.03	10.5	18.6%	32.7%	7426103221	0.00001	1.00
Average GCC States	28120.33	0.6%	157.17	1.12	9.6	20.7%	83.3%		0.00002	2.68
Average G20 States	703374.11	0.5%	3089.74	1.16	11.8	21.8%	58.7%		0.00003	4.62

MEDICINE – HEALTH INFORMATICS

Country	Total outputs in all disciplines	Subject Weighted Research Activity (% discipline outputs from total outputs)	Total outputs in discipline	Field Weighted Citation Impact	Citations per publication	Outputs in Top 10% citation percentile	% international collaborators	Population (2016)	Per capita outputs (per million)	Population Weighted Research Activity
Argentina	69930	0.2%	158	1.12	6.2	8.2%	41.8%	43590368	0.00000	0.44
Australia	494302	0.5%	2653	1.12	6.8	11.7%	43.8%	24190907	0.00011	13.24
Bahrain	2562	0.2%	6	0.21	0.5	0.0%	66.7%	1425791	0.00000	0.51
Brazil	374558	0.2%	843	0.87	4.3	6.9%	35.7%	206163058	0.00000	0.49
Canada	536412	0.6%	2996	1.20	6.9	11.4%	43.0%	36109487	0.00008	10.02
China	2587717	0.3%	7603	0.80	3.3	6.1%	26.1%	1378665000	0.00001	0.67
France	606241	0.3%	1755	1.09	6.1	8.5%	50.0%	66859768	0.00003	3.17
Germany	878930	0.3%	2893	1.14	5.7	8.8%	44.0%	82348669	0.00004	4.24
India	752392.00	0.7%	5568.00	0.82	2.7	5.0%	9.5%	1324509589	0.00000	0.51
Indonesia	82124.00	0.6%	525.00	0.69	1.1	0.8%	16.8%	261554226	0.00000	0.24
Italy	572770	0.4%	2140	1.17	5.0	7.1%	42.9%	60627498	0.00004	4.26
Japan	656260	0.3%	2222	0.72	2.9	4.1%	25.9%	126994511	0.00002	2.11
Kuwait	8138	0.4%	31	0.80	3.3	9.7%	61.3%	3956873	0.00001	0.95
Mexico	116091	0.3%	384	0.71	3.8	4.2%	46.4%	123333376	0.00000	0.38
Oman	8660	0.3%	23	0.56	3.8	0.0%	78.3%	4479219	0.00001	0.62
Qatar	17610	0.7%	119	1.51	6.5	10.9%	81.5%	2570000	0.00005	5.59
Russian Federation	399823	0.0%	479	0.62	1.7	2.7%	24.0%	144342396	0.00000	0.40
Saudi Arabia	104173	0.6%	659	0.94	5.4	9.6%	50.5%	32442572	0.00002	2.45
South Africa	113388	2.3%	275	1.25	5.2	13.1%	55.6%	56203654	0.00000	0.59
South Korea	414499	0.6%	1663	0.88	4.2	6.6%	23.2%	51245707	0.00003	3.92
Turkey	221534	0.8%	1074	0.61	3.0	4.4%	15.9%	79821724	0.00001	1.62
United Arab Emirates	27579	0.6%	172	0.96	3.2	3.5%	69.8%	9360980	0.00002	2.22
United Kingdom	1022511	0.1%	4417	1.22	7.0	12.9%	51.8%	65595665	0.00007	8.13
United States	3360453	0.1%	15997	1.13	6.0	9.9%	27.7%	323071342	0.00005	5.98
World	14961710	0.4%	61516	0.93	4.4	6.9%	19.0%	7426103221	0.00001	1.00
Average GCC States	28120.33	0.5%	168.33	0.83	3.8	5.6%	68.0%		0.00002	2.06
Average G20 States	703374.11	0.5%	2858.11	0.95	4.6	7.5%	35.5%		0.00003	3.31

MEDICINE – ONCOLOGY

Country	Total outputs in all disciplines	Subject Weighted Research Activity (% discipline outputs from total outputs)	Total outputs in discipline	Field Weighted Citation Impact	Citations per publication	Outputs in Top 10% citation percentile	% international collaborators	Population (2016)	Per capita outputs (per million)	Population Weighted Research Activity
Argentina	69930	0.9%	629	1.45	14.8	20.7%	65.2%	43590368	0.00001	0.39
Australia	494302	1.7%	8416	1.79	18.6	28.6%	52.8%	24190907	0.00035	9.37
Bahrain	2562	1.1%	29	5.13	56.8	13.8%	72.4%	1425791	0.00002	0.55
Brazil	374558.00	0.8%	2978.00	1.57	17.2	20.4%	45.4%	206163058	0.00001	0.39
Canada	536412.00	2.2%	11700.00	1.70	16.7	28.1%	55.4%	36109487	0.00032	8.73
China	2587717	2.4%	62141	0.89	8.6	16.9%	16.4%	1378665000	0.00005	1.21
France	606241	2.3%	13757	1.93	19.4	26.5%	48.0%	66859768	0.00021	5.54
Germany	878930	1.9%	16779	1.57	15.9	26.7%	52.5%	82348669	0.00020	5.49
India	752392	0.8%	6158	0.80	8.4	9.5%	21.3%	1324509589	0.00000	0.13
Indonesia	82124	0.3%	218	0.96	7.4	11.5%	56.9%	261554226	0.00000	0.02
Italy	572770	2.9%	16531	1.57	15.7	27.7%	45.1%	60627498	0.00027	7.34
Japan	656260	3.1%	20640	0.95	9.2	15.5%	17.3%	126994511	0.00016	4.38
Kuwait	8138	0.9%	76	0.50	4.9	9.2%	36.8%	3956873	0.00002	0.52
Mexico	116091	1.0%	1160	1.04	10.3	15.1%	35.7%	123333376	0.00001	0.25
Oman	8660	1.1%	92	0.62	5.2	2.2%	47.8%	4479219	0.00002	0.55
Qatar	17610	1.3%	228	1.26	11.8	24.1%	82.9%	2570000	0.00009	2.39
Russian Federation	399823	0.2%	2239	0.99	10.6	13.1%	32.1%	144342396	0.00002	0.42
Saudi Arabia	104173	1.2%	1207	1.04	10.4	14.7%	70.8%	32442572	0.00004	1.00
South Africa	113388	7.4%	566	1.65	17.5	20.5%	67.1%	56203654	0.00001	0.27
South Korea	414499	2.0%	9061	1.22	12.2	18.3%	24.9%	51245707	0.00018	4.76
Turkey	221534	4.1%	3581	0.82	9.6	6.7%	16.7%	79821724	0.00004	1.21
United Arab Emirates	27579	0.6%	167	1.54	15.8	18.0%	80.2%	9360980	0.00002	0.48
United Kingdom	1022511	0.4%	15210	1.83	19.3	30.7%	63.3%	65595665	0.00023	6.25
United States	3360453	0.5%	83532	1.55	15.5	26.4%	35.2%	323071342	0.00026	6.96
World	14961710	1.8%	275720	1.04	10.1	17.8%	18.8%	7426103221	0.00004	1.00
Average GCC States	28120.33	1.0%	299.83	1.68	17.5	13.7%	65.2%		0.00003	0.92
Average G20 States	703374.11	1.9%	14552.79	1.33	13.5	19.9%	43.3%		0.00013	3.37

MEDICINE – PUBLIC HEALTH, ENVIRONMENTAL AND OCCUPATIONAL HEALTH

Country	Total outputs in all disciplines	Subject Weighted Research Activity (% discipline outputs from total outputs)	Total outputs in discipline	Field Weighted Citation Impact	Citations per publication	Outputs in Top 10% citation percentile	% international collaborators	Population (2016)	Per capita outputs (per million)	Population Weighted Research Activity
Argentina	69930	1.5%	1049	1.02	6.9	10.0%	48.1%	43590368	0.00002	0.73
Australia	494302	2.9%	14449	1.37	7.9	13.4%	47.1%	24190907	0.00060	18.19
Bahrain	2562	3.2%	83	1.79	10.6	10.8%	62.7%	1425791	0.00006	1.77
Brazil	374558	2.6%	9672	0.77	4.8	6.2%	24.5%	206163058	0.00005	1.43
Canada	536412	2.5%	13313	1.30	7.9	13.1%	45.9%	36109487	0.00037	11.23
China	2587717	0.7%	17350	0.97	6.0	10.7%	27.9%	1378665000	0.00001	0.38
France	606241	1.1%	6781	1.28	8.2	14.4%	53.9%	66859768	0.00010	3.09
Germany	878930	1.3%	11324	0.98	6.0	10.6%	37.0%	82348669	0.00014	4.19
India	752392	1.3%	9689	0.63	4.0	5.6%	23.2%	1324509589	0.00001	0.22
Indonesia	82124	1.8%	1481	0.58	2.9	4.8%	32.1%	261554226	0.00001	0.17
Italy	572770	1.2%	7036	1.22	7.3	14.4%	39.5%	60627498	0.00012	3.53
Japan	656260	0.8%	5173	0.85	5.5	7.6%	32.8%	126994511	0.00004	1.24
Kuwait	8138	1.9%	154	1.12	7.1	13.0%	70.8%	3956873	0.00004	1.19
Mexico	116091	1.8%	2109	0.93	5.5	7.1%	47.0%	123333376	0.00002	0.52
Oman	8660	1.7%	145	0.95	5.8	7.6%	64.1%	4479219	0.00003	0.99
Qatar	17610	1.2%	216	1.30	6.8	12.0%	82.9%	2570000	0.00008	2.56
Russian Federation	399823	0.3%	2326	0.45	2.8	3.7%	25.8%	144342396	0.00002	0.49
Saudi Arabia	104173	1.3%	1317	1.02	6.4	10.7%	68.8%	32442572	0.00004	1.24
South Africa	113388	12.7%	4671	1.24	7.2	12.3%	59.4%	56203654	0.00008	2.53
South Korea	414499	3.5%	4961	0.76	4.7	6.4%	23.2%	51245707	0.00010	2.95
Turkey	221534	2.2%	2661	0.74	4.9	5.7%	16.4%	79821724	0.00003	1.02
United Arab Emirates	27579	1.1%	290	0.95	5.3	9.0%	76.2%	9360980	0.00003	0.94
United Kingdom	1022511	0.3%	21685	1.51	8.8	16.1%	55.6%	65595665	0.00033	10.07
United States	3360453	0.6%	79054	1.28	7.6	12.4%	29.2%	323071342	0.00024	7.45
World	14961710	1.6%	243822	0.97	5.8	8.9%	21.5%	7426103221	0.00003	1.00
Average GCC States	28120.33	1.7%	367.50	1.19	7.0	10.5%	70.9%		0.00005	1.45
Average G20 States	703374.11	2.1%	11373.74	0.99	6.1	9.7%	38.8%		0.00012	3.72

MEDICINE – PULMONARY AND RESPIRATORY MEDICINE

Country	Total outputs in all disciplines	Subject Weighted Research Activity (% discipline outputs from total outputs)	Total outputs in discipline	Field Weighted Citation Impact	Citations per publication	Outputs in Top 10% citation percentile	% international collaborators	Population (2016)	Per capita outputs (per million)	Population Weighted Research Activity
Argentina	69930	0.4%	273	2.39	20.2	26.0%	70.3%	43590368	0.00001	0.49
Australia	494302	0.8%	4114	1.89	13.1	22.2%	45.6%	24190907	0.00017	13.30
Bahrain	2562	0.1%	2	0.19	1.0	0.0%	0.0%	1425791	0.00000	0.11
Brazil	374558	0.5%	1896	1.38	10.2	13.8%	39.0%	206163058	0.00001	0.72
Canada	536412	1.0%	5389	1.90	13.1	23.0%	51.3%	36109487	0.00015	11.67
China	2587717	0.3%	6788	0.93	6.9	10.9%	19.9%	1378665000	0.00000	0.39
France	606241	0.8%	5064	1.54	10.7	18.6%	40.5%	66859768	0.00008	5.92
Germany	878930	0.7%	6532	1.56	10.8	19.7%	44.8%	82348669	0.00008	6.20
India	752392	0.3%	2181	0.63	4.5	5.7%	17.9%	1324509589	0.00000	0.13
Indonesia	82124	0.1%	72	1.94	14.1	11.1%	61.1%	261554226	0.00000	0.02
Italy	572770	1.1%	6075	1.58	10.2	17.8%	41.4%	60627498	0.00010	7.84
Japan	656260	1.1%	7521	0.83	6.1	9.0%	11.3%	126994511	0.00006	4.63
Kuwait	8138	0.3%	26	0.84	8.2	19.2%	69.2%	3956873	0.00001	0.51
Mexico	116091	0.0%	556	1.20	9.9	16.2%	39.6%	123333376	0.00000	0.35
Oman	8660	0.3%	26	2.49	23.8	30.8%	53.9%	4479219	0.00001	0.45
Qatar	17610	0.3%	52	0.96	6.2	5.8%	65.4%	2570000	0.00002	1.58
Russian Federation	399823	0.1%	732	0.83	5.8	8.6%	28.0%	144342396	0.00001	0.40
Saudi Arabia	104173	0.4%	411	1.31	10.5	12.7%	61.1%	32442572	0.00001	0.99
South Africa	113388	3.6%	654	2.57	17.4	24.9%	70.8%	56203654	0.00001	0.91
South Korea	414499	1.0%	2979	0.91	7.5	10.5%	14.8%	51245707	0.00006	4.55
Turkey	221534	1.3%	2607	0.50	3.8	4.2%	10.4%	79821724	0.00003	2.55
United Arab Emirates	27579	0.4%	109	2.08	14.9	21.1%	75.2%	9360980	0.00001	0.91
United Kingdom	1022511	0.3%	8514	1.98	13.1	24.1%	54.9%	65595665	0.00013	10.15
United States	3360453	0.3%	30439	1.41	9.5	18.0%	26.7%	323071342	0.00009	7.37
World	14961710	0.6%	94941	1.02	6.8	12.0%	17.6%	7426103221	0.00001	1.00
Average GCC States	28120.33	0.3%	104.33	1.31	10.8	14.9%	54.1%		0.00001	0.76
Average G20 States	703374.11	0.7%	4884.05	1.44	10.4	15.6%	39.4%		0.00005	4.14

NEUROSCIENCE										
Country	Total outputs in all disciplines	Subject Weighted Research Activity (% discipline outputs from total outputs)	Total outputs in discipline	Field Weighted Citation Impact	Citations per publication	Outputs in Top 10% citation percentile	% international collaborators	Population (2016)	Per capita outputs (per million)	Population Weighted Research Activity
Argentina	69930	2.8%	1964	0.94	8.8	16.5%	53.0%	43590368	0.00005	0.91
Australia	494302	3.5%	17322	1.44	12.4	23.9%	55.5%	24190907	0.00072	14.52
Bahrain	2562.00	1.3%	34.00	0.53	4.3	11.8%	73.5%	1425791	0.00002	0.48
Brazil	374558	2.6%	9797	0.96	8.2	14.9%	39.6%	206163058	0.00005	0.96
Canada	536412	4.3%	22984	1.33	12.0	22.9%	52.5%	36109487	0.00064	12.91
China	2587717	1.6%	40414	1.05	9.1	19.4%	32.1%	1378665000	0.00003	0.59
France	606241	2.8%	16763	1.41	13.0	24.8%	56.8%	66859768	0.00025	5.09
Germany	878930	3.9%	33852	1.43	12.8	25.0%	54.3%	82348669	0.00041	8.34
India	752392	1.1%	8075	0.81	6.5	11.4%	23.3%	1324509589	0.00001	0.12
Indonesia	82124	0.3%	239	1.38	7.4	12.1%	59.0%	261554226	0.00000	0.02
Italy	572770	3.5%	20021	1.38	12.0	23.7%	49.7%	60627498	0.00033	6.70
Japan	656260	2.8%	18204	0.98	8.5	14.2%	28.7%	126994511	0.00014	2.91
Kuwait	8138	1.6%	133	0.97	7.7	12.8%	63.9%	3956873	0.00003	0.68
Mexico	116091	2.4%	2838	0.80	7.1	12.5%	42.7%	123333376	0.00002	0.47
Oman	8660.00	0.9%	78.00	1.57	12.9	34.6%	89.7%	4479219	0.00002	0.35
Qatar	17610	1.9%	336	1.47	11.9	29.5%	90.2%	2570000	0.00013	2.65
Russian Federation	399823	0.9%	3536	0.73	6.0	11.8%	40.0%	144342396	0.00002	0.50
Saudi Arabia	104173	1.4%	1425	1.46	13.5	24.8%	83.8%	32442572	0.00004	0.89
South Africa	113388	1.2%	1342	1.38	11.0	20.8%	68.0%	56203654	0.00002	0.48
South Korea	414499	0.3%	9446	0.92	8.1	13.6%	28.0%	51245707	0.00018	3.74
Turkey	221534	4.3%	4455	0.70	5.7	9.2%	22.9%	79821724	0.00006	1.13
United Arab Emirates	27579	1.4%	382	1.24	12.1	25.4%	80.4%	9360980	0.00004	0.83
United Kingdom	1022511	0.4%	36847	1.56	13.8	27.2%	61.5%	65595665	0.00056	11.39
United States	3360453	3.9%	130355	1.36	12.5	24.5%	35.9%	323071342	0.00040	8.18
World	14961710	2.4%	366104	1.11	9.8	18.7%	26.0%	7426103221	0.00005	1.00
Average GCC States	28120.33	1.4%	398.00	1.21	10.4	23.1%	80.3%		0.00005	0.98
Average G20 States	703374.11	2.3%	19993.63	1.16	9.9	18.6%	46.7%		0.00021	4.20

NURSING										
Country	Total outputs in all disciplines	Subject Weighted Research Activity (% discipline outputs from total outputs)	Total outputs in discipline	Field Weighted Citation Impact	Citations per publication	Outputs in Top 10% citation percentile	% international collaborators	Population (2016)	Per capita outputs (per million)	Population Weighted Research Activity
Argentina	69930	0.7%	507	1.15	8.0	14.8%	50.1%	43590368	0.00001	0.35
Australia	494302	3.1%	15302	1.65	8.1	13.7%	36.8%	24190907	0.00063	18.78
Bahrain	2562	2.0%	51	1.90	8.3	11.8%	76.5%	1425791	0.00004	1.06
Brazil	374558	2.4%	8845	0.78	4.3	6.0%	20.2%	206163058	0.00004	1.27
Canada	536412	2.1%	11486	1.48	8.1	14.0%	39.0%	36109487	0.00032	9.45
China	2587717	0.3%	8886	1.15	7.3	14.3%	32.5%	1378665000	0.00001	0.19
France	606241	1.8%	10728	0.71	4.5	8.1%	22.0%	66859768	0.00016	4.76
Germany	878930	1.0%	8484	1.35	8.0	13.7%	36.9%	82348669	0.00010	3.06
India	752392	0.3%	2621	1.04	6.6	10.8%	32.3%	1324509589	0.00000	0.06
Indonesia	82124	1.1%	877	0.55	2.7	3.1%	30.8%	261554226	0.00000	0.10
Italy	572770	1.1%	6035	1.88	11.0	21.6%	42.4%	60627498	0.00010	2.96
Japan	656260	0.9%	5622	1.06	6.1	9.7%	19.3%	126994511	0.00004	1.31
Kuwait	8138	1.2%	98	1.09	7.2	0.1%	63.3%	3956873	0.00002	0.74
Mexico	116091	1.3%	1541	0.91	6.0	11.7%	41.3%	123333376	0.00001	0.37
Oman	8660	1.1%	97	1.11	8.1	15.5%	63.9%	4479219	0.00002	0.64
Qatar	17610	1.4%	254	1.92	9.7	16.9%	78.4%	2570000	0.00010	2.93
Russian Federation	399823	0.3%	1117	0.44	3.0	4.4%	15.3%	144342396	0.00001	0.23
Saudi Arabia	104173	0.8%	861	1.44	6.8	11.6%	70.5%	32442572	0.00003	0.79
South Africa	113388	1.5%	1663	1.21	6.0	9.6%	49.1%	56203654	0.00003	0.88
South Korea	414499	1.8%	7485	0.81	4.9	6.4%	17.1%	51245707	0.00015	4.34
Turkey	221534	1.3%	2893	0.86	3.9	4.2%	12.8%	79821724	0.00004	1.08
United Arab Emirates	27579	0.9%	250	1.24	6.5	12.0%	70.0%	9360980	0.00003	0.79
United Kingdom	1022511	2.6%	26096	1.31	6.5	11.2%	31.6%	65595665	0.00040	11.81
United States	3360453.00	2.4%	82281.00	1.19	6.0	9.4%	17.7%	323071342	0.00025	7.56
World	14961710	1.7%	250072	1.00	5.0	8.0%	14.0%	7426103221	0.00003	1.00
Average GCC States	28120.33	1.2%	268.50	1.45	7.8	11.3%	70.4%		0.00004	1.16
Average G20 States	703374.11	1.4%	10701.58	1.10	6.2	10.4%	32.5%		0.00012	3.65

