جامعة الإمام عبدالرحمن بن فيصل
IMAM ABDULRAHMAN BIN FAISAL UNIVERSITY

وزارة التعليم
Ministry of Education

Research Efforts in Combating

COVID-19

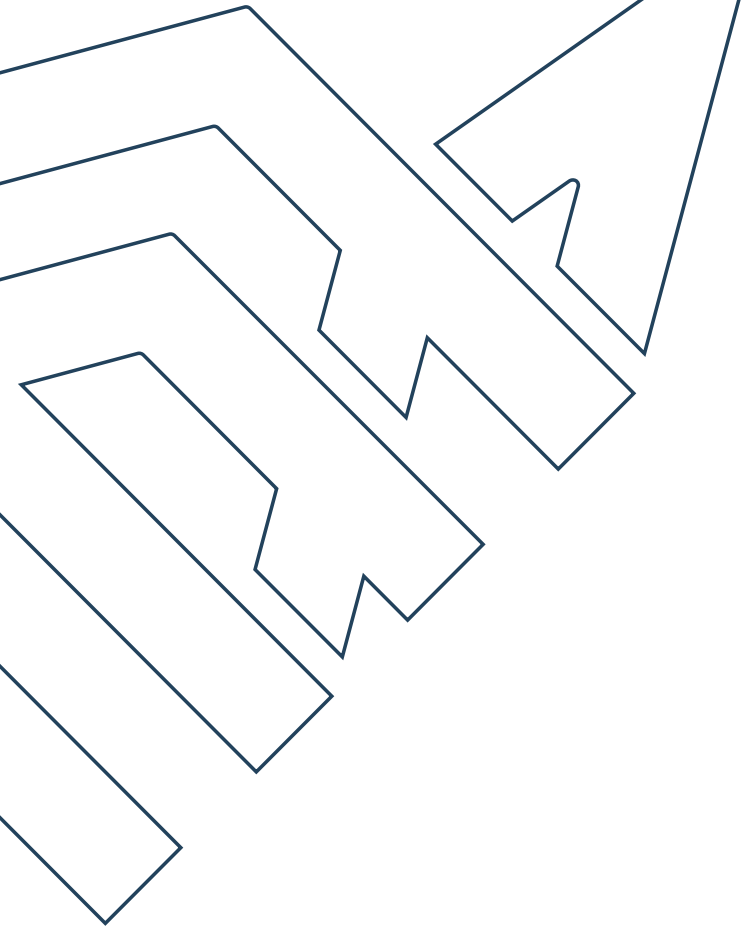
100

Publications

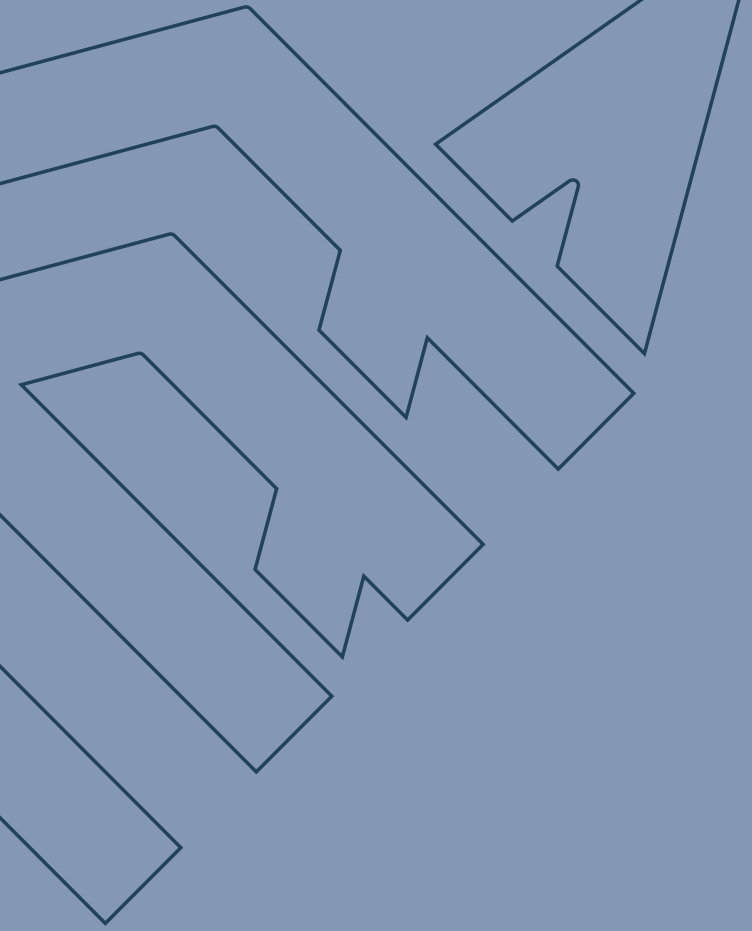
VERSION 1

2021

MARKETING UNIT
وحدة التسويق
بعمادة البحث العلمي
DEANSHIP OF SCIENTIFIC RESEARCH




بسم الله الرحمن الرحيم



Research Efforts in Combating

COVID-19

100 Publications

Supervision:

Dr.Nuhad A. Alomair

Dean of Deanship of Scientific Research

Done by :

Mrs.Aisha A. Alhulaibi

Head of Research Marketing Unit

The support team :

Dr.Silviya A. Alanthikkal

Mrs.Noha A. Alamer

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خادم الحرمين الشريفين

الملك سلمان بن عبدالعزيز آل سعود

أؤكد لكم حرصنا الشديد على توفير ما يلزم المواطن والمقيم لهذه الأرض الطيبة من دواء وغذاء واحتياجات معيشية.

ولي العهد

الأمير / محمد بن سلمان بن عبدالعزيز

أُديرت الأزمة بعناية فائقة وبشكل فعّال قاد إلى التخفيف من الآثار السلبية على الاقتصاد السعودي، وتمت الموازنة بين الإجراءات الاحترازية وتوقيت عودة الأنشطة الاقتصادية تدريجيًا بوتيرة جيدة.

أمير المنطقة الشرقية

الأمير / سعـود بـن نـــايـــف

الخطط الاستباقية والإجراءات الاحترازية التي اتخذتها المملكة أسهمت ولله الحمد في الحد من انتشار فيروس كورونا.

وزير التعليم

معالي الدكتور حمد آل الشيخ

"المملكة تحقق المرتبة الأولى عربيًا والـ١٧ عالميًا في نشر أبحاث كورونا".


COVID-19
CORONAVIRUS

Research Efforts in Combating

COVID-19

100 Publications

IMAM ABDULRAHMAN BIN FAISAL UNIVERSITY

Introduction

Research Efforts in Combating COVID-19

Imam Abdulrahman Bin Faisal University dedicates its research output to serve the community and respond to the current crises. Also, due to the spreading of (COVID19-) pandemic in 2020 domestically and internationally, the University supports and motivates the scientific studies, boosts the scientific production, and enriches the studies domestically and internationally to confront the pandemic with scientific studies which promote the production of knowledge towards COVID19- in alignment with standards of Saudi Ministry of Health and World Health Organization.

Accordingly, as a culmination of these efforts, we in Scientific Research Marketing Unit prepared this book which includes all efforts of Imam Abdulrahman Bin Faisal University in promoting research scientific production to confront COVID19- with supportive and motivative facts and figures.

Word of the President of Imam Abdulrahman Bin Faisal University

Dr.Abdullah Mohammed Alrbeesh

Kingdom of Saudi Arabia under the command of King Salman Bin Abdulaziz and the Crown Prince Mohammed Bin Salman played a role in handling and confronting the (COVID19-) pandemic, as they made substantial efforts to fight and limit the virus by preventive actions, as well as, proactive and precautionary measures, also follow-up actions and emphasize the importance of following these measures for citizen's safety in the first place.

All educational organizations contributed to confront the virus in many ways through the solutions Ministry of Education provided to confront the pandemic and guarantee the continuation of the education easily and flexibly, also, to save the students and guarantee the education process with minimal damage.

Imam Abdulrahman Bin Faisal University did all its best over the year to confront the virus through the support of the Ministry of Education and the other national ownership to the universities and the developing of diagnostic tools and treatments.

This includes the intensive efforts in research, the research projects of teaching staff and researchers from various colleges and departments, as well as, the research workshops of the virus, in addition to the university initiatives aimed at fighting novel coronavirus.

The university motivated the system of research, development, and innovation to have scientific production contribute to fight and limit the virus, a financing avenue has been introduced under the supervision of Deanship of Scientific Research at the university that concern with the research into the fighting and limiting the spreading of the novel coronavirus.

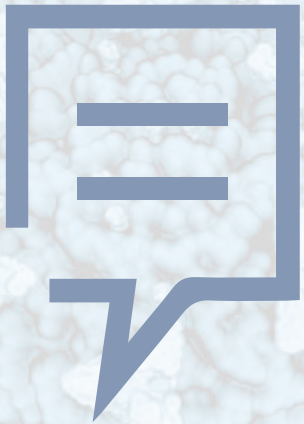
Word of the
Vice President for Postgraduate Studies and Scientific Research

Prof.Dr.Fahad Ahmad Alharbi

Scientific Research is important for the development of the nations in various development areas, especially for the domestic and global crises, and for solve problems that faced the society in an easy and structured way to find a positive solution. The power of the scientific research double during the crises of society and help the society to move on by suggesting solutions and finding the best results, this what we witness recently because the spreading of novel coronavirus (COVID19-) worldwide, the efforts and contributions of the researchers in confronting the virus must be appreciated.

These efforts include the efforts of Imam Abdulrahman Bin Faisal University researchers, which depend on the investigation, the accurate examination to discover the information of the pandemic, develop the knowledge in addition to verified it, as well as, their organized way in finding answers and solutions for the questions of the virus that face individuals and society, having a scientific production that contributes to overcoming the global crisis, these efforts illustrated through facts and index the university provides in researches.

In this sense, the university endeavored to document the efforts and make it paper-based by the Deanship of Scientific Research, which guarantee its permanence and stability, also to introduce the efforts of the university researchers to confront novel coronavirus (COVID19-) and protect the data and the statistics to be the main source of the efforts of Imam Abdulrahman Bin Faisal University in confronting the virus.



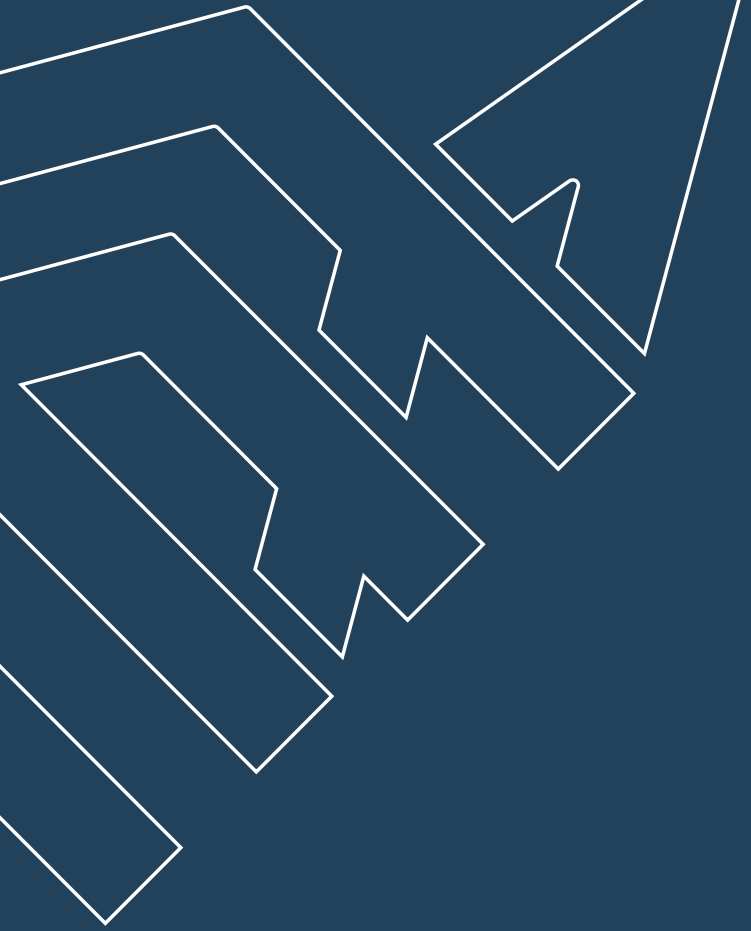
Word of the Dean of Deanship of Scientific Research

Dr.Nuhad Abdullah Alomair

Due to the importance of scientific research during the crisis the country witnessing, especially for the spreading of novel coronavirus (COVID19-) worldwide in 2020, an appreciation for the research efforts in this field and strengthen the scientific research culture in confronting the effects of the crisis domestically and globally, we are therefore glad in Deanship of Scientific Research represented by Scientific Research Marketing Unit to put this book between your hands, which emphasize the efforts of the researchers of Imam Abdulrahman Bin Faisal University and confront the virus scientifically to serve society domestically and globally.

The scientific production this book includes, is a result of constant effort to confront the crisis and to meet the domestically and globally needs of knowing how to confront coronavirus that affected human in every aspect, it’s also preserving and clarifying the researchers' efforts in eliminating the pandemic.

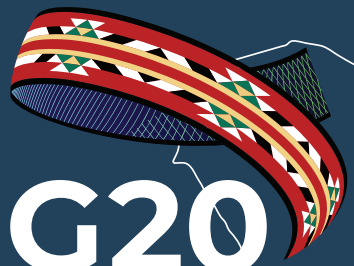
The research environment in our society is rich enough to serve the country, as scientific research will seek knowledge, motivates innovation, and finds solutions for all domestic and global challenges, to achieve a sustainable and promising future aligned with the aspirations of our good leadership and 2030 vision.




CORONAVIRUS
TEST
Patient Information

Saudi Arabia

1



Saudi Arabia

12

Saudi Arabia

14

for Coronavirus Research


لا إله إلا الله محمد رسول الله
المملكة الأولى عربياً
12 على دول العشرين
14 عالمياً
في الأبحاث المنشورة عن فيروس كورونا
المستجد في قاعدة بيانات شبكة العلوم
935
بحثاً منشوراً
في المملكة
84%
من الجامعات
السعودية
مجموع الأبحاث
الكلي العالمي:
45,643
أكثر 5
جهات
في المملكة
نشراً للبحوث
جامعة الملك سعود 192
جامعة الملك عبدالعزيز 137
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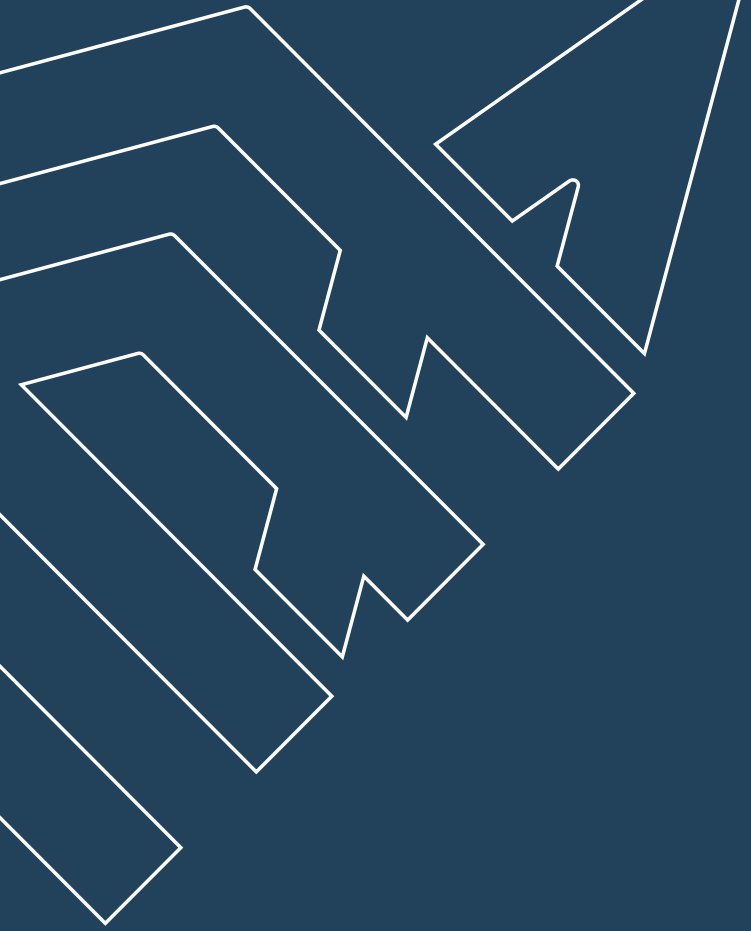
Research Funds

for Imam Abdulrahman Bin Faisal University

COVID-19




كلنا مسؤول
COVID-19
Novel Coronavirus
أطلقت وكالة الجامعة
للدراسات العليا والبحث العلمي
مبادرة تقديم أبحاث لدراسة ومكافحة انتشار مرض كورونا
المستجد في المجالات التالية:
التشخيص والكشف عن فيروس كورونا المستجد
مجال استكشاف أو تطوير عقاقير ولقاحات مضادة تساعد في علاج الفيروس
مجال تطوير أجهزة تساعد في علاج الفيروس، كتطوير أجهزة تنفس صناعية منخفضة التكلفة
مجال الوقاية من الإصابة بالفيروس والحد من انتشاره
مجال تطوير أو اكتشاف برامج معلوماتية طبية
مجال الأثر البيئي والاقتصادي والمترتب لانتشار فيروس كورونا المستجد
دراسة الأثر النفسي و الاجتماعي لجائحة كورونا على المرضى و الممارسين الصحيين و كافة أفراد المجتمع
المخرجات المتوقعة:
أوراق بحثية منشورة حسب شروط المجلس العلمي
برامج إلكترونية
براءات اختراع
منتج طبي
التفاصيل:
متاح حتى:
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الفئة المستهدفة:
أعضاء هيئة التدريس
الباحثين
الطلاب
آلية التقديم:
من خلال نظام إدارة البحوث Converis تحت برنامج
The Grants Program For COVID-19
2 30

Research Fund

Internal Fund (DSR)

Imam Abdulrahman bin Faisal University, represented by Deanship of Postgraduate Studies and Scientific Research, sought to create a rapid funding path supervised by Deanship of Scientific Research, which is the path of research that is conducted to combat and limit the spread of the Corona virus, and accordingly, (43) research projects were approved out of (75) A research proposal submitted which is equivalent to 57% of the total applicants.

The following table shows the number of research projects funded by Imam Abdulrahman bin Faisal University, distributed according to field of research:

Vaccine	Drug	Diagnosis	Ventilator	Quality Care/ Guidelines	Psychological and Social studies	Total Budget
2	8	6	4	10	13	2,786,129 S.R

External fund (KACST)

King Abdelaziz City for Science and Technology (KACST) has launched a rapid track for COVID-19, 17 researchers have been participated from Imam Abdulrahman bin Faisal University, and 4 research projects have been accepted for funding.

The following table shows their research fields:

Drug	Diagnosis	Quality Care/ Guidelines	Total Budget
2	1	1	1,392,867 S.R


برنامج المسار السريع
لدعم البحوث العلمية
لمرض كورونا المستجد
COVID-19
50
مقترح بحثي تمت الموافقة على دعمها
ضمن برنامج المسار السريع
7
مجالات علمية:
تطوير وإنتاج الأدوات التشخيصية الطبية المتقدمة والمبتكرة محلياً
أنظمة الذكاء الصناعي والترصد الحيوي النشط لفيروس كورونا المستجد
البحوث المسحية الوبائية والمراقبة الجزيئية
تطوير الفحوصات المناعية (المصلية)
تطوير الاختبارات التشخيصية لفيروس كورونا المستجد
الدراسات السريرية لفيروس كورونا المستجدة
البحوث النفسية والاجتماعية لفيروس كورونا المستجد
22
جهة وطنية حاصلة على الدعم:
شارك

Research Groups

for Imam AbdulRahman Bin Faisal University

COVID-19

Formation of research Groups

Imam Abdulrahman bin Faisal University sought to form research teams to confront Corona virus, 4 research groups were formed with research topics that fall under them.

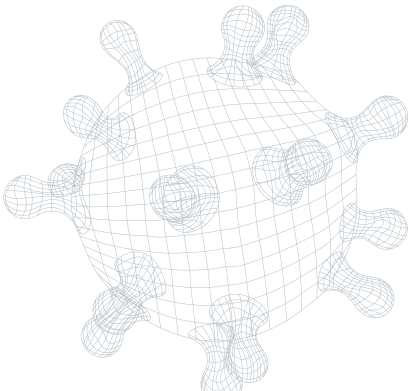
The following tables include data for the research groups and are divided according to their research topics

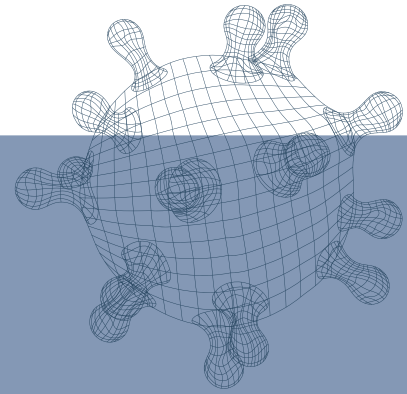
Ventilator-G1

Diagnostic-G2

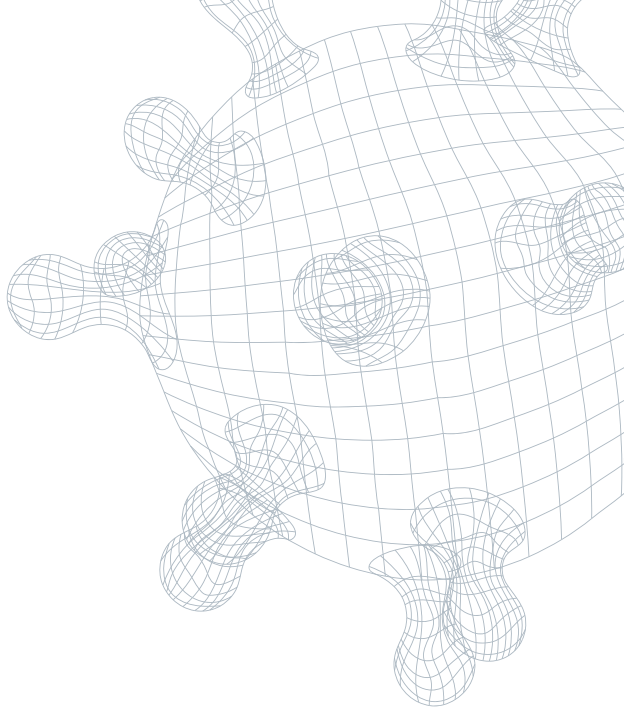
Prevention-G3

Vaccine-G4





Supplies:
devices, software, chemicals



Devices

31 research devices were provided from CACST and Deanship of Scientific Research.

Software

14 software were provided from Kacst and Deanship of Scientific Research.

Chemicals

274 chemicals were provided from Kacst and Deanship of Scientific Research.

International Review Board (IRB)

115 IRB

Participation of university employees in workshops and conferences

Participation title
Mode of virus transmission (animal to human and human to human)
Molecular testing and prototype assays and their validation for clinical use
Vaccine development and the pipelines (current status and expectation).
Respiratory ventilators prototypes and latest diagnostic kits

Cognitive Integration Forum on “Corona Virus Pandemic”

Research title	Points
Using the (Cusp) disaster model to analyze the impact of Corona pandemic on the Saudi stock market	Second point- economy
Development of DNA vaccines for the novel corona virus	Point six- medicine
Rapid detection of coronavirus via Surface-enhanced Raman spectroscopy	Point eight- innovation

Imam Abdulrahman bin Faisal University Covid-19 Publications Facts and Figures (100 Publications)

IAU COVID-19 Research

First 100 Publications

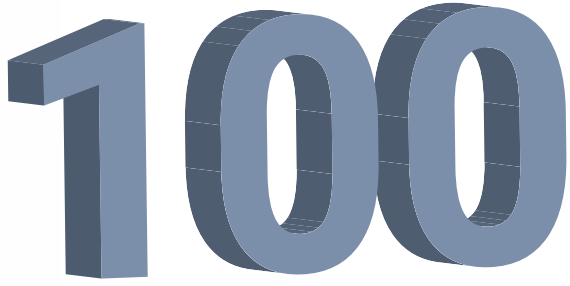
(added till 22 Jan 2021 in Scopus Database)

Search Method: Searched for IAU affiliated publications, with terms 'COVID-19 OR sars-cov-2 OR coronavirus' in Title, Abstract, Keywords, and Publication Year 2020 and 2021 in SCOPUS Database.