PHARMACOLOGY, TOXICOLOGY AND PHARMACEUTICS

Country	Total outputs in all disciplines	Subject Weighted Research Activity (% discipline outputs from total outputs)	Total outputs in discipline	Field Weighted Citation Impact	Citations per publication	Outputs in Top 10% citation percentile	% international collaborators	Population (2016)	Per capita outputs (per million)	Population Weighted Research Activity
Argentina	69930	2.8%	1946	0.92	6.7	9.8%	43.6%	43590368	0.00004	0.70
Australia	494302	2.1%	10420	1.48	11.0	22.4%	55.4%	24190907	0.00043	6.78
Bahrain	2562	2.8%	72	1.13	5.5	13.9%	75.0%	1425791	0.00005	0.79
Brazil	374558	3.5%	13034	1.01	7.1	12.1%	31.6%	206163058	0.00006	0.99
Canada	536412	2.1%	11411	1.32	10.1	19.7%	54.5%	36109487	0.00032	4.97
China	2587717	3.4%	87980	0.99	6.7	14.4%	17.6%	1378665000	0.00006	1.00
France	606241	2.3%	13985	1.25	9.5	18.1%	53.1%	66859768	0.00021	3.29
Germany	878930	2.5%	21797	1.27	9.6	18.9%	51.7%	82348669	0.00026	4.16
India	752392	6.9%	52062	0.57	4.2	6.7%	11.5%	1324509589	0.00004	0.62
Indonesia	82124	4.1%	3383	0.45	2.4	2.5%	16.7%	261554226	0.00001	0.20
Italy	572770	3.3%	18630	1.42	10.8	22.8%	44.3%	60627498	0.00031	4.83
Japan	656260	3.4%	22218	0.84	6.1	8.8%	23.9%	126994511	0.00017	2.75
Kuwait	8138	2.5%	205	0.99	6.8	10.2%	60.0%	3956873	0.00005	0.81
Mexico	116091	2.9%	3350	0.85	6.6	10.6%	36.3%	123333376	0.00003	0.43
Oman	8660	3.7%	321	1.12	6.8	18.4%	86.0%	4479219	0.00007	1.13
Qatar	17610	2.8%	489	1.10	7.4	14.9%	80.8%	2570000	0.00019	2.99
Russian Federation	399823	1.7%	6854	0.65	4.3	7.7%	24.9%	144342396	0.00005	0.75
Saudi Arabia	104173	5.9%	6153	1.08	7.6	14.5%	79.3%	32442572	0.00019	2.98
South Africa	113388	2.6%	2933	1.13	7.8	15.6%	51.3%	56203654	0.00005	0.82
South Korea	414499	0.7%	13767	1.06	8.4	14.7%	25.1%	51245707	0.00027	4.23
Turkey	221534	6.2%	6105	0.94	6.3	10.9%	24.1%	79821724	0.00008	1.20
United Arab Emirates	27579	2.5%	691	0.91	6.4	14.8%	78.2%	9360980	0.00007	1.16
United Kingdom	1022511	0.6%	23758	1.46	10.7	20.7%	58.5%	65595565	0.00036	5.70
United States	3360453	0.7%	99545	1.33	10.0	19.2%	34.8%	323071342	0.00031	4.85
World	14961710	3.2%	472075	0.97	7.0	12.9%	18.9%	7426103221	0.00006	1.00
Average GCC States	28120.33	3.4%	1321.83	1.06	6.8	14.4%	76.6%		0.00010	1.65
Average G20 States	703374.11	3.0%	22070.05	1.05	7.7	14.2%	38.9%		0.00017	2.70

PSYCHOLOGY

Country	Total outputs in all disciplines	Subject Weighted Research Activity (% discipline outputs from total outputs)	Total outputs in discipline	Field Weighted Citation Impact	Citations per publication	Outputs in Top 10% citation percentile	% international collaborators	Population (2016)	Per capita outputs (per million)	Population Weighted Research Activity
Argentina	69930	1.9%	1300	0.76	4.6	6.7%	43.5%	43590368	0.00003	0.62
Australia	494302	4.2%	20955	1.39	8.2	14.7%	43.7%	24190907	0.00087	17.99
Bahrain	2562	1.2%	32	1.17	3.8	9.4%	65.6%	1425791	0.00002	0.47
Brazil	374558	2.0%	7602	0.54	3.6	5.2%	27.4%	206163058	0.00004	0.77
Canada	536412	4.2%	22787	1.34	8.0	13.3%	44.5%	36109487	0.00063	13.11
China	2587717	0.4%	10057	1.13	6.7	12.3%	51.9%	1378665000	0.00001	0.15
France	606241	2.1%	12666	0.77	4.7	7.8%	34.8%	66859768	0.00019	3.93
Germany	878930	2.7%	23865	1.30	7.8	14.0%	42.5%	82348669	0.00029	6.02
India	752392	0.5%	3976	0.80	3.9	5.6%	24.7%	1324509589	0.00000	0.06
Indonesia	82124	0.4%	337	1.23	5.1	5.6%	61.1%	261554226	0.00000	0.03
Italy	572770	2.3%	12892	1.27	7.5	13.9%	41.9%	60627498	0.00021	4.42
Japan	656260	0.9%	5670	0.78	4.6	6.5%	28.7%	126994511	0.00004	0.93
Kuwait	8138	1.0%	84	0.87	4.7	4.8%	53.6%	3956873	0.00002	0.44
Mexico	116091	1.8%	2040	0.62	3.6	4.4%	42.9%	123333376	0.00002	0.34
Oman	8660	1.0%	89	1.30	8.0	13.5%	60.7%	4479219	0.00002	0.41
Qatar	17610	0.9%	164	0.84	4.4	7.9%	76.2%	2570000	0.00006	1.33
Russian Federation	399823	0.7%	2633	0.64	3.0	5.0%	31.6%	144342396	0.00002	0.38
Saudi Arabia	104173	0.7%	690	1.59	9.3	14.8%	77.4%	32442572	0.00002	0.44
South Africa	113388	2.8%	3181	1.11	5.7	9.3%	50.7%	56203654	0.00006	1.18
South Korea	414499	0.8%	3778	1.14	7.4	12.5%	47.9%	51245707	0.00007	1.53
Turkey	221534	1.7%	2645	1.04	5.7	9.1%	34.7%	79821724	0.00003	0.69
United Arab Emirates	27579	1.5%	420	1.31	6.9	12.9%	72.4%	9360980	0.00004	0.93
United Kingdom	1022511	0.3%	41534	1.39	8.1	14.6%	43.7%	65595565	0.00063	13.15
United States	3360453	1.2%	145420	1.35	8.0	13.4%	22.9%	323071342	0.00045	9.35
World	14961710	2.4%	357557	1.11	6.5	10.5%	19.8%	7426103221	0.00005	1.00
Average GCC States	28120.33	1.1%	246.50	1.18	6.2	10.5%	67.7%		0.00003	0.67
Average G20 States	703374.11	1.7%	17054.11	1.06	6.1	9.9%	41.9%		0.00019	3.95

A15. INSTITUTIONAL DATA, 2014-2018 (*PubMed*, 17 October 2019; *SciVal*®, 24 July 2019)

AL AIN HOSPITAL

Health research publications (*PubMed*, by affiliation to institution and UAE)

2014	2015	2016	2017	2018	Total
7	11	9	10	12	49

ASJC Subject (<i>SciVal</i> ®)	Outputs	FWCI	International Co-Authors
Biochemistry, Genetics and Molecular Biology	5	0.37	60.0%
Dentistry			
Health Professions	1	0.60	100.0%
Immunology and Microbiology	6	1.75	83.3%
Medicine	60	1.08	46.7%
Cardiology and Cardiovascular Medicine	1	0.75	100.0%
Critical Care and Intensive Medicine	1	0.00	0.0%
Emergency Medicine	6	1.51	16.7%
Endocrinology, Diabetes, and Metabolism			
General Medicine	13	0.62	30.8%
Genetics (Clinical)	2	0.32	50.0%
Health Informatics			
Oncology	1	0.30	0.0%
Public Health, Environmental & Occupational Health	8	0.48	62.5%
Pulmonary and Respiratory Medicine			
Neuroscience	4	0.25	75.0%
Nursing			
Pharmacology, Toxicology and Pharmaceutics	3	0.29	100.0%
Psychology	2	0.05	50.0%

Top Collaborating Institutions (*SciVal*®)

BIOCHEMISTRY, GENETICS AND MOLECULAR BIOLOGY		CRITICAL CARE AND INTENSIVE MEDICINE		ONCOLOGY	
United Arab Emirates University	United Arab Emirates	United Arab Emirates University	United Arab Emirates	United Arab Emirates University	United Arab Emirates
Tawam Hospital	United Arab Emirates				
Al Mafraq Hospital	United Arab Emirates				
American University of Beirut	Lebanon				
Alfaisal University	Saudi Arabia				
DENTISTRY		EMERGENCY MEDICINE		PUBLIC HEALTH, ENVIRO AND OCCUPATIONAL HEALTH	
		United Arab Emirates University	United Arab Emirates	United Arab Emirates University	United Arab Emirates
		Ahmadu Bello University	Nigeria	Alfaisal University	Saudi Arabia
		Aristotle University of Thessaloniki	Greece	American University of Beirut	Lebanon
		Athens General Hospital	Greece	Cairo University	Egypt
		Baskent University	Turkey	Department of Veterans Affairs	United States
HEALTH PROFESSIONS		ENDOCRINOLOGY, DIABETES, AND METABOLISM		PULMONARY AND RESPIRATORY MEDICINE	
Ajman Uni of Sci and Technology	United Arab Emirates				
Al Mafraq Hospital	United Arab Emirates				
Queen's University Belfast	United Kingdom				
Tawam Hospital	United Arab Emirates				
United Arab Emirates University	United Arab Emirates				
IMMUNOLOGY AND MICROBIOLOGY		GENERAL MEDICINE		NEUROSCIENCE	
Al Mafraq Hospital	United Arab Emirates	United Arab Emirates University	United Arab Emirates	Johns Hopkins University	United States
Aga Khan University	Pakistan	Al Mafraq Hospital	United Arab Emirates	Tawam Hospital	United Arab Emirates
Alfaisal University	Saudi Arabia	Ain Shams University	Egypt	United Arab Emirates University	United Arab Emirates
Allama Iqbal Medical College	Pakistan	Ajman Uni of Sci and Technology	United Arab Emirates	Harvard University	United States
American University of Beirut	Lebanon	Cleveland Clinic Foundation	United States		
MEDICINE		GENETICS (CLINICAL)		NURSING	
United Arab Emirates University	United Arab Emirates	United Arab Emirates University	United Arab Emirates		
Tawam Hospital	United Arab Emirates	University of New South Wales	Australia		
Al Mafraq Hospital	United Arab Emirates	Western Sydney University	Australia		
American University of Beirut	Lebanon				
Alfaisal University	Saudi Arabia				
CARDIOLOGY AND CARDIOVASCULAR MEDICINE		HEALTH INFORMATICS		PHARMACOLOGY, TOXICOLOGY AND PHARMACEUTICS	
Gondar University	Ethiopia			Ajman Uni of Science and Technology	United Arab Emirates
Hacettepe University	Turkey			Al Mafraq Hospital	United Arab Emirates
Imam Abdulrahman Bin Faisal Uni	Saudi Arabia			Tawam Hospital	United Arab Emirates
Tawam Hospital	United Arab Emirates			United Arab Emirates University	United Arab Emirates
United Arab Emirates University	United Arab Emirates			Charles University	Czechia
PSYCHOLOGY				PSYCHOLOGY	
				United Arab Emirates University	United Arab Emirates

AL MAFRAQ HOSPITAL

Health research publications (*PubMed*, by affiliation to institution and UAE)

2014	2015	2016	2017	2018	Total
7	9	13	17	11	57

ASJC Subject (*SciVal*®)

	Outputs	FWCI	International Co-Authors
Biochemistry, Genetics and Molecular Biology	24	1.00	58.3%
Dentistry	1	1.10	0.0%
Health Professions	4	0.62	25.0%
Immunology and Microbiology	10	1.11	90.0%
Medicine	84	5.67	59.5%
Cardiology and Cardiovascular Medicine	3	0.12	0.0%
Critical Care and Intensive Medicine	3	1.86	100.0%
Emergency Medicine	2	2.44	100.0%
Endocrinology, Diabetes, and Metabolism	21	0.82	47.6%
General Medicine	13	31.02	46.2%
Genetics (Clinical)	4	0.47	75.0%
Health Informatics			
Oncology			
Public Health, Environmental & Occupational Health	3	0.66	66.7%
Pulmonary and Respiratory Medicine			
Neuroscience	1	0.00	0.0%
Nursing	1	0.29	100.0%
Pharmacology, Toxicology and Pharmaceutics	4	0.93	100.0%
Psychology			

Top Collaborating Institutions (*SciVal*®)

BIOCHEMISTRY, GENETICS AND MOLECULAR BIOLOGY

United Arab Emirates University	United Arab Emirates
Sheikh Khalifa Medical City	United Arab Emirates
University of Cambridge	United Kingdom
Gulf Medical University	United Arab Emirates
King Saud University	Saudi Arabia

CRITICAL CARE AND INTENSIVE MEDICINE

Complutense University	Spain
Hacettepe University	Turkey
Hamad Medical Corporation	Qatar
Hospital de Galdakao	Spain
Hull and East Yorkshire Hosp NHS	United Kingdom

ONCOLOGY

DENTISTRY

EMERGENCY MEDICINE

Complutense University	Spain
Hacettepe University	Turkey
Hospital de Galdakao	Spain
Hull and East Yorkshire Hosp NHS	United Kingdom
IRCCS Ist Clin Hum - Rozzano	Italy

PUBLIC HEALTH, ENVIRO AND OCCUPATIONAL HEALTH

Griffith University Queensland	Australia
Gold Coast University Hospital	Australia
University of Sydney	Australia
Griffith University Queensland	Australia
Gold Coast University Hospital	Australia

HEALTH PROFESSIONS

United Arab Emirates University	United Arab Emirates
Ajman Uni of Sci and Technology	United Arab Emirates
Al Ain Hospital	United Arab Emirates
Sheikh Khalifa Medical City	United Arab Emirates
Tawam Hospital	United Arab Emirates

ENDOCRINOLOGY, DIABETES, AND METABOLISM

United Arab Emirates University	United Arab Emirates
Kuwait University	Kuwait
University of Cambridge	United Kingdom
Becton, Dickinson and Company	United States
Gulf Medical University	United Arab Emirates

PULMONARY AND RESPIRATORY MEDICINE

IMMUNOLOGY AND MICROBIOLOGY

King Fahad Medical City	Saudi Arabia
Al Ain Hospital	United Arab Emirates
Aga Khan University	Pakistan
Alfaisal University	Saudi Arabia
Allama Iqbal Medical College	Pakistan

GENERAL MEDICINE

United Arab Emirates University	United Arab Emirates
Al Ain Hospital	United Arab Emirates
AIY Moscow State Uni of Med Dent	Russian Federation
Aalborg University	Denmark
Aarhus University	Denmark

NEUROSCIENCE

MEDICINE

United Arab Emirates University	United Arab Emirates
Al Ain Hospital	United Arab Emirates
King Fahad Medical City	Saudi Arabia
Tawam Hospital	United Arab Emirates
Min of National Guard – Health Affairs	Saudi Arabia

GENETICS (CLINICAL)

Sheikh Khalifa Medical City	United Arab Emirates
Tawam Hospital	United Arab Emirates
United Arab Emirates University	United Arab Emirates
Al Ain Uni of Science and Tech	United Arab Emirates
Alfaisal University	Saudi Arabia

NURSING

Gold Coast University Hospital	Australia
Griffith University Queensland	Australia

CARDIOLOGY AND CARDIOVASCULAR MEDICINE

HEALTH INFORMATICS

PHARMACOLOGY, TOXICOLOGY AND PHARMACEUTICS

United Arab Emirates University	United Arab Emirates
Al Ain Hospital	United Arab Emirates
Tawam Hospital	United Arab Emirates
Ajman Uni of Science and Technology	United Arab Emirates
GlaxoSmithKline	United Kingdom

PSYCHOLOGY

DUBAI HOSPITAL

Health research publications (*PubMed*, by affiliation to institution and UAE)

2014	2015	2016	2017	2018	Total
19	36	25	40	34	154

ASJC Subject (<i>SciVal</i> ®)	Outputs	FWCI	International Co-Authors
Biochemistry, Genetics and Molecular Biology	29	1.76	96.6%
Dentistry			
Health Professions	4	0.69	5.0%
Immunology and Microbiology	21	2.94	100.0%
Medicine	278	1.44	62.2%
Cardiology and Cardiovascular Medicine	39	2.13	84.6%
Critical Care and Intensive Medicine	6	0.43	83.3%
Emergency Medicine	17	1.86	70.6%
Endocrinology, Diabetes, and Metabolism	20	1.67	80.0%
General Medicine	65	0.52	32.3%
Genetics (Clinical)	4	2.20	100.0%
Health Informatics	2	1.33	50.0%
Oncology	24	0.39	83.3%
Public Health, Environmental & Occupational Health	6	3.71	83.3%
Pulmonary and Respiratory Medicine	14	1.63	78.6%
Neuroscience	8	0.24	75.0%
Nursing	16	2.65	75.0%
Pharmacology, Toxicology and Pharmaceutics	12	0.88	75.0%
Psychology			

Top Collaborating Institutions (*SciVal*®)

BIOCHEMISTRY, GENETICS AND MOLECULAR BIOLOGY		CRITICAL CARE AND INTENSIVE MEDICINE		ONCOLOGY	
Tata Memorial Hospital	India	IRR Diab, Endo and Metab Disorders	Bangladesh	Tata Memorial Hospital	India
Thomas Jefferson University	United States	Chang Gung University	Taiwan	Uni of Texas MD Anderson Cancer Ctr	United States
Aga Khan University	Pakistan	Chang Gung Uni of Sci and Tech	Taiwan	National Cancer Centre	Singapore
Ain Shams University	Egypt	Chinese University of Hong Kong	Hong Kong	Thomas Jefferson University	United States
Alexandria University	Egypt	King Saud b Abdulaziz Uni H Sci	Saudi Arabia	Autonomous University of Barcelona	Spain
DENTISTRY		EMERGENCY MEDICINE		PUBLIC HEALTH, ENVIRO AND OCCUPATIONAL HEALTH	
		National University of Singapore	Singapore	American University of Beirut	Lebanon
		Singapore General Hospital	Singapore	Catholic University in Ruzomberok	Slovakia
		Kindai University	Japan	Central Military Hospital, Ruzomberok	Slovakia
		National Taiwan University	Taiwan	Fudan University	China
		Seoul National University	South Korea	Medanta (The Medicity)	India
HEALTH PROFESSIONS		ENDOCRINOLOGY, DIABETES, AND METABOLISM		PULMONARY AND RESPIRATORY MEDICINE	
Alexandria University	Egypt	Hamad Medical Corporation	Qatar	GlaxoSmithKline	United Kingdom
Rajiv Gandhi Uni of Health Sciences	India	Imam Abdulrahman Bin Faisal Uni	Saudi Arabia	Ain Shams University	Egypt
University of Basel	Switzerland	Ministry of Health Oman	Oman	Catholic University of Cordoba	Argentina
		University of Sharjah	United Arab Emirates	Charité – Universitätsmedizin Berlin	Germany
		Al-Imam Muhammad Ibn Saud Isl Uni	Saudi Arabia	Emek Medical Center	Israel
IMMUNOLOGY AND MICROBIOLOGY		GENERAL MEDICINE		NEUROSCIENCE	
University of Sydney	Australia	Ain Shams University	Egypt	Hamad Medical Corporation	Qatar
University of Ljubljana	Slovenia	King Saud University	Saudi Arabia	Alfaisal University	Saudi Arabia
Vilnius University	Lithuania	Sheikh Khalifa Medical City	United Arab Emirates	American University of Beirut	Lebanon
INSERM	France	United Arab Emirates University	United Arab Emirates	King Saud University	Saudi Arabia
Université Paris 5	France	Aga Khan University	Pakistan	Min of National Guard – Health Affairs	Saudi Arabia
MEDICINE		GENETICS (CLINICAL)		NURSING	
Hamad Medical Corporation	Qatar	Alfaisal University	Saudi Arabia	Kindai University	Japan
King Saud University	Saudi Arabia	Autonomous University of Barcelona	Spain	National Taiwan University	Taiwan
National University of Singapore	Singapore	Cent Hosp Uni de Clermont-Ferrand	France	National University of Singapore	Singapore
Min of National Guard – Health Affairs	Saudi Arabia	Columbia University	United States	Seoul National University	South Korea
Sultan Qaboos University	Oman	GeneDX Inc	United States	Singapore General Hospital	Singapore
CARDIOLOGY AND CARDIOVASCULAR MEDICINE		HEALTH INFORMATICS		PHARMACOLOGY, TOXICOLOGY AND PHARMACEUTICS	
Hamad Medical Corporation	Qatar	Aga Khan University	Pakistan	United Arab Emirates University	United Arab Emirates
Sultan Qaboos University	Oman	Fatima Jinnah Women University	Pakistan	Hamad Medical Corporation	Qatar
King Saud University	Saudi Arabia			Sultan Qaboos University	Oman
Sanaa University	Yemen			Imam Abdulrahman Bin Faisal Uni	Saudi Arabia
King Khalid University	Saudi Arabia			King Saud University	Saudi Arabia
PSYCHOLOGY					