COVID 19
ronavirus vaccine
For injection

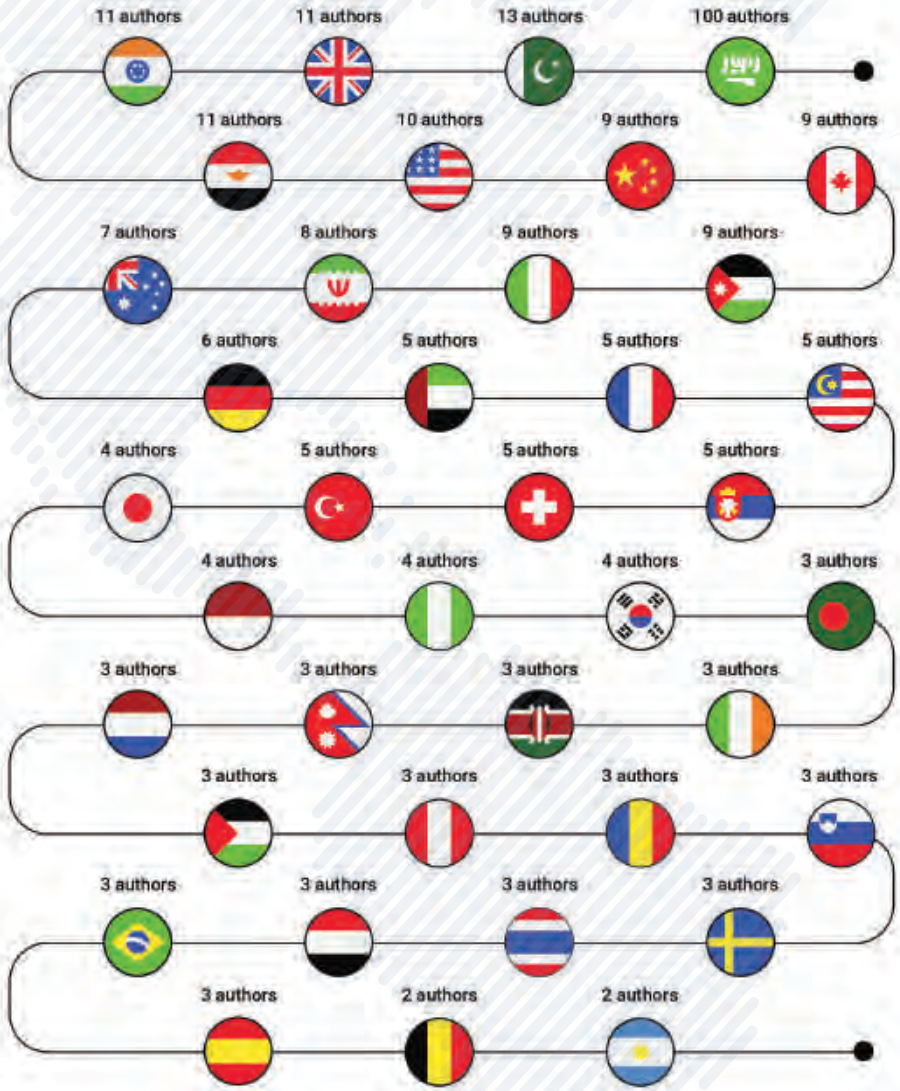
Imam Abdulrahman bin Faisal University Covid-19 Publications

Facts and Figures



Publications

International Research Collaborations with Imam Abdulrahman bin Faisal University for COVID-19 Research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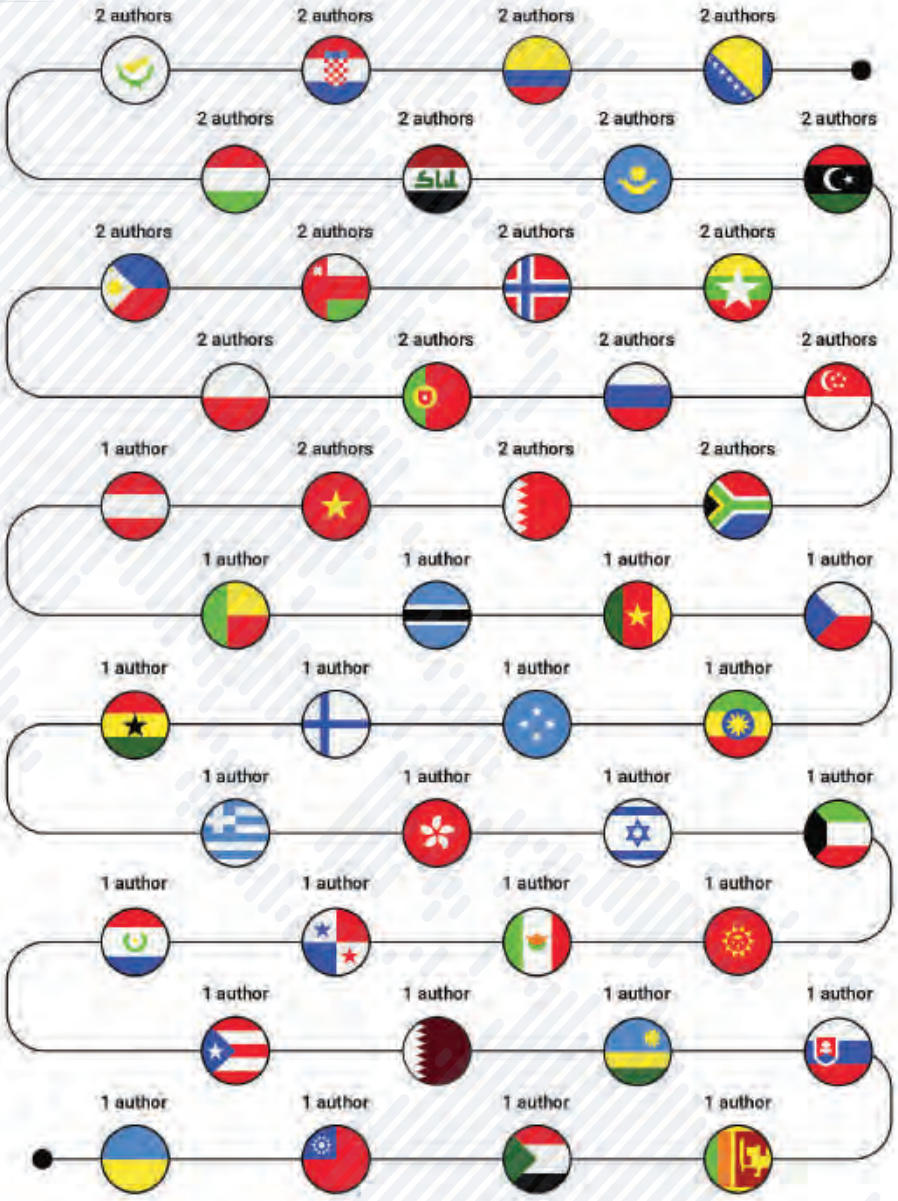
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Imam Abdulrahman bin Faisal University Covid-19 Publications Facts and Figures (100 Publications)

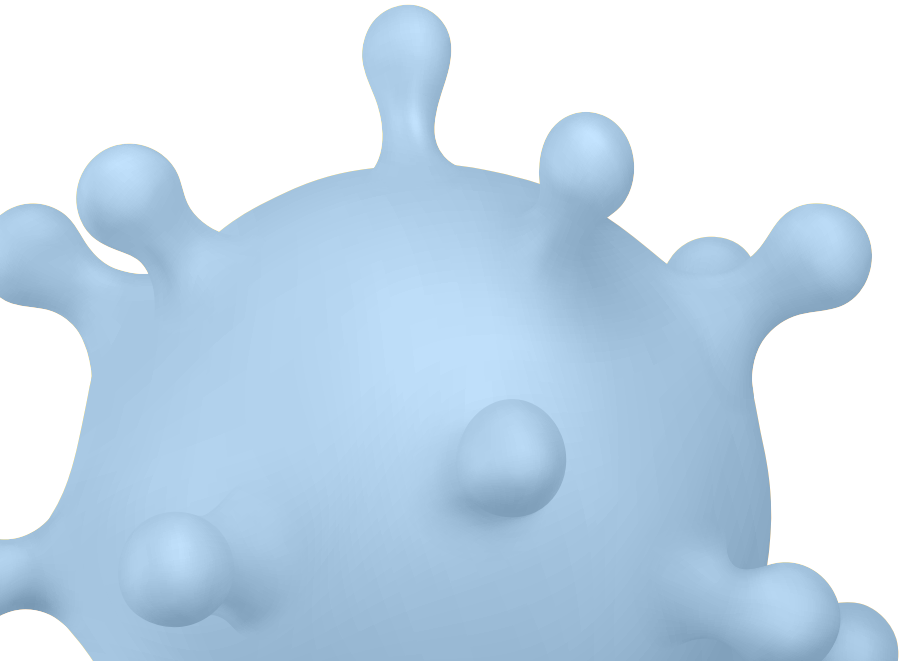
Universities, Colleges, Hospitals, Institutions Collaborating

with Imam Abdulrahman bin Faisal University

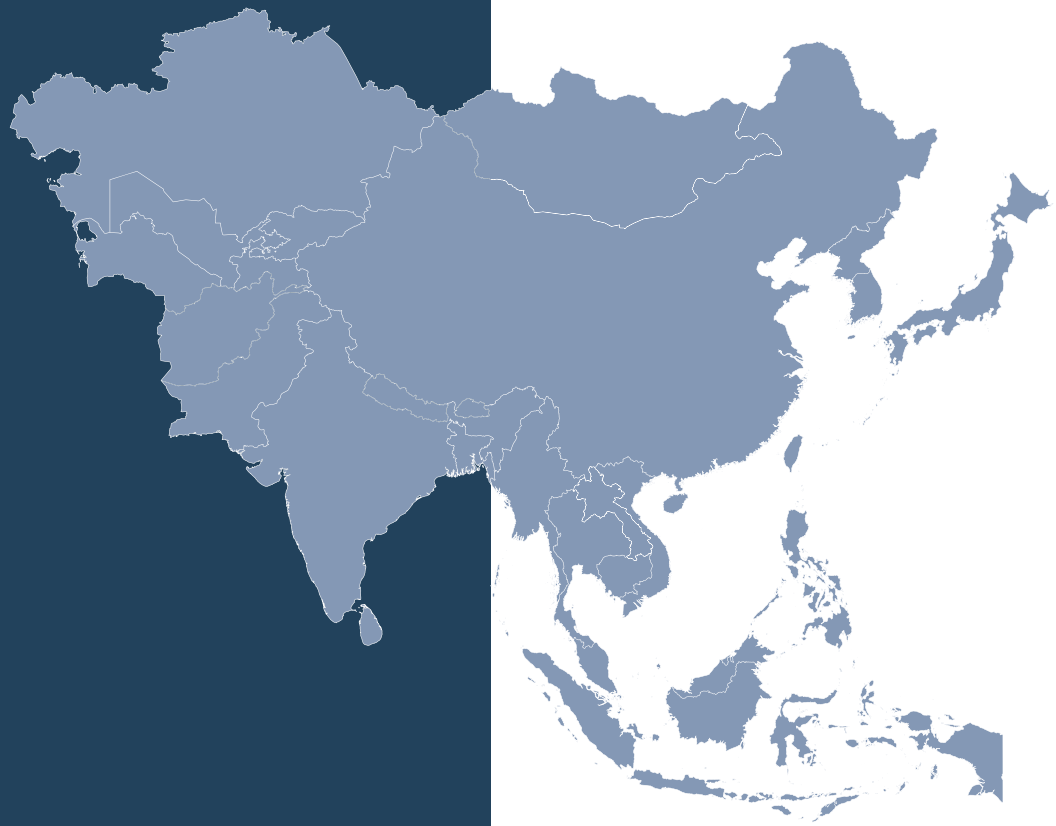
in

COVID-19

Research



Asia



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Taibah University	7
King Faisal Specialist Hospital and Research Centre	7
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King Saud Hospital Riyadh	3
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Specialized Medical Center Hospital	2
University of Dental Medicine	2
Dr Sulaiman Alhabib Hospital	2
Mashhad University of Medical Sciences	2
Universiti Kebangsaan Malaysia	2
Mayo Clinic	2
Al-Imam Muhammad Ibn Saud Islamic University	2
Qatif Central Hospital	2
Pusan National University	2
Thammasat University	2
Kyungpook National University	2
Kasturba Medical College, Mangalore	2
Manipal Academy of Higher Education	2
Jamia Millia Islamia	2
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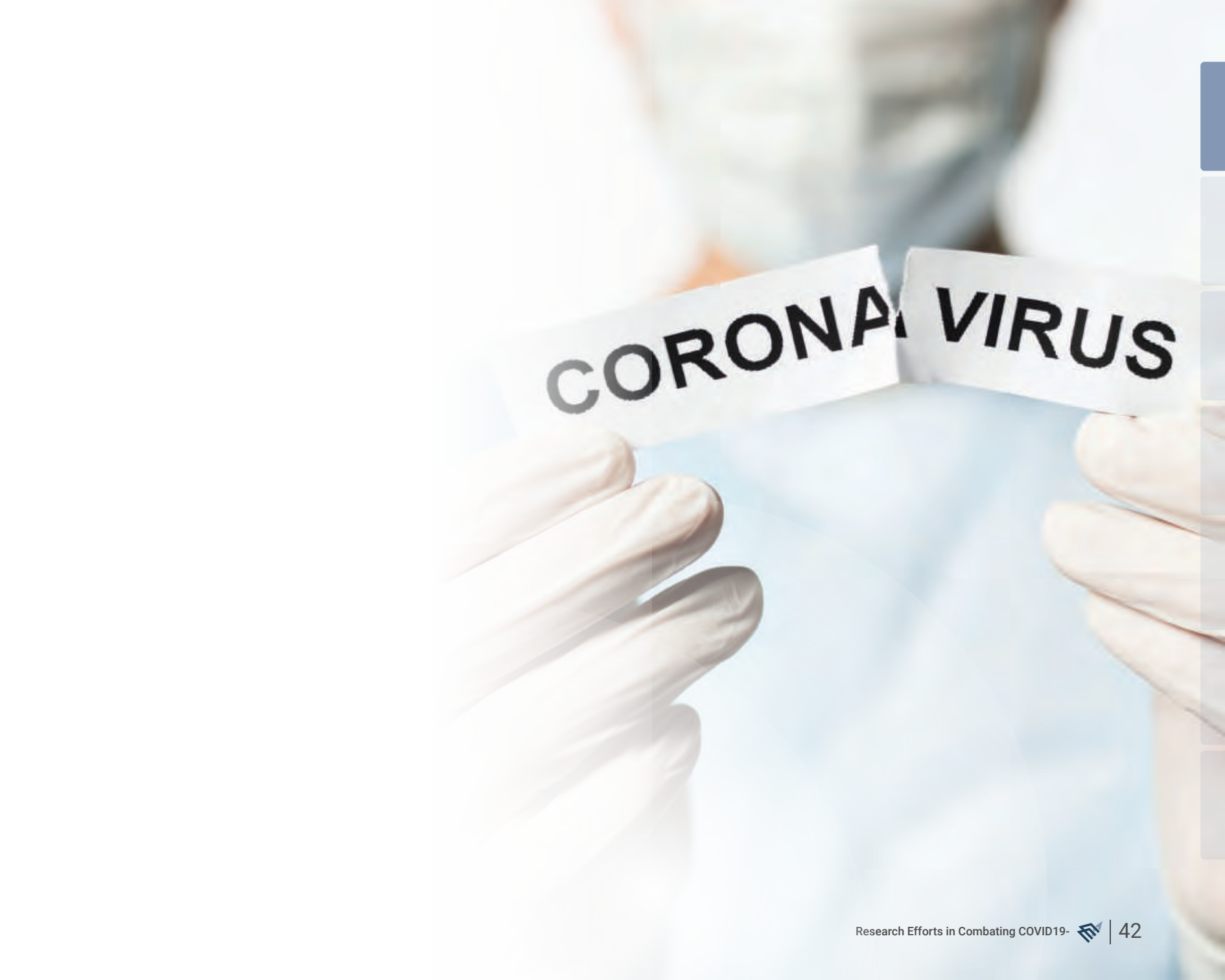
Jamia Hamdard	2
Ministry of Higher Education	2
Tarbiat Modares University	2
Juntendo University	2
King Khalid University Hospital	2
King Abdulaziz City for Science and Technology	2
Khoula Hospital	2
Tribhuvan University	2
Seoul National University School of Dentistry	2
King Abdullah University of Science and Technology	2
Nazarbayev University	2
Al Ain University	2
Royal College of Surgeons in Ireland Medical University of Bahrain	2
Mohammed Bin Rashid University of Medicine and Health Sciences	2
Arab American University, Palestine	2
University of Hafr Al-Batin	2
Majmaah University	2
Duy Tan University	2
University of Science and Technology, Yemen	2
Cleveland Clinic Abu Dhabi	2
Research Center for Caries Prevention	2
School of Preventive Oncology	1
National Center of Cardiology and Internal Medicine	1
Northern University Bangladesh	1
Dammam	1
International Medical Center	1
Dental Department	1
Guangzhou Women and Children's Medical Center	1
Islamabad Model College for Boys	1
Mahatma Gandhi Memorial Medical College	1
International Medical Center	1
Iqra National University	1
Armed Forces Hospitals	1
Prince Sultan Military College of Health Sciences	1
Shaheed Benazir Bhutto University	1
Suraj Eye Institute	1
Afro-Asian Institute	1
Milad General Hospital	1
Iran Health Insurance Organization	1
Clinic for Cardiac Surgery	1
Centre for Healthy Start Initiative	1
Smt BK Shah Medical Institute and Research Centre	1
Shaikh Khalifa Bin Zayed Al-Nahyan Medical College	1
Independent Consultant	1
Srinivas Institute of Dental Sciences	1


CORONA VIRUS

North America

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Université McGill	3
University of Toronto	3
Institut-Hôpital Neurologique de Montréal	3
Johns Hopkins School of Medicine	2
John H. Stroger, Jr. Hospital of Cook County	2
The University of British Columbia	2
Boston University	2
Indiana University School of Medicine	2

Europe

Imperial College London	4
University of Belgrade	4
Inserm	3
Karolinska Institutet	3
University College London	3
Università degli Studi di Genova	3
Université libre de Bruxelles ULB	2
Università di Salerno	2
Sechenov First Moscow State Medical University	2
Justus Liebig University Giessen	2
Karolinska University Hospital	2
University of Bern	2
Cleveland Clinic Foundation	2
Barts and The London School of Medicine and Dentistry	2
Univerzitetni Klinični Center Ljubljana	2
AP-HP Assistance Publique - Hopitaux de Paris	2
Queen Mary University of London	2
Alma Mater Studiorum Università di Bologna	2
Eskişehir Osmangazi Üniversitesi	2
Università degli Studi di Milano	2
Univerza v Ljubljani	2
Sheffield Hallam University	2

Università degli Studi di Roma La Sapienza	2
Hospital Erasme	2
Belgrade University School of Medicine	2
Klinicki Centar Srbije	2
Azienda Ospedaliera-Universitaria Pisana	2
Université de Strasbourg	2
University of Banja Luka	2
University of East Sarajevo	2
Flór Ferenc Hospital	1
Ospedale Sant'Andrea	1
American Heart Institute	1
Ernst von Bergmann Klinikum	1
Argentine Society of Medicine	1
Hellenic Society of Hematology	1
Barcelona Clinic University Hospital	1
Thomayer Teaching Hospital	1
University Centre Varazdin	1
St. Imre University Teaching Hospital	1
Mexican Institute of Ophthalmology	1
Slovenian Academy of Science	1
Azienda Ospedaliera Universitaria Integrata di Verona	1
Marius Nasta Institute of Pulmonology	1

Africa

Alexandria University	4
Cairo University	3
Obafemi Awolowo University	3
University of Nairobi	3
University of Cape Town	2
Mansoura University	2
University of Benghazi	2
University of Embu	1
University Teaching Hospital of Kigali	1

Australia

University of Technology Sydney	3
Murdoch Children's Research Institute	2
Queensland University of Technology	2
University of Melbourne	2
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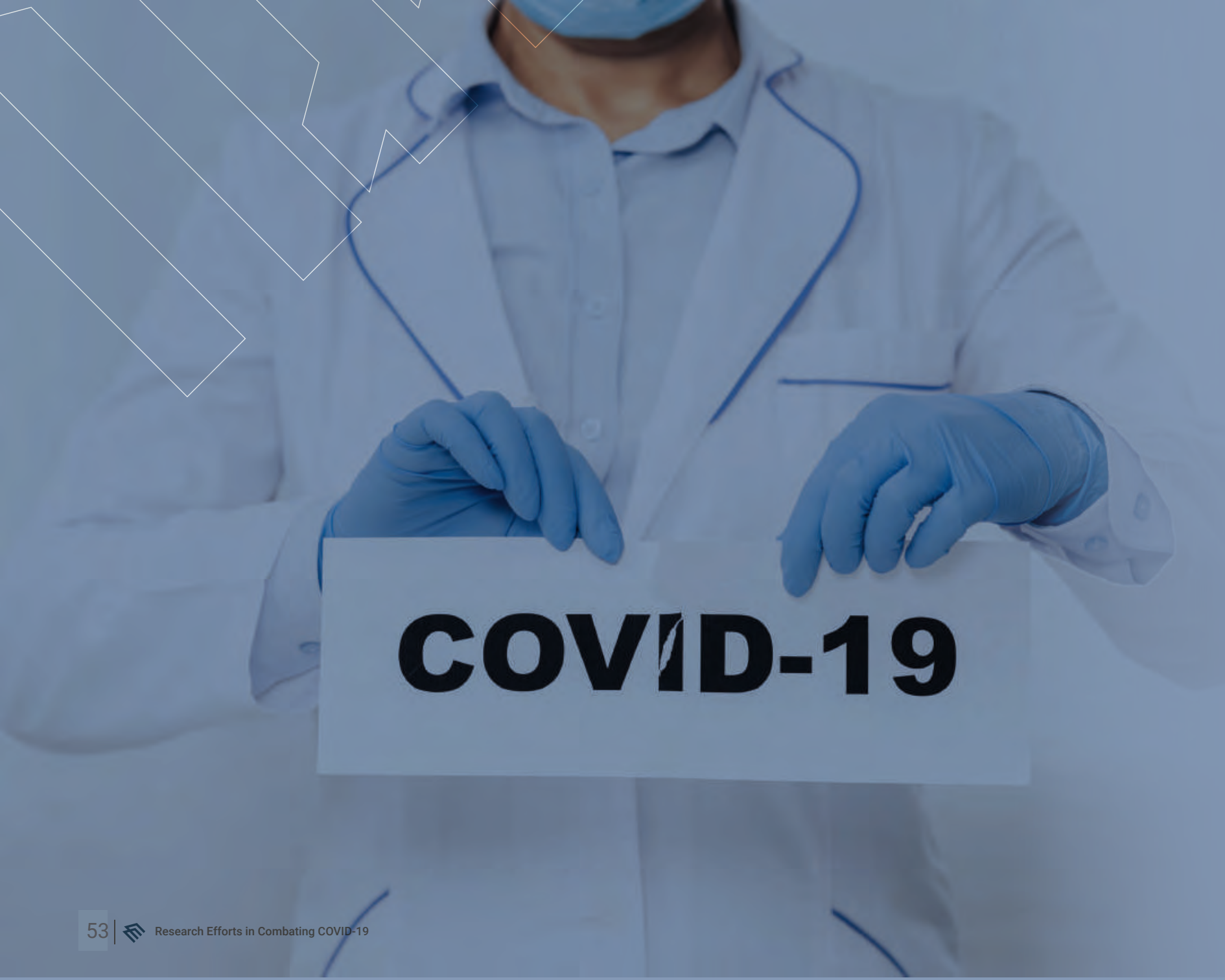
South America