GULF MEDICAL UNIVERSITY

Health research publications (*PubMed*, by affiliation to institution and UAE)

2014	2015	2016	2017	2018	Total
25	27	43	25	44	164

ASJC Subject (*SciVal*®)

	Outputs	FWCI	International Co-Authors
Biochemistry, Genetics and Molecular Biology	48	0.98	75.0%
Dentistry	14	1.26	78.6%
Health Professions	12	0.66	66.7%
Immunology and Microbiology	6	1.15	83.3%
Medicine	133	1.08	66.9%
Cardiology and Cardiovascular Medicine	13	1.37	92.3%
Critical Care and Intensive Medicine	1	0.00	0.0%
Emergency Medicine			
Endocrinology, Diabetes, and Metabolism	15	2.29	80.0%
General Medicine	31	0.95	35.5%
Genetics (Clinical)	1	1.57	100.0%
Health Informatics	1	0.00	0.0%
Oncology	9	0.20	55.6%
Public Health, Environmental & Occupational Health	23	0.41	60.9%
Pulmonary and Respiratory Medicine			
Neuroscience	8	1.33	100.0%
Nursing	4	3.14	100.0%
Pharmacology, Toxicology and Pharmaceutics	50	0.87	86.0%
Psychology	1	0.66	100.0%

Top Collaborating Institutions (*SciVal*®)

BIOCHEMISTRY, GENETICS AND MOLECULAR BIOLOGY	
Jamia Hamdard University	India
Bangalore University	India
Boston University	United States
Cairo University	Egypt
Regional Cancer Centre India	India

CRITICAL CARE AND INTENSIVE MEDICINE	
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ONCOLOGY	
Regional Cancer Centre India	India
CNRS	France
German Cancer Research Center	Germany
Heidelberg University	Germany

DENTISTRY	
University of Sharjah	United Arab Emirates
Gulbarga University	India
NITTE University	India
University of Baghdad	Iraq
Bharati Vidyapeeth University	India

EMERGENCY MEDICINE	
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PUBLIC HEALTH, ENVIRO AND OCCUPATIONAL HEALTH	
Saveetha University	India
Manipal Academy of Higher Education	India
Regional Cancer Centre India	India
United Arab Emirates University	United Arab Emirates
Bayer AG	Germany

HEALTH PROFESSIONS	
Qatar University	Qatar
University of Mysore	India
King Saud University	Saudi Arabia
Ajman Uni of Sci and Technology	United Arab Emirates
Albany College of Pharmacy	United States

ENDOCRINOLOGY, DIABETES, AND METABOLISM	
Boston University	United States
Bayer AG	Germany
Vrije Universiteit Amsterdam	Netherlands
Al Mafraq Hospital	United Arab Emirates
Azienda Ospedaliera Careggi	Italy

PULMONARY AND RESPIRATORY MEDICINE	
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IMMUNOLOGY AND MICROBIOLOGY	
CNRS	France
INSERM	France
Aix-Marseille Université	France
ComUE Paris-Saclay	France
EPHE Ecole Pratique d Hautes Etudes	France

GENERAL MEDICINE	
Ministry of Health and Prevention	United Arab Emirates
NITTE University	India
Al Mafraq Hospital	United Arab Emirates
Asian Inst of Med, Sci & Technology	Malaysia
Boston University	United States

NEUROSCIENCE	
Jamia Hamdard University	India
Boston University	United States
Bharati Vidyapeeth University	India
Curtin University of Technology	Australia
Edith Cowan University	Australia

MEDICINE	
Boston University	United States
Bayer AG	Germany
Vrije Universiteit Amsterdam	Netherlands
Saveetha University	India
University of Sheffield	United Kingdom

GENETICS (CLINICAL)	
Gunma University	Japan
Istanbul University	Turkey
Leeds Teaching Hospitals NHS Trust	United Kingdom
NHS Lothian	United Kingdom
Osaka University	Japan

NURSING	
Boston University	United States
Bayer AG	Germany
Henry Ford Health System	United States
Houston Methodist Hospital	United States
National Cheng Kung University	Taiwan

CARDIOLOGY AND CARDIOVASCULAR MEDICINE	
Boston University	United States
Medical University of South Carolina	United States
People's Friendship Uni of Russia	Russian Federation
University of Central Lancashire	United Kingdom
University of Minnesota	United States

HEALTH INFORMATICS	
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PHARMACOLOGY, TOXICOLOGY AND PHARMACEUTICS	
Qatar University	Qatar
King Faisal University	Saudi Arabia
Cairo University	Egypt
Jamia Hamdard University	India
Jawaharlal Nehru Technological Uni	India

PSYCHOLOGY	
Curtin University of Technology	Australia
Edith Cowan University	Australia
Icahn School of Med at Mount Sinai	United States
Macquarie University	Australia
Neuroscience Research Australia	Australia

KHALIFA UNIVERSITY OF SCIENCE AND TECHNOLOGY

Health research publications (*PubMed*, by affiliation to institution and UAE)

2014	2015	2016	2017	2018	Total
21	43	107	178	236	585

ASJC Subject (<i>SciVal</i> ®)	Outputs	FWCI	International Co-Authors
Biochemistry, Genetics and Molecular Biology	250	1.24	74.8%
Dentistry			
Health Professions	26	1.47	73.1%
Immunology and Microbiology	31	1.27	77.4%
Medicine	212	1.04	76.9%
Cardiology and Cardiovascular Medicine	11	0.55	100.0%
Critical Care and Intensive Medicine			
Emergency Medicine			
Endocrinology, Diabetes, and Metabolism	8	1.33	62.5%
General Medicine	33	0.65	72.7%
Genetics (Clinical)	5	1.32	60.0%
Health Informatics	58	1.22	81.0%
Oncology			
Public Health, Environmental & Occupational Health	9	1.84	88.9%
Pulmonary and Respiratory Medicine			
Neuroscience	18	1.01	83.3%
Nursing	7	0.96	28.6%
Pharmacology, Toxicology and Pharmaceutics	19	1.18	84.2%
Psychology	20	1.82	60.0%

Top Collaborating Institutions (*SciVal*®)

BIOCHEMISTRY, GENETICS AND MOLECULAR BIOLOGY		CRITICAL CARE AND INTENSIVE MEDICINE		ONCOLOGY		
Massachusetts Institute of Technology	United States					
Charles Sturt University	Australia					
University of Melbourne	Australia					
United Arab Emirates University	United Arab Emirates					
NYU Abu Dhabi	United Arab Emirates					
DENTISTRY		EMERGENCY MEDICINE		PUBLIC HEALTH, ENVIRO AND OCCUPATIONAL HEALTH		
				University of Calabria		Italy
				Central South University		China
				Charles Sturt University		Australia
				City University of Hong Kong		Hong Kong
				Edith Cowan University		Australia
HEALTH PROFESSIONS		ENDOCRINOLOGY, DIABETES, AND METABOLISM		PULMONARY AND RESPIRATORY MEDICINE		
University of Melbourne	Australia	Sheikh Khalifa Medical City	United Arab Emirates			
Aristotle University of Thessaloniki	Greece	Charles Sturt University	Australia			
Charles Sturt University	Australia	Macquarie University	Australia			
Korea Adv Inst of Sci and Technology	South Korea	Manipal Academy of Higher Education	India			
Macquarie University	Australia	Manipal Acad of Higher Edu, Dubai	United Arab Emirates			
IMMUNOLOGY AND MICROBIOLOGY		GENERAL MEDICINE		NEUROSCIENCE		
Massachusetts Institute of Technology	United States	University of Melbourne	Australia	Aristotle University of Thessaloniki	Greece	
Sant'Anna School of Adv Studies	Italy	Charles Sturt University	Australia	Center For Research And Technology	Greece	
Technical University of Denmark	Denmark	Tohoku University	Japan	Elsat al British Telecom Innovation	United Arab Emirates	
University of Pisa	Italy	University of Newcastle	Australia	Shanghai Jiao Tong University	China	
Western University	Canada	Concordia University	Canada	University of Málaga	Spain	
MEDICINE		GENETICS (CLINICAL)		NURSING		
University of Melbourne	Australia	University of Western Australia	Australia	Ahvaz Jundishapur Uni of Med Sci	Iran	
Charles Sturt University	Australia	Charles Sturt University	Australia	Edith Cowan University	Australia	
Tohoku University	Japan	Edith Cowan University	Australia	Iran University of Medical Sciences	Iran	
Macquarie University	Australia	Sheikh Khalifa Medical City	United Arab Emirates	Islamic Azad University	Iran	
Aristotle University of Thessaloniki	Greece	University of Birmingham	United Kingdom	Shahid Beheshti Uni of Med Sciences	Iran	
CARDIOLOGY AND CARDIOVASCULAR MEDICINE		HEALTH INFORMATICS		PHARMACOLOGY, TOXICOLOGY AND PHARMACEUTICS		
University of Melbourne	Australia	University of Melbourne	Australia	Korea Adv Inst of Sci and Technology	South Korea	
Tohoku University	Japan	Tohoku University	Japan	Massachusetts Institute of Technology	United States	
Charles Sturt University	Australia	Charles Sturt University	Australia	SUNY Buffalo	United States	
Macquarie University	Australia	Aristotle University of Thessaloniki	Greece	American University of Sharjah	United Arab Emirates	
Deakin University	Australia	Deakin University	Australia	Aristotle University of Thessaloniki	Greece	
				PSYCHOLOGY		
				Canadian University Dubai	United Arab Emirates	
				University of Milan	Italy	
				Brown University	United States	
				Concordia University	Canada	
				Fontys University of Applied Sciences	Netherlands	

MINISTRY OF HEALTH AND PREVENTION

Health research publications (*PubMed*, by affiliation to institution and UAE)

2014	2015	2016	2017	2018	Total
12	17	26	24	39	118

ASJC Subject (<i>SciVal</i> ®)	Outputs	FWCI	International Co-Authors
Biochemistry, Genetics and Molecular Biology	3	1.86	33.3%
Dentistry	10	1.14	80.0%
Health Professions			
Immunology and Microbiology	4	2.45	75.0%
Medicine	45	3.15	68.9%
Cardiology and Cardiovascular Medicine	9	4.25	88.9%
Critical Care and Intensive Medicine			
Emergency Medicine	2	0.00	0.0%
Endocrinology, Diabetes, and Metabolism	3	0.51	66.7%
General Medicine	8	0.53	37.5%
Genetics (Clinical)			
Health Informatics			
Oncology	1	0.86	100.0%
Public Health, Environmental & Occupational Health	3	3.12	66.7%
Pulmonary and Respiratory Medicine			
Neuroscience			
Nursing	3	1.68	66.7%
Pharmacology, Toxicology and Pharmaceutics	3	0.68	66.7%
Psychology			

Top Collaborating Institutions (*SciVal*®)

BIOCHEMISTRY, GENETICS AND MOLECULAR BIOLOGY	
Bradford Teach Hosp NHS	United Kingdom
Hospital Inf Uni Nino Jes de Madrid	Spain
Kuwait University	Kuwait
Oxford Uni Hospitals NHS	United Kingdom
Schneider Childrens Med Ctr Israel	Israel

CRITICAL CARE AND INTENSIVE MEDICINE	

ONCOLOGY	
Cent Hosp Universitaire Ibn-Rochd	Morocco
Int Agency for Research on Cancer	France
Ministry of Health	Morocco

DENTISTRY	
University of Otago	New Zealand
Ajman Uni of Sci and Technology	United Arab Emirates
University of Münster	Germany

EMERGENCY MEDICINE	

PUBLIC HEALTH, ENVIRO AND OCCUPATIONAL HEALTH	
Alfaisal University	Saudi Arabia
King Khalid University	Saudi Arabia
King Saud b Abdulaziz Uni H Sci	Saudi Arabia
Lund University	Sweden
Ministry of Health Oman	Oman

HEALTH PROFESSIONS	

ENDOCRINOLOGY, DIABETES, AND METABOLISM	
Ajman Uni of Sci and Technology	United Arab Emirates
Baker Heart Research Institute	Australia
Dubai Hospital	United Arab Emirates
Gondar University	Ethiopia
Taif University	Saudi Arabia

PULMONARY AND RESPIRATORY MEDICINE	

IMMUNOLOGY AND MICROBIOLOGY	
Aga Khan University	Pakistan
Al Ain Hospital	United Arab Emirates
Al Mafraq Hospital	United Arab Emirates
Alfaisal University	Saudi Arabia
Allama Iqbal Medical College	Pakistan

GENERAL MEDICINE	
Gulf Medical University	United Arab Emirates
American University of Beirut	Lebanon
Cairo University	Egypt
Dubai Medical College	United Arab Emirates
Gazi University	Turkey

NEUROSCIENCE	

MEDICINE	
Dubai Hospital	United Arab Emirates
American University of Beirut	Lebanon
Min of National Guard – Health Affairs	Saudi Arabia
Alfaisal University	Saudi Arabia
King Saud b Abdulaziz Uni H Sci	Saudi Arabia

GENETICS (CLINICAL)	

NURSING	
Emory University	United States
Iowa State University	United States
Mahidol University	Thailand
Ministry of Health Oman	Oman
Stanford University	United States

CARDIOLOGY AND CARDIOVASCULAR MEDICINE	
University of Toledo	United States
AP-HM Ass Pub - Hop de Marseille	France
CHU de Limoges	France
CHU de Toulouse	France
Centre Hospitalier Uni de Rennes	France

HEALTH INFORMATICS	

PHARMACOLOGY, TOXICOLOGY AND PHARMACEUTICS	
Ajman Uni of Sci and Technology	United Arab Emirates
Gulf Medical University	United Arab Emirates
Lithuanian Uni of Health Sciences	Lithuania
United Arab Emirates University	United Arab Emirates
University of Sharjah	United Arab Emirates

PSYCHOLOGY	

MOHAMMED BIN RASHID UNIVERSITY OF MEDICINE AND HEALTH SCIENCES

Health research publications (*PubMed*, by affiliation to institution and UAE)

2014	2015	2016	2017	2018	Total
	4	18	50	70	142

ASJC Subject (<i>SciVal</i> ®)	Outputs	FWCI	International Co-Authors
Biochemistry, Genetics and Molecular Biology	20	1.07	90.0%
Dentistry	51	0.69	56.9%
Health Professions	2	0.64	100.0%
Immunology and Microbiology	27	3.50	96.3%
Medicine	113	1.08	89.4%
Cardiology and Cardiovascular Medicine	19	0.76	94.7%
Critical Care and Intensive Medicine			
Emergency Medicine	1	0.44	0.0%
Endocrinology, Diabetes, and Metabolism	3	1.31	100.0%
General Medicine	12	0.93	91.7%
Genetics (Clinical)	5	1.88	100.0%
Health Informatics	2	0.67	100.0%
Oncology	2	1.89	100.0%
Public Health, Environmental & Occupational Health	10	1.96	100.0%
Pulmonary and Respiratory Medicine			
Neuroscience	10	1.59	90.0%
Nursing	4	2.71	75.0%
Pharmacology, Toxicology and Pharmaceutics	14	0.97	100.0%
Psychology			

Top Collaborating Institutions (*SciVal*®)

BIOCHEMISTRY, GENETICS AND MOLECULAR BIOLOGY		CRITICAL CARE AND INTENSIVE MEDICINE		ONCOLOGY	
University of Toronto	Canada			National Institutes of Health	United States
United Arab Emirates University	United Arab Emirates			Sultan Qaboos University	Oman
American University of Beirut	Lebanon			University of Florida	United States
INSERM	France			University of Illinois at Chicago	United States
McMaster University	Canada				
DENTISTRY		EMERGENCY MEDICINE		PUBLIC HEALTH, ENVIRO AND OCCUPATIONAL HEALTH	
Aristotle University of Thessaloniki	Greece	Tawam Hospital	United Arab Emirates	American University of Beirut	Lebanon
Kyungpook National University	South Korea			University of Veterinary Med Vienna	Austria
Pusan National University	South Korea			Lebanese American University	Lebanon
University of Jordan	Jordan			Medical University of Vienna	Austria
Indiana University-Purdue	United States			Szent Istvan University	Hungary
HEALTH PROFESSIONS		ENDOCRINOLOGY, DIABETES, AND METABOLISM		PULMONARY AND RESPIRATORY MEDICINE	
Neuroscience Research Australia	Australia	American University of Beirut	Lebanon		
University of California at Los Angeles	United States	Hospital Israelita Albert Einstein	Brazil		
University of Sydney	Australia	Inst do Coracao do Hosp das Clinicas	Brazil		
		Kuwait University	Kuwait		
		State of Kuwait Ministry of Health	Kuwait		
IMMUNOLOGY AND MICROBIOLOGY		GENERAL MEDICINE		NEUROSCIENCE	
University of Veterinary Med Vienna	Austria	King Saud University	Saudi Arabia	Neuroscience Research Australia	Australia
UK Dep Env, Food and Rural Affairs	United Kingdom	United Arab Emirates University	United Arab Emirates	University of Toronto	Canada
Szent Istvan University	Hungary	Dubai Hospital	United Arab Emirates	Western Sydney University	Australia
Bernhard Nocht Inst for Tropical Med	Germany	Hamad Medical Corporation	Qatar	University of Sydney	Australia
Pasteur Institute of Iran	Iran	King Abdulaziz University	Saudi Arabia	Alfaisal University	Saudi Arabia
MEDICINE		GENETICS (CLINICAL)		NURSING	
King Saud University	Saudi Arabia	University of Toronto	Canada	American University of Beirut	Lebanon
American University of Beirut	Lebanon	McMaster University	Canada	Hospital Israelita Albert Einstein	Brazil
Hamad Medical Corporation	Qatar	Newcastle University	United Kingdom	Imam Abdulrahman Bin Faisal Uni	Saudi Arabia
Sultan Qaboos University	Oman	University of British Columbia	Canada	Inst do Coracao do Hosp das Clinicas	Brazil
University of Toronto	Canada	H. Lundbeck A/S	Denmark	King Abdulaziz University	Saudi Arabia
CARDIOLOGY AND CARDIOVASCULAR MEDICINE		HEALTH INFORMATICS		PHARMACOLOGY, TOXICOLOGY AND PHARMACEUTICS	
Hamad Medical Corporation	Qatar	American University of Beirut	Lebanon	United Arab Emirates University	United Arab Emirates
King Saud University	Saudi Arabia	Lebanese American University	Lebanon	Sultan Qaboos University	Oman
Sultan Qaboos University	Oman	York University Toronto	Canada	University of Veterinary Med Vienna	Austria
Sanaa University	Yemen			Hamad Medical Corporation	Qatar
Tufts University	United States			King Saud University	Saudi Arabia
				PSYCHOLOGY	

NYU ABU DHABI

Health research publications (*PubMed*, by affiliation to institution and UAE)

2014	2015	2016	2017	2018	Total
43	78	107	110	134	472

ASJC Subject (<i>SciVal</i> ®)	Outputs	FWCI	International Co-Authors
Biochemistry, Genetics and Molecular Biology	264	1.48	89.8%
Dentistry	17	0.97	100.0%
Health Professions	7	2.60	100.0%
Immunology and Microbiology	36	2.35	88.9%
Medicine	122	11.21	86.1%
Cardiology and Cardiovascular Medicine			
Critical Care and Intensive Medicine			
Emergency Medicine			
Endocrinology, Diabetes, and Metabolism	2	0.54	50.0%
General Medicine	36	33.19	86.1%
Genetics (Clinical)	21	1.25	90.5%
Health Informatics	6	0.35	83.3%
Oncology	5	1.34	80.0%
Public Health, Environmental & Occupational Health	15	1.31	100.0%
Pulmonary and Respiratory Medicine			
Neuroscience	95	1.44	90.5%
Nursing	1	0.00	100.0%
Pharmacology, Toxicology and Pharmaceuticals	19	1.06	84.2%
Psychology	108	1.44	89.8%

Top Collaborating Institutions (*SciVal*®)

BIOCHEMISTRY, GENETICS AND MOLECULAR BIOLOGY	
United Arab Emirates University	United Arab Emirates
Sultan Qaboos University	Oman
University of Veterinary Med Vienna	Austria
King Saud University	Saudi Arabia
Kuwait University	Kuwait

DENTISTRY	
Universidade de Sao Paulo	Brazil
New York University	United States
Malmö University	Sweden
Uni Est Paulista Julio de Mesq Filho	Brazil
Tufts University	United States

HEALTH PROFESSIONS	
New York University	United States
Queen Mary University of London	United Kingdom
University of Ljubljana	Slovenia
University of Maryland	United States
Utrecht University	Netherlands

IMMUNOLOGY AND MICROBIOLOGY	
New York University	United States
University of Washington	United States
City University of New York	United States
Icahn School of Med at Mount Sinai	United States
Rensselaer Polytechnic Institute	United States