Universidad Peruana Cayetano Heredia	2
Velez Sarsfield Hospital	1
CIBERSAM	1
Gorgas Memorial Institute for Health Studies	1


COVID-19

Imam Abdulrahman bin Faisal University Covid-19 Publications Facts and Figures

100 Publications

Journal Titles and Publishing Sources

Used for COVID-19 Research

Sustainable Production and Consumption

Ethics, Medicine and Public Health

Air Quality, Atmosphere and Health

Frontiers in bioscience (Elite edition)

Research in Social and Administrative Pharmacy

Child: Care, Health and Development

Informatics in Medicine Unlocked

Saudi Medical Journal

American Journal of Ophthalmology Case Reports

International Journal of Environmental Research and Public Health

Postgraduate Medical Journal

Saudi Medical Journal

BMC Medical Education

Journal of Nepal Health Research Council

European Journal of Pharmacology

Arabian Journal of Chemistry

Advances in Anatomic Pathology

GEMA Online Journal of Language Studies

International Journal of Environmental Science and Technology

Pakistan Journal of Medical Sciences

International Journal of Environmental Research and Public Health

Science of the Total Environment

Annals of Medicine and Surgery

World Neurosurgery

Clinical Neurology and Neurosurgery

Journal of Stroke and Cerebrovascular Diseases

Acta Paediatrica, International Journal of Paediatrics

Sustainability (Switzerland)

Saudi Journal of Biological Sciences

Molecules

Journal of Cardiothoracic and Vascular Anesthesia

Frontiers in Public Health

Patient Safety in Surgery

Peritoneal Dialysis International

Journal of Cardiothoracic and Vascular Anesthesia

PLoS ONE

Clinical Diabetology

Frontiers in Neurology

Journal of Pharmaceutical Policy and Practice

European Journal of Radiology Open

Journal of Multidisciplinary Healthcare

Information (Switzerland)

Journal of Multidisciplinary Healthcare

European Journal of Dentistry

Risk Management and Healthcare Policy

Pakistan Journal of Medical Sciences

Neurosciences

Sexual Medicine Reviews

Journal of Healthcare Leadership

Malaysian Journal of Medical Sciences

Journal of Dental Education

Informatics in Medicine Unlocked

International Journal of Technological Learning, Innovation and Development

Journal of occupational health

International Journal of Pharmaceutical Research

Clinical Ophthalmology

Advances in Science, Technology and Engineering Systems

Journal of Advanced Research in Dynamical and Control Systems

Thrombosis and Haemostasis

Medicine, Science and the Law

Nature

BMC Oral Health

European Journal of Dentistry

European Journal of Dentistry

Computers, Materials and Continua

Contemporary Educational Technology

Frontiers in Molecular Biosciences

International Journal of Environmental Research and Public Health

Journal of Advanced Research

Journal of Multidisciplinary Healthcare

Journal of Multidisciplinary Healthcare

Library Philosophy and Practice

Proceedings - 19 2020th Distributed Computing and Applications for Business Engineering and Science, DCABES 2020

Psychiatria Danubina

Pharmaceuticals

Journal of Family and Community Medicine

Journal of Family and Community Medicine

International Journal of Advanced Computer Science and Applications

Imam Abdulrahman bin Faisal University Covid-19 Publications Facts and Figures (100 Publications)

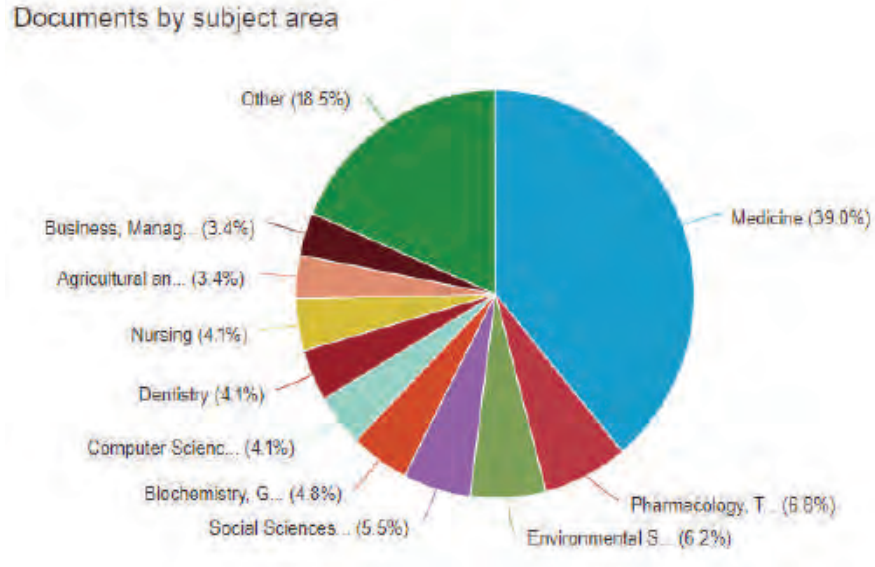
Subjects Areas for

COVID-19 Research

Medicine	57
Pharmacology, Toxicology and Pharmaceutics	10
Environmental Science	9
Social Sciences	8
Biochemistry, Genetics and Molecular Biology	7
Computer Science	6
Dentistry	6
Nursing	6
Agricultural and Biological Sciences	5
Business, Management and Accounting	5
Engineering	4

Multidisciplinary	4
Energy	3
Immunology and Microbiology	3
Arts and Humanities	2
Chemistry	2
Chemical Engineering	1
Decision Sciences	1
Earth and Planetary Sciences	1
Health Professions	1
Materials Science	1
Mathematics	1

	Neuroscience	1
	Physics and Astronomy	1
	Psychology	1



76

Medical Sciences

58.5%

26

Natural Sciences

20.0%

12

Social Sciences

9.2%

9

Engineering and Technologies

6.9%

5

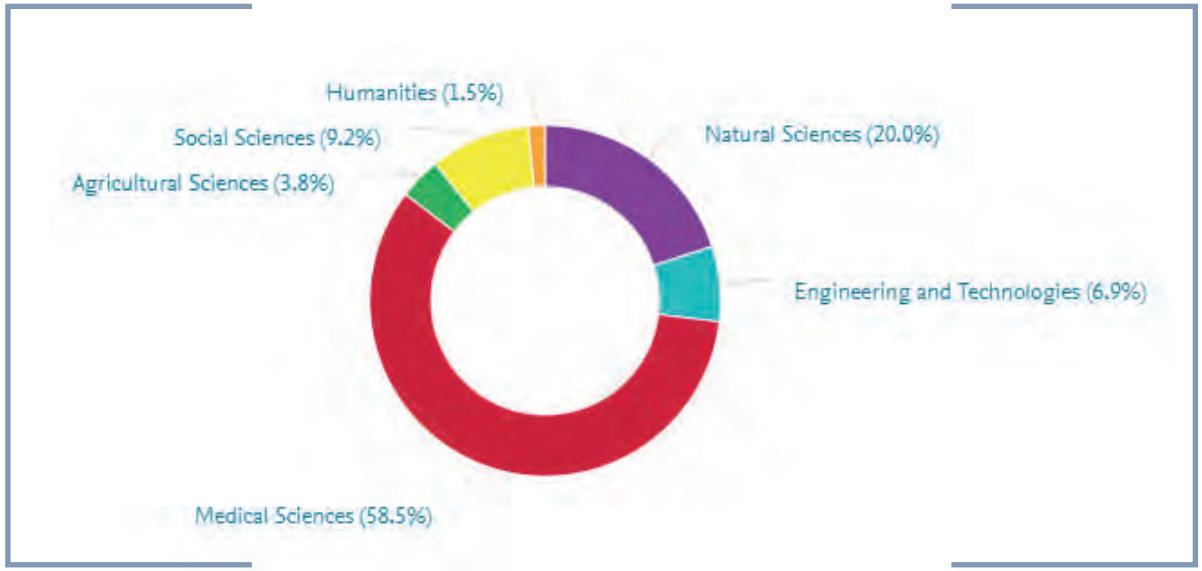
Agricultural Sciences

3.8%

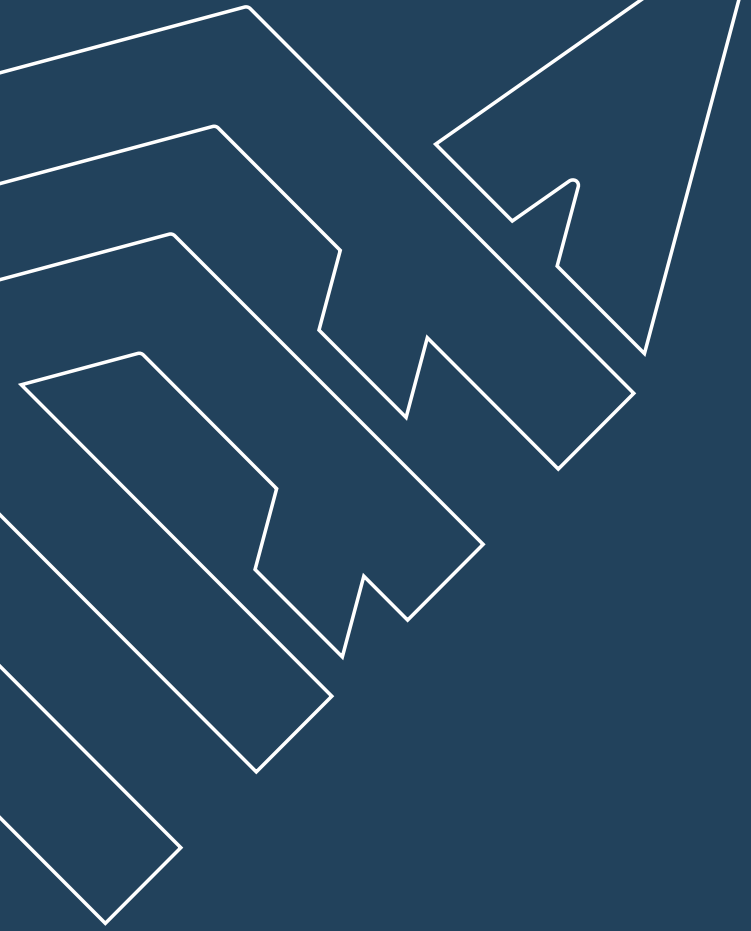
2

Humanities

1.5%



This classification is used in the Frascati Manual of the Organization for Economic Co-operation and Development (OECD)



Imam Abdulrahman bin Faisal University Covid-19 Publications Facts and Figures (100 Publications)

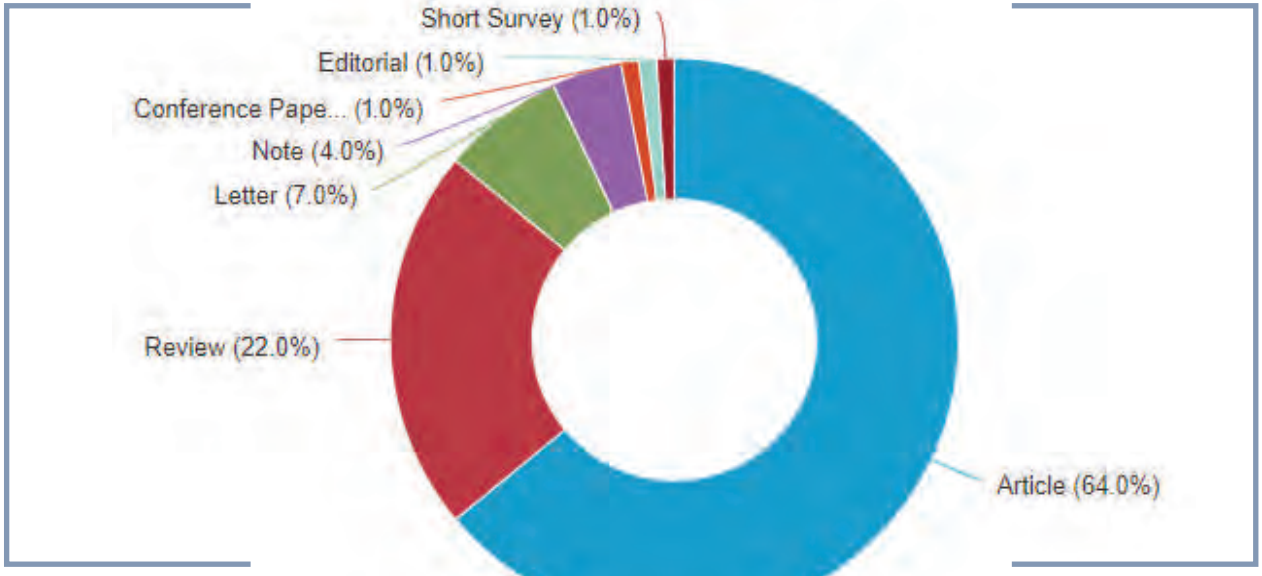
Type of publications for

COVID-19 research

Type of publications for

COVID-19 research

Article	64
Review	22
Letter	7
Note	4
Conference Paper	1
Editorial	1
Short Survey	1


Short Survey (1.0%)
Editorial (1.0%)
Conference Pape... (1.0%)
Note (4.0%)
Letter (7.0%)
Review (22.0%)
Article (64.0%)

Most Distinguished Research of

COVID-19


تهنئة
تتقدم وكالة الجامعة
للدراسات العليا والبحث العلمي
Immunogenicity of Multiple Doses of pDNA Vaccines against SARS-CoV-2
2020-161-RMC

Kingdom of Saudi Arabia has made great efforts to combat Corona pandemic. Also, Imam Abdulrahman bin Faisal University has made research efforts to limit the spread of this virus. By national cadres, research team led by Dr. Iman Al-Mansour from Institute for Research and Medical Consultations (IRMC) reached to first Saudi vaccine to confront Corona pandemic, within their research project under the title:

Immunogenicity of Multiple Doses of pDNA Vaccines against SARS-CoV-2

Supported by Ministry of Research and Innovation Agency, which contributed to fund the research within Institutional Funding Program.

In March of 2020, World Health Organization announced that it had classified Coronavirus disease 2019 (Covid 19) as a pandemic, and since then international drug companies began to compete to discover a vaccine for this new virus.

The world today faces numbers of vaccines that compete in quality, protection, and effectiveness. For example, University of Oxford produced "AstraZenikia" vaccine, while American "Pfizer" vaccine and German "Biontech" vaccine were produced. The Chinese Beijing Institute for Biological Products also participated which produced "Sinopharma." CNPEG, in addition to other vaccines such as "Moderna" and "Sepotnik".

Immunogenicity of Multiple Doses of pDNA Vaccines against SARS-CoV2-

Abstract

Since its identification in Wuhan, China, in December 2019, severe acute respiratory syndrome coronavirus 2 (SARS-CoV2-), the causative agent of coronavirus disease 2019 (COVID19-), has resulted in 46 million cases and more than one million deaths worldwide, as of 30 October 2020. Limited data exist on the magnitude and durability of antibodies generated by natural infection with SARS-CoV2- and whether they can provide long-lasting immunity from reinfection. Vaccination has proven the most effective measure for controlling and preventing pandemics and, thus, development of a vaccine against COVID19- is a top priority. However, , the doses required to induce effective, long-lasting antibody responses against SARS-CoV2- remain undetermined. Here, we present the development of SARS-CoV2- vaccine candidates encoding the viral spike (S) gene, generated using plasmid (p)DNA technology, and we demonstrate the eliciting of S-specific antibodies in mice after three and four doses. The magnitude of binding and neutralizing antibody responses with three doses of synthetic, codon-optimized, full-length S (S.opt.FL) vaccine is comparable to that generated after four doses, suggesting that three doses are sufficient to elicit robust immune responses. Conversely, four doses of S1.opt pDNA vaccine, containing the S globular head, are required to elicit high levels of neutralizing antibodies. Furthermore, the S.opt.FL pDNA vaccine induces the highest serum levels of interferon (IFN)-γ, a marker for activation of cellular immune responses. Overall, our data show that three doses of S.FL pDNA vaccine elicit potent neutralizing antibody responses, with preclinical data that support the immunogenicity of these COVID19- vaccine candidates and provide justification for further translational studies.

Almansour, I.; Macadato, N.C.; Alshammari, T. Immunogenicity of Multiple Doses of pDNA Vaccines against SARS-CoV2-. Pharmaceuticals 39 ,14 ,2021. https://doi.org/10.3390/ ph14010039

Research Production of

Imam Abdul Rahman bin Faisal University for COVID-19 Research

100 Publications

36 reserch in **Q1** journal

35 reseach in **Q2** journal

16 research in **Q3** journal

11 research in **Q4** journal

Quartiles	Publications	Publication share (%)
Q1 (top 25%)	36	36.7
Q2 (26% - 50%)	35	35.7
Q3 (51% - 75%)	16	16.3
Q4 (76% - 100%)	11	11.2

Cumulative shares	Publications	Publication share (%)
Q1 to Q2 (top 50%)	71	72.4
Q1 to Q3 (top 75%)	87	88.8

1.

Title

Impact of COVID-19 on the social, economic, environmental and energy domains: Lessons learnt from a global pandemic

Authors

Mofijur M., Fattah I.M.R., Alam M.A., Islam A.B.M.S., Ong H.C., Rahman S.M.A., Najafi G., Ahmed S.F., Uddin M.A., Mahlia T.M.I.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Sustainable Production and Consumption	Q1	Elsevier B.V.	April 2021

DOI

10.1016/j.spc.2020.10.016

Abstract

COVID-19 has heightened human suffering, undermined the economy, turned the lives of billions of people around the globe upside down, and significantly affected the health, economic, environmental and social domains. This study aims to provide a comprehensive analysis of the impact of the COVID-19 outbreak on the ecological domain, the energy sector, society and the economy and investigate the global preventive measures taken to reduce the transmission of COVID-19. This analysis unpacks the key responses to COVID-19, the efficacy of current initiatives, and summarises the lessons learnt as an update on the information available to authorities, business and industry. This review found that a 72-hour delay in the collection and disposal of waste from infected households and quarantine facilities is crucial to controlling the spread of the virus. Broad sector by sector plans for socio-economic growth as well as a robust entrepreneurship-friendly economy is needed for the business to be sustainable at the peak of the pandemic. The socio-economic crisis has reshaped investment in energy and affected the energy sector significantly with most investment activity facing disruption due to mobility restrictions. Delays in energy projects are expected to create uncertainty in the years ahead. This report will benefit governments, leaders, energy firms and customers in addressing a pandemic-like situation in the future.

2.

Title

Toward establishing telepsychology guideline. Turning the challenges of COVID-19 into opportunity [Vers l'établissement d'une ligne directrice en matière de télépsychologie. Transformer les défis de la COVID-19 en opportunités]

Authors

Alqahtani M.M.J., Alkhamees H.A., Alkhalaf A.M., Alarjan S.S., Alzahrani H.S., AlSaad G.F., Alhrbi F.H., Wahass S.H., Khayat A.H., Alqahtani K.M.M.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Ethics, Medicine and Public Health	Q4	Elsevier Masson s.r.l.	March 2021

DOI

10.1016/j.jemep.2020.100612

Abstract

The COVID-19 pandemic has obstructed the classical practices of psychological assessment and intervention via face-to-face interaction. Patients and all health professionals have been forced to isolate and become innovative to continue receiving and providing exceptional healthcare services while minimizing the risk of exposure to, or transmission of, COVID-19. Aim: This document is proposed initially as a guide to the extraordinary implementation of telepsychology in the context of the COVID-19 pandemic and to extend its implementation to use fundamentally as the main guideline for telepsychology services in Saudi Arabia and other Arabic communities. Method: A professional task force representing different areas of professional psychology reviewed, summarized, and documented methods, policies, procedures, and other resources to ensure that the recommendations and evidence reviews were valid and consistent with best practices. Results: The practice of telepsychology involves the consideration of legal and professional requirements. This paper provides a guideline and recommendations for procedural changes that are necessary to address psychological services as we transition to telepsychology, as well as elucidates and demonstrates practical telepsychology frameworks, procedures, and proper recommendations for the provision of services during COVID-19. It adds a focused examination and discussion related to factors that could influence the telemedicine guideline, such as culture, religion, legal matters, and how clinical psychologists could expand their telepsychology practice during COVID-19 and after, seeking to produce broadly applicable guidelines for the practice of telepsychology. Professional steps in practical telemedicine were illustrated in tables and examples. Conclusion: Telepsychology is not a luxury or a temporary response. Rather, it should be considered part of a proactive governance model to secure a continuity of mental health care services. Arabic communities could benefit from this guideline to telepsychology as an essential protocol for providing mental health services during and after the COVID-19 pandemic.

3.

Title

The impact of COVID-19 lockdown on the air quality of Eastern Province, Saudi Arabia

Authors

Anil I., Alagha O.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Air Quality, Atmosphere and Health	Q1	Springer Science and Business Media B.V.	2021

DOI

10.1007/s11869-020-00918-3

Abstract

Since the identification of the COVID-19 outbreak in Wuhan, China, in December 2019, the death toll from the direct infection by COVID-19 has exceeded 775,000, and more than 21 million cases have been reported to the World Health Organization (WHO) around the world. It is strongly believed that its impact might be worsened by poor outdoor and indoor air qualities, particularly on older adults. The nationwide lockdown measures were imposed between March 23 and June 20, 2020, to stop the spread of COVID-19 pandemic in the Kingdom of Saudi Arabia (KSA). In this work, the possible effects of the lockdown on the air quality were investigated using meteorological and air quality datasets obtained from eight monitoring stations covering the Eastern Province of the KSA. The studied air pollutants include carbon monoxide (CO), sulfur dioxide (SO2), nitrogen dioxide (NO2), ozone (O3), and inhalable particulate matter (PM10). The NO2 was found to be the marker pollutant responding best to the lockdown measures since its concentrations decreased at all sites during- and post-lockdown periods and ranged between 12–86% and 14–81%, respectively. Compared with pre-lockdown period, the Eastern Province also experienced significant concentration reductions at varying rates for PM10 (21–70%), CO (5.8–55%), and SO2 (8.7–30%), while O3 concentrations showed increasing rates ranging between 6.3 and 45%. The consequences of these reductions were reflected in easing the outdoor air quality, which might reduce the impact of COVID-19 pandemic, especially on elderly and sensitive groups.

4.

Title

Insights into the COVID-19 pandemic: Origin, pathogenesis, diagnosis, and therapeutic interventions

Authors

Berekaa M.M.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Frontiers in bioscience (Elite edition)	Q2	NLM (Medline)	1 January 2021

DOI

NA

Abstract

Coronavirus disease (COVID-19) is caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), a member of the human coronavirus (HCoV) family that targets the lower part of the respiratory tract and causes severe acute respiratory syndrome (SARS). In a short span of time, this infection has led to a global pandemic and has become a significant threat to the existence of present human society. Currently, there are no treatments for this infection and the measures established across various countries such as social distancing, usage of mask to prevent entry of the virus into the respiratory tract, quarantine, and containment together have reduced the prevalence of this disease and mortality in highly susceptible individuals. Here, we examine the structure, replication cycle, phylogeny and genomic organization of this virus and discuss the role of spike (S) protein of the virus, an important structure that interacts with the host ACE2 receptor facilitating viral entry. Further, we explore the epidemiology, symptoms of the disease, describe the reverse transcriptase-polymerase chain reaction (RT-PCR) that establishes the diagnosis of the disease and also review its unique diagnostic features in the chest CT-Scan. Finally, we review the current approaches to develop therapies and vaccines as a measure for disease prevention and control.

5.