MEDICINE	
New York University	United States
University of Montreal	Canada
University of Oxford	United Kingdom
Harvard University	United States
Karolinska Institutet	Sweden

CARDIOLOGY AND CARDIOVASCULAR MEDICINE	

CRITICAL CARE AND INTENSIVE MEDICINE	

EMERGENCY MEDICINE	

ENDOCRINOLOGY, DIABETES, AND METABOLISM	
Khalifa Uni of Sci and Technology	United Arab Emirates
New York University	United States
Sheikh Khalifa Medical City	United Arab Emirates
United Arab Emirates University	United Arab Emirates
Zayed Military Hospital	United Arab Emirates

GENERAL MEDICINE	
Universidade de Sao Paulo	Brazil
Addis Ababa University	Ethiopia
Aga Khan University	Pakistan
Ahmadu Bello University	Nigeria
Alborz University of Medical Sciences	Iran

GENETICS (CLINICAL)	
New York University	United States
Fairfield University	United States
Icahn School of Med at Mount Sinai	United States
Karolinska Institutet	Sweden
University of Basel	Switzerland

HEALTH INFORMATICS	
New York University	United States
Georgia Institute of Technology	United States
Inst Nat de la Recherche Scientifique	Canada
McGill University	Canada
Polytechnique Montreal	Canada

ONCOLOGY	
University of Montreal	Canada
Cairo University	Egypt
Sidra Medical and Research Center	Qatar
Tawam Hospital	United Arab Emirates
United Arab Emirates University	United Arab Emirates

PUBLIC HEALTH, ENVIRO AND OCCUPATIONAL HEALTH	
New York University	United States
City University of New York	United States
University of Oxford	United Kingdom
Case Western Reserve University	United States
Heidelberg University	Germany

PULMONARY AND RESPIRATORY MEDICINE	

NEUROSCIENCE	
New York University	United States
Shanghai Jiao Tong University	China
Harvard University	United States
Adm HQ of the Max Planck Society	Germany
Icahn School of Med at Mount Sinai	United States

NURSING	
Boston College	United States
New York University	United States
University of Michigan, Ann Arbor	United States

PHARMACOLOGY, TOXICOLOGY AND PHARMACEUTICS	
University of Iceland	Iceland
American University of Sharjah	United Arab Emirates
Ben-Gurion University of the Negev	Israel
Cairo University	Egypt
Icahn School of Med at Mount Sinai	United States

PSYCHOLOGY	
New York University	United States
University of Minnesota	United States
Stony Brook University	United States
University of Freiburg	Germany
University of Maryland	United States

SHEIKH KHALIFA MEDICAL CITY

Health research publications (*PubMed*, by affiliation to institution and UAE)

2014	2015	2016	2017	2018	Total
25	37	37	54	66	219

ASJC Subject (<i>SciVal</i> ®)	Outputs	FWCI	International Co-Authors
Biochemistry, Genetics and Molecular Biology	23	1.02	87.0%
Dentistry			
Health Professions	5	7.00	60.0%
Immunology and Microbiology	5	1.30	100.0%
Medicine	185	1.15	67.0%
Cardiology and Cardiovascular Medicine	31	1.25	87.1%
Critical Care and Intensive Medicine	3	2.99	100.0%
Emergency Medicine	4	0.22	75.0%
Endocrinology, Diabetes, and Metabolism	32	1.03	53.1%
General Medicine	23	1.22	56.5%
Genetics (Clinical)	5	0.58	100.0%
Health Informatics			
Oncology	6	1.44	100.0%
Public Health, Environmental & Occupational Health	5	1.51	80.0%
Pulmonary and Respiratory Medicine	2	7.42	50.0%
Neuroscience	4	0.37	50.0%
Nursing	24	1.24	45.8%
Pharmacology, Toxicology and Pharmaceutics	4	0.97	100.0%
Psychology	3	0.14	66.7%

Top Collaborating Institutions (*SciVal*®)

BIOCHEMISTRY, GENETICS AND MOLECULAR BIOLOGY		CRITICAL CARE AND INTENSIVE MEDICINE		ONCOLOGY	
Khalifa Uni of Sci and Technology	United Arab Emirates	University of Washington	United States	Bnai-Zion Medical Center	Israel
Charles Sturt University	Australia	Alfred Hospital	Australia	Clalit Health Services	Israel
Imperial College London	United Kingdom	Brown University	United States	Dokuz Eylul University	Turkey
Macquarie University	Australia	Clinica Las Condes	Chile	Istanbul University	Turkey
Al Mafraq Hospital	United Arab Emirates	Columbia University	United States	Jordan Uni of Science and Technology	Jordan
DENTISTRY		EMERGENCY MEDICINE		PUBLIC HEALTH, ENVIRO AND OCCUPATIONAL HEALTH	
		Dubai Hospital	United Arab Emirates	Alfaisal University	Saudi Arabia
		George Washington University	United States	American University of Beirut	Lebanon
		Hamad Medical Corporation	Qatar	Hamad Medical Corporation	Qatar
		King Khalid University	Saudi Arabia	King Saud b Abdulaziz Uni H Sci	Saudi Arabia
		King Saud University	Saudi Arabia	Lebanese University	Lebanon
HEALTH PROFESSIONS		ENDOCRINOLOGY, DIABETES, AND METABOLISM		PULMONARY AND RESPIRATORY MEDICINE	
Al-Fayoum University	Egypt	Imperial College London	United Kingdom	Alfred Hospital	Australia
Universidade de Sao Paulo	Brazil	Khalifa Uni of Sci and Technology	United Arab Emirates	Clinica Las Condes	Chile
University College London	United Kingdom	Zayed University	United Arab Emirates	Columbia University	United States
University Health Network	Canada	Al Mafraq Hospital	United Arab Emirates	IRCCS Fond Pol San Matteo - Pavia	Italy
University of British Columbia	Canada	Alfaisal University	Saudi Arabia	IRCCS Osp Pedit Bamb Gesù - Roma	Italy
IMMUNOLOGY AND MICROBIOLOGY		GENERAL MEDICINE		NEUROSCIENCE	
King Fahad Medical City	Saudi Arabia	Hamad Medical Corporation	Qatar	American University of Beirut	Lebanon
University of Liverpool	United Kingdom	Sultan Qaboos University	Oman	United Arab Emirates University	United Arab Emirates
Beni-Suef University	Egypt	Dubai Hospital	United Arab Emirates		
Cent for Disease Ctrl and Prevention	United States	King Saud University	Saudi Arabia		
Jazan University	Saudi Arabia	Medical University of Warsaw	Poland		
MEDICINE		GENETICS (CLINICAL)		NURSING	
Alfaisal University	Saudi Arabia	Al Mafraq Hospital	United Arab Emirates	Charles Sturt University	Australia
King Saud University	Saudi Arabia	Alfaisal University	Saudi Arabia	University of Sharjah	United Arab Emirates
Hamad Medical Corporation	Qatar	Bayer AG	Germany	Kuwait University	Kuwait
Dubai Hospital	United Arab Emirates	Charles Sturt University	Australia	Trinity College Dublin	Ireland
United Arab Emirates University	United Arab Emirates	Imperial College London	United Kingdom	Aga Khan University	Pakistan
CARDIOLOGY AND CARDIOVASCULAR MEDICINE		HEALTH INFORMATICS		PHARMACOLOGY, TOXICOLOGY AND PHARMACEUTICS	
Hamad Medical Corporation	Qatar			Sultan Qaboos University	Oman
Dubai Hospital	United Arab Emirates			Hamad Medical Corporation	Qatar
King Saud University	Saudi Arabia			Kuwait University	Kuwait
Sultan Qaboos University	Oman			State of Kuwait Ministry of Health	Kuwait
Alfaisal University	Saudi Arabia			United Arab Emirates University	United Arab Emirates
				PSYCHOLOGY	
				American University of Beirut	Lebanon
				Western Michigan University	United States

TAWAM HOSPITAL

Health research publications (*PubMed*, by affiliation to institution and UAE)

2014	2015	2016	2017	2018	Total
30	42	51	61	59	243

ASJC Subject (*SciVal*®)

	Outputs	FWCI	International Co-Authors
Biochemistry, Genetics and Molecular Biology	95	1.27	77.9%
Dentistry	2	0.81	0.0%
Health Professions	2	0.44	100.0%
Immunology and Microbiology	11	1.96	100.0%
Medicine	229	1.08	64.6%
Cardiology and Cardiovascular Medicine	11	0.77	90.9%
Critical Care and Intensive Medicine	3	0.71	33.0%
Emergency Medicine	7	0.62	42.9%
Endocrinology, Diabetes, and Metabolism	31	1.38	58.1%
General Medicine	25	0.80	40.0%
Genetics (Clinical)	49	1.37	81.6%
Health Informatics	1	0.57	100.0%
Oncology	17	0.91	76.5%
Public Health, Environmental & Occupational Health	2	0.48	50.0%
Pulmonary and Respiratory Medicine	3	0.70	33.3%
Neuroscience	13	1.15	53.9%
Nursing	14	1.38	64.3%
Pharmacology, Toxicology and Pharmaceuticals	12	0.80	91.7%
Psychology	1	0.32	100.0%

Top Collaborating Institutions (*SciVal*®)

BIOCHEMISTRY, GENETICS AND MOLECULAR BIOLOGY

United Arab Emirates University	United Arab Emirates
Baylor College of Medicine	United States
Alfaisal University	Saudi Arabia
King Fahad Medical City	Saudi Arabia
Min of National Guard – Health Affairs	Saudi Arabia

CRITICAL CARE AND INTENSIVE MEDICINE

Beni-Suef University	Egypt
Hamad Medical Corporation	Qatar
United Arab Emirates University	United Arab Emirates

ONCOLOGY

United Arab Emirates University	United Arab Emirates
Alfaisal University	Saudi Arabia
Hamad Bin Khalifa University	Qatar
King Fahad Medical City	Saudi Arabia
University of Manchester	United Kingdom

DENTISTRY

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EMERGENCY MEDICINE

United Arab Emirates University	United Arab Emirates
Al Ain Hospital	United Arab Emirates
Alexandria University	Egypt
Baylor College of Medicine	United States
Boston University	United States

PUBLIC HEALTH, ENVIRO AND OCCUPATIONAL HEALTH

Gulf Medical University	United Arab Emirates
Johns Hopkins University	United States
United Arab Emirates University	United Arab Emirates

HEALTH PROFESSIONS

Ajman Uni of Sci and Technology	United Arab Emirates
Al Ain Hospital	United Arab Emirates
Al Mafraq Hospital	United Arab Emirates
Cairo University	Egypt
College of Technol Studies Kuwait	Kuwait

ENDOCRINOLOGY, DIABETES, AND METABOLISM

United Arab Emirates University	United Arab Emirates
Baylor College of Medicine	United States
King Fahad Medical City	Saudi Arabia
Alfaisal University	Saudi Arabia
Dalhousie University	Canada

PULMONARY AND RESPIRATORY MEDICINE

United Arab Emirates University	United Arab Emirates
Curtin University of Technology	Australia
Telethon Kids Institute	Australia
University of Western Australia	Australia

IMMUNOLOGY AND MICROBIOLOGY

United Arab Emirates University	United Arab Emirates
King Saud University	Saudi Arabia
American University of Beirut	Lebanon
Dubai Hospital	United Arab Emirates
King Fahad Medical City	Saudi Arabia

GENERAL MEDICINE

United Arab Emirates University	United Arab Emirates
Dubai Hospital	United Arab Emirates
Hamad Medical Corporation	Qatar
Imperial College London	United Kingdom
Ajman Uni of Sci and Technology	United Arab Emirates

NEUROSCIENCE

United Arab Emirates University	United Arab Emirates
Johns Hopkins University	United States
Al Ain Hospital	United Arab Emirates
Alfaisal University	Saudi Arabia
Hamad Medical Corporation	Qatar

MEDICINE

United Arab Emirates University	United Arab Emirates
Baylor College of Medicine	United States
King Fahad Medical City	Saudi Arabia
Alfaisal University	Saudi Arabia
Min of National Guard – Health Affairs	Saudi Arabia

GENETICS (CLINICAL)

United Arab Emirates University	United Arab Emirates
Baylor College of Medicine	United States
Alfaisal University	Saudi Arabia
King Fahad Medical City	Saudi Arabia
Min of National Guard – Health Affairs	Saudi Arabia

NURSING

United Arab Emirates University	United Arab Emirates
Alfaisal University	Saudi Arabia
American University of Beirut	Lebanon
Assuta Medical Center	Israel
Baskent University	Turkey

CARDIOLOGY AND CARDIOVASCULAR MEDICINE

Fukuoka University	Japan
P. J. Safarik University	Slovakia
People's Friendship Uni of Russia	Russian Federation
University of Lucknow	India
Al Ain Hospital	United Arab Emirates

HEALTH INFORMATICS

Beni-Suef University	Egypt
Hamad Medical Corporation	Qatar

PHARMACOLOGY, TOXICOLOGY AND PHARMACEUTICS

United Arab Emirates University	United Arab Emirates
Gondar University	Ethiopia
Ajman Uni of Science and Technology	United Arab Emirates
Al Ain Hospital	United Arab Emirates
Al Mafraq Hospital	United Arab Emirates

PSYCHOLOGY

Hospital Pulau Pinang	Malaysia
I-Shou University	Taiwan
Johns Hopkins University	United States
Mahidol University	Thailand
National Yang-Ming University	Taiwan

UNITED ARAB EMIRATES UNIVERSITY

Health research publications (*PubMed*, by affiliation to institution and UAE)

2014	2015	2016	2017	2018	Total
204	232	234	241	323	1234

ASJC Subject (<i>SciVal</i> ®)	Outputs	FWCI	International Co-Authors
Biochemistry, Genetics and Molecular Biology	603	1.62	73.8%
Dentistry	4	0.60	50.0%
Health Professions	27	0.55	66.7%
Immunology and Microbiology	95	1.32	77.9%
Medicine	933	3.94	71.5%
Cardiology and Cardiovascular Medicine	51	1.52	90.2%
Critical Care and Intensive Medicine	22	1.34	72.7%
Emergency Medicine	48	3.06	62.5%
Endocrinology, Diabetes, and Metabolism	59	0.89	62.7%
General Medicine	151	16.14	64.9%
Genetics (Clinical)	55	1.01	76.4%
Health Informatics	25	0.64	48.0%
Oncology	33	7.27	69.7%
Public Health, Environmental & Occupational Health	86	0.64	77.9%
Pulmonary and Respiratory Medicine	13	6.34	76.9%
Neuroscience	122	1.54	73.0%
Nursing	51	1.25	64.7%
Pharmacology, Toxicology and Pharmaceutics	219	1.03	81.3%
Psychology	62	1.01	64.5%

Top Collaborating Institutions (*SciVal*®)

BIOCHEMISTRY, GENETICS AND MOLECULAR BIOLOGY		CRITICAL CARE AND INTENSIVE MEDICINE		ONCOLOGY	
Sultan Qaboos University	Oman	McMaster University	Canada	University of Manchester	United Kingdom
Tawam Hospital	United Arab Emirates	Alfaisal University	Saudi Arabia	University of Oxford	United Kingdom
University of Patras	Greece	Imam Abdulrahman Bin Faisal Uni	Saudi Arabia	Harvard University	United States
Harvard University	United States	Royal North Shore Hospital	Australia	King's College London	United Kingdom
Gondar University	Ethiopia	The George Inst for Global Health	Australia	Tawam Hospital	United Arab Emirates
DENTISTRY		EMERGENCY MEDICINE		PUBLIC HEALTH, ENVIRO AND OCCUPATIONAL HEALTH	
King Saud b Abdulaziz Uni H Sci	Saudi Arabia	Universidade Estadual de Campinas	Brazil	Gondar University	Ethiopia
University of Alberta	Canada	University of Colorado Denver	United States	Uppsala University	Sweden
		University of Helsinki	Finland	Al Ain Hospital	United Arab Emirates
		University of California at San Diego	United States	Chinese Academy of Sciences	China
		Hadassah University Medical Centre	Israel	Technical University of Denmark	Denmark
HEALTH PROFESSIONS		ENDOCRINOLOGY, DIABETES, AND METABOLISM		PULMONARY AND RESPIRATORY MEDICINE	
University of Montreal	Canada	Tawam Hospital	United Arab Emirates	Aga Khan University	Pakistan
Al Mafraq Hospital	United Arab Emirates	UiT The Arctic University of Norway	Norway	University of Toronto	Canada
Gondar University	Ethiopia	Al Mafraq Hospital	United Arab Emirates	University of Western Australia	Australia
University of Catania	Italy	Sultan Qaboos University	Oman	Charité – Universitätsmedizin Berlin	Germany
University of Wollongong	Australia	University Hospital of North Norway	Norway	Children's Mercy Hosp and Clinics	United States
IMMUNOLOGY AND MICROBIOLOGY		GENERAL MEDICINE		NEUROSCIENCE	
Jordan Uni of Sci and Technology	Jordan	Gondar University	Ethiopia	King Saud b Abdulaziz Uni H Sci	Saudi Arabia
Harvard University	United States	Harvard University	United States	Ulster University	United Kingdom
University of Manchester	United Kingdom	King Saud University	Saudi Arabia	Lund University	Sweden
Tawam Hospital	United Arab Emirates	University of British Columbia	Canada	Tawam Hospital	United Arab Emirates
Charité – Universitätsmedizin Berlin	Germany	University of Queensland	Australia	CNRS	France
MEDICINE		GENETICS (CLINICAL)		NURSING	
Tawam Hospital	United Arab Emirates	Tawam Hospital	United Arab Emirates	Agricultural University of Athens	Greece
Harvard University	United States	Baylor College of Medicine	United States	Karolinska Institutet	Sweden
Gondar University	Ethiopia	Harvard University	United States	Harokopio University	Greece
University of Toronto	Canada	Howard Hughes Medical Institute	United States	Swedish Univ of Agri Sciences	Sweden
Sultan Qaboos University	Oman	Broad Institute	United States	Tawam Hospital	United Arab Emirates
CARDIOLOGY AND CARDIOVASCULAR MEDICINE		HEALTH INFORMATICS		PHARMACOLOGY, TOXICOLOGY AND PHARMACEUTICS	
Sultan Qaboos University	Oman	University of Wollongong	Australia	Sultan Qaboos University	Oman
University of Central Lancashire	United Kingdom	Concordia University	Canada	Gondar University	Ethiopia
Hamad Medical Corporation	Qatar	Qatar University	Qatar	North Maharashtra University	India
University of Nebraska Med Center	United States	Coventry University	United Kingdom	University of Ibadan	Nigeria
Dubai Hospital	United Arab Emirates	Ethiopian Federal Ministry of Health	Ethiopia	Heinrich Heine University Düsseldorf	Germany
				PSYCHOLOGY	
				University of Guelph	Canada
				Ain Shams University	Egypt
				Al Ain Hospital	United Arab Emirates
				American University in Dubai	United Arab Emirates
				Ctr for AIDS Prog Res in Sth Africa	South Africa

UNIVERSITY OF SHARJAH

Health research publications (*PubMed*, by affiliation to institution and UAE)

2014	2015	2016	2017	2018	Total
36	36	74	145	196	487

ASJC Subject (<i>SciVal</i> ®)	Outputs	FWCI	International Co-Authors
Biochemistry, Genetics and Molecular Biology	164	1.43	87.2%
Dentistry	84	1.21	70.2%
Health Professions	27	1.26	66.7%
Immunology and Microbiology	41	0.78	85.4%
Medicine	296	2.08	73.3%
Cardiology and Cardiovascular Medicine	8	0.84	75.0%
Critical Care and Intensive Medicine			
Emergency Medicine	1	1.02	100.0%
Endocrinology, Diabetes, and Metabolism	21	0.47	57.1%
General Medicine	54	7.66	64.8%
Genetics (Clinical)	2	1.10	50.0%
Health Informatics	7	0.41	85.7%
Oncology	19	1.40	79.0%
Public Health, Environmental & Occupational Health	35	0.71	62.9%
Pulmonary and Respiratory Medicine	18	0.98	88.9%
Neuroscience	12	0.94	83.3%
Nursing	31	1.10	71.0%
Pharmacology, Toxicology and Pharmaceutics	119	1.08	84.0%
Psychology	9	1.15	88.9%

Top Collaborating Institutions (*SciVal*®)

BIOCHEMISTRY, GENETICS AND MOLECULAR BIOLOGY	
Cairo University	Egypt
Al-Azhar University	Egypt
Beni-Suef University	Egypt
Mansoura University	Egypt
Universiti Sains Malaysia	Malaysia

DENTISTRY	
Universiti Sains Malaysia	Malaysia
Suez Canal University	Egypt
University of Khartoum	Sudan
Hacettepe University	Turkey
University of Athens	Greece

HEALTH PROFESSIONS	
Cairo University	Egypt
Monash University	Australia
Ajman Uni of Sci and Technology	United Arab Emirates
Deakin University	Australia
Universiti Sains Malaysia	Malaysia

IMMUNOLOGY AND MICROBIOLOGY	
King Saud University	Saudi Arabia
Jordan Uni of Sci and Technology	Jordan
Qatar University	Qatar
University of Venda	South Africa
United Arab Emirates University	United Arab Emirates