Title

Structural and operational redesigning of patient-centered ambulatory care pharmacy services and its effectiveness during the COVID-19 pandemic

Authors

Thorakkattil S.A., Nemr H.S., Al-Ghamdi F.H., Jabbour R.J., Al-Qaaneh A.M.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Research in Social and Administrative Pharmacy	Q1	Elsevier Inc.	January 2021

DOI

10.1016/j.sapharm.2020.06.017

Abstract

Background: The newly emerged coronavirus pandemic (COVID-19) has collapsed the entire global health care system. Due to these settings, a lot of strategic changes are adopted by healthcare facilities to ensure continuity in patient-centered services. Objective: This study aims to evaluate the effectiveness of structural and operational changes made in ambulatory care pharmacy services during the COVID-19 pandemic. Methods: A retrospective comparative study was conducted to evaluate the impact and effectiveness of patient-centered interventions and consequent access to medication management care within Johns Hopkins Aramco Health Care ambulatory care pharmacy services during the COVID-19 pandemic by comparing patient-centered key performance indicators before and during COVID-19 pandemic for a total of 4 months. Results: As a result of the structural and operational changes made in patient-centered ambulatory care pharmacy services during the COVID-19 pandemic, a 48% prescriptions requests and 90% prescriptions fills are increased through online health portal application. A three-fold increase in the pharmacy call center utilization resulted in around 10% abandoned calls. In the number of physical visits to ambulatory care pharmacies, a 37% reduction was also noted. The decrease in staff schedule efficiency and an increase in average prescription waiting time were also noticed. The prescription collection through remote area pick up locations, and medication home delivery services were successful during COVID-19 pandemic as supported by statistical data. Conclusion: The access to ambulatory care pharmacy services during COVID-19 pandemic has been successfully maintained via medication home delivery, remote area pickup locations, pharmacy call-center consultations and refill requests, online health portal application services, and other measures, while reducing the number of physical visits to the JHAH hospital/clinic to ensure compliance with infection control and prevention measures.

6.

Title

COVID-19 and children: The mental and physical reverberations of the pandemic

Authors

Iqbal S.A., Tayyab N.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Child: Care, Health and Development	Q1	Blackwell Publishing Ltd	January 2021

DOI

10.1111/cch.12822

Abstract

No abstract available (Letter)

7.

Title

Investigating healthcare practitioners' attitudes towards the COVID-19 outbreak in Saudi Arabia: A general qualitative framework for managing the pandemic

Authors

Alanezi F., Aljahdali A., Alyousef S.M., Alshaikh W., Mushcab H., AlThani B., Alghamedy F., Alotaibi H., Alrajhi S., Alabbadi D., Alanzi T.M.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Informatics in Medicine Unlocked	Q2	Elsevier Ltd	January 2021

DOI

10.1016/j.imu.2020.100491

Abstract

Background: Some previous studies have investigated the attitudes of healthcare professionals towards certain aspects of the COVID-19 outbreak. In addition, some general frameworks have been proposed to manage the pandemic. Objective: The purpose of this article was to analyze the attitudes of healthcare practitioners in Saudi Arabia towards the treatment of patients with COVID-19, work planning of practitioners, leadership approaches to manage the pandemic, sharing information strategies, medical errors, compliance with procedures, and challenges faced by the practitioners. Furthermore, another objective was to propose a general framework for managing the COVID-19 outbreak in Saudi Arabia. Methods: To achieve these purposes, a survey was designed based on an online questionnaire that was initially sent via WhatsApp, Twitter, Facebook, and email to 336 healthcare practitioners working in 7 hospitals in Saudi Arabia. The response rate was 30.4%. Results: The outcomes indicated that healthcare practitioners in Saudi Arabia had positive attitudes towards effective communication and interaction between health professionals and patients, leadership and maintenance of team coordination, work planning, communication and cooperation between team members, training and skills development of healthcare professionals, implementing strict procedures to avoid errors and control the spread of the COVID-19 pandemic, maintaining an adequate supply of medicines and medical equipment, and obtaining the support of the government, the community, and the people. Conclusion: Based on the findings, it was possible to suggest that the management of health care operations related to the COVID-19 outbreak in Saudi Arabia requires effective collaboration and information sharing among various stakeholders. In this sense, communication, effective leadership, coordination and work planning, adequate treatment for patients, strict compliance with hospital rules and procedures, preventive and regulatory measures, and training and support for health professionals, were parameters considered in the general qualitative framework suggested in this study for managing the COVID-19 pandemic in Saudi Arabia. The propositions presented in this study can help the Saudi Arabian government implement an effective plan to control the spread of the COVID-19 pandemic in this country.

8.

Title

The battle against coronavirus disease 2019 (COVID-19) in the Kingdom of Saudi Arabia

Authors

Al-Otaibi S.T.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Saudi Medical Journal	Q2	Saudi Arabian Armed Forces Hospital	12, December 2020

DOI

10.15537/smj.2020.12.25459

Abstract

Coronavirus disease 2019 (COVID-19) which was initially reported in the Chinese city of Wuhan has now spread unprecedented all over the world, including the Kingdom of Saudi Arabia (KSA). The World Health Organization declared this outbreak as a public health emergency of international concern during late January 2020 while the announcement of this viral infectious condition was made as COVID-19 disease during February 2020. As of late May 2020, the global death rate due to COVID-19 was 357,714 and 441 in KSA alone. This review provides an overview of COVID-19 and the public health measures adopted by KSA in the context of COVID-19.

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9.

Title

Episcleritis as a possible presenting sign of the novel coronavirus disease: A case report

Authors

Otaif W., Al Somali A.I., Al Habash A.

Journal name	Journal quartile (Scopus)	Publisher	Published date
American Journal of Ophthalmology Case Reports	Q3	Elsevier Inc.	December 2020

DOI

10.1016/j.ajoc.2020.100917

Abstract

In this report, we describe a case of episcleritis that appeared to be the first sign of the novel coronavirus disease (COVID-19). Observations: A 29-year-old man with no prior medical condition presented with a complaint of redness and foreign body sensation in his left eye, which started two days before his consultation. He had no history of decreased vision, pain, photophobia, discharge, ocular surgery, or trauma. He had no symptoms in his fellow eye nor did he have any systemic symptoms. External examination of his left eye revealed a sectoral nasal conjunctival and episcleral injection and a clear cornea. There was no scleral edema. A diagnosis of episcleritis was made based on clinical grounds and topical fluorometholone 0.1%. was started. Three days later, the patient presented with headache, shortness of breath, cough, and fever (39.2 °C). Real-time fluorescence polymerase chain reaction test of his nasopharyngeal swab returned a positive result for COVID-19. The patient was then admitted for observation and supportive therapy. After five days, fever, respiratory and ocular symptoms were markedly improved and the patient was discharged and advised to isolate at home for 14 days. Conclusions and importance: This is the first report that describes episcleritis as a possible presenting sign of COVID-19. Understanding the association between ocular signs/symptoms and COVID-19 can aid in the diagnosis of the viral infection and can help in limiting its transmission.

10.

Title

Source apportionment of ambient black carbon during the COVID-19 lockdown

Authors

Anil I., Alagha O.

Journal name	Journal quartile (Scopus)	Publisher	Published date
International Journal of Environmental Research and Public Health	Q2	Multidisciplinary Digital Publishing Institute (MDPI)	3 December 2020

DOI

10.3390/ijerph17239021

Abstract

Black carbon (BC) particles being emitted from mobile and stationary emission sources as a result of combustion activities have significant impacts on human health and climate change. A lot of social activities have been halted during the COVID-19 lockdowns, which has evidently enhanced the ambient and indoor air quality. This paper investigates the possible emission sources and evaluates the meteorological conditions that may affect the dispersion and transport of BC locally and regionally. Ground-level equivalent BC (eBC) measurements were performed between January 2020 and July 2020 at a university campus located in Dammam city of the Kingdom of Saudi Arabia (KSA). The fossil fuel (eBCff) and biomass burning (eBCbb) fractions of total eBC (eBCt) concentrations were estimated as 84% and 16%, respectively, during the entire study period. The mean eBCbb, eBCff, and eBCt concentrations during the lockdown reduced by 14%, 24%, and 23%, respectively. The results of statistical analyses indicated that local fossil fuel burning emissions and atmospheric conditions apparently affected the observed eBC levels. Long-range potential source locations, including Iraq, Kuwait, Iran, distributed zones in the Arabian Gulf, and United Arab Emirates and regional source areas, such as the Arabian Gulf coastline of the KSA, Bahrain, and Qatar, were associated with moderate to high concentrations observed at the receptor site as a result of cluster analysis and concentration-weighted trajectory analysis methods.

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11.

Title

COVID-19 outbreak and its monetary implications for dental practices, hospitals and healthcare workers

Authors

Farooq I., Ali S.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Postgraduate Medical Journal	Q1	BMJ Publishing Group	1 December 2020

DOI

10.1136/postgradmedj-2020-137781

Abstract

The novel COVID-19 came under limelight few months back (December 2019) and has recently been declared a pandemic by WHO. It has resulted in serious financial implications being faced by dental practices, hospitals and healthcare workers. Dental practice currently is restricted to provision of emergency dental care whereas, many hospitals have also cancelled elective procedures to save finances for COVID-19 treatment which is expensive and unpredictable. In addition, healthcare workers are also facing financial challenges in this difficult time. Competent authorities should step in to help dental practices, hospitals and healthcare workers in order to ensure the provision of all types of healthcare efficiently in these testing times and beyond.

12.

Title

Stress and psychological resilience among general surgery residents during COVID-19 pandemic

Authors

Aljehani Y.M., Othman S.A., Telmesani N.K., Alghamdi R.A., AlBuainain H.M., Alghamdi Z.M., Zakaria H.M., Alreshaid F.T., Busbait S.A., Alqarzaie A.A., Alharbi T.M., Alnajim R.K.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Saudi Medical Journal	Q2	Saudi Arabian Armed Forces Hospital	December 2020

DOI

10.15537/smj.2020.12.25577

Abstract

Objectives: To evaluate the impact of coronavirus-19 (COVID-19) pandemic and its consequences on general surgery residents. Methods: Cross-sectional, survey based study including surgical residents in Kingdom of Saudi Arabia and Kingdom of Bahrain. Results: Surgical trainees who participated in our survey (n=234) were young (mean age 28), single (53.8%), and males (65.8%). Approximately half (50.4%) have been deployed to cover the staff shortage in intensive care units (ICUs) or emergency departments (EDs). Half of our trainees (117) scored positive in the screening tool of generalized anxiety disorder (GAD). There was a significant association between experiencing anxiety and male gender (p=0.055), level of training (p=0.002), deployment to cover ICUs (p=0.050), testing positive for COVID-19 (p=0.054) and having an infected family member (p=0.004). Conclusion: Coronavirus-19 pandemic has a serious effect on all healthcare workers and surgical residents have experienced a considerable amount of stress. Accordingly, this psychological burden should be appropriately addressed in organizations planning strategies. We suggest formulating guidelines to help surgical trainees to continue their learning process with least psychological burden.

13.

Title

Knowledge of dental academics about the COVID-19 pandemic: a multi-country online survey

Authors

Ammar N., Aly N.M., Folayan M.O., Mohebbi S.Z., Attia S., Howaldt H.-P., Boettger S., Khader Y., Maharani D.A., Rahardjo A., Khan I., Madi M., Shamala A., Al-Batayneh O.B., Rashwan M., Pavlic V., Cicmil S., Galluccio G., Polimeni A., Mancino D., Arheiam A., Dama M.A., Nyan M., Phantumvanit P., Kim J.-B., Choi Y.-H., Castillo J.L., Joury E., Abdelsalam M.M., Alkeshan M.M., Hussein I., Vukovic A.P., Iandolo A., Kemoli A.M., El Tantawi M.

Journal name	Journal quartile (Scopus)	Publisher	Published date
BMC Medical Education	Q1	BioMed Central Ltd	1 December 2020

DOI

10.1186/s12909-020-02308-w

Abstract

Background: COVID-19 is a global pandemic affecting all aspects of life in all countries. We assessed COVID-19 knowledge and associated factors among dental academics in 26 countries. Methods: We invited dental academics to participate in a cross-sectional, multi-country, online survey from March to April 2020. The survey collected data on knowledge of COVID-19 regarding the mode of transmission, symptoms, diagnosis, treatment, protection, and dental treatment precautions as well as participants' background variables. Multilevel linear models were used to assess the association between dental academics' knowledge of COVID-19 and individual level (personal and professional) and country-level (number of COVID-19 cases/ million population) factors accounting for random variation among countries. Results: Two thousand forty-five academics participated in the survey (response rate 14.3%, with 54.7% female and 67% younger than 46 years of age). The mean (SD) knowledge percent score was 73.2 (11.2) %, and the score of knowledge of symptoms was significantly lower than the score of knowledge of diagnostic methods (53.1 and 85.4%, $P < 0.0001$). Knowledge score was significantly higher among those living with a partner/spouse than among those living alone (regression coefficient (B) = 0.48); higher among those with PhD degrees than among those with Bachelor of Dental Science degrees (B = 0.48); higher among those seeing 21 to 30 patients daily than among those seeing no patients (B = 0.65); and higher among those from countries with a higher number of COVID-19 cases/million population (B = 0.0007). Conclusions: Dental academics had poorer knowledge of COVID-19 symptoms than of COVID-19 diagnostic methods. Living arrangements, academic degrees, patient load, and magnitude of the epidemic in the country were associated with COVD-19 knowledge among dental academics. Training of dental academics on COVID-19 can be designed using these findings to recruit those with the greatest need.

14.

Title

Students' Perspective on Online Medical Education Amidst the COVID-19 Pandemic in Nepal

Authors

Nepal S., Atreya A., Menezes R.G., Joshi R.R.`

Journal name	Journal quartile (Scopus)	Publisher	Published date
Journal of Nepal Health Research Council	Q3	NLM (Medline)	14 November 2020

DOI

10.33314/jnhrc.v18i3.2851

Abstract

BACKGROUND: The lockdown strategy adopted to contain the spread of current pandemic of coronavirus disease has affected all sectors of life globally. Nepal also instructed all the educational institutions to shut down, medical colleges being no exception. One month into the lockdown all the medical colleges in Nepal started online classes to keep pace with the academic calendar. This preliminary survey analyses the students' perspective on newly introduced online medical education system. METHODS: This cross-sectional survey used an online questionnaire typed in Google forms. The link to the survey was then emailed to the student representative of each semester of Lumbini Medical College, Palpa, Nepal, who were then instructed to forward it to their classmates. The questionnaire consisted of demographic variables and perspective of medical undergraduates towards online classes and also a space to comment or opine their perspective on current medical education. RESULTS: A total of 226 students responded the survey. Almost one-third of the students (n=173, 76.5%) admitted of never having attended the online classes. Most of the students used smartphones to attend online classes; broadband internet service being the source of internet in 65.5%. Two-third of the students rated online classes to be poorer than the traditional classroom teaching and 77.8% of the students preferred traditional classroom teaching in future. CONCLUSIONS: Medical students did not find online classes as effective as the traditional classroom teachings; it could be made more interactive and productive by introducing interactive and brainstorming sessions complementing the conventional face?to?face education.

15.

Title

Coronavirus diseases 2019: Current biological situation and potential therapeutic perspective

Authors

Khan S., Tombuloglu H., Hassanein S.E., Rehman S., Bozkurt A., Cevik E., Abdel-Ghany S., Nabi G., Ali A., Sabit H.

Journal name	Journal quartile (Scopus)	Publisher	Published date
European Journal of Pharmacology	Q2	Elsevier B.V.	5 November 2020

DOI

10.1016/j.ejphar.2020.173447

Abstract

Coronavirus Disease 2019 (COVID-19) caused by a Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2) was first reported in Wuhan, China at the end of December 2019. SARS-CoV-2 is a highly pathogenic zoonotic virus and closely related to the Severe Acute Respiratory Coronavirus (SARS-CoV) and Middle East Respiratory Syndrome Coronavirus (MERS-CoV). The COVID-19 was declared as a global pandemic due to its high infectiousness, and worldwide morbidities and mortalities. The Chinese scientists at the start of the outbreak reported genome sequences, which made the characterization of glycoproteins and other structural proteins possible. Moreover, researchers across the world have widely focused on understanding basic biology, developing vaccines, and therapeutic drugs against the COVID-19. However, until now, no promising treatment options, as well as vaccines, are available. In this review, we have described SARS-CoV-2's genome, transmission, and pathogenicity. We also discussed novel potential therapeutic agents that can help to treat the COVID-19 patients.

16.

Title

TAT-peptide conjugated repurposing drug against SARS-CoV-2 main protease (3CLpro): Potential therapeutic intervention to combat COVID-19

Authors

Ansari M.A., Jamal Q.M.S., Rehman S., Almatroudi A., Alzohairy M.A., Alomary M.N., Tripathi T., Alharbi A.H., Adil S.F., Khan M., Shaheer Malik M.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Arabian Journal of Chemistry	Q1	Elsevier B.V.	November 2020

DOI

10.1016/j.arabjc.2020.09.037

Abstract

The Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) that originated in Chinese city of Wuhan has caused around 906,092 deaths and 28,040,853 confirmed cases worldwide (https://covid19.who.int/, 11 September 2020). In a life-threatening situation, where there is no specific and licensed anti-COVID-19 vaccine or medicine available; the repurposed drug might act as a silver bullet. Currently, more than 211 vaccines, 80 antibodies, 31 antiviral drugs, 35 cell-based, 6 RNA-based and 131 other drugs are in clinical trials. It is therefore utter need of the hour to develop an effective drug that can be used for the treatment of COVID-19 before a vaccine can be developed. One of the best-characterized and attractive drug targets among coronaviruses is the main protease (3CLpro). Therefore, the current study focuses on the molecular docking analysis of TAT-peptide47–57 (GRKKRRQRR-RP)-conjugated repurposed drugs (i.e., lopinavir, ritonavir, favipiravir, and hydroxychloroquine) with SARS-CoV-2 main protease (3CL-pro) to discover potential efficacy of TAT-peptide (TP) - conjugated repurposing drugs against SARS-CoV-2. The molecular docking results validated that TP-conjugated ritonavir, lopinavir, favipiravir, and hydroxychloroquine have superior and significantly enhanced interactions with the target SARS-CoV-2 main protease. In-silico approach employed in this study suggests that the combination of the drug with TP is an excelling alternative to develop a novel drug for the treatment of SARS-CoV-2 infected patients. The development of TP based delivery of repurposing drugs might be an excellent approach to enhance the efficacy of the existing drugs for the treatment of COVID-19. The predictions from the results obtained provide invaluable information that can be utilized for the choice of candidate drugs for in vitro, in vivo and clinical trials. The outcome from this work prove crucial for exploring and developing novel cost-effective and biocompatible TP conjugated anti-SARS-CoV-2 therapeutic agents in immediate future.

17.

Title

TAT-peptide conjugated repurposing drug against SARS-CoV-2 main protease (3CLpro): Potential therapeutic intervention to combat COVID-19

Authors

Al Nemer A.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Advances in Anatomic Pathology	Q1	Lippincott Williams and Wilkins	1 November 2020

DOI

10.1097/PAP.0000000000000276

Abstract

In response to the current outbreak of Coronavirus Disease-2019 (COVID-19), a fast body of literature emerged providing insights into the clinical and radiologic aspects of the novel disease, while the pathologic manifestations on tissue are yet to be sufficiently characterized mainly due to paucity of autopsy and biopsy of these cases. It is essential for both the clinicians and pathologists to maintain up-to-date knowledge of this continuously evolving topic in the midst of the current pandemic. Besides, understanding the impact of any disease in tissue pathology is crucial for better analysis of the pathogenesis and speculation of potential therapeutic targets. This review aimed to highlight the potential implication of COVID-19 in the pathology of various organ systems. We discuss the pathologic findings of the lungs, gastrointestinal tract, liver, brain, kidneys, heart, and the reproductive and immune systems that are associated with COVID-19. It seems that the respiratory, immune, and the digestive systems are the major targets of the disease. Mild mononuclear inflammatory cell infiltration is the most frequent histologic finding in general. Besides organ-specific changes, microthrombi, especially noticed in lungs, kidneys, and prostates, are the most significant observation microscopically. In addition, the possible mechanisms of organ injury were also reviewed.

18.

Title

Multivocality of Saudi COVID-19 discourse in social media posts: A socio-semiotic multimodal perspective

Authors

Al-Ghamdi N.A., Albawardi A.H.

Journal name	Journal quartile (Scopus)	Publisher	Published date
GEMA Online Journal of Language Studies	Q1	Penerbit Universiti Kebangsaan Malaysia	4, November 2020

DOI

10.17576/gema-2020-2004-13

Abstract

This paper examines the discourse of COVID-19 (also known as coronavirus) in social media posts and argues that the mediated COVID-19 discourse in Saudi Arabia enacted a variety of voices and thematic discourses that cannot be fully evaluated without reference to the locality of the sociolinguistic semiotics of the speech community. It attempts to construct the various non-verbal multivocalities in written and visual COVID-19 discourse present in 24 texts obtained from Saudi social media platforms, namely WhatsApp and Twitter, during the COVID-19 pandemic in the months of February, March and April, 2020. WhatsApp and Twitter are chosen because they are considered the platforms most used by Saudis in Saudi Arabia (GlobalWebIndex, 2020a, 2020b). The study employs a socio-semiotic approach to the analysis of collected data following Kress & Van Leeuwen (1996), mediated discourse analysis (Norris & Jones, 2005; Scollon, 2001) and systemic functional multimodal discourse analysis (SF-MDA). The analysis aims at integrating the social semiotics and multimodal approaches to better understand the dynamic Saudi discourse on COVID-19. The discourse on COVID-19 has revealed the dynamic multi-layered nature of governmental, individual and public voices pertaining to COVID-19 multi-discoursal themes, novel multimodal resources and the specific cultural semiotics of Saudi Arabia. The findings of the study revealed that the COVID-19 pandemic mediated discourse is relevant to the local speech community diglossic situation, cultural semiotics, social norms and integrated national identity.

19.

Title

Coronavirus pandemic (COVID-19) and its natural environmental impacts

Authors

Rupani P.F., Nilashi M., Abumalloh R.A., Asadi S., Samad S., Wang S.

Journal name	Journal quartile (Scopus)	Publisher	Published date
International Journal of Environmental Science and Technology	Q1	Springer Science and Business Media Deutschland GmbH	2020

DOI

10.1007/s13762-020-02910-x

Abstract

Coronavirus Disease 2019 (COVID-19) is the official name of a respiratory infectious disease caused by a new coronavirus that started first in Wuhan, China, and outspread worldwide with an unexpectedly fast speed. Flights have been canceled worldwide and transportation has been closed nationwide and across international borders. As a consequence, the economic activity has been stopped and stock markets have been dropped. The COVID-19 lockdown has several social and economic effects. Additionally, COVID-19 has caused several impacts on global migration. On the other hand, such lockdown, along with minimal human mobility, has impacted the natural environment somewhat positively. Overall carbon emissions have dropped, and the COVID-19 lockdown has led to an improvement in air quality and a reduction in water pollution in many cities around the globe. A summary of the existing reports of the environmental impacts of COVID-19 pandemic are discussed and the important findings are presented focusing on several aspects: air pollution, waste management, air quality improvements, waste fires, wildlife, global migration, and sustainability.

20.

Title

Covid-19 outbreak, disruption of dental education, and the role of teledentistry

Authors

Farooq I., Ali S., Alam Moheet I., Alhumaid J.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Pakistan Journal of Medical Sciences	Q2	Professional Medical Publications	7, November-December 2020

DOI

10.12669/pjms.36.7.3125

Abstract

The novel coronavirus disease 2019 (COVID-19) has affected the whole world and has now been declared a Pandemic by the World Health Organization (WHO). Although the mortality rate of this virus is low, it is especially potent against people with underlying systemic conditions. Dentistry is a profession where the doctor, as well as the dental staff, works in close vicinity to the patient's mouth. Dental education has two core components; didactic and clinical training (including patient care). Dental education has been interrupted in the past due to certain events (Arab Spring and SARS outbreak). Currently, the pandemic of COVID-19 has disrupted dental education globally as most of the dental schools and universities in the world have closed amidst the COVID-19 outbreak. Teledentistry is a subspecialty of telemedicine that helps in the provision of educational activities, advice, and diagnosis about treatment over a distance with the help of technology like video conferencing. The current overview summarizes the potential role of teledentistry in continuing the dental educational process in terms of delivery of didactic components, clinical training, and patient care. It can be concluded that with modern updated devices and tools, teledentistry can be an effective way to prevent disruption of dental education and it can be utilized in continuing the dental educational process in this critical time of the COVID-19 outbreak.