MEDICINE	
Cairo University	Egypt
King Saud University	Saudi Arabia
Monash University	Australia
McGill University	Canada
Universiti Sains Malaysia	Malaysia

CARDIOLOGY AND CARDIOVASCULAR MEDICINE	
King Saud b Abdulaziz Uni H Sci	Saudi Arabia
Alfaisal University	Saudi Arabia
King Saud University	Saudi Arabia
Charles Darwin University	Australia
IRCCS – Osp Magg Policlinico	Italy

CRITICAL CARE AND INTENSIVE MEDICINE	
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EMERGENCY MEDICINE	
Queensland University of Technology	Australia
Royal Brisbane and Women's Hospital	Australia
University of Queensland	Australia

ENDOCRINOLOGY, DIABETES, AND METABOLISM	
Baker Heart Research Institute	Australia
Dubai Hospital	United Arab Emirates
Deakin University	Australia
Imperial College London	United Kingdom
Monash University	Australia

GENERAL MEDICINE	
Cairo University	Egypt
Aga Khan University	Pakistan
American University of Beirut	Lebanon
International Medical University	Malaysia
Isfahan University of Med Sciences	Iran

GENETICS (CLINICAL)	
Allama Iqbal Medical College	Pakistan
Baylor College of Medicine	United States
Lahore College for Women University	Pakistan
Liaquat Uni of Medical and Health Sci	Pakistan
National Institutes of Health	United States

HEALTH INFORMATICS	
King Saud b Abdulaziz Uni H Sci	Saudi Arabia
Australian Catholic University	Australia
Helwan University	Egypt
International Islamic Uni Malaysia	Malaysia
La Trobe University	Australia

ONCOLOGY	
Cairo University	Egypt
Medical College of Wisconsin	United States
Ain Shams University	Egypt
Beni-Suef University	Egypt
University College London	United Kingdom

PUBLIC HEALTH, ENVIRO AND OCCUPATIONAL HEALTH	
Zayed Military Hospital	United Arab Emirates
Dubai Hospital	United Arab Emirates
GlaxoSmithKline	United Kingdom
Monash University	Australia
United Arab Emirates University	United Arab Emirates

PULMONARY AND RESPIRATORY MEDICINE	
Cairo University	Egypt
King Saud University	Saudi Arabia
GlaxoSmithKline	United Kingdom
Dubai Hospital	United Arab Emirates
King Saud b Abdulaziz Uni H Sci	Saudi Arabia

NEUROSCIENCE	
Mansoura University	Egypt
All India Institute of Medical Sciences	India
Baylor College of Medicine	United States
Cairo University	Egypt
Cornell University	United States

NURSING	
Charles Sturt University	Australia
Trinity College Dublin	Ireland
Griffith University Queensland	Australia
Sheikh Khalifa Medical City	United Arab Emirates
United Arab Emirates University	United Arab Emirates

PHARMACOLOGY, TOXICOLOGY AND PHARMACEUTICS	
Cairo University	Egypt
Beni-Suef University	Egypt
Korea Inst of Science and Technology	South Korea
University of Science and Technology	South Korea
National Research Center	Egypt

PSYCHOLOGY	
Arabian Gulf University	Bahrain
Cairo University	Egypt
International Islamic Uni Malaysia	Malaysia
Kadir Has University	Turkey
Kuwait University	Kuwait

ZAYED MILITARY HOSPITAL

Health research publications (*PubMed*, by affiliation to institution and UAE)

2014	2015	2016	2017	2018	Total
10	10	5	11	8	44

ASJC Subject (<i>SciVal</i> ®)	Outputs	FWCI	International Co-Authors
Biochemistry, Genetics and Molecular Biology	5	0.76	80.0%
Dentistry			
Health Professions	1	0.47	100.0%
Immunology and Microbiology	3	2.82	100.0%
Medicine	49	0.84	65.3%
Cardiology and Cardiovascular Medicine	8	0.85	87.5%
Critical Care and Intensive Medicine	1	0.00	0.0%
Emergency Medicine	2	0.00	50.0%
Endocrinology, Diabetes, and Metabolism	2	0.39	50.0%
General Medicine	8	0.47	25.0%
Genetics (Clinical)			
Health Informatics			
Oncology	2	0.28	100.0%
Public Health, Environmental & Occupational Health	5	0.71	100.0%
Pulmonary and Respiratory Medicine	9	0.77	77.8%
Neuroscience	1	0.10	100.0%
Nursing			
Pharmacology, Toxicology and Pharmaceuticals	3	2.24	100.0%
Psychology			

Top Collaborating Institutions (*SciVal*®)

BIOCHEMISTRY, GENETICS AND MOLECULAR BIOLOGY		CRITICAL CARE AND INTENSIVE MEDICINE		ONCOLOGY	
United Arab Emirates University	United Arab Emirates			McMaster University	Canada
Khalifa Uni of Sci and Technology	United Arab Emirates			Hamilton Health Sciences	Canada
NYU Abu Dhabi	United Arab Emirates			University of Waterloo	Canada
New York University	United States				
Zayed University	United Arab Emirates				
DENTISTRY		EMERGENCY MEDICINE		PUBLIC HEALTH, ENVIRO AND OCCUPATIONAL HEALTH	
		Dubai Hospital	United Arab Emirates	University of Sharjah	United Arab Emirates
		Tawam Hospital	United Arab Emirates	Dubai Hospital	United Arab Emirates
		United Arab Emirates University	United Arab Emirates	GlaxoSmithKline	United Kingdom
		University of Maryland-Baltimore	United States	Ain Shams University	Egypt
				American University of Beirut	Lebanon
HEALTH PROFESSIONS		ENDOCRINOLOGY, DIABETES, AND METABOLISM		PULMONARY AND RESPIRATORY MEDICINE	
Robert Gordon University	United Kingdom	Khalifa Uni of Sci and Technology	United Arab Emirates	Dubai Hospital	United Arab Emirates
		NYU Abu Dhabi	United Arab Emirates	University of Sharjah	United Arab Emirates
		New York University	United States	Ain Shams University	Egypt
		Sheikh Khalifa Medical City	United Arab Emirates	American University of Beirut	Lebanon
		United Arab Emirates University	United Arab Emirates	Autonomous University of Barcelona	Spain
IMMUNOLOGY AND MICROBIOLOGY		GENERAL MEDICINE		NEUROSCIENCE	
Aga Khan University	Pakistan	Dubai Hospital	United Arab Emirates		
Al Ain Hospital	United Arab Emirates	Harvard University	United States		
Al Mafraq Hospital	United Arab Emirates	Texas A and M University	United States		
Alfaisal University	Saudi Arabia	Uniformed Services Uni of Health Sci	United States		
Allama Iqbal Medical College	Pakistan	United Arab Emirates University	United Arab Emirates		
MEDICINE		GENETICS (CLINICAL)		NURSING	
Dubai Hospital	United Arab Emirates				
Alfaisal University	Saudi Arabia				
Sheikh Khalifa Medical City	United Arab Emirates				
King Saud University	Saudi Arabia				
Min of National Guard – Health Affairs	Saudi Arabia				
CARDIOLOGY AND CARDIOVASCULAR MEDICINE		HEALTH INFORMATICS		PHARMACOLOGY, TOXICOLOGY AND PHARMACEUTICS	
Sheikh Khalifa Medical City	United Arab Emirates			Cardiff University	United Kingdom
Tufts University	United States			Dubai Pharmacy College	United Arab Emirates
Alfaisal University	Saudi Arabia			Imam Abdulrahman Bin Faisal Uni	Saudi Arabia
King Abdulaziz University	Saudi Arabia			King Saud b Abdulaziz Uni H Sci	Saudi Arabia
Mohammed Bin Rashid Uni of MHS	United Arab Emirates			Min of National Guard – Health Affairs	Saudi Arabia
				PSYCHOLOGY	

ZAYED UNIVERSITY

Health research publications (*PubMed*, by affiliation to institution and UAE)

2014	2015	2016	2017	2018	Total
10	25	30	35	60	160

ASJC Subject (*SciVal*®)

	Outputs	FWCI	International Co-Authors
Biochemistry, Genetics and Molecular Biology	64	0.74	85.9%
Dentistry	2	0.79	100.0%
Health Professions	13	1.49	84.6%
Immunology and Microbiology	10	0.84	80.0%
Medicine	138	2.96	76.8%
Cardiology and Cardiovascular Medicine	4	0.00	75.0%
Critical Care and Intensive Medicine	2	1.45	100.0%
Emergency Medicine	1	0.89	100.0%
Endocrinology, Diabetes, and Metabolism	12	1.03	91.7%
General Medicine	20	14.59	70.0%
Genetics (Clinical)	2	0.59	50.0%
Health Informatics	10	1.96	90.0%
Oncology	4	1.52	75.0%
Public Health, Environmental & Occupational Health	15	0.73	66.7%
Pulmonary and Respiratory Medicine			
Neuroscience	16	0.53	75.0%
Nursing	15	0.72	80.0%
Pharmacology, Toxicology and Pharmaceuticals	11	0.58	81.8%
Psychology	64	0.90	64.1%

Top Collaborating Institutions (*SciVal*®)

BIOCHEMISTRY, GENETICS AND MOLECULAR BIOLOGY

United Arab Emirates University	United Arab Emirates
University of Central Lancashire	United Kingdom
Bogomoletz Institute of Physiology	Ukraine
Kyung Hee University	South Korea
Khalifa Uni of Sci and Technology	United Arab Emirates

CRITICAL CARE AND INTENSIVE MEDICINE

Maastricht University	Netherlands
Universiti Kebangsaan Malaysia	Malaysia
University of Parma	Italy
University of Pisa	Italy
University of Tennessee System	United States

ONCOLOGY

Abu Dhabi University	United Arab Emirates
Ain Shams University	Egypt
American University of Beirut	Lebanon
Arabian Gulf University	Bahrain
Birzeit University	Palestinian Territory

DENTISTRY

University of Bergen	Norway
University of Western Australia	Australia

EMERGENCY MEDICINE

University of Bath	United Kingdom
University of Plymouth	United Kingdom
University of Sheffield	United Kingdom

PUBLIC HEALTH, ENVIRO AND OCCUPATIONAL HEALTH

Ain Shams University	Egypt
American University of Beirut	Lebanon
Arabian Gulf University	Bahrain
Birzeit University	Palestinian Territory
Dubai Medical College	United Arab Emirates

HEALTH PROFESSIONS

University of New Haven	United States
Concordia University	Canada
University of Central Lancashire	United Kingdom
University of Derby	United Kingdom
Edith Cowan University	Australia

ENDOCRINOLOGY, DIABETES, AND METABOLISM

Sheikh Khalifa Medical City	United Arab Emirates
Khalifa Uni of Sci and Technology	United Arab Emirates
United Arab Emirates University	United Arab Emirates
University of Nicosia	Cyprus
University of Sydney	Australia

PULMONARY AND RESPIRATORY MEDICINE

IMMUNOLOGY AND MICROBIOLOGY

Saint Joseph University	Lebanon
Manipal Academy of Higher Education	India
Manipal Acad of Higher Edu, Dubai	United Arab Emirates
James Cook University Queensland	Australia
AP-HP Ass Pub - Hopitaux de Paris	France

GENERAL MEDICINE

INSERM	France
University of Adelaide	Australia
Aarhus University	Denmark
Academia Sinica Taiwan	Taiwan
Aga Khan University	Pakistan

NEUROSCIENCE

Chinese University of Hong Kong	Hong Kong
University of Leicester	United Kingdom
University of Teesside	United Kingdom
Abu Dhabi University	United Arab Emirates
American University of Sharjah	United Arab Emirates

MEDICINE

United Arab Emirates University	United Arab Emirates
Saint Joseph University	Lebanon
Maastricht University	Netherlands
American University of Beirut	Lebanon
Chinese University of Hong Kong	Hong Kong

GENETICS (CLINICAL)

Khalifa Uni of Sci and Technology	United Arab Emirates
University of Manitoba	Canada

NURSING

Maastricht University	Netherlands
University of Plymouth	United Kingdom
Agricultural University of Athens	Greece
American University of Sharjah	United Arab Emirates
Queen's University Belfast	United Kingdom

CARDIOLOGY AND CARDIOVASCULAR MEDICINE

Aristotle University of Thessaloniki	Greece
Agricultural University of Athens	Greece
University of Nicosia	Cyprus

HEALTH INFORMATICS

Innopolis University	Russian Federation
Jordan Uni of Sci and Technology	Jordan
Liverpool John Moores University	United Kingdom
Universidade Estadual de Campinas	Brazil
Kyung Hee University	South Korea

PHARMACOLOGY, TOXICOLOGY AND PHARMACEUTICS

United Arab Emirates University	United Arab Emirates
COMSATS Inst of Information Tech	Pakistan
Chapman University	United States
East China Uni of Science and Tech	China
James Cook University Queensland	Australia

PSYCHOLOGY

University of Leicester	United Kingdom
American University of Sharjah	United Arab Emirates
Harvard University	United States
University of Bristol	United Kingdom
University of Houston	United States

HEALTH RESEARCH OUTPUTS FOR EXTENDED LIST OF UAE INSTITUTIONS, 2014 - 2018

Health Research Publications 2014 – 2018 (<i>PubMed</i> , 17 October 2019) Search results based on affiliations as listed in this table. Only institutions with more than 10 identified outputs are shown.		Outputs
UNIVERSITIES AND COLLEGES		
Abu Dhabi University		15
Ajman University of Science and Technology		17
Al Ain University of Science and Technology		26
Dubai Medical College		60
Dubai Pharmacy College		15
Gulf Medical University		164
Higher Colleges of Technology		19
Khalifa University of Science, Technology & Research		585
Masdar Institute of Science and Technology (Khalifa University)		78
Mohammed Bin Rashid University of Medicine and Health Sciences		142
NYU Abu Dhabi		472
United Arab Emirates University		1234
University of Sharjah		487
Zayed University		160
HEALTHCARE INSTITUTIONS		
Al Ain Hospital		49
Al Jalila Children's Specialty Hospital		11
Al Mafraq Hospital		57
Al Qassimi Hospital		16
Al Rahba Hospital		18
Al Zahra Hospital		20
Ambulatory Healthcare Services		10
American Hospital Dubai		18
Cleveland Clinic Abu Dhabi		252
Corniche Hospital		17
Dubai Hospital		154
Emirates Hospital		15
Hatta Hospital		15
Mediclinic City Hospital		15
Ministry of Health and Prevention		118
NMC Specialty Hospital		16
Rashid Hospital		102
Sheikh Khalifa Medical City		219
Tawam Hospital		243
Zayed Military Hospital		44

A16. TOP 10 OUTPUTS PER DISCIPLINE, BY FWCI, 2014-2018 (SciVal®, 24 July 2019)

BIOCHEMISTRY, GENETICS AND MOLECULAR BIOLOGY

Citations	FWCI	Reference
979	85.36	Fitzmaurice, C., Allen, C., Barber, R.M. and 182 more (...) (2017). Global, regional, and national cancer incidence, mortality, years of life lost, years lived with disability, and disability-adjusted life-years for 32 cancer groups, 1990 to 2015: A Systematic Analysis for the Global Burden of Disease Study Global Burden of Disease Cancer Collaboration. <i>JAMA Oncology</i> ,3(4) 524-548. UAE Authorship: United Arab Emirates University.
1263	80.91	Fitzmaurice, C., Dicker, D., Pain, A. and 129 more (...) (2015). The Global Burden of Cancer 2013. <i>JAMA Oncology</i> ,1(4) 505-527. UAE Authorship(s): United Arab Emirates University.
1893	77.74	Klionsky, D.J., Abdelmohsen, K., Abe, A. and 2,459 more (...) (2016). Guidelines for the use and interpretation of assays for monitoring autophagy (3rd edition). <i>Autophagy</i> ,12(1) 1-222. UAE Authorship: Al Jalila Foundation Research Centre Dubai; University of Sharjah.
2	55.61	Kamal-Eldin, A., Ghnimi, S. (2017). Design of flavonoid microparticles with channel forming properties to improve oxidative stability of sunflower oil. <i>European Journal of Lipid Science and Technology</i> ,119(10). UAE Authorship: United Arab Emirates University.
114	46.26	Fitzmaurice, C., Akinyemiju, T.F., Al Lami, F.H. and 150 more (...) (2018). Global, Regional, and National Cancer Incidence, Mortality, Years of Life Lost, Years Lived With Disability, and Disability-Adjusted Life-Years for 29 Cancer Groups, 1990 to 2016: A Systematic Analysis for the Global Burden of Disease Study. <i>JAMA oncology</i> ,4(11) 1553-1568. UAE Authorship: United Arab Emirates University.
613	34.59	Cox, L.M., Yamanishi, S., Sohn, J. and 12 more (...) (2014). Altering the intestinal microbiota during a critical developmental window has lasting metabolic consequences. <i>Cell</i> ,158(4) 705-721. UAE Authorship: NYU Abu Dhabi.
74	33.09	Pludowski, P., Holick, M.F., Grant, W.B. and 17 more (...) (2018). Vitamin D supplementation guidelines. <i>Journal of Steroid Biochemistry and Molecular Biology</i> ,175125-135. UAE Authorship: Gulf Diagnostic Center Hospital Abu Dhabi.
339	26.26	Kok, F.O., Shin, M., Ni, C.-W. and 14 more (...) (2015). Reverse genetic screening reveals poor correlation between morpholino-induced and mutant phenotypes in zebrafish. <i>Developmental Cell</i> ,32(1) 97-108. UAE Authorship: Khalifa University of Science and Technology.
106	17.84	Andreoli, L., Bertias, G.K., Agmon-Levin, N. and 23 more (...) (2017). EULAR recommendations for women's health and the management of family planning, assisted reproduction, pregnancy and menopause in patients with systemic lupus erythematosus and/or antiphospholipid syndrome. <i>Annals of the Rheumatic Diseases</i> ,76(3) 476-485. UAE Authorship: Dubai Hospital.
121	12.53	Yang, X., Coulombe-Huntington, J., Kang, S. and 35 more (...) (2016). Widespread Expansion of Protein Interaction Capabilities by Alternative Splicing. <i>Cell</i> ,164(4) 805-817. UAE Authorship: NYU Abu Dhabi.

DENTISTRY

Citations	FWCI	Reference
26	25.76	El-Damhoury, H.M., Gaintantzopoulou, M.D. (2018). Self-etching ceramic primer versus hydrofluoric acid etching: Etching efficacy and bonding performance. <i>Journal of Prosthodontic Research</i> ,62(1) 75-83. UAE Authorship: University of Sharjah.
101	11.04	El-Damhoury, H.M., Platt, J.A. (2014). Polymerization shrinkage stress kinetics and related properties of bulk-fill resin composites. <i>Operative Dentistry</i> ,39(4) 374-382. UAE Authorship: University of Sharjah.
2	9.52	Ferguson, D.J., Wilcko, M.T. (2016). Tooth movement mechanobiology: Toward a unifying concept. <i>Biology of Orthodontic Tooth Movement: Current Concepts and Applications in Orthodontic Practice</i> ,13-44. UAE Authorship: Dubai Healthcare City.
20	6.94	Al-Moraissi, E.A., Dahan, A.A., Alwadeai, M.S. and 6 more (...) (2017). What surgical treatment has the lowest recurrence rate following the management of keratocystic odontogenic tumor?: A large systematic review and meta-analysis. <i>Journal of Cranio-Maxillofacial Surgery</i> ,45(1) 131-144. UAE Authorship: Medicine Welcare Hospital, Dubai.
56	6.04	Coelho, P.G., Jimbo, R., Tovar, N. and 1 more (...) (2015). Osseointegration: Hierarchical designing encompassing the micrometer, micrometer, and nanometer length scales. <i>Dental Materials</i> ,31(1) 37-52. UAE Authorship: NYU Abu Dhabi.
4	5.72	Rebong, R.E., Stewart, K.T., Utreja, A. and 1 more (...) (2018). Accuracy of three-dimensional dental resin models created by fused deposition modeling, stereolithography, and Polyjet prototype technologies: A comparative study. <i>Angle Orthodontist</i> ,88(3) 363-369. UAE Authorship: Mohammed Bin Rashid University.
32	5.37	Papageorgiou, S.N., Papadopoulos, M.A., Athanasiou, A.E. (2014). Reporting characteristics of meta-analyses in orthodontics: Methodological assessment and statistical recommendations. <i>European Journal of Orthodontics</i> ,36(1) 74-85. UAE Authorship: Mohammed Bin Rashid University.
37	4.85	Awad, M.A., Rashid, F., Feine, J.S. and 11 more (...) (2014). The effect of mandibular 2-implant overdentures on oral health-related quality of life: An international multicentre study. <i>Clinical Oral Implants Research</i> ,25(1) 46-51. UAE Authorship: Ajman University of Science and Technology; University of Sharjah.
1	4.76	Jain, P., Yeli, M., Dhingra, K. (2016). Root canal filling. <i>Current Therapy in Endodontics</i> ,111-140. UAE Authorship: University of Sharjah.
31	4.7	El-Damhoury, H.M., Haj-Ali, R.N., Platt, J.A. (2015). Fracture resistance and microleakage of endocrowns utilizing three cad-cam blocks. <i>Operative Dentistry</i> ,40(2) 201-210. UAE Authorship: University of Sharjah.