21.

Title

Awareness, attitudes, prevention, and perceptions of covid-19 outbreak among nurses in saudi arabia

Authors

Al-Dossary R., Alamri M., Albaqawi H., Al Hosis K., Aljeldah M., Aljohan M., Aljohani K., Almadani N., Alrasheadi B., Falatah R., Almazan J.

Journal name	Journal quartile (Scopus)	Publisher	Published date
International Journal of Environmental Research and Public Health	Q2	MDPI AG	1 November 2020

DOI

10.3390/ijerph17218269

Abstract

The newly discovered coronavirus (COVID-19) has become a pandemic, infecting thousands of people around the world. This study examines nurses' demographic information (age, gender, marital status, area of practice, total years of experience in the current hospital, work region, monthly salary, educational level, workplace, nationality, working hours per day, total nursing experience, and the respondents' main source of information on COVID-19), awareness, attitudes, prevention, and perceptions of COVID-19 during the outbreak in Saudi Arabia. A cross-sectional descriptive design of 500 nurses working at government and non-governmental hospitals in five regions in Saudi Arabia were selected using convenience sampling. The Kruskal–Wallis test was applied and the Mann–Whitney test was utilized as a post hoc test. The majority of nurses in this study, 96.85%, had excellent knowledge of COVID-19. Some (83.2%) of nurses reported significant prevention knowledge and treatment skills about COVID-19, while 7.6% had little knowledge about prevention. More than half of the nurses (60.4%) had high positive attitudes toward caring for COVID-19 patients. In conclusion, female nurses, married nurses, and bachelor's degree nurses had greater awareness, better attitude, and prevention clinical experience towards COVID-19. Meanwhile, non-Saudi nurses had higher self-reported awareness, positive attitudes, optimal prevention, and positive perceptions compared to Saudi nurses. This study provides baseline information immediately needed to enable health authorities to prioritize training programs that support nurses during the COVID-19 pandemic.

22.

Title

Can exposure to PM2.5 particles increase the incidence of coronavirus disease 2019 (COVID-19)?

Authors

Mehmood K., Saifullah, Iqbal M., Abrar M.M.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Science of the Total Environment	Q1	Elsevier B.V.	2020

DOI

10.1016/j.scitotenv.2020.140441

Abstract

No Abstract Available (Letter)

23.

Title

Perception and experience of academic Jordanian ophthalmologists with E-Learning for undergraduate course during the COVID-19 pandemic

Authors

Alqudah N.M., Jammal H.M., Saleh O., Khader Y., Obeidat N., Alqudah J.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Annals of Medicine and Surgery	Q2	Elsevier Ltd	November 2020

DOI

10.1016/j.amsu.2020.09.014

Abstract

Electronic-learning (e-Learning) is a form of education that utilizes information and communications technology to access online teaching and learning. This study aims to evaluate the e-Learning experience among Jordanian academic ophthalmologists during the coronavirus disease 2019 (COVID-19) pandemic. Material and methods: A cross-sectional survey was applied by using a questionnaire that was distributed among 23 academic ophthalmologists working at 6 medical schools in Jordan during the lockdown. The questionnaire included questions about the ophthalmologists' experience with e-Learning, advantages and disadvantages of e-Learning, interactions of medical students for the e-Learning and the expectations of e-Learning for the future. Results: A total of 22 out of 23 academic ophthalmologists responded. Flexibility of e-Learning to time and place was a major advantage (95.5%), whereas lack of skills was the main obstacle for e-Learning (77.3%). Nineteen participants (86.4%) were not satisfied with e-Learning as the sole method for undergraduate teaching. To improve the original on-campus two-week ophthalmology course, 12 (54.5%) suggested integrating e-Learning into the curriculum, 3 (13.6%) preferred extending the period of training, and 7 (31.8%) reported that their tight schedule does not allow for more tasks. Conclusion: The experience of e-Learning was positive. Most believed that e-Learning would have a prominent role in the future of medical education and proposed blended learning programs.

24.

Title

Neurosurgical Procedures and Safety During the COVID-19 Pandemic: A Case-Control Multicenter Study

Authors

Bajunaid K., Alqurashi A., Alatar A., Alkutbi M., Alzahrani A.H., Sabbagh A.J., Alobaid A., Barnawi A., Alferayan A.A., Alkhani A.M., Salamah A.B., Sheikh B.Y., Alotaibi F.E., Alabbas F., Farrash F., Al-Jehani H.M., Alhabib H., Alnaami I., Altweijri I., Khoja I., Taha M., Alzahrani M., Bafaquh M.S., Binmahfoodh M., Algahtany M.A., Al-Rashed S., Raza S.M., Elwatidy S., Alomar S.A., Al-Issawi W., Khormi Y.H., Ammar A., Al-Habib A., Baeesa S.S., Ajlan A.

Journal name	Journal quartile (Scopus)	Publisher	Published date
World Neurosurgery	Q2	Elsevier Inc.	November 2020

DOI

10.1016/j.wneu.2020.07.093

Abstract

Objective: Quantitative documentation of the effects of outbreaks, including the coronavirus disease 2019 (COVID-19) pandemic, is limited in neurosurgery. Our study aimed to evaluate the effects of the COVID-19 pandemic on neurosurgical practice and to determine whether surgical procedures are associated with increased morbidity and mortality. Methods: A multicenter case-control study was conducted, involving patients who underwent neurosurgical intervention in the Kingdom of Saudi Arabia during 2 periods: pre-COVID-19 and during the COVID-19 pandemic. The surgical intervention data evaluated included diagnostic category, case priority, complications, length of hospital stay, and 30-day mortality. Results: A total of 850 procedures were included, 36% during COVID-19. The median number of procedures per day was significantly lower during the COVID-19 period (5.5 cases) than during the pre-COVID-19 period (12 cases; $P < 0.0001$). Complications, length of hospital stay, and 30-day mortality did not differ during the pandemic. In a multivariate analysis comparing both periods, case priority levels 1 (immediate) (odds ratio [OR], 1.82; 95% confidence interval [CI], 1.24–2.67), 1 (1–24 h) (OR, 1.63; 95% CI, 1.10–2.41), and 4 (OR, 0.28; 95% CI, 0.19–0.42) showed significant differences. Conclusions: During the early phase of the COVID-19 pandemic, the overall number of neurosurgical procedures declined, but the load of emergency procedures remained the same, thus highlighting the need to allocate sufficient resources for emergencies. More importantly, performing neurosurgical procedures during the pandemic in regions with limited effects of the outbreak on the health care system was safe. Our findings may aid in developing guidelines for acute and long-term care during pandemics in surgical subspecialties.

25.

Title

The longitudinal impact of COVID-19 pandemic on neurosurgical practice

Authors

Bajunaid K., Alatar A., Alqurashi A., Alkutbi M., Alzahrani A.H., Sabbagh A.J., Alobaid A., Barnawi A., Alferayan A.A., Alkhani A.M., Bin Salamah A., Sheikh B.Y., Alotaibi F.E., Alabbas F., Farrash F., Al-Jehani H.M., Alhabib H., Alnaami I., Altweijri I., Khoja I., Taha M., Alzahrani M., Bafaquh M.S., Binmahfoodh M., Algahtany M.A., Al-Rashed S., Raza S.M., Elwatidy S., Alomar S.A., Al-Issawi W., Khormi Y.H., Ammar A., Al-Habib A., Baeesa S.S., Ajlan A.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Clinical Neurology and Neurosurgery	Q2	Elsevier B.V.	November 2020

DOI

10.1016/j.clineuro.2020.106237

Abstract

This observational cross-sectional multicenter study aimed to evaluate the longitudinal impact of the coronavirus disease 2019 (COVID-19) pandemic on neurosurgical practice. Methods: We included 29 participating neurosurgeons in centers from all geographical regions in the Kingdom of Saudi Arabia. The study period, which was between March 5, 2020 and May 20, 2020, was divided into three equal periods to determine the longitudinal effect of COVID-19 measures on neurosurgical practice over time. Results: During the 11-week study period, 474 neurosurgical interventions were performed. The median number of neurosurgical procedures per day was 5.5 (interquartile range [IQR]: 3.5–8). The number of cases declined from 72 in the first week and plateaued at the 30's range in subsequent weeks. The most and least number of performed procedures were oncology (129 [27.2 %]) and functional procedures (6 [1.3 %]), respectively. Emergency (Priority 1) cases were more frequent than non-urgent (Priority 4) cases (178 [37.6 %] vs. 74 [15.6 %], respectively). In our series, there were three positive COVID-19 cases. There was a significant among-period difference in the length of hospital stay, which dropped from a median stay of 7 days (IQR: 4–18) to 6 (IQR: 3–13) to 5 days (IQR: 2–8). There was no significant among-period difference with respect to institution type, complications, or mortality. Conclusion: Our study demonstrated that the COVID-19 pandemic decreased the number of procedures performed in neurosurgery practice. The load of emergency neurosurgery procedures did not change throughout the three periods, which reflects the need to designate ample resources to cover emergencies. Notably, with strict screening for COVID -19 infections, neurosurgical procedures could be safely performed during the early pandemic phase. We recommend to restart performing neurosurgical procedures once the pandemic gets stabilized to avoid possible post pandemic health-care system intolerable overload.

26.

Title

Current Recommendations for the Management of Stroke Patients in the Middle East in the Era of COVID-19 Pandemic; Statement from the MENA SINO

Authors

Al Hashmi A.M., Ozdemir A.O., Shuaib A., Al-Jehani H., Mansour O.Y., Alhazzani A., Aladhem F., Farhoudi M., John S., Saqqur M.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Journal of Stroke and Cerebrovascular Diseases	Q1	W.B. Saunders	November 2020

DOI

10.1016/j.jstrokecerebrovasdis.2020.105181

Abstract

COVID-19 pandemic has led to a change in the way we manage acute medical illnesses. This pandemic had a negative impact on stroke care worldwide. The World Stroke Organization (WSO) has raised concerns due to the lack of available care and compromised acute stroke services globally. The numbers of thrombolysis and thrombectomy therapies are declining. As well as, the rates and door-to treatment times for thrombolysis and thrombectomy therapies are increasing. The stroke units are being reallocated to serve COVID-19 patients, and stroke teams are being redeployed to COVID-19 centers. Covid 19 confirmed cases and deaths are rising day by day. This pandemic clearly threatened and threatening all stroke care achievements regionally. Managing stroke patients during this pandemic is even more challenging at our region. The Middle East and North Africa Stroke and Interventional Neurotherapies Organization (MENA-SINO) is the main stroke organization regionally. MENA-SINO urges the need to developing new strategies and recommendations for stroke care during this pandemic. This will require multiple channels of interventions and create a protective code stroke with fast triaging path. Developing and expanding the tele-stroke programs are urgently required. There is an urgent need for enhancing collaboration and cooperation between stroke expertise regionally and internationally. Integrating such measures will inevitably lead to an improvement and upgrading of the services to a satisfactory level.

27.

Title

Review of guidelines and recommendations from 17 countries highlights the challenges that clinicians face caring for neonates born to mothers with COVID-19

Authors

Yeo K.T., Oei J.L., De Luca D., Schmölzer G.M., Guaran R., Palasanthiran P., Kumar K., Buonocore G., Cheong J., Owen L.S., Kusuda S., James J., Lim G., Sharma A., Uthaya S., Gale C., Whittaker E., Battersby C., Modi N., Norman M., Naver L., Giannoni E., Diambomba Y., Shah P.S., Gagliardi L., Harrison M., Pillay S., Alburaey A., Yuan Y., Zhang H.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Acta Paediatrica, International Journal of Paediatrics	Q1	Blackwell Publishing Ltd	1 November 2020

DOI

10.1111/apa.15495

Abstract

This review examined how applicable national and regional clinical practice guidelines and recommendations for managing neonates born to mothers with COVID-19 mothers were to the evolving pandemic. Methods: A systematic search and review identified 20 guidelines and recommendations that had been published by May 25, 2020. We analysed documents from 17 countries: Australia, Brazil, Canada, China, France, India, Italy, Japan, Saudi Arabia, Singapore, South Africa, South Korea, Spain, Sweden, Switzerland, the UK and the United States. Results: The documents were based on expert consensus with limited evidence and were of variable, low methodological rigour. Most did not provide recommendations for delivery methods or managing symptomatic infants. None provided recommendations for post-discharge assimilation of potentially infected infants into the community. The majority encouraged keeping mothers and infants together, subject to infection control measures, but one-third recommended separation. Although breastfeeding or using breastmilk was widely encouraged, two countries specifically prohibited this. Conclusion: The guidelines and recommendations for managing infants affected by COVID-19 were of low, variable quality and may be unsustainable. It is important that transmission risks are not increased when new information is incorporated into clinical recommendations. Practice guidelines should emphasise the extent of uncertainty and clearly define gaps in the evidence.

28.

Title

Relationship between weather variables and new daily covid-19 cases in Dhaka, Bangladesh

Authors

Mofijur M., Rizwanul Fattah I.M., Saiful Islam A.B.M., Uddin M.N., Ashrafur Rahman S.M., Chowdhury M.A., Alam M.A., Uddin M.A.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Sustainability (Switzerland)	Q1	MDPI AG	2 October 2020

DOI

10.3390/su12208319

Abstract

The present study investigated the relationship between the transmission of COVID-19 infections and climate indicators in Dhaka, Bangladesh, using coronavirus infections data available from the Institute of Epidemiology, Disease Control and Research (IEDCR), Bangladesh. The Spearman rank correlation test was carried out to study the association of seven climate indicators, including humidity, air quality, minimum temperature, precipitation, maximum temperature, mean temperature, and wind speed with the COVID-19 outbreak in Dhaka, Bangladesh. The study found that, among the seven indicators, only two indicators (minimum temperature and average temperature) had a significant relationship with new COVID-19 cases. The study also found that air quality index (AQI) had a strong negative correlation with cumulative cases of COVID-19 in Dhaka city. The results of this paper will give health regulators and policymakers valuable information to lessen the COVID-19 spread in Dhaka and other countries around the world.

29.

Title

Current scenario of COVID-19 in pediatric age group and physiology of immune and thymus response

Authors

Rehman S., Majeed T., Ansari M.A., Ali U., Sabit H., Al-Suhaimi E.A.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Saudi Journal of Biological Sciences	Q1	Elsevier B.V.	October 2020

DOI

10.1016/j.sjbs.2020.05.024

Abstract

COVID-19 pandemic caused by SARS-CoV-2, continues to manifest with severe acute respiratory syndrome among the adults, however, it offers a convincing indication of less severity and fatality in pediatric age group (0–18 years). The current trend suggests that children may get infected but are less symptomatic with less fatality, which is concordant to earlier epidemic outbreaks of SARS-CoV and MERS-CoV, in 2002 and 2012, respectively. According to the available data, children appear to be at lower risk for COVID-19, as adults constitute for maximum number of the confirmed cases (308,592) and deaths (13,069) as on 22nd March (https://www.worldometers.info/coronavirus). However, rapid publications and information of the adult patients with COVID-19 is in progress and published, on the contrary, almost no comprehensive data or discussion about the COVID-19 in children is available. Therefore, in this review, we outline the epidemiology, clinical symptoms, diagnosis, treatment, prevention, possible immune response and role of thymus in children to combat the COVID-19 outbreak.

30.

Title

NMR as a “gold standard” method in drug design and discovery

Authors

Emwas A.-H., Szczepski K., Poulson B.G., Chandra K., McKay R.T., Dhahri M., Alahmari F., Jaremko L., Lachowicz J.I., Jaremko M.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Molecules	Q2	Multidisciplinary Digital Publishing Institute (MDPI)	October 2020

DOI

10.3390/molecules25204597

Abstract

Studying disease models at the molecular level is vital for drug development in order to improve treatment and prevent a wide range of human pathologies. Microbial infections are still a major challenge because pathogens rapidly and continually evolve developing drug resistance. Cancer cells also change genetically, and current therapeutic techniques may be (or may become) ineffective in many cases. The pathology of many neurological diseases remains an enigma, and the exact etiology and underlying mechanisms are still largely unknown. Viral infections spread and develop much more quickly than does the corresponding research needed to prevent and combat these infections; the present and most relevant outbreak of SARS-CoV-2, which originated in Wuhan, China, illustrates the critical and immediate need to improve drug design and development techniques. Modern day drug discovery is a time-consuming, expensive process. Each new drug takes in excess of 10 years to develop and costs on average more than a billion US dollars. This demonstrates the need of a complete redesign or novel strategies. Nuclear Magnetic Resonance (NMR) has played a critical role in drug discovery ever since its introduction several decades ago. In just three decades, NMR has become a “gold standard” platform technology in medical and pharmacology studies. In this review, we present the major applications of NMR spectroscopy in medical drug discovery and development. The basic concepts, theories, and applications of the most commonly used NMR techniques are presented. We also summarize the advantages and limitations of the primary NMR methods in drug development.

31.

Title

Interruption of the European Association of Cardiothoracic Anaesthesiology (EACTA) Fellowship Program During the Coronavirus Disease 2019 Pandemic: Consequences and Solutions

Authors

El-Tahan M.R., Schreiber J.-U., Diprose P., Wilkinson K., Guarracino F., Erdoes G.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Journal of Cardiothoracic and Vascular Anesthesia	Q2	W.B. Saunders	July 11, 2020

DOI

10.1053/j.jvca.2020.06.056

Abstract

This article discusses the impact of the COVID-19 pandemic on the EACTA fellowship program. The authors present three points that in their view are important and give cause for concern because they could make it difficult or impossible to achieve the original goals of the fellowship program. Corresponding points are discussed and possible solutions are presented. An implementation in the fellowship curriculum is planned. © 2020 Elsevier Inc.

32.

Title

Implications of Public Understanding of COVID-19 in Saudi Arabia for Fostering Effective Communication Through Awareness Framework

Authors

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Journal name	Journal quartile (Scopus)	Publisher	Published date
Frontiers in Public Health	Q3	Frontiers Media S.A.	18 September 2020

DOI

10.3389/fpubh.2020.00494

Abstract

Background: Participation of the public is an important and most effective approach for controlling the spread of novel coronavirus. However, considering its novel nature, it is important to create awareness among the public to be able to take timely preventive measures. On the contrary, misinformation and myths from online communities result in severe damages in mitigation of this novel disease. Objective: Focusing on these aspects, this manuscript reviews public awareness about COVID-19, myths surrounding it, its symptoms, treatment, transmission, importance of information sources, types of information to be considered in awareness campaigns, promotional channels, and their implications in Saudi Arabia. Methods: An online questionnaire-based survey was used for collecting data related to five major aspects related to COVID-19 and awareness creation process. The survey was accessed by 1,881 people, out of whom 741 people participated in the survey. However, 150 dropouts left the survey in between, as a result of which a final sample of 591 was achieved, indicating the response rate of 39.3% and a completion rate of 79.76%. Results: Awareness levels of the participants related to COVID-19, its means of transmission, preventive measures, symptoms, and treatment were identified to be moderate to high (60–80%). However, reliance on a few myths and violation of certain preventive measures were identified with majority of the participants (more than 60%). The Ministry of Health was identified to be the most reliable source of information followed by family and friends. Moreover, 15 types of information were identified to be highly relevant and important, which need to be effectively disseminated among the public through effective communication channels. Conclusions: Lack of awareness can result in serious outcomes in relation to COVID-19. Effective awareness campaigns including relevant information from reliable sources can improve the knowledge of people, and they must be effective in developing positive attitudes among the public toward adopting preventive measures.

33.

Title

Safety measures for COVID-19: A review of surgical preparedness at four major medical centres in Saudi Arabia

Authors

Alsofyani M.A., Malaekah H.M., Bashawyah A., Bawazeer M., Akkour K., Alsalmi S., Alkhairy A., Dajim N.B., Khalifah S., Almalki I.A., Kassab F., Barnawi M., Almalki M., Alharthi M., Alharthi M., Almalki A., Almalki A.H., Bourghli A., Obeid I.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Patient Safety in Surgery	Q2	BioMed Central Ltd	5 September 2020

DOI

10.1186/s13037-020-00259-1

Abstract

In view of the worldwide coronavirus disease 2019 (COVID-19) pandemic, hospitals need contingency planning. This planning should include preparation for an unexpected patient surge. This measure is evolving concomitantly with the implementation of the needed infection control rules. Here, we present our experience in contingency planning at four large tertiary hospitals in Saudi Arabia during this global pandemic, with a focus on dealing with COVID-19 patients who need to undergo surgery. The planning covers response measures required in the operating room and supporting units, including the administrative department, intensive care unit, and different sections of the surgical department. Furthermore, it covers the role of education and simulation in preparing health care providers and ensuring smooth workflow between all sections. We additionally discuss the guidelines and policies implemented in different surgical specialties. These measures are necessary to prevent the transmission of COVID-19 within healthcare facilities. Throughout the COVID-19 pandemic, the healthcare system should develop a comprehensive pandemic plan and set guidelines addressing the management of urgent and malignant cases. The guidelines should be in concordance with internal guidelines.

34.

Title

Successfully treating three patients with acute kidney injury secondary to COVID-19 by peritoneal dialysis: Case report and literature review

Authors

Al-Hwiesh A.K., Mohammed A.M., Elnokeety M., Al-Hwiesh A., Al-Audah N., Esam S., Abdul-Rahman I.S.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Peritoneal Dialysis International	Q2	SAGE Publications Inc.	1 September 2020

DOI

10.1177/0896860820953050

Abstract

Coronavirus Disease 2019 (COVID-19) is a pandemic disease that increased the burden on health-care system. In the Kingdom of Saudi Arabia, 74,795 cases have been reported until 26 May 2020 and the number of cases is rapidly increasing. The mortality rate of COVID-19 worldwide is 6.37%. Here we report three cases of acute kidney injury (AKI) secondary to pneumonia of severe COVID-19; they were treated with automated peritoneal dialysis (PD) with full recovery. To the best of our knowledge, few reports in the literature have discussed the use of PD in AKI secondary to COVID-19.

35.

Title

Thoracic Anesthesia of Patients With Suspected or Confirmed 2019 Novel Coronavirus Infection: Preliminary Recommendations for Airway Management by the European Association of Cardiothoracic Anaesthesiology Thoracic Subspecialty Committee

Authors

Şentürk M., El Tahan M.R., Szegedi L.L., Marczin N., Karzai W., Shelley B., Piccioni F., Granell Gil M., Rex S., Sorbello M., Bence J., Cohen E., Gregorio G.D., Kawagoe I., Globokar M.D., Jimenez M.-J., Licker M.-J., Mourisse J., Mukherjee C., Navarro R., Neskovic V., Paloczi B., Paternoster G., Pelosi P., Salaheldeen A., Stoica R., Unzueta C., Vanpeteghem C., Vegh T., Wouters P., Yapici D., Guarracino F.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Journal of Cardiothoracic and Vascular Anesthesia	Q2	Elsevier	September 2020

DOI

10.1053/j.jvca.2020.03.059

Abstract

The novel coronavirus has caused a pandemic around the world. Management of patients with suspected or confirmed coronavirus infection who have to undergo thoracic surgery will be a challenge for the anesthesiologists. The thoracic subspecialty committee of European Association of Cardiothoracic Anaesthesiology (EACTA) has conducted a survey of opinion in order to create recommendations for the anesthetic approach to these challenging patients. It should be emphasized that both the management of the infected patient with COVID-19 and the self-protection of the anesthesia team constitute a complicated challenge. The text focuses therefore on both important topics.

36.

Title

Behavior change due to COVID-19 among dental academics - The theory of planned behavior: Stresses, worries, training, and pandemic severity

Authors

Ammar N., Aly N.M., Folayan M.O., Khader Y., Virtanen J.I., Al-Batayneh O.B., Mohebbi S.Z., Attia S., Howaldt H.-P., Boettger S., Maharani D.A., Rahardjo A., Khan I., Madi M., Rashwan M., Pavlic V., Cicmil S., Choi Y.-H., Joury E., Castillo J.L., Noritake K., Shamala A., Galluccio G., Polimeni A., Phantumvanit P., Mancino D., Kim J.-B., Abdelsalam M.M., Arheiam A., Dama M.A., Nyan M., Hussein I., Alkeshan M.M., Vukovic A.P., Iandolo A., Kemoli A.M., El Tantawi M.