HEALTH PROFESSIONS

Citations	FWCI	Reference
113	17.06	Steele, C.M., Alsanei, W.A., Ayanikalath, S. and 17 more (...) (2015). The Influence of Food Texture and Liquid Consistency Modification on Swallowing Physiology and Function: A Systematic Review. <i>Dysphagia</i> ,30(1) 2-26. UAE Authorship: Sheikh Khalifa Medical City.
5	16.3	Steele, C.M., Alsanei, W.A., Ayanikalath, S. and 17 more (...) (2015). The Influence of Food Texture and Liquid Consistency Modification on Swallowing Physiology and Function: A Systematic Review [Dysphagia, 10.1007/s00455-014-9578-x]. <i>Dysphagia</i> ,30(2) 272-273. UAE Authorship: Sheikh Khalifa Medical City.
51	14.85	Powers, M.A., Bardsley, J., Cypress, M. and 6 more (...) (2017). Diabetes Self-management Education and Support in Type 2 Diabetes: A Joint Position Statement of the American Diabetes Association, the American Association of Diabetes Educators, and the Academy of Nutrition and Dietetics. <i>Diabetes Educator</i> ,43(1) 40-53. UAE Authorship: LifeScan (Johnson and Johnson Diabetes Solutions Company) Dubai.
70	10.63	Powers, M.A., Bardsley, J., Cypress, M. and 6 more (...) (2015). Diabetes Self-management Education and Support in Type 2 Diabetes: A Joint Position Statement of the American Diabetes Association, the American Association of Diabetes Educators, and the Academy of Nutrition and Dietetics. <i>Diabetes Educator</i> ,41(4) 417-430. UAE Authorship: LifeScan (Johnson and Johnson Diabetes Solutions Company) Dubai.
13	9.55	Karbab, E.B., Debbabi, M., Derhab, A. and 1 more (...) (2018). MalDozer: Automatic framework for android malware detection using deep learning. <i>Digital Investigation</i> ,24S48-S59. UAE Authorship: University of Sharjah.
16	7.27	Al-Hamadi, H., Gawanmeh, A., Al-Qutayri, M. (2014). Formalizing electrocardiogram (ECG) signal behavior in event-B. 2014 IEEE 16th International Conference on e-Health Networking, Applications and Services, Healthcom 2014,55-60. UAE Authorship: Khalifa University of Science and Technology.
33	6.28	Fruchter, J., Marantz, A. (2015). Decomposition, lookup, and recombination: MEG evidence for the full decomposition model of complex visual word recognition. <i>Brain and Language</i> ,14381-96. UAE Authorship: NYU Abu Dhabi.
19	6.19	Gawanmeh, A., Al-Hamadi, H., Al-Qutayri, M. and 2 more (...) (2015). Reliability analysis of healthcare information systems: State of the art and future directions. 2015 17th International Conference on E-Health Networking, Application and Services, HealthCom 2015, 68-74. UAE Authorship: Khalifa University of Science and Technology.
40	6.15	Walnycky, D., Baggili, I., Marrington, A. and 2 more (...) (2015). Network and device forensic analysis of Android social-messaging applications. <i>Digital Investigation</i> ,14(S1) S77-S84. UAE Authorship: Zayed University.
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19	6.19	Gawanmeh, A., Al-Hamadi, H., Al-Qutayri, M. and 2 more (...) (2015). Reliability analysis of healthcare information systems: State of the art and future directions. 2015 17th International Conference on E-Health Networking, Application and Services, HealthCom 2015,68-74. UAE Authorship: Khalifa University of Science and Technology.
13	5.71	Pervez, U., Hasan, O., Latif, K. and 3 more (...) (2014). Formal reliability analysis of a typical FHIR standard based e-Health system using PRISM. 2014 IEEE 16th International Conference on e-Health Networking, Applications and Services, Healthcom 2014,43-48. UAE Authorship: Khalifa University of Science and Technology.
20	5.03	Sweileh, W.M., Al-Jabi, S.W., AbuTaha, A.S. and 3 more (...) (2017). Bibliometric analysis of worldwide scientific literature in mobile - health: 2006-2016. BMC Medical Informatics and Decision Making,17(1). UAE Authorship: unknown.
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7	3.91	Thabtah, F., Kamalov, F., Rajab, K. (2018). A new computational intelligence approach to detect autistic features for autism screening. International Journal of Medical Informatics,117112-124. UAE Authorship: Canadian University Dubai.
2	3.86	Majdalawieh, M., Marir, F., Tiemساني, I. (2018). Developing Adaptive Islamic Law Business Processes Models for Islamic Finance and Banking by Text Mining the Holy Qur'an and Hadith. Proceedings - 2017 IEEE 15th International Conference on Dependable, Autonomic and Secure Computing, 2017 IEEE 15th International Conference on Pervasive Intelligence and Computing, 2017 IEEE 3rd International Conference on Big Data Intelligence and Computing and 2017 IEEE Cyber Science and Technology Congress, DASC-PiCom-DataCom-CyberSciTec 2017,2018-January1278-1283. UAE Authorship: Zayed University.
5	3.67	Fahim, M., Baker, T., Khattak, A.M. and 1 more (...) (2017). Alert me: Enhancing active lifestyle via observing sedentary behavior using mobile sensing systems. 2017 IEEE 19th International Conference on e-Health Networking, Applications and Services, Healthcom 2017,2017-December1-4. UAE Authorship: Zayed University.
8	3.62	Shapsough, S., Hesham, A., Elkhazraty, Y. and 2 more (...) (2016). Emotion recognition using mobile phones. 2016 IEEE 18th International Conference on e-Health Networking, Applications and Services, Healthcom 2016. UAE Authorship: American University of Sharjah.

MEDICINE - ONCOLOGY

Citations	FWCI	Reference
979	85.36	Fitzmaurice, C., Allen, C., Barber, R.M. and 182 more (...) (2017). Global, regional, and national cancer incidence, mortality, years of life lost, years lived with disability, and disability-adjusted life-years for 32 cancer groups, 1990 to 2015: A Systematic Analysis for the Global Burden of Disease Study Global Burden of Disease Cancer Collaboration. <i>JAMA Oncology</i> ,3(4) 524-548. <i>UAE Authorship: unknown.</i>
1263	80.91	Fitzmaurice, C., Dicker, D., Pain, A. and 129 more (...) (2015). The Global Burden of Cancer 2013. <i>JAMA Oncology</i> ,1(4) 505-527. <i>UAE Authorship: United Arab Emirates University.</i>
114	46.26	Fitzmaurice, C., Akinyemiju, T.F., Al Lami, F.H. and 150 more (...) (2018). Global, Regional, and National Cancer Incidence, Mortality, Years of Life Lost, Years Lived With Disability, and Disability-Adjusted Life-Years for 29 Cancer Groups, 1990 to 2016: A Systematic Analysis for the Global Burden of Disease Study. <i>JAMA oncology</i> ,4(11) 1553-1568. <i>UAE Authorship: Hamdan Bin Mohammed Smart University Dubai; United Arab Emirates University.</i>
28	4.44	Khaja, A.S.S., Toor, S.M., El Salhat, H. and 4 more (...) (2017). Preferential accumulation of regulatory T cells with highly immunosuppressive characteristics in breast tumor microenvironment. <i>Oncotarget</i> ,8(20) 33159-33171. <i>UAE Authorship: Al Noor Hospital; Tawam Hospital; United Arab Emirates University.</i>
22	4.29	Lemaire, M., D'Huyvetter, M., Lahoutte, T. and 8 more (...) (2014). Imaging and radioimmunotherapy of multiple myeloma with anti-idiotypic Nanobodies. <i>Leukemia</i> ,28(2) 444-447. <i>UAE Authorship: Central Veterinary Research Laboratory Dubai.</i>
18	4.22	Abdin, S.M., Zaher, D.M., Arafa, E.-S.A. and 1 more (...) (2018). Tackling cancer resistance by immunotherapy: Updated clinical impact and safety of PD-1/PD-L1 inhibitors. <i>Cancers</i> ,10(2) . <i>UAE Authorship: Ajman University; University of Sharjah.</i>
11	3.32	Tolba, M.F., Omar, H.A. (2018). Immunotherapy, an evolving approach for the management of triple negative breast cancer: Converting non-responders to responders. <i>Critical Reviews in Oncology/Hematology</i> ,122202-207. <i>UAE Authorship: University of Sharjah.</i>
56	3.29	Weatherspoon, D.J., Chattopadhyay, A., Boroumand, S. and 1 more (...) (2015). Oral cavity and oropharyngeal cancer incidence trends and disparities in the United States: 2000-2010. <i>Cancer Epidemiology</i> ,39(4) 497-504. <i>UAE Authorship: Dubai Healthcare City; Mohammad Bin Rashid University.</i>
8	3.25	Rahmani, M., Nkwocha, J., Hawkins, E. and 7 more (...) (2018). Cotargeting BCL-2 and PI3K induces BAX-dependent mitochondrial apoptosis in AML cells. <i>Cancer Research</i> ,78(11) 3075-3086. <i>UAE Authorship: University of Sharjah.</i>
7	3.06	Khan, F.M., Saleh, E., Alawadhi, H. and 3 more (...) (2018). Inhibition of exosome release by ketotifen enhances sensitivity of cancer cells to doxorubicin. <i>Cancer Biology and Therapy</i> ,19(1) 25-33. <i>UAE Authorship: University of Sharjah.</i>

MEDICINE - PUBLIC HEALTH, ENVIRONMENTAL AND OCCUPATIONAL HEALTH

Citations	FWCI	Reference
120	10.46	Rosenthal, V.D., Maki, D.G., Mehta, Y. and 825 more (...) (2014). International Nosocomial Infection Control Consortiu (INICC) report, data summary of 43 countries for 2007-2012. Device-associated module. <i>American Journal of Infection Control</i> ,42(9) 942-956. <i>UAE Authorship: Dubai Hospital.</i>
69	10.39	Rosenthal, V.D., Al-Abdely, H.M., El-Kholy, A.A. and 795 more (...) (2016). International Nosocomial Infection Control Consortium report, data summary of 50 countries for 2010-2015: Device-associated module. <i>American Journal of Infection Control</i> ,44(12) 1495-1504. <i>UAE Authorship: Dubai Hospital.</i>
5	6.87	Hajat, C., Kishore, S.P. (2018). The case for a global focus on multiple chronic conditions. <i>BMJ Global Health</i> ,3(3). <i>UAE Authorship: United Arab Emirates University.</i>
16	6.77	Balkhy, H.H., Assiri, A.M., Mousa, H.A. and 45 more (...) (2016). The strategic plan for combating antimicrobial resistance in Gulf Cooperation Council States. <i>Journal of Infection and Public Health</i> ,9(4) 375-385. <i>UAE Authorship: Ministry of Health and Prevention.</i>
21	6.39	Attaji, M.W., Khatib, R., McKee, M. and 389 more (...) (2017). Availability and affordability of blood pressure-lowering medicines and the effect on blood pressure control in high-income, middle-income, and low-income countries: an analysis of the PURE study data. <i>The Lancet Public Health</i> ,2(9) e411-e419. <i>UAE Authorship: Hatta Hospital.</i>
8	6.16	Simsekler, M.C.E., Ward, J.R., Clarkson, P.J. (2018). Evaluation of system mapping approaches in identifying patient safety risks. <i>International Journal for Quality in Health Care</i> ,30(3) 227-233. <i>UAE Authorship: Khalifa University of Science and Technology.</i>
8	6	Paden, C.R., Yusof, M.F.B.M., Al Hammadi, Z.M. and 26 more (...) (2018). Zoonotic origin and transmission of Middle East respiratory syndrome coronavirus in the UAE. <i>Zoonoses and Public Health</i> ,65(3) 322-333. <i>UAE Authorship: Abu Dhabi Food Control Authority; Department of Health Abu Dhabi; Sheikh Khalifa Medical City.</i>
23	5.03	Gossner, C.M., Marrama, L., Carson, M. and 13 more (...) (2017). West Nile virus surveillance in Europe: Moving towards an integrated animal-human-vector approach. <i>Eurosurveillance</i> ,22(18) . <i>UAE Authorship: Mohammad Bin Rashid University.</i>
6	4.78	Mokdad, A.H., Moradi-Lakeh, M., Charara, R. and 109 more (...) (2018). Intentional injuries in the Eastern Mediterranean Region, 1990-2015: findings from the Global Burden of Disease 2015 study. <i>International Journal of Public Health</i> ,6339-46. <i>UAE Authorship: Hamdan Bin Mohammed Smart University Dubai.</i>
50	4.75	Hoffman, E.W., Pinkleton, B.E., Weintraub Austin, E. and 1 more (...) (2014). Exploring college students use of general and alcohol-related social media and their associations with alcohol-related behaviors. <i>Journal of American College Health</i> ,62(5) 328-335. <i>UAE Authorship: Higher Colleges of Technology Dubai.</i>

MEDICINE - PULMONARY AND RESPIRATORY MEDICINE

Citations	FWCI	Reference
268	55.68	Soriano, J.B., Abajobir, A.A., Abate, K.H. and 122 more (...) (2017). Global, regional, and national deaths, prevalence, disability-adjusted life years, and years lived with disability for chronic obstructive pulmonary disease and asthma, 1990-2015: a systematic analysis for the Global Burden of Disease Study 2015. <i>The Lancet Respiratory Medicine</i> ,5(9) 691-706. <i>UAE Authorship: United Arab Emirates University.</i>
155	11.66	Fiocchi, A., Pawankar, R., Cuello-Garcia, C. and 22 more (...) (2015). World Allergy Organization-McMaster University Guidelines for Allergic Disease Prevention (GLAD-P): Probiotics. <i>World Allergy Organization Journal</i> ,8(1). <i>UAE Authorship: United Arab Emirates University.</i>
19	9.93	Harskamp, R.E., Bonatti, J.O., Zhao, D.X. and 4 more (...) (2014). Standardizing definitions for hybrid coronary revascularization. <i>Journal of Thoracic and Cardiovascular Surgery</i> ,147(2) 556-560. <i>UAE Authorship: Cleveland Clinic Abu Dhabi.</i>
11	8.59	Rodriguez, E., Nifong, L.W., Bonatti, J. and 11 more (...) (2016). Pathway for surgeons and programs to establish and maintain a successful robot-assisted adult cardiac surgery program. <i>Journal of Thoracic and Cardiovascular Surgery</i> ,152(1) 9-13. <i>UAE Authorship: Cleveland Clinic Abu Dhabi.</i>
1	8.37	Feshchenko, Y., Iashyna, L., Nugmanova, D. and 10 more (...) (2017). Correction: Chronic obstructive pulmonary disease, bronchial asthma and allergic rhinitis in the adult population within the commonwealth of independent states: Rationale and design of the CORE study. [BMC Pulm Med. 17, (2017), (131)] DOI: 10.1186/s12890-017-0471-x. <i>BMC Pulmonary Medicine</i> ,17(1). <i>UAE Authorship: GlaxoSmithKline Dubai.</i>
86	8.09	Shrestha, M., Bachet, J., Bavaria, J. and 15 more (...) (2015). Current status and recommendations for use of the frozen elephant trunk technique: A position paper by the Vascular Domain of EACTS. <i>European Journal of Cardio-thoracic Surgery</i> ,47(5) 759-769. <i>UAE Authorship:</i>
17	7.26	Conrad, S.A., Broman, L.M., Taccone, F.S. and 15 more (...) (2018). The extracorporeal life support organization Maastricht treaty for nomenclature in extracorporeal life support a position paper of the extracorporeal life support organization. <i>American Journal of Respiratory and Critical Care Medicine</i> ,198(4) 447-451. <i>UAE Authorship: Cleveland Clinic Abu Dhabi.</i>
44	6.65	Kiraly, L., Tofeig, M., Jha, N.K. and 1 more (...) (2016). Three-dimensional printed prototypes refine the anatomy of post-modified Norwood-1 complex aortic arch obstruction and allow presurgical simulation of the repair. <i>Interactive Cardiovascular and Thoracic Surgery</i> ,22(2) 238-240. <i>UAE Authorship: Cleveland Clinic Abu Dhabi; Sheikh Khalifa Medical City.</i>
60	5.99	Beach, J.M., Mihaljevic, T., Rajeswaran, J. and 8 more (...) (2014). Ventricular hypertrophy and left atrial dilatation persist and are associated with reduced survival after valve replacement for aortic stenosis. <i>Journal of Thoracic and Cardiovascular Surgery</i> ,147(1) 362-369.e8. <i>UAE Authorship: Cleveland Clinic Abu Dhabi.</i>
1	5.61	Bousquet, J., Farrell, J., Crooks, G. and 318 more (...) (2017). Erratum to: Scaling up strategies of the chronic respiratory disease programme of the European Innovation Partnership on Active and Healthy Ageing (Action Plan B3: Area 5)(Clin Transl Allergy (2016) 6 (29) DOI: 10.1186/s13601-016-0116-9). <i>Clinical and Translational Allergy</i> ,7(1). <i>UAE Authorship: Rashid Hospital.</i>

NEUROSCIENCE		
Citations	FWCI	Reference
8	8.18	Lansford, J.E., Rothenberg, W.A., Jensen, T.M. and 17 more (...) (2018). Bidirectional Relations Between Parenting and Behavior Problems From Age 8 to 13 in Nine Countries. <i>Journal of Research on Adolescence</i> ,28(3) 571-590. UAE Authorship: Emirates College for Advanced Education .
66	7.26	Majbour, N.K., Vaikath, N.N., Van Dijk, K.D. and 11 more (...) (2016). Oligomeric and phosphorylated alpha-synuclein as potential CSF biomarkers for Parkinson's disease. <i>Molecular Neurodegeneration</i> ,11(1). UAE Authorship: United Arab Emirates University .
145	6.8	Doelling, K.B., Arnal, L.H., Ghitza, O. and 1 more (...) (2014). Acoustic landmarks drive delta-theta oscillations to enable speech comprehension by facilitating perceptual parsing. <i>NeuroImage</i> ,85761-768. UAE Authorship: NYU Abu Dhabi .
33	6.28	Fruchter, J., Marantz, A. (2015). Decomposition, lookup, and recombination: MEG evidence for the full decomposition model of complex visual word recognition. <i>Brain and Language</i> ,14381-96. UAE Authorship: NYU Abu Dhabi .
91	6.06	Parnetti, L., Chiasserini, D., Persichetti, E. and 17 more (...) (2014). Cerebrospinal fluid lysosomal enzymes and alpha-synuclein in Parkinson's disease. <i>Movement Disorders</i> ,29(8) 1019-1027. UAE Authorship: United Arab Emirates University .
39	5.93	Lim, E.T., Uddin, M., De Rubeis, S. and 26 more (...) (2017). Rates, distribution and implications of postzygotic mosaic mutations in autism spectrum disorder. <i>Nature Neuroscience</i> ,20(9) 1217-1224. UAE Authorship: Mohammed Bin Rashid University .
87	5.88	Chandrasekar, A., Rakkayappan, R., Cao, J. and 1 more (...) (2014). Synchronization of memristor-based recurrent neural networks with two delay components based on second-order reciprocally convex approach. <i>Neural Networks</i> ,5779-93. UAE Authorship: United Arab Emirates University .
32	5.66	Diener, H.C., Bernstein, R., Bulcher, K. and 10 more (...) (2017). Thrombolysis and thrombectomy in patients treated with dabigatran with acute ischemic stroke: Expert opinion. <i>International Journal of Stroke</i> ,12(1) 9-12. UAE Authorship: CityHospital Mediclinic Dubai .
80	5.6	Bahi, A., Al Mansouri, S., Al Memari, E. and 3 more (...) (2014). β -Caryophyllene, a CB2 receptor agonist produces multiple behavioral changes relevant to anxiety and depression in mice. <i>Physiology and Behavior</i> ,135119-124. UAE Authorship: United Arab Emirates University .
80	5.46	Arnal, L.H., Doelling, K.B., Poeppel, D. (2015). Delta-beta coupled oscillations underlie temporal prediction accuracy. <i>Cerebral Cortex</i> ,25(9) 3077-3085. UAE Authorship: NYU Abu Dhabi .