Journal name	Journal quartile (Scopus)	Publisher	Published date
PLoS ONE	Q1	Public Library of Science	9 September 2020

DOI

10.1371/journal.pone.0239961

Abstract

Objective COVID-19 pandemic led to major life changes. We assessed the psychological impact of COVID-19 on dental academics globally and on changes in their behaviors. Methods We invited dental academics to complete a cross-sectional, online survey from March to May 2020. The survey was based on the Theory of Planned Behavior (TPB). The survey collected data on participants' stress levels (using the Impact of Event Scale), attitude (fears, and worries because of COVID-19 extracted by Principal Component Analysis (PCA), perceived control (resulting from training on public health emergencies), norms (country-level COVID-19 fatality rate), and personal and professional backgrounds. We used multilevel regression models to assess the association between the study outcome variables (frequent handwashing and avoidance of crowded places) and explanatory variables (stress, attitude, perceived control and norms). Results 1862 academics from 28 countries participated in the survey (response rate = 11.3%). Of those, 53.4% were female, 32.9% were <46 years old and 9.9% had severe stress. PCA extracted three main factors: fear of infection, worries because of professional responsibilities, and worries because of restricted mobility. These factors had significant dosede-pendent association with stress and were significantly associated with more frequent handwashing by dental academics (B = 0.56, 0.33, and 0.34) and avoiding crowded places (B = 0.55, 0.30, and 0.28). Low country fatality rates were significantly associated with more handwashing (B = -2.82) and avoiding crowded places (B = -6.61). Training on public health emergencies was not significantly associated with behavior change (B = -0.01 and -0.11). Conclusions COVID-19 had a considerable psychological impact on dental academics. There was a direct, dose-dependent association between change in behaviors and worries but no association between these changes and training on public health emergencies. More change in behaviors was associated with lower country COVID-19 fatality rates. Fears and stresses were associated with greater adoption of preventive measures against the pandemic. © 2020 Ammar et al. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

37.

Title

COVID-19 specialized diabetes clinic model for excellence in diabetes Care: Scientific perspective

Authors

El-Malky A.M., Alsaqabi A.M., Alharbi A.S., Alghammdi W.A., Albalawi, Al-Khalaf, Alghutayghit A.K., Alrufaidi A.S., Alrofydi S.M., Bafageeh S.W., Husain A., Ashour M.A.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Clinical Diabetology	Q4	Via Medica	26 August 2020

DOI

10.5603/DK.2020.0032

Abstract

While diabetes centers are well established by the Ministry of Health, there is no separate specialized diabetes clinics for COVID-19 patients (SDCs). There are several clinical diabetes centers throughout the Kingdom of Saudi Arabia, several of which have been developed through philanthropy funding; nevertheless, it is not obvious what distinguishes SDCs from a therapeutic viewpoint and what the potential would be for such centers. Through this context, we suggest a structure to direct the progress of SDCs. Defining protocols for wider adoption of SDCs as a means to enhance public safety and COVID-19 patient care efficiency (including consistency and satisfaction) and minimize health care expenses becomes increasingly essential when moving towards value-based sales and reimbursements away from service charges. It is wise to introduce innovative financial mechanisms to pay for diabetes that cannot be covered by fiscally limited private and university medical centers. We foresee potential clinical SDCs to be made up of a well-defined framework and six areas or foundations that act as basic guiding principles for the advancement of diabetes treatment skills that can be easily illustrated by stakeholders, including insurance facilities, consumers, payers and government departments.

38.

Title

MENA-SINO Consensus Statement on Implementing Care Pathways for Acute Neurovascular Emergencies During the COVID-19 Pandemic

Authors

Al-Jehani H., John S., Hussain S.I., Al Hashmi A., Alhamid M.A., Amr D., Ozdemir A.O., Shuaib A., Alhazzani A., Ghorbani M., Mansour O., Saqqur M., the MENA-SINO group

Journal name	Journal quartile (Scopus)	Publisher	Published date
Frontiers in Neurology	Q3	Frontiers Media S.A.	25 August 2020

DOI

10.3389/fneur.2020.00928

Abstract

In the unprecedented current era of the COVID-19 pandemic, challenges have arisen in the management and interventional care of patients with acute stroke and large vessel occlusion, aneurysmal subarachnoid hemorrhage, and ruptured vascular malformations. There are several challenges facing endovascular therapy for stroke, including shortages of medical staff who may be deployed for COVID-19 coverage or who may have contracted the infection and are thus quarantined, patients avoiding early medical care, a lack of personal protective equipment, delays in door-to-puncture time, anesthesia challenges, and a lack of high-intensity intensive care unit and stroke ward beds. As a leading regional neurovascular organization, the Middle East North Africa Stroke and Interventional Neurotherapies Organization (MENA-SINO) has established a task force composed of medical staff and physicians from different disciplines to establish guiding recommendations for the implementation of acute care pathways for various neurovascular emergencies during the current COVID-19 pandemic. This consensus recommendation was achieved through a series of meetings to finalize the recommendation.

39.

Title

Identification of the awareness level by the public of Arab countries toward COVID-19: Cross-sectional study following an outbreak

Authors

Bonyan R., Al-Karasneh A.F., El-Dahiyat F., Jairoun A.A.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Journal of Pharmaceutical Policy and Practice	Q2	BioMed Central	21 August 2020

DOI

10.1186/s40545-020-00247-x

Abstract

Background: The novel coronavirus disease 2019 (COVID-19) pandemic is a global challenge. Improving public awareness about preventive measures and disseminating appropriate information about COVID-19 has a critical role in containing the disease. Aim: To evaluate and determine the factors that may affect the level of awareness and responses toward COVID-19 in Arab countries. The study could be helpful in identifying where more public education about COVID-19 is needed. Method: This cross-sectional, online descriptive questionnaire-based study was conducted in February and March 2020. A total of 485 participants from Arabic-speaking countries (Jordan, United Arab Emirates, the Kingdom of Saudi Arabia, Qatar, Palestine, and Egypt) were asked to complete this Arabic-translated survey using social media platforms (Facebook and WhatsApp). Result: In general, there was a good level of awareness of the participants regarding COVID-19. Higher awareness scores were significantly correlated with older participants [odds ratio (OR) 1.019; 95% CI 1.012-1.026], those who attended awareness campaigns [OR 1.212; 95% CI 1.081-1.358], secondary school education holders [OR 1.740; 95% CI 1.096-2.763], higher education diploma holders [OR 2.090; 95% CI 1.297-3.368], university degree holders [OR 1.969; 95% CI 1.265-3.066], those who have post-graduate education [OR 2.206; 95% CI 1.393-3.493], and healthcare employees [OR 1.259; 95% CI 1.025-1.547]. Conclusions: The COVID-19 pandemic is causing global panic; thus, awareness and practices of preventive measures of COVID-19 should be increased through public educational campaigns, which should be planned in accordance with communities' and countries' attitudes toward COVID-19. Collaborative efforts between ministries of heath and residents of every country should be implemented.

40.

Title

COVID-19: Impact and challenges at breast imaging unit

Authors

Fahd Al-Muhanna A.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Breast Journal	Q2	Blackwell Publishing Inc.	1 August 2020

DOI

10.1111/tbj.13891

Abstract

No Abstract Available (Note)

41.

Title

Pandemic preparedness of dentists against coronavirus disease: A Saudi Arabian experience

Authors

Al-Khalifa K.S., AlSheikh R., Al-Swuailem A.S., Alkhalifa M.S., Al-Johani M.H., Al-Moumen S.A., Almomen Z.I.

Journal name	Journal quartile (Scopus)	Publisher	Published date
PLoS ONE	Q1	Public Library of Science	August 2020

DOI

10.1371/journal.pone.0237630

Abstract

Background Dental offices are among the highest risk for transmission of the COVID-19, having the potential to transmit the virus via routine dental procedures. This cross-sectional study assessed the preparedness and perception of infection control measures against the COVID-19 pandemic by dentists in Saudi Arabia. Materials and methods This online survey addressed the impact and perception of the COVID-19 pandemic on dental practice in Saudi Arabia. The questionnaire comprised 26 closed-ended questions. Descriptive statistics included frequency distributions with percentages. In addition, the significance between the different demographic variables and questions about dentists' perception of the COVID-19 pandemic was tested using the Chi-square test. Results COVID-19 management in dental clinics varied in terms of adherence to the Ministry of Health (MOH) guidelines. Dental clinics' screening questionnaire for patients showed good adherence (67%), while the lowest agreement was detected with the question on the existence of an airborne infection in the isolation room (15%). Almost two-thirds of the respondents agreed that the dental reception area adopted the proper COVID-19 preventive measures. Greatest accord was observed in their answers on questions about dentists' perception of the COVID-19 pandemic, ranging from 64%–89%. In addition, there were statistically significant differences in questions about the perception of dentists towards the COVID-19 pandemic by different demographic variables such as age and years of work experience ($p < 0.05$). Conclusion The response of most dentists regarding the preparedness and perception of infection control measures against the COVID-19 pandemic was positive. Dental clinics need to adhere more to the MOH recommendations in preparedness of their facilities or by educating their dentists and staff.

42.

Title

Forecasting the spread of the COVID-19 pandemic in Saudi Arabia using ARIMA prediction model under current public health interventions

Authors

Alzahrani S.I., Aljamaan I.A., Al-Fakih E.A.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Journal of Infection and Public Health	Q1	Elsevier Ltd	July 2020

DOI

10.1016/j.jiph.2020.06.001

Abstract

The substantial increase in the number of daily new cases infected with coronavirus around the world is alarming, and several researchers are currently using various mathematical and machine learning-based prediction models to estimate the future trend of this pandemic. In this work, we employed the Autoregressive Integrated Moving Average (ARIMA) model to forecast the expected daily number of COVID-19 cases in Saudi Arabia in the next four weeks. We first performed four different prediction models; Autoregressive Model, Moving Average, a combination of both (ARMA), and integrated ARMA (ARIMA), to determine the best model fit, and we found out that the ARIMA model outperformed the other models. The forecasting results showed that the trend in Saudi Arabia will continue growing and may reach up to 7668 new cases per day and over 127,129 cumulative daily cases in a matter of four weeks if stringent precautionary and control measures are not implemented to limit the spread of COVID-19. This indicates that the Umrah and Hajj Pilgrimages to the two holy cities of Mecca and Medina in Saudi Arabia that are supposedly scheduled to be performed by nearly 2 million Muslims in mid-July may be suspended. A set of extreme preventive and control measures are proposed in an effort to avoid such a situation.

43.

Title

Anesthesia management of thoracic surgery in a patient with suspected/confirmed COVID-19: Interim Saudi Anesthesia Society guidelines

Authors

Eldawlatly A., El Tahan M., Abdulmomen A., Kattan M., Ahmad A.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Saudi Journal of Anaesthesia	Q3	Wolters Kluwer Medknow Publications	July-September 2020

DOI

10.4103/sja.SJA_252_20

Abstract

The Saudi Anesthesia Society (SAS) has developed interim guidelines on perioperative care of COVID-19 patients who undergo surgery and anesthesia.[1] Patients with ' suspected/confirmed' COVID-19 might be scheduled for emergency thoracic procedures either during the acute or convalescence phases of the disease. There is a demanding need to develop the SAS recommendations on the perioperative care of thoracic surgery patients during the COVID-19 outbreak. There are no relevant publications on perioperative care of thoracic surgery in COVID-19 patients. These recommendations were developed from the previous experience of management of patients during the MERS-CoV outbreak in 2012-2013 and literature available on the general airway and anesthesia care for patients with COVID-19, SARS, MERS-CoV.

44.

Title

Predicting the epidemiological outbreak of the coronavirus disease 2019 (COVID-19) in Saudi Arabia

Authors

Alboaneen D., Pranggono B., Alshammari D., Alqahtani N., Alyaffer R.

Journal name	Journal quartile (Scopus)	Publisher	Published date
International Journal of Environmental Research and Public Health	Q2	Multidisciplinary Digital Publishing Institute (MDPI) AG	June 2020

DOI

10.3390/ijerph17124568

Abstract

The coronavirus diseases 2019 (COVID-19) outbreak continues to spread rapidly across the world and has been declared as pandemic by World Health Organization (WHO). Saudi Arabia was among the countries that was affected by the deadly and contagious virus. Using a real-time data from 2 March 2020 to 15 May 2020 collected from Saudi Ministry of Health, we aimed to give a local prediction of the epidemic in Saudi Arabia. We used two models: the Logistic Growth and the Susceptible-Infected-Recovered for real-time forecasting the confirmed cases of COVID-19 across Saudi Arabia. Our models predicted that the epidemics of COVID-19 will have total cases of 69,000 to 79,000 cases. The simulations also predicted that the outbreak will entering the final-phase by end of June 2020.

45.

Title

Dentists thoughts about COVID-19

Authors

Al-Ansari A.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Evidence-Based Dentistry	Q4	Springer Nature	1 June 2020

DOI

10.1038/s41432-020-0102-x

Abstract

Data sources Self-developed survey. Data extraction and synthesis This was a cross-sectional study using a self-administered online survey. Results Out of 700 randomly selected dentists in Jordan, 368 completed an online survey. Of those, 36% reported that the incubation period for COVID-19 is 1-14 days. The majority were aware of the symptoms of the disease and can identify affected patients. Nonetheless, 36.7% of dentists did not believe it to be a serious public health issue. Conclusions This group of Jordanian dentists was generally aware of COVID-19 symptoms and mode of transmission. Clinical practice guidelines should be made available to dentists by their associations during such crises.

46.

Title

Telegram as a tool to supplement online medical education during covid-19 crisis

Authors

Iqbal M.Z., Alradhi H.I., Alhumaidi A.A., Alshaikh K.H., AlObaid A.M., Alhashim M.T., AlSheikh M.H.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Acta Informatica Medica	Q2	Avicena Publishing	1 June 2020

DOI

10.5455/aim.2020.28.94-97

Abstract

Introduction Instant Messaging Applications are known for their potential to enhance learning. However, to date, there has been little investigation into the implications of the 'Telegram' application for online medical education and training. Aim: This study explores the potential benefits and disadvantages of integrating Telegram into undergraduate medical education during the COVID-19 pandemic. Methods: An exploratory study was conducted between March and May 2020, with 203 undergraduate medical students recruited through purposive sampling. Data was collected through seven open-ended questions, followed by thematic analysis using Atlas.ti. Results: Most students participating in this study reported multiple utilities of the application, including easy access to educational resources and the ability to add unlimited members, as well as files in all formats and sizes. Additionally, the application assisted students to engage with collaborative learning, maintain their wellbeing, and ensure their security. However, they also reported some drawbacks, i.e., a complex interface, information overload, and a tendency to distract them, causing time wastage. Conclusion: This study concludes that Telegram provides an effective mobile learning platform for medical students during the current crisis, in particular. Moreover, it offers considerably more functionalities and fewer potential drawbacks than alternative applications.

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47.

Title

COVID-19 and healthcare workers in pakistan: Are we losing this fight?

Authors

Ali S., Noreen S., Farooq I.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Journal of Medical Sciences (Peshawar)	Q4	Khyber Medical College	Jul 31, 2020

DOI

N/A

Abstract

No Abstract Available (Note)

48.

Title

Assessment of the implementation of preventive measures by iraqis people to reduce the spread of COVID-19 pandemic

Authors

Kamel Abd R., Raman V.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Revista de Salud Publica	Q4	Universidad Nacional de Colombia	March-April 2020

DOI

10.15446/rsap.V22n2.86475

Abstract

Background and aim the new outbreak “Coronavirus disease 2019 (COVID-19)” happened in china is caused by severe acute respiratory distress syndrome coronavi-rus 2 (SARS-CoV-2). Consequently, it spreads across the globe and is affecting wellbe-ing frameworks and the global economy. This pandemic disease places a heavy burden on governments in general, so individuals must adhere to WHO's instructions to limit its spread. The current study was applied to find out the extent of commitment among the Iraqi people to the standards of prevention measures against the coronavirus. Materials and Methods A cross sec¬tional study was conducted with 1153 respondents widely in all governorates of Iraq to identify the commitment of the Iraqis to the preventive measures against COVID-19 in Iraq. This study covered the Iraqis in three main regions (Southern, middle, and Northern) for data collection. It was conducted between the 17th and 25th of March 2020, and Iraqis were administered with a structu-red questionnaire comprising of three domains. Results The results showed that the majority of the respondents (52%) were female, and most of them (42.3%) were observed between the age group of 31-40 years. About 82% of the respondents were residents of urban areas. Conclusion This study reveals the excellent implementation of preventive measures by the population. It is observed that the application of prevention standards in the countryside is less than in the city.

49.

Title

Tocilizumab prescribing criteria for COVID-19 patients

Authors

Al-Qaaneh A.M., Al-Ghamdi F.H.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Human Vaccines and Immunotherapeutics	Q2	Bellwether Publishing, Ltd.	20 Oct 2020

DOI

10.1080/21645515.2020.1822137

Abstract

No abstract available (Letter)

50.

Title

State-of-the-art tools to identify druggable protein ligand of SARS-CoV-2

Authors

Azeez S.A., Alhashim Z.G., Al Otaibi W.M., Alsuwat H.S., Ibrahim A.M., Almandil N.B., Francis Borgio J.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Archives of Medical Science	Q1	Termedia Publishing House Ltd.	24-04-2020

DOI

10.5114/aoms.2020.94046

Abstract

Introduction: The SARS-CoV-2 (previously 2019-nCoV) outbreak in Wuhan, China and other parts of the world affects people and spreads coronavirus disease 2019 (COVID-19) through human-to-human contact, with a mortality rate of > 2%. There are no approved drugs or vaccines yet available against SARS-CoV-2. Material and methods: State-of-the-art tools based on in-silico methods are a cost-effective initial approach for identifying appropriate ligands against SARS-CoV-2. The present study developed the 3D structure of the envelope and nucleocapsid phosphoprotein of SARS-CoV-2, and molecular docking analysis was done against various ligands. Results: The highest log octanol/water partition coefficient, high number of hydrogen bond donors and acceptors, lowest non-bonded interaction energy between the receptor and the ligand, and high binding affinity were considered for the best ligand for the envelope (mycophenolic acid: log P = 3.00; ΔG = -10.2567 kcal/mol; pKi = 7.713 μM) and nucleocapsid phosphoprotein (1-[(2,4-dichlorophenyl)methyl]pyrazole-3,5-dicarboxylic acid: log P = 2.901; ΔG = -12.2112 kcal/mol; pKi = 7.885 μM) of SARS-CoV-2. Conclusions: The study identifies the most potent compounds against the SARS-CoV-2 envelope and nucleocapsid phosphoprotein through state-of-the-art tools based on an in-silico approach. A combination of these two ligands could be the best option to consider for further detailed studies to develop a drug for treating patients infected with SARS-CoV-2, COVID-19.


COVID-19

51.

Title

Coagulopathies in novel coronavirus (SARS-CoV-2) pandemic: Emerging evidence for hematologists

Authors

Al-Subaie A.M.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Saudi Journal of Biological Sciences	Q1	Elsevier B.V.	2020

DOI

10.1016/j.sjbs.2020.11.006

Abstract

The coronavirus disease (COVID-19), which is also known as acute respiratory syndrome coronavirus-2 (SARS-CoV2) is a transmissible disease, has phenotypes varying from asymptomatic to Acute Respiratory Distress Syndrome (ARDS) or multiple organ dysfunction syndrome (MODS) and ultimately death in certain cases. Coagulation disorders are being frequently reported amongst these patients and the pathogenesis is still not completely understood. Proposed mechanisms for these coagulopathies comprise a hypercoagulable state with micro- and/or macro-thrombosis in the vessels. A number of changes have been reported or proposed in circulating prothrombotic factors in COVID-19 patients and includes elevation in both factor VIII and fibrinogen, circulating prothrombotic microparticles and hyperviscosity. The COVID-19 patients are showing varied coagulopathies and are at high risk for venous thromboembolism (VTE) which demands an early intervention. This paper reviews the evolving data regarding the evaluation and managing of coagulopathies in patients with COVID-19.

52.

Title

Lipid-based nano delivery of Tat-peptide conjugated drug or vaccine–promising therapeutic strategy for SARS-CoV-2 treatment

Authors

Ansari M.A., Almatroudi A., Alzohairy M.A., AlYahya S., Alomary M.N., Al-Dossary H.A., Alghamdi S.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Expert Opinion on Drug Delivery	Q1	Taylor & Francis Ltd	31 Aug 2020

DOI

10.1080/17425247.2020.1813712

Abstract

No abstract available (Editorial)

53.

Title

State-of-the-art tools unveil potent drug targets amongst clinically approved drugs to inhibit helicase in SARS-CoV-2

Authors

Francis Borgio J., Alsuwat H.S., Al Otaibi W.M., Ibrahim A.M., Almandil N.B., Al Asoom L.I., Salahuddin M., Kamaraj B., AbdulAzeez S.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Archives of Medical Science	Q1	Termedia Publishing House Ltd.	24-04-2020

DOI

10.5114/aoms.2020.94567

Abstract

Introduction: The extreme health and economic problems in the world due to the SARS-CoV-2 infection have led to an urgent need to identify potential drug targets for treating coronavirus disease 2019 (COVID-19). The present state-of-the-art tool-based screening was targeted to identify drug targets among clinically approved drugs by uncovering SARS-CoV-2 helicase inhibitors through molecular docking analysis. Material and methods: Helicase is a vital viral replication enzyme, which unwinds nucleic acids and separates the double-stranded nucleic acids into single-stranded nucleic acids. Hence, the SARS-CoV-2 helicase protein 3D structure was predicted, validated, and used to screen the druggable targets among clinically approved drugs such as protease inhibitor, nucleoside reverse transcriptase inhibitor, and non-nucleoside reverse transcriptase inhibitors, used to treat HIV infection using molecular docking analysis. Results: Interaction with SARS-CoV-2 helicase, approved drugs, vapreotide (affinity: -12.88; S score: -9.84 kcal/mol), and atazanavir (affinity: -11.28; S score: -9.32 kcal/mol), approved drugs for treating AIDS-related diarrhoea and HIV infection, respectively, are observed with significantly low binding affinity and MOE score or binding free energy. The functional binding pockets of the clinically approved drugs on SARS-CoV-2 helicase protein molecule suggest that vapreotide and atazanavir may interrupt the activities of the SARS-CoV-2 helicase. Conclusions: The study suggests that vapreotide may be a choice of drug for wet lab studies to inhibit the infection of SARS-CoV-2.

54.

Title

Recent advances in vaccine and immunotherapy for COVID-19

Authors

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Journal name	Journal quartile (Scopus)	Publisher	Published date
Human Vaccines and Immunotherapeutics	Q2	Bellwether Publishing, Ltd.	06 Nov 2020

DOI

10.1080/21645515.2020.1825896

Abstract

The COVID-19 pandemic caused by SARS-CoV-2 has resulted in millions of cases and hundreds of thousands of deaths. Beyond there being no available antiviral therapy, stimulating protective immunity by vaccines is the best option for managing future infections. Development of a vaccine for a novel virus is a challenging effort that may take several years to accomplish. This mini-review summarizes the immunopathological responses to SARS-CoV-2 infection and discusses advances in the development of vaccines and immunotherapeutics for COVID-19.

55.

Title

Emerging of composition variations of SARS-CoV-2 spike protein and human ACE2 contribute to the level of infection: in silico approaches

Authors

AlGhamdi N.A., Alsuwat H.S., Borgio J.F., AbdulAzeez S.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Journal of Biomolecular Structure and Dynamics	Q3	Taylor & Francis Ltd	03 Nov 2020

DOI

10.1080/07391102.2020.1841032

Abstract

SARS-CoV-2 is causative of pandemic COVID-19. There is a sequence similarity between SARS-CoV-2 and SARS-CoV; however, SARS-CoV-2 RBDs (receptor-binding domain) binds 20-fold strongly with human angiotensin-converting enzyme 2 (hACE2) than SARS-CoV. The study aims to investigate protein–protein interactions (PPI) of hACE2 with SARS-CoV-2 RBD between wild and variants to detect the most influential interaction. Variants of hACE2 were retrieved from NCBI and subjected to determine the most pathogenic nsSNPs. Probability of PPIs determines the binding affinity of hACE2 genetic variants with RBD was investigated. Composition variations at the hACE2 and RBD were processed for PatchDock and refined by FireDock for the PPIs. Twelve nsSNPs were identified as the top pathogenic from SNPs (n = 7489) in hACE2 using eight bioinformatics tools. Eight RBD variants were complexed with 12 nSNPS of hACE2, and the global energy scores (Kcal/mol) were calculated and classified as very weak (−3.93 to −18.43), weak (−18.42 to −32.94), moderate (−32.94 to −47.44), strong (−47.44 to −61.95) and very strong (−61.95 to −76.46) zones. Seven composition variants in the very strong zone [G726R-G476S; R768W-V367F; Y252N-V483A; Y252N-V367F; G726R-V367F; N720D-V367F and N720D-F486L], and three in very weak [P263S-S383C; RBD-H378R; G726R-A348T] are significantly ($p < 0.00001$) varied for global energy score. Zonation of the five zones was established based on the scores to differentiate the effect of hACE2 and RBD variants on the binding affinity. Moreover, our findings support that the combination of hACE2 and RBD is key players for the risk of infection that should be done by further laboratory studies. Communicated by Ramaswamy H. Sarma. © 2020 Informa UK Limited, trading as Taylor & Francis Group.

56.

Title

Dynamic interplay between microbiota and mucosal immunity in early shaping of asthma and its implication for the COVID-19 pandemic

Authors

Alkhater S.A.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Journal of Asthma and Allergy	Q1	Dove Medical Press Ltd	28 September 2020

DOI

10.2147/JAA.S272705

Abstract

The crosstalk between host immunity and the external environment in the mucous membranes of the gastrointestinal and respiratory tracts in bronchial asthma has recently been scrutinized. There is compelling evidence that the microbiota at these sites may play an important role in the pathogenesis of this chronic airway disease. The appearance of bacteria early in life in the gut before dissemination to the airways plays a pivotal role in shaping mucosal immunity. Loss of microbial diversity or dysbiosis can result in aberrant immunemediated inflammation and mucosal barrier disruption, which coincides clinically with the successive development of the “allergic march” in asthma. Microbial manipulation may be effective in curbing asthma development by indirectly preserving homeostatic epithelial barrier functions. The protective effects and mechanisms of immunity-microbiome crosstalk at mucosal sites require further investigation to identify therapeutic and preventive measures in asthma. This topical review aims to highlight new evidence that compromised epithelial barrier function, which results in deregulated crosstalk between the microbiome and host mucosal immune system, is an important disease mechanism in asthma. In the light of current COVID-19 pandemic, the collective findings on the impact of mucosal microbiota on the suceptibility to SARS-CoV-2 infection and severity of COVID-19 is explored. The possible therapeutic implications to target these abnormalities are further discussed.

57.

Title

Chest computed tomography findings in hospitalized COVID-19 patients: A systematic review and meta-analysis

Authors

Muhammad S.Z., Ahmed A., Shahid I., Khalid A., Menezes R.G., Sheikh M.U., Siddiqi T.J., Usman M.S., Khosa F.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Infezioni in Medicina	Q3	EDIMES Edizioni Medico Scientifiche	2020

DOI

NA

Abstract

Most studies evaluating chest computed tomography (CT) features in coronavirus disease 2019 (COVID-19) have been small-sized and have presented varied findings. We aim to systematically review these studies and to conduct a meta-analysis of their results to provide a well-powered assessment of chest CT findings in patients with COVID-19. PubMed and EMBASE databases were systematically searched to identify published studies that evaluated chest CT findings in COVID-19 patients. Data regarding study characteristics and CT findings, including distribution of lesions, the lobe of lung involved, lesion densities, and radiological pat-terns, were extracted. Arcsine transformed proportions from individual studies were pooled using a random-effects model to derive pooled proportions (PPs) and 95% confidence intervals (CIs). A total of fifty-four studies (n=2693 confirmed COVID-19 patients) were included in the final review. Prevalence of different CT findings varied across studies; however, the most common findings were bilateral pulmonary involvement (PP: 74.1% [68.4%, 79.5%]; I2=85.76%), ground glass opacification (PP: 64.6% [57.6%, 71.4%]; I2=91.52%), involvement of the left lower lobe (PP: 71.2% [58.9%, 82.1%]; I2=90.91%), and subpleural distribution of lesions (PP: 57.2% [39.0%, 74.3%]; I2=93.08%). Multivari-ate meta-regression revealed a positive association between prevalence of air bron-chograms and average age of the population (p=0.013). Bilateral ground glass opacification, a subpleural distribution of lesions, and involvement of the left lower lobe were the most nota-ble chest CT findings in COVID-19 patients.

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58.

Title

The positive impact of social media on the level of covid-19 awareness in saudi arabia: A web-based cross-sectional survey

Authors

Alnasser A.H.A., Al-Tawfiq J.A., Al Kalif M.S.H., Alobaysi A.M.A., Al Mubarak M.H.M., Alturki H.N.H., Alharbi A.A.A., Albahrani R.S.S., Alatef Sultan S.A.S., Alhamad A.R.N.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Infezioni in Medicina	Q3	EDIMES Edizioni Medico Scientifiche	2020

DOI

NA

Abstract

In late December 2019, the COVID-19 pandemic start-ed to spread from Hubei province in China. Currently there are many affected countries worldwide, including Saudi Arabia. This study aimed to assess the use of social media as a source for COVID-19 awareness in Saudi Arabia. An online survey was conducted between 9 and 13 May 2020 and a total of 3,204 subjects participated in the survey. We used snowball sam-pling techniques through an online structured ques-tionnaire. The data were cleaned, coded and analysed using the Statistical Package for the Social Sciences SPSS version 25.0. A chi-square test was used to find the associations between variables. Of all participants, 75.4% had a high level of awareness of the COVID-19 pandemic. Saudi participants above 18 years old and medical practitioners showed a high level of aware-ness. All participants from all regions of Saudi Arabia showed a high level of awareness except for those from the northern region. The most common source of information was the official government social media, and 44.1% reported the use of Twitter. Our findings show that social media have a positive impact on the circula-tion of information about the COVID-19 pandemic in Saudi Arabia.

59.

Title

Benzothiazole moieties and their derivatives as antimicrobial and antiviral agents: A mini-review

Authors

Elamin M.B., Elaziz A.A.E.S.A., Abdallah E.M.

Journal name	Journal quartile (Scopus)	Publisher	Published date
International Journal of Research in Pharmaceutical Sciences	Q4	JK Welfare & Pharmascope Foundation	Jul 8, 2020

DOI

NA

Abstract

Heterocyclic chemistry has provided an inexhaustible source of pharmaceutical molecules. Heterocyclic compounds such as benzothiazole moieties and its derivatives area substantial class of compounds in pharmaceutical chemistry and exhibited therapeutic capabilities, such as antitumor, anticancer, antioxidant, antidiabetic, antiviral, antimicrobial, antimalarial, anthelmintic and other activities. Besides, some antibiotics such as penicillin and cephalosporin have heterocyclic moiety. The growing prevalence of multi-drug resistant pathogens represents serious global concern,which requires the development of new antimicrobial drugs. Moreover, the emergence of pandemic SARS-CoV-2 causing Covid-19 disease and all these health dilemmas urge the scientific community to examine the possible antimicrobial and antiviral capacities of some bioactive benzothiazole derivatives against these severe causative agents.This mini-review highlights some recent scientific literature on different benzothiazole molecules and their derivatives. It turns out that, there are numerous synthesized benzothiazole derivatives which exhibited different mode of actions against microorganisms or viruses and accordingly suggested them as an active candidate in the discovery of new antimicrobial or antiviral agents for clinical development. The recommended bioactive benzothiazole derivatives mentioned in the current study are mainly Schiff bases, azo dyes and metal complexes benzothiazole derivatives; the starting material for most of these derivatives are 2-aminobenzothiazole although careful pharmaceutical studies should be conducted to ensure the safety and efficacy of these bioactive synthesized molecules as an antimicrobial or antiviral drug in the future.

60.

Title

Safety and efficacy of convalescent plasma to treat severe covid-19: Protocol for the saudi collaborative multicenter phase II study

Authors

Albalawi M., Zaidi S.Z.A., AlShehry N., AlAskar A., Zaidi A.R.Z., Abdallah R.N.M., Salam A., AlSagheir A., AlMozain N., Elgohary G., Batarfi K., Alfaraedi A., Khojah O., Al-Ansari R., Alfaraj M., Dayel A., Bahrani A.A., Abdelhameed A.N., Alhumaidan H., Al-Otaibi J.M., Radwi G., Raizah A., Shatry H., Alsaleh S., AlZahrani H., Al-Hashmi H.

Journal name	Journal quartile (Scopus)	Publisher	Published date
JMIR Research Protocols	Not available	JMIR Publications Inc.	02.10.2020

DOI

10.2196/23543

Abstract

Background: The COVID-19 pandemic is expected to cause significant morbidity and mortality. The development of an effective vaccine will take several months to become available, and its affordability is unpredictable. Transfusion of convalescent plasma (CP) may provide passive immunity. Based on initial data from China, a group of hematologists, infectious disease specialists, and intensivists drafted this protocol in March 2020. Objective: The aim of this study is to test the feasibility, safety, and efficacy of CP in treating patients with COVID-19 across Saudi Arabia. Methods: Eligible patients with COVID-19 will be recruited for CP infusion according to the inclusion criteria. As COVID-19 has proven to be a moving target as far as its management is concerned, we will use current definitions according to the Ministry of Health (MOH) guidelines for diagnosis, treatment, and recovery. All CP recipients will receive supportive management including all available recommended therapies according to the available MOH guidelines. Eligible CP donors will be patients with COVID-19 who have fully recovered from their disease according to MOH recovery criteria as detailed in the inclusion criteria. CP donors have to qualify as blood donors according to MOH regulations except for the history of COVID-19 in the recent past. We will also test the CP donors for the presence of SARS-CoV-2 antibodies by a rapid test, and aliquots will be archived for future antibody titration. Due to the perceived benefit of CP, randomization was not considered. However, we will compare the outcome of the cohort treated with CP with those who did not receive CP due to a lack of consent or lack of availability. In this national collaborative study, there is a likelihood of not finding exactly matched control group patients. Hence, we plan to perform a propensity score matching of the CP recipients with the comparator group patients for the major characteristics. We plan to collect demographic, clinical, and laboratory characteristics of both groups and compare the outcomes. A total sample size of 575 patients, 115 CP recipients and 460 matched controls (1:4 ratio), will be sufficient to detect a clinically important hospital stay and 30-day mortality difference between the two groups with 80% power and a 5% level of significance. Results: At present, patient recruitment is still ongoing, and the interim analysis of the first 40 patients will be shared soon. Conclusions: In this paper, we present a protocol for a national collaborative multicenter phase II study in Saudi Arabia for assessing the feasibility, safety, and potential efficacy of CP in treating patients with severe COVID-19. We plan to publish an interim report of the first 40 CP recipients and their matched comparators soon.

61.

Title

Syndrome resembling Kawasaki disease in COVID-19 asymptomatic children

Authors

Rehman S., Majeed T., Ansari M.A., Al-Suhaimi E.A.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Journal of Infection and Public Health	Q1	Elsevier Ltd	December 2020

DOI

10.1016/j.jiph.2020.08.003

Abstract

The current knowledge about the COVID-19 (Coronavirus Disease-2019) pandemic is still limited and is unravelling with the passing days, especially clinical data, and research in pediatric age group. Recently, there is a new and crucial development reported recently among the COVID-19 asymptomatic children, a novel syndrome affecting asymptomatic COVID-19 children, presenting as a hyperinflammatory syndrome which is like Kawasaki disease shock syndrome. The purpose of this correspondence is to discuss some important findings of the syndrome for the better understanding of the disease.

62.

Title

Imaging differences between coronavirus disease 2019, severe acute respiratory syndrome, and Middle East respiratory syndrome

Authors

Kheiralla O.A.M., Tajaldeen A.A., Bakheet A.O.

Journal name	Journal quartile (Scopus)	Publisher	Published date
European Journal of Radiology Open	Q3	Elsevier Ltd	12 October 2020

DOI

10.1016/j.ejro.2020.100277

Abstract

Since the outbreak of Coronavirus Disease-19 (COVID-19) infection in December 2019 in Wuhan, the capital Hubei province, central of China, more than 4 million people have contracted the virus worldwide. Despite the imposed precautions, coronavirus disease-19 is rapidly spreading with human-to-human transmission resulting in more than 290,000 death as of May 13, 2020 according to World Health Organization (WHO). The aim of this study was to revise the characteristic imaging features of Sever Acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome (MERS) during their outbreak, and to compare them with that of COVID-19, to familiarize radiologists with the imaging spectrum of corona-virus syndromes. This study will help in more understanding and characterisation of COVID-19 to support the global efforts in combating its worldwide outbreak.

63.

Title

Role of precautionary measures in containing the natural course of novel coronavirus disease

Authors

Alumran A.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Journal of Multidisciplinary Healthcare	Q1	Dove Medical Press Ltd	16 July 2020

DOI

10.2147/JMDH.S261643

Abstract

Background: The coronavirus disease (COVID-19) pandemic is spreading at an alarming rate. Several health authorities have implemented specific precautionary measures worldwide to combat the spread of the disease. The influence of these measures on tackling the spread of the disease remains to be elucidated. Therefore, this study aimed to assess the impact of precautionary measures to contain the COVID-19 outbreak. Methods: Data for this study were gathered from publicly available data sources such as the Worldometer and World Health Organization websites. The expected number of new cases is calculated using a mathematical formula to assess the difference between the observed and expected number of cases, thus indicating the impact of precautionary measures on the spread of COVID-19. Results: The preventive measures massively impacted the reduction of COVID-19 cases in Saudi Arabia from the expected number of 437,097 accumulated cases by May 4, 2020, to the observed number of 28,656 accumulated cases. Thus, the fatality rate is reduced from the expected 15,735 accumulated deaths by May 4 to 191 accumulated deaths. Conclusion: Precautionary measures adopted by the Saudi Arabian health authorities were evidently effective in controlling the spread and further burden of COVID-19.

64.

Title

A deep-learning-based framework for automated diagnosis of COVID-19 using X-ray images

Authors

Khan I.U., Aslam N.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Information (Switzerland)	Q3	Multidisciplinary Digital Publishing Institute (MDPI) AG	29 August 2020

DOI

10.3390/INFO11090419

Abstract

The emergence and outbreak of the novel coronavirus (COVID-19) had a devasting effect on global health, the economy, and individuals' daily lives. Timely diagnosis of COVID-19 is a crucial task, as it reduces the risk of pandemic spread, and early treatment will save patients' life. Due to the time-consuming, complex nature, and high false-negative rate of the gold-standard RT-PCR test used for the diagnosis of COVID-19, the need for an additional diagnosis method has increased. Studies have proved the significance of X-ray images for the diagnosis of COVID-19. The dissemination of deep-learning techniques on X-ray images can automate the diagnosis process and serve as an assistive tool for radiologists. In this study, we used four deep-learning models-DenseNet121, ResNet50, VGG16, and VGG19-using the transfer-learning concept for the diagnosis of X-ray images as COVID-19 or normal. In the proposed study, VGG16 and VGG19 outperformed the other two deep-learning models. The study achieved an overall classification accuracy of 99.3%.

65.

Title

Further comments on the effect of precautionary measures in containing the spread of covid-19 [response to letter]

Authors

Alumran A.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Journal of Multidisciplinary Healthcare	Q1	Dove Medical Press Ltd	4 September 2020

DOI

10.2147/JMDH.S278693

Abstract

No abstract Available (Response to Letter)

66.

Title

Current Clinical Dental Practice Guidelines and the Financial Impact of COVID-19 on Dental Care Providers

Authors

Ali S., Farooq I., Abdelsalam M., Alhumaid J.

Journal name	Journal quartile (Scopus)	Publisher	Published date
European Journal of Dentistry	Q2	Georg Thieme Verlag	03 September 2020

DOI

10.1055/s-0040-1716307

Abstract

The novel coronavirus disease 2019 (COVID-19) has been acknowledged as a pandemic by the World Health Organization (WHO). The aim of this study was to review guidelines issued by different health regulatory bodies amid the COVID-19 outbreak and financial constraints faced by dentists globally. Relevant papers and news articles were identified in Google Scholar and PubMed. The search was made using the keywords COVID-19, COVID-19 and dentistry, and the financial impact of COVID-19 on dentistry. Studies and news articles published in languages other than English were excluded and a final selection of 53 relevant studies, guideline documents, and news articles were made. The outbreak of COVID-19 has affected all businesses including general dental practices, which are suffering huge financial losses as they have been advised to provide only emergency dental care. These recommendations should be appreciated as a positive step but they have caused serious financial implications for dental practices. It can be concluded that current dental practice globally is limited to the provision of emergency treatments only. This step is appreciative, but has resulted in huge financial losses sustained by dental care providers (DCPs) worldwide. The governments and health regulatory bodies of developed countries are trying to help dental practices to evolve from this troublesome situation, but there is no visible policy from the underdeveloped world that could help the DCPs to save their practices from closing down due to the financial constraints.

67.

Title

Dental facilities during the new corona outbreak: A swot analysis

Authors

Gaffar B., Alhumaid J., Alhareky M., Alonaizan F., Almas K.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Risk Management and Healthcare Policy	Q2	Dove Medical Press Ltd	25 August 2020

DOI

10.2147/RMHP.S265998

Abstract

Recently, there have been many global outbreaks of diseases. The latest is the coronavirus disease of 2019 (COVID-19) pandemic. The virus has spread worldwide and is transmitted mainly through droplets or by touching contaminated surfaces. Globally, health-care systems are challenged due to a lack of workplace safety and professional obligations in addition to the rapid spread of the virus. Dental facilities are at greater risk due to the nature of dental care. The aim of this review study was to provide a situational analysis within dental facilities during the new COVID-19 outbreak. Published papers concerning dental facilities and COVID-19 were retrieved from PubMed, search engines, and organizational websites. All data were reviewed, arranged into themes, and then categorized either as strengths or weaknesses with respect to addressing the COVID-19 pandemic in dental facilities, and accordingly, threats and possible opportunities to the handling of the pandemic were identified. Preparedness of dental facilities during the current pandemic is a weakness that needs to be addressed promptly. Shortage of dental care providers, cyber security, economic losses, and ethical challenges are possible threats due to the current outbreak. Coordination and prompt communication among all healthcare providers during such outbreaks is a strength that needs to be supported. This strengths, weaknesses, opportunities, and threats (SWOT) analysis can be a useful tool for guiding decision-making as it is crucial during the current pandemic to work on weaknesses, avoid threats, and utilize all future opportunities.

68.

Title

Risk assessment of healthcare workers at the frontline against COVID-19

Authors

Ali S., Noreen S., Farooq I., Bugshan A., Vohra F.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Pakistan Journal of Medical Sciences	Q2	Professional Medical Publications	19-05-2020

DOI

10.12669/pjms.36.COVID19-S4.2790

Abstract

The novel coronavirus disease 2019 (COVID-19) is a global pandemic. Healthcare workers (HCWs) are on the frontline of treating patients infected with COVID-19. However, data related to its infection rate among HCWs are limited. The aim was to present evidence associated with the number of HCWs being infected with COVID-19 from most viral affected countries (Italy, China, United States, Spain, and France). Furthermore, we looked into the reasons for HCWs COVID 19 infections and strategies to overcome this problem. Early available evidence suggested that HCWs are being increasingly infected with the novel infection ranging from 15% to 18% and in some cases up to 20% of the infected population. Major factors for infection among HCWs include lack of understanding of the disease, inadequate use and availability of Personal Protective Equipment (PPE), uncertain diagnostic criteria, unavailability of diagnostic tests and psychological stress. Therefore the protection of HCWs by authorities should be prioritized through education and training, the readiness of staff, incentives, availability of PPEs, and psychological support.

69.

Title

Saudi epilepsy society consensus on epilepsy management during the covid-19 pandemic

Authors

Alotaibi F., Althani Z., Aljaafari D., Tayeb H.O., Baarmah D., Aljalal N., Muthaffar O., Alqulaiti K., Alhameed M., Ali B., Qureshi S., Albaradie R.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Neurosciences	Q3	Saudi Arabian Armed Forces Hospital	2020

DOI

10.17712/nsj.2020.3.20200066

Abstract

No abstract available (Note)

70.

Title

Sexual Health Implications of COVID-19 Pandemic

Authors

Pennanen-lire C., Prereira-Lourenço M., Padoa A., Ribeirinho A., Samico A., Gressler M., Jatoi N.-A., Mehrad M., Girard A.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Sexual Medicine Reviews	Q1	Elsevier B.V.	November 2020

DOI

10.1016/j.sxmr.2020.10.004

Abstract

A novel coronavirus (COVID-19) reached pandemic levels by March 11th, 2020, with a destructive impact across socioeconomic domains and all facets of global health, but little is known of its impact on sexual health. Objective: To review current knowledge on sexual health-related containment measures during pandemics, specifically COVID-19, and focus on 2 main areas: intimacy and relational dynamics and clinical effects on sexual health. Methods: We carried out a literature search encompassing sexual health and pandemic issues using Entrez-PubMed and Google Scholar. We reviewed the implications of the COVID-19 pandemic on sexual health regarding transmission and safe sex practices, pregnancy, dating and intimacy amid the pandemic, benefits of sex, and impact on sexual dysfunctions. Results: Coronavirus transmission occurs via inhalation and touching infected surfaces. Currently, there is no evidence it is sexually transmitted, but there are sexual behaviors that pose a higher risk of infectivity due to asymptomatic carriers. Nonmonogamy plays a key role in transmission hubs. New dating possibilities and intimacy issues are highlighted. Sexual activity has a positive impact on the immune response, psychological health, and cognitive function and could mitigate psychosocial stressors. COVID-19 pandemic affects indirectly the sexual function with implications on overall health. Conclusion: Increased awareness of health-care providers on sexual health implications related to the COVID-19 pandemic is needed. Telemedicine has an imperative role in allowing continued support at times of lockdown and preventing worsening of the sexual, mental, and physical health after the pandemic. This is a broad overview addressing sexual issues related to the COVID-19 pandemic. As this is an unprecedented global situation, little is known on sexuality related to pandemics. Original research is needed on the topic to increase the understanding of the impact the current pandemic may have on sexual health and function.

71.

Title

A comparative study on the strategies adopted by the United Kingdom, India, China, Italy, and Saudi Arabia to contain the spread of the COVID-19 pandemic

Authors

Alanezi F., Aljahdali A., Alyousef S.M., Alrashed H., Althani H.M.B., Alghamedy F., Alotaibi H., Saadah A., Alanzi T.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Journal of Healthcare Leadership	Q1	Dove Medical Press Ltd	30 October 2020

DOI

10.2147/JHL.S266491

Abstract

The objective of this study was to compare the strategies adopted by the United Kingdom, Italy, China, India, and Saudi Arabia to contain the spread of the COVID-19 pandemic. Materials and Methods: A review of the literature was carried out to collect data on the strategies used by China, Italy, India, the United Kingdom, and Saudi Arabia to contain the spread of the COVID-19 virus. The global analysis of 65 published literature references allowed observing the effectiveness and efficiency of the strategies used by these countries to control the spread of the COVID-19 virus. Results: Both mitigation and suppression strategies were adopted by the United Kingdom, India, Italy, China, and Saudi Arabia to control the spread of the COVID-19 pandemic. It was observed that China has achieved a greater success in flattening the curve compared to the other countries. In China, few new daily cases have occurred since March, and it has been the only country that has managed to keep the COVID-19 pandemic under control. On the other hand, reductions in the number of daily cases (since May 2020) were detected in the United Kingdom, Italy, and Saudi Arabia (since July 2020). Also, during the last 3 months (June, July and August) India has shown the highest growth in the total number of confirmed cases and in the number of new daily cases, compared to the mentioned countries. Conclusion: The review of the strategies adopted by China, India, the United Kingdom, Italy and Saudi Arabia to combat the COVID-19 pandemic can guide countries in the design and development of mitigation and suppression approaches to control the spread of the COVID-19 virus. Containment strategies such as lockdowns cannot continue in the long term. Therefore, countries must adopt mitigation and prevention strategies to protect people from infection and learn to live with the virus.