NURSING		
Citations	FWCI	Reference
78	11.83	Ong, M.E.H., Shin, S.D., De Souza, N.N.A. and 26 more (...) (2015). Outcomes for out-of-hospital cardiac arrests across 7 countries in Asia: The Pan Asian Resuscitation Outcomes Study (PAROS). <i>Resuscitation</i> ,96100-108. UAE Authorship: Rashid Hospital .
126	10.76	Powers, M.A., Bardsley, J., Cypress, M. and 6 more (...) (2015). Diabetes self-management education and support in type 2 diabetes: A joint position statement of the American Diabetes Association, the American Association of Diabetes Educators, and the Academy of Nutrition and Dietetics. <i>Diabetes Care</i> ,38(7) 1372-1382. UAE Authorship: LifeScan (Johnson and Johnson Diabetes Solutions Company) Dubai .
18	10.67	Mahawar, K.K., Himpens, J., Shikora, S.A. and 13 more (...) (2018). The First Consensus Statement on One Anastomosis/Mini Gastric Bypass (OAGB/MGB) Using a Modified Delphi Approach. <i>Obesity Surgery</i> ,28(2) 303-312. UAE Authorship: Rashid Hospital .
2	8.99	Al-Ghabeesh, S.H., Alshraifeen, A.A., Saifan, A.R. and 3 more (...) (2018). Spirituality in the Lives of Patients with End-Stage Renal Disease: A Systematic Review. <i>Journal of Religion and Health</i> ,57(6) 2461-2477. UAE Authorship: Fatima College Abu Dhabi .
2	7.27	Vally, Z., D'Souza, C.G., Habeeb, H. and 1 more (...) (2018). The factor structure and psychometric properties of an Arabic-translated version of the Body Appreciation Scale-2. <i>Perspectives in Psychiatric Care</i> ,55(3):373-377. UAE Authorship: United Arab Emirates University .
8	7.22	Stone, T.E., Rossiter, R.C. (2015). Predatory publishing: Take care that you are not caught in the Open Access net. <i>Nursing and Health Sciences</i> ,17(3) 277-279. UAE Authorship: University of Sharjah .
54	7.02	Saad, F., Yassin, A., Doros, G. and 1 more (...) (2016). Effects of long-term treatment with testosterone on weight and waist size in 411 hypogonadal men with obesity classes I-III: Observational data from two registry studies. <i>International Journal of Obesity</i> ,40(1) 162-170. UAE Authorship: Gulf Medical University .
65	6.49	Jernerén, F., Elshorbagy, A.K., Oulhaj, A. and 3 more (...) (2015). Brain atrophy in cognitively impaired elderly: The importance of long-chain w-3 fatty acids and B vitamin status in a randomized controlled trial. <i>American Journal of Clinical Nutrition</i> ,102(1) 215-221. UAE Authorship: United Arab Emirates University .
5	6.14	Ousey, K., Chadwick, P., Jawien, A. and 7 more (...) (2018). Identifying and treating foot ulcers in patients with diabetes: saving feet, legs and lives. <i>Journal of wound care</i> ,27S1-S52. UAE Authorship: Sheikh Khalifa Medical City .
8	5.96	Daniel, F., Abou Fadel, C., Houmani, Z. and 1 more (...) (2016). Spatz 3 Adjustable Intra gastric Balloon: Long-Term Safety Concerns. <i>Obesity Surgery</i> ,26(1) 159-160. UAE Authorship: American Hospital Dubai .

PHARMACOLOGY, TOXICOLOGY AND PHARMACEUTICS		
Citations	FWCI	Reference
6	11.59	Lee, K.S., Yee, S.M., Zaidi, S.T.R. and 4 more (...) (2017). Combating sale of counterfeit and falsified medicines online: A losing battle. <i>Frontiers in Pharmacology</i> ,8(MAY). UAE Authorship: Ajman University of Science and Technology .
18	8.65	Ali, B.H., Al-Salam, S., Al Suleimani, Y. and 12 more (...) (2018). Curcumin Ameliorates Kidney Function and Oxidative Stress in Experimental Chronic Kidney Disease. <i>Basic and Clinical Pharmacology and Toxicology</i> ,122(1) 65-73. UAE Authorship: United Arab Emirates University .
107	6.98	Chaudhary, B., Elkord, E. (2016). Regulatory T cells in the tumor microenvironment and cancer progression: Role and therapeutic targeting. <i>Vaccines</i> ,4(3). UAE Authorship: United Arab Emirates University .
28	6.64	Traish, A.M., Haider, A., Haider, K.S. and 2 more (...) (2017). Long-Term Testosterone Therapy Improves Cardiometabolic Function and Reduces Risk of Cardiovascular Disease in Men with Hypogonadism. <i>Journal of Cardiovascular Pharmacology and Therapeutics</i> ,22(5) 414-433. UAE Authorship: Gulf Medical University .
72	6.25	Zowawi, H.M., Sartor, A.L., Balkhy, H.H. and 13 more (...) (2014). Molecular characterization of carbapenemase-producing escherichia coli and klebsiella pneumoniae in the countries of the gulf cooperation council: Dominance of OXA-48 and NDM Produces. <i>Antimicrobial Agents and Chemotherapy</i> ,58(6) 3085-3090. UAE Authorship: Sheikh Khalifa General Hospital; Zayed Military Hospital .
3	5.8	Patrinos, G.P., Mitropoulou, C. (2017). Measuring the Value of Pharmacogenomics Evidence. <i>Clinical Pharmacology and Therapeutics</i> ,102(5) 739-741. UAE Authorship: United Arab Emirates University .
2	4.48	Fernandez-Llmos, F., Berti, A.D., Yeung, D. and 145 more (...) (2018). Scholarly publishing depends on peer reviewers. <i>Pharmacy Practice</i> ,16(1). UAE Authorship: Ajman University of Science and Technology; Gulf Medical University .
41	4.44	Ojha, S., Javed, H., Azimullah, S. and 2 more (...) (2015). Neuroprotective potential of ferulic acid in the rotenone model of Parkinson's disease. <i>Drug Design, Development and Therapy</i> ,95499-5510. UAE Authorship: United Arab Emirates University .
39	4.4	Nemmar, A., Yuvaraju, P., Beegam, S. and 3 more (...) (2016). Oxidative stress, inflammation, and DNA damage in multiple organs of mice acutely exposed to amorphous silica nanoparticles. <i>International Journal of Nanomedicine</i> ,11919-928. UAE Authorship: United Arab Emirates University .
8	4.39	Sasidharan Nair, V., Toor, S.M., Ali, B.R. and 1 more (...) (2018). Dual inhibition of STAT1 and STAT3 activation downregulates expression of PD-L1 in human breast cancer cells. <i>Expert Opinion on Therapeutic Targets</i> ,22(6) 547-557. UAE Authorship: United Arab Emirates University .

PSYCHOLOGY		
Citations	FWCI	Reference
8	15.6	Lytras, M.D., Damiani, E., Mathkour, H. (2016). Virtual reality in learning, collaboration and behaviour: content, systems, strategies, context designs. <i>Behaviour and Information Technology</i> ,35(11) 877-878. UAE Authorship: Khalifa University of Science and Technology .
98	14.25	Al-Emran, M., Elsherif, H.M., Shaalan, K. (2016). Investigating attitudes towards the use of mobile learning in higher education. <i>Computers in Human Behavior</i> ,5693-102. UAE Authorship: The British University in Dubai .
14	13.51	Webber, D., Chernikova, M., Kruglanski, A.W. and 5 more (...) (2018). Deracializing Detained Terrorists. <i>Political Psychology</i> ,39(3) 539-556. UAE Authorship: NYU Abu Dhabi .
33	10.56	Kharkhurin, A.V. (2014). Creativity.4in1: Four-Criterion Construct of Creativity. <i>Creativity Research Journal</i> ,26(3) 338-352. UAE Authorship: American University of Sharjah .
37	9.73	Bozionelos, N., Singh, S.K. (2017). The relationship of emotional intelligence with task and contextual performance: More than it meets the linear eye. <i>Personality and Individual Differences</i> ,116206-211. UAE Authorship: Abu Dhabi University .
79	9.37	Pietschnig, J., Voracek, M. (2015). One Century of Global IQ Gains: A Formal Meta-Analysis of the Flynn Effect (1909-2013). <i>Perspectives on Psychological Science</i> ,10(3) 282-306. UAE Authorship: Middlesex University Dubai .
12	9.02	Duell, N., Steinberg, L., Icenogle, G. and 17 more (...) (2018). Age Patterns in Risk Taking Across the World. <i>Journal of Youth and Adolescence</i> ,47(5) 1052-1072. UAE Authorship: Emirates College for Advanced Education Abu Dhabi .
8	8.18	Lansford, J.E., Rothenberg, W.A., Jensen, T.M. and 17 more (...) (2018). Bidirectional Relations Between Parenting and Behavior Problems From Age 8 to 13 in Nine Countries. <i>Journal of Research on Adolescence</i> ,28(3) 571-590. UAE Authorship: Emirates College for Advanced Education Abu Dhabi .
33	7.7	Priporas, C.-V., Stylos, N., Fotiadis, A.K. (2017). Generation Z consumers' expectations of interactions in smart retailing: A future agenda. <i>Computers in Human Behavior</i> ,77374-381. UAE Authorship: Zayed University .
44	6.63	Oulhaj, A., Jernerén, F., Refsum, H. and 2 more (...) (2016). Omega-3 fatty acid status enhances the prevention of cognitive decline by B Vitamins in mild cognitive impairment. <i>Journal of Alzheimer's Disease</i> ,50(2) 547-557. UAE Authorship: United Arab Emirates University .

A17. LIST OF CLINICAL TRIALS ACTIVE IN THE UAE, 2014 – 2018 (ClinicalTrials.gov, 6 August 2019)

Trial Description		Sponsorship		Trial Categories			Years Active					UAE Trial Sites									
												International									
NCT Number	Title	Condition Category	Funded By	Sponsor/ Collaborators	Study Type	Phases	Enrollment	Status	2014	2015	2016	2017	2018	Abu Dhabi	Ajman	Dubai	Fujairah	Ras Al Khaimah	Sharjah	Umm Al Quwain	Not Specified
NCT00144794	Mucopolysaccharidosis I (MPS I) Registry	Congenital Diseases	Industry	Genzyme, a Sanofi Company Sanofi	Observational		1500	Recruiting	*	*	*	*	*	*			*				
NCT00231400	Pompe Disease Registry	Congenital Diseases	Industry	Genzyme, a Sanofi Company Sanofi	Observational		2000	Recruiting	*	*	*	*	*	*			*				
NCT00358943	International Collaborative Gaucher Group (ICGG) Gaucher Registry	Genetic Conditions/ Metabolism	Industry	Genzyme, a Sanofi Company Sanofi	Observational		12000	Recruiting	*	*	*	*	*	*			*				
NCT00787657	Observational Study to Analyse the Impact of Nurse Support and Disease Related Factors on Long- Term Adherence to Bataferon Treatment	Neurodegeneration	Industry	Bayer	Observational		1723	Completed	*	*	*	*	*	*			*		*		*
NCT01011738	An Observational Cohort Study in Patients With Chronic Hepatitis B Receiving Pegasis	Gastrointestinal	Industry	Hoffmann-La Roche	Observational		1842	Completed	*	*	*	*	*	*			*				
NCT01147250	Evaluation of Cardiovascular Outcomes in Patients With Type 2 Diabetes After Acute Coronary Syndrome During Treatment With AVE0010 (Lixisenatide)	Cardiovascular	Industry	Sanofi	Interventional	Phase 3	6068	Completed	*	*	*	*	*	*	*		*				
NCT01179048	Liraglutide Effect and Action in Diabetes: Evaluation of Cardiovascular Outcome Results	Diabetes	Industry	Novo Nordisk A/S	Interventional	Phase 3	9341	Completed	*	*	*	*	*	*			*				
NCT01205152	Extension Study of Protocol ENB-002-08 - Study of Asfotase Alfa in Infants and Young Children With Hypophosphatasia (HPP)	Metabolism and Metabolic Diseases	Industry	Alexion Pharmaceuticals	Interventional	Phase 2	10	Completed	*	*	*	*	*	*	*		*				
NCT01254188	Safety and Efficacy of Nilotinib in Newly Diagnosed Chronic Myeloid Leukemia Patients	Cancer	Industry	Novartis Pharmaceuticals Novartis	Interventional	Phase 3	421	Completed	*	*	*	*	*	*	*		*				
NCT01285479	Pregnancy Registry Trial	Neurodegeneration	Industry	Novartis Pharmaceuticals Novartis	Observational		500	Recruiting	*	*	*	*	*	*	*		*				
NCT01351415	A Study of Bevacizumab in Combination With Standard of Care Treatment in Participants With Advanced Non-squamous Non-small Cell Lung Cancer (NSCLC)	Cancer	Industry	Hoffmann-La Roche	Interventional	Phase 3	485	Completed	*	*	*	*	*	*	*		*		*		
NCT01400971	An Observational Study to Understand Challenges Associated With Progression of Insulin Therapy in Type 2 Diabetes	Diabetes	Industry	Eli Lilly and Company	Observational		4530	Completed	*	*	*	*	*	*	*	*	*	*	*	*	
NCT01447446	An Observational Study on Dual And Triple Therapies Based on Peginterferon Alfa (e.g. Pegasis) in Patients With Chronic Hepatitis C	Gastrointestinal	Industry	Hoffmann-La Roche	Observational		4442	Completed	*	*	*	*	*	*	*		*		*		
NCT01459809	Efficacy and Safety Comparison of Metformin/Glimepiride Combination Versus Each Compound Alone in New Diagnosed Type 2 Diabetes Patients	Diabetes	Industry	Sanofi	Interventional	Phase 3	538	Completed	*	*	*	*	*	*	*		*		*		
NCT01468701	GLORIA-AF Registry Program - Second and Third Phases	Cardiovascular	Industry	Boehringer Ingelheim	Observational		19266	Active, not recruiting	*	*	*	*	*	*	*		*		*		
NCT01480063	An Observational Study to Collect Information on Safety and to Document the Drug Utilization of Fampyra (BIB041) When Used in Routine Medical Practice	Neurodegeneration	Industry	Biogen	Observational		4734	Completed	*	*	*	*	*	*	*		*		*		

Trial Description		Sponsorship		Trial Categories				Years Active					UAE Trial Sites									
NCT Number	Title	Condition Category	Funded By	Sponsor/ Collaborators	Study Type	Phases	Enrollment	Status	2014	2015	2016	2017	2018	International	Abu Dhabi	Ajman	Dubai	Fujairah	Ras Al Khaimah	Sharjah	Umm Al Quwain	Not Specified
NCT01524276	Product Surveillance Registry	Cardiovascular/Urological/ Neurological/ Gastrointestinal	Industry	Medtronic	Observational		100000	Recruiting	*	*	*	*	*	*	*							
NCT01562665	Epidemiological Study to Describe Non Small Cell Lung Cancer Clinical Management Patterns in MENA, Lung-EPICLIN/ Gulf	Cancer	Industry	AstraZeneca	Observational		25	Completed	*	*				*	*							
NCT01566721	A Safety and Tolerability Study of Assisted and Self-Administered Subcutaneous (SC) Herceptin (Trastuzumab) as Adjuvant Therapy in Early Human Epidermal Growth Factor Receptor 2 (HER2)-Positive Breast Cancer	Cancer	Industry	Hoffmann-La Roche	Interventional	Phase 3	2577	Active, not recruiting	*	*	*	*	*	*	*							
NCT01572038	A Study of Pertuzumab in Combination With Trastuzumab (Herceptin) and a Taxane in First-Line Treatment in Participants With Human Epidermal Growth Factor 2 (HER2)-Positive Advanced Breast Cancer	Cancer	Industry	Hoffmann-La Roche	Interventional	Phase 3	1436	Active, not recruiting	*	*	*	*	*	*	*	*						
NCT01578850	Study Conducted in Subjects With Rheumatoid Arthritis Who Have Moderate to Severe Disease Activity Despite Methotrexate Therapy With or Without Other Non Biologic Disease Modifying Antirheumatic Drugs (DMARDs)for at Least 12 Weeks Prior to Screening	Musculoskeletal	Industry	Pfizer	Interventional	Phase 4	491	Completed	*	*				*	*		*					
NCT01595724	Daily Practice Treatment and Influence of Visamine on the Patient Assessment of Quality of Life	Reproduction (Female)	Industry	Bayer	Observational		3006	Completed	*	*				*	*							*
NCT01702571	A Study of Trastuzumab Emtrastine in Participants With Human Epidermal Growth Factor Receptor 2 (HER2) Positive Breast Cancer Who Have Received Prior Anti-HER2 And Chemotherapy-based Treatment	Cancer	Industry	Hoffmann-La Roche	Interventional	Phase 3	2003	Active, not recruiting	*	*	*			*	*							
NCT01753349	Phase IV-Cervical Dystonia-INTEREST IN CD2	Reproduction (Female)	Industry	Ipsen	Observational		1050	Completed	*	*	*	*		*	*		*					
NCT01800006	Xarelto for Prevention of Stroke in Patients With Atrial Fibrillation in Latinamerica and EMEA Region	Cardiovascular	Industry	Bayer/Janssen Research & Development, LLC	Observational		2101	Completed	*	*	*	*		*	*		*				*	
NCT01853839	Impact of Ramadan on Achieving Joint National Committee (JNC) 7 Treatment Goals in CV Risk Patients	Cardiovascular	Industry	Boehringer Ingelheim	Observational		1674	Completed	*	*				*	*		*	*	*	*		
NCT01917656	Efficacy and Safety of Liraglutide Versus Sulphonylurea Both in Combination With Metformin During Ramadan in Subjects With Type 2 Diabetes	Diabetes	Industry	Novo Nordisk A/S	Interventional	Phase 4	343	Completed	*	*				*	*		*	*	*	*	*	
NCT01972282	Registry on WATCHMAN Outcomes in Real-Life Utilization	Cardiovascular	Industry	Boston Scientific Corporation	Observational		1025	Completed	*	*	*	*	*	*	*		*			*	*	
NCT02065791	Evaluation of the Effects of Canagliflozin on Renal and Cardiovascular Outcomes in Participants With Diabetic Nephropathy	Diabetes	Industry/ Other	Janssen Research & Development, LLC/ The George Institute for Global Health, Australia	Interventional	Phase 3	4401	Completed	*	*	*	*	*	*	*	*	*	*	*	*	*	
NCT02099721	Improve Sudden Cardiac Arrest Study	Cardiovascular	Industry	Medtronic Cardiac Rhythm and Heart Failure	Interventional	NA	4222	Completed	*	*	*	*	*	*	*		*					
NCT02125877	Phase II Study to Investigate the Benefits of an Improved Deferasirox Formulation (Film-coated Tablet)	Blood Disorders	Industry	Novartis Pharmaceuticals/ Novartis	Interventional	Phase 2	173	Completed	*	*	*	*	*	*	*	*	*	*	*	*	*	

Trial Description		Sponsorship		Trial Categories			Years Active					UAE Trial Sites									
												International									
NCT Number	Title	Condition Category	Funded By	Sponsor/ Collaborators	Study Type	Phases	Enrollment	Status	2014	2015	2016	2017	2018	Abu Dhabi	Alman	Dubai	Fujairah	Ras Al Khaimah	Sharjah	Umm Al Quwain	Not Specified
NCT02153411	Multicentric, Transversal, Descriptive, Epidemiological Study on the Management of Asthma in Asthmatic Middle East Adult Population	Pulmonary/Respiratory	Industry	AstraZeneca	Observational		7294	Completed	*	*	*	*	*	*	*	*	*	*	*	*	
NCT02188355	Prospective, Single-arm, Multi Centre Observations Ultimaster Des Registry	Cardiovascular	Industry	Terumo Europe N.V.	Observational		37000	Recruiting	*	*	*	*	*	*	*	*	*	*	*	*	
NCT02210819	Treatment of Venous Thromboembolism (VTE) With Either Rivaroxaban or Current Standard of Care Therapy	Cardiovascular	Industry	Bayer Janssen Research & Development, LLC	Observational		1987	Completed	*	*	*	*	*	*	*	*	*	*	*	*	
NCT02278120	Study of Efficacy and Safety in Premenopausal Women With Hormone Receptor Positive, HER2-negative Advanced Breast Cancer	Cancer	Industry	Novartis Pharmaceuticals Novartis	Interventional	Phase 3	672	Active, not recruiting	*	*	*	*	*	*	*	*	*	*	*	*	
NCT02303444	An Observational Study in Differentiated Thyroid Cancer Which is Radioactive Iodine (RAI) Refractory to Assess the Use of Multikinase Inhibitors	Cancer	Industry	Bayer	Observational		661	Active, not recruiting	*	*	*	*	*	*	*	*	*	*	*	*	
NCT02304406	Retrospective Epidemiology Study Of ALK Rearrangement In Non-Small Cell Lung Cancer Patients In The Middle East & North Africa	Cancer	Industry	Pfizer	Observational		449	Completed	*	*	*	*	*	*	*	*	*	*	*	*	
NCT02306681	A Survey on Low Blood Sugar Among Insulin-treated Patients With Diabetes	Diabetes	Industry	Novo Nordisk A/S	Observational		7315	Completed	*	*	*	*	*	*	*	*	*	*	*	*	
NCT02322762	DISCOVERing Treatment Reality of Type 2 Diabetes in Real World Settings	Diabetes	Industry	AstraZeneca	Observational		14173	Active, not recruiting	*	*	*	*	*	*	*	*	*	*	*	*	
NCT02366182	Does Neck Circumference Help to Predict Difficult Airway in Obstetric Patients?	Reproduction (Female)	Other	Corniche Hospital	Observational		94	Completed	*	*	*	*	*	*	*	*	*	*	*	*	
NCT02368930	Behavioral Lifestyle Intervention Study (BLUS) in Patients With Type 2 Diabetes in UAE: A Randomized Controlled Trial in Real Life Setting	Diabetes	Other	Rashid Centre for Diabetes and Research	Interventional	NA	35	Completed	*	*	*	*	*	*	*	*	*	*	*	*	
NCT02437318	Study Assessing the Efficacy and Safety of Alpelisib Plus Fulvestrant in Men and Postmenopausal Women With Advanced Breast Cancer Which Progressed on or After Aromatase Inhibitor Treatment.	Cancer	Industry	Novartis Pharmaceuticals Novartis	Interventional	Phase 3	572	Active, not recruiting	*	*	*	*	*	*	*	*	*	*	*	*	
NCT02453685	A Study to Compare Insulin Intensification of Biphasic Insulin Aspart 30 and Insulin Analogues (Insulin Glargine and Insulin Aspart) in Insulin naïve Type 2 Diabetic Patients	Diabetes	Industry	Novo Nordisk A/S	Interventional	Phase 4	335	Completed	*	*	*	*	*	*	*	*	*	*	*	*	
NCT02474355	Real World Treatment Study of AZD9291 for Advanced/Metastatic EGFR T790M Mutation NSCLC	Cancer	Industry	AstraZeneca Parexel	Interventional	Phase 3	3020	Completed	*	*	*	*	*	*	*	*	*	*	*	*	
NCT02477826	An Investigational Immuno-therapy Trial of Nivolumab, or Nivolumab Plus Ipilimumab, or Nivolumab Plus Platinum-doublet Chemotherapy, Compared to Platinum Doublet Chemotherapy in Patients With Stage IV Non-Small Cell Lung Cancer (NSCLC)	Cancer	Industry	Bristol-Myers Squibb Ono Pharmaceutical Co. Ltd	Interventional	Phase 3	2220	Recruiting	*	*	*	*	*	*	*	*	*	*	*	*	
NCT02489851	Quadratus Lumborum Block vs Transversus Abdominis Plane Block for Cesarean Section	Surgery	Other	Corniche Hospital	Interventional	NA	76	Completed	*	*	*	*	*	*	*	*	*	*	*	*	
NCT02491853	The Gulf Implantable Cardioverter-Defibrillator Registry	Cardiovascular	Other Industry	Gulf Heart Association Medtronic Boston Scientific Corporation	Observational		1545	Completed	*	*	*	*	*	*	*	*	*	*	*	*	

Trial Description		Sponsorship		Trial Categories			Years Active					UAE Trial Sites									
NCT Number	Title	Condition Category	Funded By	Sponsor/ Collaborators	Study Type	Phases	Enrollment	Status	2014	2015	2016	2017	2018	Abu Dhabi	Ajman	Dubai	Fujairah	Ras Al Khaimah	Sharjah	Umm Al Quwain	Not Specified
NCT02525939	Effect of Dalcetrapib vs Placebo on CV Risk in a Genetically Defined Population With a Recent ACS	Cardiovascular	Industry/ Other	DaCor Pharmaceuticals The Montreal Health Innovations Coordinating Center (MHICC) Medpace, Inc. Roche Molecular Systems, Inc	Interventional	Phase 3	6000	Active, not recruiting		*	*	*	*	*	*	*	*	*	*	*	
NCT02596230	RE-COVERY DVT/PE: Global Study on Treatment Secondary Prevention of Acute Venous Thromboembolism	Cardiovascular	Industry	Boehringer Ingelheim	Observational		8038	Completed		*	*	*	*	*	*	*	*				
NCT02642159	Efficacy and Safety of Alirocumab Versus Usual Care on Top of Maximally Tolerated Statin Therapy in Patients With Type 2 Diabetes and Mixed Dyslipidemia (ODYSSEY DM-Dyslipidemia)	Cardiovascular	Industry	Sanofi Regeneron Pharmaceuticals	Interventional	Phase 4	413	Completed	*	*	*	*	*	*	*	*	*				
NCT02648217	Comparing Efficacy and Safety of Insulin Degludec/Insulin Aspart Twice Daily and Biphasic Insulin Aspart Twice Daily in Subjects With Type 2 Diabetes Mellitus Before, During and After Ramadan	Diabetes	Industry	Novo Nordisk A/S	Interventional	Phase 3	263	Completed		*	*			*	*	*	*	*	*	*	
NCT02662491	Effects of Vitamin D and Calcium Supplementation on Health and Well-being of Vitamin D Deficient UAE Citizens	Metabolism and Metabolic Diseases	Other	United Arab Emirates University	Interventional	NA	545	Completed			*	*	*	*	*	*	*				
NCT02696421	Ramadan and Energy Expenditure Study	Metabolism and Metabolic Diseases	Other	Imperial College London Diabetes Centre	Observational		200	Recruiting	*	*	*	*	*	*	*	*	*				
NCT02718924	Detecting Hypercoagulability in Morbidly Obese and Non Obese Parurients Following Cesarean Section Delivery	Reproduction (Female)	Other	Corniche Hospital	Observational		40	Completed		*	*	*	*	*	*	*	*				
NCT02737657	An Observational Study to Evaluate Tolerability of Canagliflozin and Sulphonylurea in Type 2 Diabetes Patients During Ramadan	Diabetes	Industry	Janssen-Cilag International NV	Observational		379	Completed		*	*			*	*	*	*	*	*	*	
NCT02752737	Cryo AF Global Registry	Cardiovascular	Industry	Medtronic Cardiac Rhythm and Heart Failure	Observational		3500	Recruiting		*	*	*	*	*	*	*	*				
NCT02762851	Influenza Vaccine To Prevent Adverse Vascular Events (RCT-IWE)	Cardiovascular	Other	McMaster University	Interventional	Phase 4	5000	Recruiting		*	*	*	*	*	*	*	*	*	*	*	
NCT02795052	Neurologic Stem Cell Treatment Study	Neurodegeneration	Industry/ Other	MD Stem Cells The Healing Institute	Interventional	NA	300	Recruiting		*	*	*	*	*	*	*	*	*	*	*	
NCT02805361	Real World Assessment of Clinical Outcome Changes -Including Month of Ramadan-for Dapagliflozin in Management of Type II Diabetes Mellitus	Diabetes	Industry	AstraZeneca	Observational		511	Completed		*	*	*	*	*	*	*	*	*	*	*	
NCT02809170	The Effect of Arginine and Citrulline Supplementation on Endothelial Dysfunction in Mitochondrial Diseases	Congenital Diseases	Other	Tawam Hospital	Interventional	NA	9	Active, not recruiting	*	*	*	*	*	*	*	*	*	*	*	*	
NCT02863419	Efficacy and Safety of Oral Semaglutide Versus Liraglutide and Versus Placebo in Subjects With Type 2 Diabetes Mellitus	Diabetes	Industry	Novo Nordisk A/S	Interventional	Phase 3	711	Completed		*	*	*	*	*	*	*	*	*	*	*	
NCT02864247	LIRA-ADD2SGLT2i - Liraglutide Versus Placebo as add-on to SGLT2 Inhibitors.	Diabetes	Industry	Novo Nordisk A/S	Interventional	Phase 3	303	Completed		*	*	*	*	*	*	*	*	*	*	*	
NCT03011541	Stem Cell Ophthalmology Treatment Study II	Ocular	Industry	MD Stem Cells	Interventional	NA	500	Recruiting		*	*	*	*	*	*	*	*	*	*	*	

Trial Description		Sponsorship		Trial Categories			Years Active					UAE Trial Sites									
NCT Number	Title	Condition Category	Funded By	Sponsor/ Collaborators	Study Type	Phases	Enrolment	Status	2014	2015	2016	2017	2018	Abu Dhabi	Ajman	Dubai	Fujairah	Ras Al Khaimah	Sharjah	Umm Al Quwain	Not Specified
NCT03049293	Measurement of Midazolam Levels in Follicular Fluid	Psychiatric Illness	Other	IVI Middle East Fertility Clinic	Interventional	Early Phase 1	34	Recruiting	*		*	*	*	*	*						
NCT03073720	Follicular Fluid, Bioavailable Vitamin D and Embryo Quality Markers	Metabolism and Metabolic Diseases	Other	IVI Middle East Fertility Clinic	Observational		30	Recruiting	*		*	*	*	*	*						
NCT03082976	Prevalence of BRCA1 and BRCA2 Mutations in Ovarian Cancer Patients in the Gulf Region	Reproduction (Female)	Industry	AstraZeneca	Observational		120	Recruiting	*		*	*	*	*	*						
NCT03106272	Evaluating the AMH Levels During Natural Cycle	Reproduction (Female)	Other	IVI Middle East Fertility Clinic	Observational		20	Completed	*		*	*	*	*	*						
NCT03131804	Effect of Intradialytic Exercise In The United Arab Emirates	Renal	Other	Zayed University	Interventional	NA	41	Completed	*		*	*	*	*	*			*			
NCT03138941	Validation of the Lupus Low Disease Activity State (LLDAS) in the Asia Pacific Region	Immunological Diseases	Other	Monash University, Australia Other Universities and Hospitals in Australia, China/Hong Kong, Japan, South Korea, Philippines, Malaysia, Thailand, Singapore, New Zealand, and UAE (Dubai Hospital)	Observational		2000	Recruiting	*	*	*	*	*	*	*						
NCT03147872	Evaluation of the Impact of Reduced Oxygen Concentration on Live Birth Rate	Reproduction (Female)	Other	Reproductive Medicine Associates of New Jersey Instituto Universitario IVI	Interventional	NA	500	Recruiting	*		*	*	*	*	*						
NCT03155243	Impact of Humira®E Therapy on Ocular Inflammation, Selected Health Care Resource Utilization and Patient Reported Outcomes in Patients With Active Non-infectious Intermediate, Posterior and Panuveitis in Routine Clinical Practice	Ocular	Industry	AbbVie	Observational		145	Active, not recruiting	*		*	*	*	*	*						
NCT03161912	A Study to Evaluate the Effectiveness of Intravitreal Aflibercept in Patients With Diabetic Macular Edema and/or Macular Edema Secondary to Retinal Vein Occlusion, Which Either Have or Have Not Been Pretreated for Their Disease	Ocular	Industry	Bayer Regeneron Pharmaceuticals	Observational		3560	Recruiting	*		*	*	*	*	*				*		
NCT03210350	Effect of Magnesium Sulphate on the Intracranial Pressure of Preeclamptic Patients	Reproduction (Female)	Other	Corniche Hospital	Observational		30	Completed	*		*	*	*	*	*						
NCT03225586	Prospective Urban Rural Epidemiology Study	Cardiovascular	Other	Population Health Research Institute Canadian Institutes of Health Research (CIHR) Heart and Stroke Foundation of Ontario	Observational		200000	Recruiting	*	*	*	*	*	*	*		*				
NCT03285763	A Study of Atezolizumab (Tecentriq) to Investigate Long-term Safety and Efficacy in Previously-treated Participants With Locally Advanced or Metastatic Non-small Cell Lung Cancer (NSCLC)	Cancer	Industry	Hoffmann-La Roche	Interventional	Phase 4	600	Recruiting	*		*	*	*	*	*		*				

Trial Description			Sponsorship		Trial Categories				Years Active					UAE Trial Sites								
NCT Number	Title	Condition Category	Funded By	Sponsor/ Collaborators	Study Type	Phases	Enrolment	Status	2014	2015	2016	2017	2018	International	Abu Dhabi	Ajman	Dubai	Fujairah	Ras Al Khaimah	Sharjah	Umm Al Quwain	Not Specified
NCT03289273	Observational Study to Evaluate, Under Real-world Practice Conditions, the Safety and Effectiveness of Regorafenib in Patients Diagnosed With Unresectable Hepatocellular Carcinoma (uHCC)	Cancer	Industry	Bayer	Observational		1000	Recruiting				*	*	*								*
NCT03331237	Sparing Diaphragm; ISO Block Versus Low Volume Scalene Block	Musculoskeletal	Other	Healthpoint Hospital	Interventional	NA	72	Recruiting				*	*		*							
NCT03356964	Step Down FSH Approach and Late Follicular Phase in Progesterone Level	Reproduction (Female)	Other Industry	IVI Middle East Fertility Clinic Merck Serono International SA	Interventional	Early Phase 1	120	Recruiting				*	*		*							
NCT03362463	Long-Term Follow-Up and Management Patterns of Patients With Acute Coronary Syndrome in Middle East and Africa	Cardiovascular	Industry	AstraZeneca	Observational		1191	Active, not recruiting		*	*	*	*	*	*		*					
NCT03363542	The Effects of Increased Fiber Diet Consumption on Outcomes of Subjects With Visceral Obesity	Obesity	Other	United Arab Emirates University	Interventional	NA	332	Recruiting				*	*		*							
NCT03372083	Safety Study of Crushed Deferasirox Film Coated Tablets in Pediatric Patients With Transfusional Hemosiderosis	Metabolism and Metabolic Diseases	Industry	Novartis Pharmaceuticals Novartis	Interventional	Phase 4	44	Active, not recruiting				*	*	*	*	*						
NCT03387722	Assessment of Treatment Patterns of Severe Asthmatic Patients Across the Gulf Region - Seveus Study	Pulmonary/Respiratory	Industry	AstraZeneca	Observational		253	Completed				*	*	*	*	*		*	*			
NCT03388229	Association Between Dietary Pattern and Glycemic Control Among Type 2 Diabetes Patients in the United Arab Emirates	Metabolism and Metabolic Diseases	Other	Rashid Centre for Diabetes and Research	Observational		850	Completed				*	*		*	*						
NCT03395184	Study To Evaluate The Efficacy And Safety Of Oral PF-06651600 And PF-A06700841 In Subjects With Moderate To Severe Crohn's Disease	Gastrointestinal	Industry	Pfizer	Interventional	Phase 2	250	Recruiting				*	*	*	*	*		*	*			
NCT03426228	In Vitro Fertilization Impact on Metabolic Parameters	Metabolism and Metabolic Diseases	Other	University of Warwick Fakh IVF Fertility Center University of Sharjah	Observational		192	Recruiting				*	*		*	*						
NCT03447132	Fulvestrant Versus Fulvestrant Plus Palbociclib in Operable Breast Cancer Responding to Fulvestrant	Cancer	Other Industry	International Cancer Research Group, United Arab Emirates AstraZeneca Pfizer Genomic Health-VE, Inc.	Interventional	Phase 3	400	Recruiting				*	*	*	*	*						
NCT03505723	PeriOperative Ischemic Evaluation-3 Trial	Cardiovascular	Other	Population Health Research Institute	Interventional	Phase 3	10000	Recruiting				*	*	*	*	*						
NCT03516786	Quality of Recovery After Quadratus Lumborum Block for Cesarean Section.	Surgery	Other	Corniche Hospital	Observational		25	Recruiting				*	*		*	*						
NCT03518385	Intracavitary Fluid and Position of C-section-scar	Reproduction (Female)	Other	IVI Middle East Fertility Clinic	Observational		100	Recruiting				*	*		*	*						
NCT03519763	Intrauterine Microbiota During IVF in Patients Affected With Isthmoeale.	Reproduction (Female)	Other	IVI Middle East Fertility Clinic	Observational		3	Recruiting				*	*		*	*						
NCT03519776	Variation of Progesterone in IVF Cycles	Reproduction (Female)	Other	IVI Middle East Fertility Clinic	Observational		30	Recruiting				*	*		*	*						

Trial Description		Sponsorship		Trial Categories			Years Active					UAE Trial Sites												
							2014 2015 2016 2017 2018					International												
NCT Number	Title	Condition Category	Funded By	Sponsor/Collaborators	Study Type	Phases	Enrolment	Status																
NCT03523858	A Study to Evaluate Orelizumab Treatment in Participants With Progressive Multiple Sclerosis	Neurodegeneration	Industry	Hoffmann-La Roche	Interventional	Phase 3	600	Recruiting																
NCT03552757	Research Study Investigating How Well Semaglutide Works in People With Type 2 Diabetes Suffering From Overweight or Obesity	Obesity	Industry	Novo Nordisk A/S	Interventional	Phase 3	1210	Active, not recruiting																
NCT03559712	Effectiveness of Collaborative Tele-Mental Health Services for ADHD in Primary Care	Psychiatric Illness	Other	Al Jallia Children's Specialty Hospital Harvard Medical School Dubai Health Authority	Interventional	NA	122	Recruiting																
NCT03567421	Ureteral Stenting After Ureterscopy for Stone Treatment, A Global Perspective on Indications and Outcomes	Renal	Other	Societe Internationale d'Urologie	Observational		2000	Recruiting																
NCT03578094	Mother and Infant Study Cohort (MISC)-	Obesity and Reproduction (Female)	Other	University of Sharjah Al Jallia Foundation	Observational		257	Completed																
NCT03584191	Awareness, Care & Treatment In Obesity Management - An International Observation	Obesity	Industry	Novo Nordisk A/S	Observational		17287	Completed																
NCT03589079	Delineation of Novel Monogenic Disorders in the United Arab Emirates Population	Genetic Conditions	Other	Imperial College London Diabetes Centre	Observational		150	Recruiting																
NCT03589092	Genetic Causes of Gestational Diabetes in the Emirati Population	Diabetes	Other	Imperial College London Diabetes Centre	Observational		600	Recruiting																
NCT03590687	Rapid Structural and Functional Improvements in Following 0.19 mg Fluocinolone Acetonide (FAC) Implant in Diabetic Macular Edema Patients With Poor Visual Acuity: 12-month Audit Results From United Arab Emirates	Diabetes	Other	Bertha University Sheikh Khalifa Medical City	Observational		30	Recruiting																
NCT03597958	Genetic Causes of Hypercholesterolaemia in the Emirati Population	Cardiovascular	Other	Imperial College London Diabetes Centre	Observational		1000	Recruiting																
NCT03607409	Role of Inhibin A as Biomarker for Ovarian Response for IVF Treatment	Reproduction (Female)	Other	IVI Middle East Fertility Clinic	Observational		150	Recruiting																
NCT03607604	Application of UCPCR as a Testing Tool for Identification of MODY Patients in the UAE	Diabetes	Other	Imperial College London Diabetes Centre	Observational		778	Active, not recruiting																
NCT03636464	Pharmacokinetics of Antibiotics in Patients Undergoing Renal Replacement Therapies	Renal	Other	Cleveland Clinic Abu Dhabi University of the Sciences in Philadelphia	Observational		200	Recruiting																
NCT03681184	A Study to Evaluate Lumasiran in Children and Adults With Primary Hyperoxaluria Type 1	Congenital Diseases	Industry	Ahlyam Pharmaceuticals	Interventional	Phase 3	30	Active, not recruiting																
NCT03686059	Outcome of Punctal Plugs on Ocular Surface Disease	Ocular	Other	Bertha University	Interventional	Phase 4	50	Recruiting																
NCT03703869	Twelve-Month Study Observing How Insulin-naïve Patients With Type 2 Diabetes Mellitus Manage Diabetes Using Toujeo® After Oral Antidiabetic Drug Failure, the Side Effect of Toujeo®-E, and The Cost.	Diabetes	Industry	Sanofi	Observational		4625	Active, not recruiting																

Trial Description		Sponsorship		Trial Categories				Years Active				UAE Trial Sites						
NCT Number	Title	Condition Category	Funded By	Study Type	Phases	Enrolment	Status	2014	2015	2016	2017	2018	Abu Dhabi	Fujairah	Ras Al Khaimah	Sharjah	Umm Al Quwain	Not Specified
NCT03708991	Effectiveness of PGT-A: IVF Versus ICSI	Genetic Conditions	Other	Observational		30	Recruiting				*	*	*					
NCT03724136	Alzheimer's Autism and Cognitive Impairment Stem Cell Treatment Study	Neurodegeneration	Industry	Interventional	NA	100	Recruiting				*	*	*	*		*		
NCT03725969	Effect of Camel Milk on Insulin and Incretin Response	Diabetes	Other	Interventional	NA	15	Recruiting			*	*	*	*	*				
NCT03803462	Behcet's Disease Overall Damage Index	Immunological Diseases	Other	Observational		210	Recruiting				*	*	*	*				
NCT03922243	An Analysis of Dental Treatments Rendered by Undergraduates at Ajman University to Patients From Fujairah, UAE	Dentistry	Other	Observational		650	Completed				*	*	*	*	*			
NCT03951103	rFVIII-Fc (Elocta-4E) ITI Chart Review in Patients With Haemophilia A	Blood Disorders	Industry/ Other	Observational		50	Recruiting				*	*	*	*	*			
NCT03963657	Cognitive Function and Body Mass Index in Children and Adolescents	Obesity	Other	Observational		100	Recruiting				*	*	*	*	*			
NCT03971279	Dexamethasone Intravitreal Implant (Ozurdex-4E) for Recurrent Vogt-Koyanagi-Harada (VKH) Disease Posterior Uveitis	Ocular	Other	Observational		16	Recruiting				*	*	*	*	*			

A18. UAE CLINICAL TRIALS WITH INTERNATIONAL STUDY SITES, 2014 – 2018 (*ClinicalTrials.gov*, 6 August 2019)

[illegible]

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