72.

Title

Health and economic impact of covid-19: Mapping the consequences of a pandemic in malaysia

Authors

Shakeel S., Ahmed Hassali M.A., Abbas Naqvi A.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Malaysian Journal of Medical Sciences	Q2	Penerbit Universiti Sains Malaysia	30 Apr 2020

DOI

10.21315/mjms2020.27.2.16

Abstract

The World Health Organization (WHO) has termed the novel coronavirus infection a pandemic based on number of confirmed cases in more than 195 countries and with risk of further spread. The infection has had drastic impact on global trade and stock markets. The Malaysian authorities realised the need to ensure availability of health resources and facilities in the country so that the health-care professionals could treat serious cases on priority basis. Steps have been taken to ensure that health facilities are not overwhelmed with cases and do not become the source of virus spread to other healthcare staff and patients.

73.

Title

A cross-sectional multicenter survey on the future of dental education in the era of COVID-19: Alternatives and implications

Authors

Haridy R., Abdalla M.A., Kaisarly D., Gezawi M.E.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Journal of Dental Education	Q2	John Wiley and Sons Inc	01 December 2020

DOI

10.1002/jdd.12498

Abstract

The coronavirus disease 2019 (COVID-19) pandemic has significantly challenged dental education. This study investigated the procedures outlined by dental faculty members to maintain quality dental education in a safe bioenvironment and adequately control the risk of cross-infection. Method: Dental educators from dental schools around the world were invited to join an online survey considering different demographic factors. The survey consisted of 31 questions that were classified into separate sections, including academic characteristics, college size and facilities, action taken after announcement of the COVID-19 pandemic, perception of the pandemic, opinion regarding teaching, patient flow, possible facilities to implement for short- and long-term plans, and actions suggested to deal with the COVID-19 pandemic. Results: Two hundred-twelve responses were received. Respondents commonly agreed that COVID-19 will have major negative effects on dental education, adversely affecting all clinical disciplines. Shifting to virtual curricula, simulation labs, and distant learning were the prevailing actions taken in different dental colleges during the pandemic. Special attention was raised by the majority of respondents regarding dental aerosolizing procedures, preferring to postpone their training to a postpandemic/later phase. Coinciding opinions suggested adopting a future dynamic hybrid strategy analysis that combines online distant learning, virtual simulation, and haptic labs together with traditional direct clinical training on real patients. Conclusion: The future of dental education will have far-reaching changes in strategies and tools to cope with COVID-19 pandemic and the postpandemic requirements of an effective, yet safe, dental learning environment. Dental colleges need to invest in infection precautions and in modern virtual education and training facilities.

74.

Title

Impact of lockdowns on the spread of COVID-19 in Saudi Arabia

Authors

Alrashed S., Min-Allah N., Saxena A., Ali I., Mehmood R.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Informatics in Medicine Unlocked	Q2	Elsevier Ltd	2 September 2020

DOI

10.1016/j.imu.2020.100420

Abstract

Epidemiological models have been used extensively to predict disease spread in large populations. Among these models, Susceptible Infectious Exposed Recovered (SEIR) is considered to be a suitable model for COVID-19 spread predictions. However, SEIR in its classical form is unable to quantify the impact of lockdowns. In this work, we introduce a variable in the SEIR system of equations to study the impact of various degrees of social distancing on the spread of the disease. As a case study, we apply our modified SEIR model on the initial spread data available (till April 9, 2020) for the Kingdom of Saudi Arabia (KSA). Our analysis shows that with no lockdown around 2.1 million people might get infected during the peak of spread around 2 months from the date the lockdown was first enforced in KSA (March 25th). On the other hand, with the Kingdom's current strategy of partial lockdowns, the predicted number of infections can be lowered to 0.4 million by September 2020. We further demonstrate that with a stricter level of lockdowns, the COVID-19 curve can be effectively flattened in KSA.

75.

Title

Technology innovation and financial performance of MSMEs during Covid-19 lockdown in Dammam area of Saudi Arabia: A case of food and beverage sector

Authors

Akinwale Y.O.

Journal name	Journal quartile (Scopus)	Publisher	Published date
International Journal of Technological Learning, Innovation and Development	Q3	Inderscience Publishers	26-Oct-2020

DOI

10.1504/IJTLID.2020.110622

Abstract

The Covid-19 pandemic and the lockdown associated with it have shown how turbulent the business environment could be. The resources (tangible or intangible) become very crucial to the survival of firms during this period. Innovation has theoretically been documented as a valuable resource which could foster firm performance. The aim of this paper is to empirically examine the relationship between innovation efforts, technology innovation and the financial performance of micro, small and medium enterprises (MSMEs) in food and beverage sector in Dammam area of Saudi Arabia. The results of structural equation model reveal that innovation efforts contribute positively and significantly to product and process innovations. Meanwhile, process innovation is positively significant in influencing the MSMEs' financial performance whereas product innovation though positive but not significant. This implies that top management in this sector should concentrate more on process innovation as this improve their financial performance during the lockdown in Dammam.

76.

Title

Concerns, perceived impact, and preparedness of oral healthcare workers in their working environment during COVID-19 pandemic

Authors

Chaudhary F.A., Ahmad B., Ahmad P., Khalid M.D., Butt D.Q., Khan S.Q.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Journal of occupational health	Q2	NLM (Medline)	20 September 2020

DOI

10.1002/1348-9585.12168

Abstract

The aim of the study was to evaluate the oral healthcare workers' concerns, perceived impact, and preparedness in COVID-19 pandemic. METHODS: This cross-sectional study was carried out at 10 different dental hospitals in Pakistan from March to June 2020. A 35 items valid and reliable questionnaire was used to assess the concerns, perceived impact, and preparedness of oral healthcare workers (OHCW) in COVID-19 pandemic. Chi-squared test and logistic regression were used for analysis. RESULTS: A total of 583 OHCW participated in this study. The odds of having the awareness about the risk of exposure and fear of getting infected, were greater in the clinical than non-clinical OHCW (OR: 52.6; OR: 15.9). For social network concerns, the clinical OHCW were more likely to be concerned about their colleagues (OR: 6.0). The clinical OHCW have greater odds of worrying about telling the family/friends about the risk exposed to (OR: 2.55), being avoided because of the job (OR: 3.20) and more likely to be feeling stressed (OR: 4.31). Less than 50% of the participants felt that their institutions are well prepared and only 12.6% had attended an infection control training session. Most participants practiced self-preparation such as buying masks and disinfection (94.3%, 98.3%). CONCLUSION: The majority of OHCW felt concerned about their risk of exposure to infection and falling ill from exposure and infecting friends/family. There is a need for training of infection control and PPE and minimizing fear and psychological impact on OHCW should be the priority in any preparedness and planning for combating COVID-19.

77.

Title

Impact of covid-19 pandemic on psychological responses of the general population in india: A nationwide survey

Authors

Sebastian J., Anand A., Vakkalaganti Rajesh R., Lucca J.M., Joseph R.

Journal name	Journal quartile (Scopus)	Publisher	Published date
International Journal of Pharmaceutical Research	Q3	Advanced Scientific Research	2020

DOI

10.31838/ijpr/2020.SP1.340

Abstract

Background: Any pandemic can influence the mental health of the general population, as it may restrict activities, change normal routine, affect social and economic wellbeing of them. Aims: This study was aimed to assess the impact of COVID-19 pandemic on mental health of the general public in India Methodology: A cross-sectional web-based study was conducted for a period of 20 days among general population of India. The study used PHQ-4 and IES-6 scales to measure depression/anxiety and distress respectively. Multiple binary logistic regression was used for exploring the relationship of the personal characteristics with the prevalence of psychiatric illness. Results: The study enrolled a total of 1257 individuals with representation from 29 states of India with a mean (SD) age of 29.3 (9.7). Based on the combined PHQ-4 scale, 13.9% (n=174) had reported a moderate-severe level of anxiety or depression. Regarding distress, nearly three-quarters (n=942) had exhibited clinical concern for distress and more than a half (n=670) met the threshold for probable diagnosis of distress. The study found individuals who lived alone, lived in shared accommodation, or who did not have chronic illness were reported a higher prevalence of anxiety or depression, and accommodation type was associated with the distress level in comparison with their counterparts. Conclusion:, Our findings may be used to assist various a healthcare professionals and Government advisors to strategize targeted interventions as required for fighting this pandemic in India and across the globe, as COVID-19 posing a higher risk for a possible pandemic psychological illness.

78.

Title

Residents' perceived impact of covid-19 on saudi ophthalmology training programs-a survey

Authors

Alahmadi A.S., Alhatlan H.M., Helayel H.B., Khandekar R., Habash A.A., Al-Shahwan S.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Clinical Ophthalmology	Q2	Dove Medical Press Ltd	3 November 2020

DOI

10.2147/OPTH.S283073

Abstract

Purpose: To evaluate the impact of the current pandemic on ophthalmology residency training in Saudi Arabia, focusing on its effects on clinical education, training, and the mental well-being of the trainees. Methods: An online self-administered questionnaire was distributed among residents in the Saudi ophthalmology training programs between July 7 and 14, 2020. In this study, we explored residents' opinions regarding training disruption and virtual education. The patient health questionnaire (PHQ-9) was used to assess the COVID-19 pandemic's impact on their mental health. We used descriptive statistics for data analysis. Results: Out of 183 registered ophthalmology residents, 142 participated in this study. Ninety-six participants (35.4%) were rotated at a specialized eye hospital during the COVID-19 pandemic, while 52 (19.2%) had rotations in the ophthalmology department at general hospitals. Those who rotated in both types of hospitals were 123 (45.4%). According to the participants, there was a significant decline in exposure to surgical and office-based procedures compared to emergency eye consultations (Friedman P <0.001). The COVID-19 pandemic's effect on mental health was reported by 100 (70.5%) participants. Eighty-five (55.4%) respondents were satisfied with the virtual method of education. Conclusion: COVID-19 pandemic has disrupted residents' clinical and surgical training in the Saudi ophthalmology training programs. Additionally, we believe that COVID-19 may have a negative impact on trainees' mental health. Fortunately, the current pandemic provided an innovative education method that will likely be used even after the pandemic.

79.

Title

Comparative study of cryptocurrency algorithms: Coronavirus towards bitcoin-s expansion

Authors

Mallouli F., Hellal A., Alzahrani F.A., Ali Almadani A., Saeed N.S.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Advances in Science, Technology and Engineering Systems	Q4	ASTES Publishers	24 September 2020

DOI

10.25046/AJ050556

Abstract

The widespread presence of Coronavirus (COVID-19) is causing organizations and individuals major economics downsizing. The way this virus is transmitted from one individual to another is the real cause of the problem. For that, researchers in different fields started seriously looking for touch-less and contact-less exchange. Particularly in the finance world, cash transactions and keypad based transactions are becoming obsolete because they are some of the major causes of the spread of this virus (and other viruses and bacteria). Cryptocurrency could be one of the solutions to the above mentioned situation. This novel money is based on Block-chain technology, which is based on cryptography algorithms for the safety and the security of the transactions. This paper exhibits a comparative study of the asymmetric cryptography algorithms. This helps the user to best choose the most secure, safe and reliable method to encrypt the Blockchain.

80.

Title

Novel vision-based thermal people counting tool for tracking infected people with viruses like covid-19

Authors

Said M.A., Samuel M., El-Nafaty A.S., Noaime E., Shannan N.M., Bashir F.M., Dano U.L., Dodo Y.A.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Journal of Advanced Research in Dynamical and Control Systems	Q4	Institute of Advanced Scientific Research	2020

DOI

10.5373/JARDCS/V12SP7/20202210

Abstract

The ability and accuracy of thermal imaging over conventional image cameras has led to the implementation of thermal cameras in people counting/tracking applications. This paper presents a thermal people counting/tracking application, capable of tracking people with signs like high body temperature for COVID 19. The people application would be remotely monitored from a single centralized PC station and can be connected also to several thermal imaging sensors for data collection. This application can help speed up the tracking rate of COVID 19 cases that are unknow. By placing the thermal imaging sensor at several locations like malls, schools, airport etc, the application can help identify people with high body temperation and isolate them and their data can help keep others safe.

81.

Title

Guidance for the Management of Patients with Vascular Disease or Cardiovascular Risk Factors and COVID-19: Position Paper from VAS-European Independent Foundation in Angiology/Vascular Medicine

Authors

Gerotziafas G.T., Catalano M., Colgan M.-P., Pecsvarady Z., Wautrecht J.C., Fazeli B., Olinic D.-M., Farkas K., Elalamy I., Falanga A., Fareed J., Papageorgiou C., Arellano R.S., Agathagelou P., Antic D., Auad L., Banfic L., Bartolomew J.R., Benczur B., Bernardo M.B., Boccardo F., Cifkova R., Cosmi B., De Marchi S., Dimakakos E., Dimopoulos M.A., Dimitrov G., Durand-Zaleski I., Edmonds M., El Nazar E.A., Erer D., Esponda O.L., Gresele P., Gschwandtner M., Gu Y., Heinzmann M., Hamburg N.M., Hamadé A., Jatoi N.-A., Karahan O., Karetova D., Karplus T., Klein-Weigel P., Kolossvary E., Kozak M., Lefkou E., Lessiani G., Liew A., Marcoccia A., Marshang P., Marakomichelakis G., Matuska J., Moraglia L., Pillon S., Poredos P., Prior M., Salvador D.R.K., Schlager O., Schernthaner G., Sieron A., Spaak J., Spyropoulos A., Sprynger M., Suput D., Stanek A., Stvrtinova V., Szuba A., Tafur A., Vandreden P., Vardas P.E., Vasic D., Vikkula M., Wennberg P., Zhai Z.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Thrombosis and Haemostasis	Q1	Georg Thieme Verlag	2020

DOI

10.1055/s-0040-1715798

Abstract

COVID-19 is also manifested with hypercoagulability, pulmonary intravascular coagulation, microangiopathy, and venous thromboembolism (VTE) or arterial thrombosis. Predisposing risk factors to severe COVID-19 are male sex, underlying cardiovascular disease, or cardiovascular risk factors including noncontrolled diabetes mellitus or arterial hypertension, obesity, and advanced age. The VAS-European Independent Foundation in Angiology/Vascular Medicine draws attention to patients with vascular disease (VD) and presents an integral strategy for the management of patients with VD or cardiovascular risk factors (VD-CVR) and COVID-19. VAS recommends (1) a COVID-19-oriented primary health care network for patients with VD-CVR for identification of patients with VD-CVR in the community and patients' education for disease symptoms, use of eHealth technology, adherence to the antithrombotic and vascular regulating treatments, and (2) close medical follow-up for efficacious control of VD progression and prompt application of physical and social distancing measures in case of new epidemic waves. For patients with VD-CVR who receive home treatment for COVID-19, VAS recommends assessment for (1) disease worsening risk and prioritized hospitalization of those at high risk and (2) VTE risk assessment and thromboprophylaxis with rivaroxaban, betrixaban, or low-molecular-weight heparin (LMWH) for those at high risk. For hospitalized patients with VD-CVR and COVID-19, VAS recommends (1) routine thromboprophylaxis with weight-adjusted intermediate doses of LMWH (unless contraindication); (2) LMWH as the drug of choice over unfractionated heparin or direct oral anticoagulants for the treatment of VTE or hypercoagulability; (3) careful evaluation of the risk for disease worsening and prompt application of targeted antiviral or convalescence treatments; (4) monitoring of D-dimer for optimization of the antithrombotic treatment; and (5) evaluation of the risk of VTE before hospital discharge using the IMPROVE-D-dimer score and prolonged post-discharge thromboprophylaxis with rivaroxaban, betrixaban, or LMWH.

82.

Title

Amendment to the law to curb violence against doctors during the coronavirus disease 2019 crisis in India

Authors

Padubidri J.R., Saran J.S.R.G., Manoj M.A., Menezes R.G.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Medicine, Science and the Law	Q2	SAGE	July 9, 2020

DOI

10.1177/0025802420935308

Abstract

No Abstract Available (Letter)

83.

Title

Mapping routine measles vaccination in low- and middle-income countries

Authors

Sbarra A.N., et al.,

Journal name	Journal quartile (Scopus)	Publisher	Published date
Nature	Q1	Springer Nature	16 December 2020

DOI

10.1038/s41586-020-03043-4

Abstract

The safe, highly effective measles vaccine has been recommended globally since 1974, yet in 2017 there were more than 17 million cases of measles and 83,400 deaths in children under 5 years old, and more than 99% of both occurred in low- and middle-income countries (LMICs)1–4. Globally comparable, annual, local estimates of routine first-dose measles-containing vaccine (MCV1) coverage are critical for understanding geographically precise immunity patterns, progress towards the targets of the Global Vaccine Action Plan (GVAP), and high-risk areas amid disruptions to vaccination programmes caused by coronavirus disease 2019 (COVID-19)5–8. Here we generated annual estimates of routine childhood MCV1 coverage at 5 × 5-km2 pixel and second administrative levels from 2000 to 2019 in 101 LMICs, quantified geographical inequality and assessed vaccination status by geographical remoteness. After widespread MCV1 gains from 2000 to 2010, coverage regressed in more than half of the districts between 2010 and 2019, leaving many LMICs far from the GVAP goal of 80% coverage in all districts by 2019. MCV1 coverage was lower in rural than in urban locations, although a larger proportion of unvaccinated children overall lived in urban locations; strategies to provide essential vaccination services should address both geographical contexts. These results provide a tool for decision-makers to strengthen routine MCV1 immunization programmes and provide equitable disease protection for all children.

84.

Title

Knowledge of dentists, dental auxiliaries, and students regarding the COVID-19 pandemic in Saudi Arabia: a cross-sectional survey

Authors

Shahin S.Y., Bugshan A.S., Almulhim K.S., AlSharief M.S., Al-Dulaijan Y.A., Siddiqui I., al-Qarni F.D.

Journal name	Journal quartile (Scopus)	Publisher	Published date
BMC Oral Health	Q2	BioMed Central Ltd	21 December 2020

DOI

10.1186/s12903-020-01361-7

Abstract

Background: This study aimed to assess the knowledge of dental professionals in Saudi Arabia regarding severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and coronavirus disease 2019 (COVID-19). Methods: A questionnaire was developed to assess various dental professionals from both governmental and private sectors through online and social media outlets. Results: A total of 1,033 questionnaires were collected (273 dental students, 193 dental auxiliary personnel, 544 dentists). In all, 63.4% of the respondents worked in hospitals. Of all the respondents, 44.9%, 33.4%, and 21.7% worked in governmental clinics, academia, and the private sector, respectively. Overall knowledge of the incubation period and route of transmission of SARS-CoV-2 was consistent across all dental professions. Knowledge of hand-soap cleaning time was significantly different among dental professionals ($p < 0.001$). Dental professionals displayed significant disagreement on the survival of SARS-CoV-2 outside the host ($p < 0.001$). Furthermore, 75.1% of the respondents were reluctant to treat a suspected COVID-19 patient, and 92% of the participants believed that the mode of transmission was droplet inhalation. Fever, coughing, and shortness of breath were identified as the most common symptoms of COVID-19. Most standard methods of prevention in the dental office were selected by at least 50% of the participants. Conclusions: Dental professionals seem to be consistent regarding their knowledge of the incubation period of SARS-CoV-2. However, knowledge of viral survivability and recommended hand-soap washing time was significantly variable among the professionals. A high degree of apprehension toward suspected COVID-19 patients existed among all dental professionals. Pandemic-awareness campaigns are essential among healthcare providers.

85.

Title

Knowledge, Attitudes, and Clinical Practices of Dental Professionals during Coronavirus Disease 2019 (COVID-19) Pandemic in Pakistan

Authors

Almas K., Khan A.S., Tabassum A., Nazir M.A., Afaq A., Majeed A.

Journal name	Journal quartile (Scopus)	Publisher	Published date
European Journal of Dentistry	Q2	Georg Thieme Verlag	2002

DOI

10.1055/s-0040-1718785

Abstract

The aim of this study is to assess knowledge, attitudes, and clinical practices of dental professionals regarding the prevention and control of coronavirus disease 2019 (COVID-19) in Pakistan. Materials and Methods General dentists and dental specialists working in public and private dental practices, hospitals, and academic institutions participated in this cross-sectional study. A pilot-tested questionnaire was sent to dental professionals through an online link in Pakistan and data collection was completed in April-May 2020. The knowledge score was calculated from 22 variables about the COVID-19. Results The study included data of 343 dental professionals with 47.2% of males and 52.8% of females. The mean knowledge score was 16.78 ± 2.25, and it significantly differed between general dentists (16.55 ± 2.36) and dental specialists (17.15 ± 2.04) ($p = 0.020$), and those with up to 10 years of experience (16.58 ± 2.28) and those with more than 10 years of experience (17.05 ± 2.2) ($p = 0.026$). Only 15.5% of the participants were comfortable in treating patients during the COVID-19 pandemic. A workshop/seminar on the COVID-19 was attended by 23% of the participants. In multivariate analysis, being comfortable in treating patients (odds ratio = 3.31, 95% confidence interval = 1.63, 6.73) was associated with the attendance of workshop/seminar on COVID-19. Conclusions Dental professionals had adequate knowledge about COVID-19, but a few of them were comfortable in treating patients during the pandemic. A minority of dental professionals attended a workshop/seminar on the COVID-19. Continuous education activities should be provided to dental professionals to enhance their role in the prevention of COVID-19 spread and promotion of oral health.

86.

Title

Dental and Medical Students' Knowledge and Attitude toward COVID-19: A Cross-Sectional Study from Pakistan

Authors

Ali, S.a Alam, B.F.b,Farooqi, F.c,Almas, K.d,Noreen, S.e

Journal name	Journal quartile (Scopus)	Publisher	Published date
European Journal of Dentistry	Q2	Georg Thieme Verlag	2020

DOI

10.1055/s-0040-1719219

Abstract

Objective The aims of this study were to investigate the awareness, knowledge, and attitudes of Pakistani medical and dental undergraduate students toward COVID-19 during the surge of its outbreak. Materials and Methods The multicentered, cross-sectional study was carried out nationwide among undergraduate medical and dental students. A convenience sampling technique was used. A self-developed online questionnaire was pretested to be completed by the participants. It was distributed using social media. The survey was comprised of questions related to demographics, health status, general hygiene perception, understanding, and the learning attitudes of the students. Comparisons of the knowledge scores and the attitude responses with the demographic information were done using the independent t -test, one-way ANOVA, and Chi-square, as appropriate. Results Of the 937 total respondents, 353 (38%) were males and 582 (62%) were females; two students did not mark their gender. Of these, 680 (73%) were dental students and 257 (27%) were medical students. The mean knowledge score of the female dental students (5.15 ± 1.08) was significantly higher than that of the male students (4.87 ± 1.09). Overall, the mean knowledge score was statistically higher among the medical students in comparison to the dental students (5.21 ± 1.15, 5.05 ± 1.09; p = 0.054), respectively. Conclusion The medical and dental students were both aware of the importance of the use of a mask. The medical students had a greater awareness regarding the mode of transmission, symptoms, and origin of COVID-19. However, the dental students showed better understanding of the use of surgical masks and the correct protocol for hand washing. Social media was considered the main source for COVID-19 related information.

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87.

Title

Modelling and simulation of COVID-19 outbreak prediction using supervised machine learning

Authors

Zagrouba R., Khan M.A., Atta-Ur-Rahman, Saleem M.A., Mushtaq M.F., Rehman A., Khan M.F.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Computers, Materials and Continua	Q1	Tech Science Press	28 December 2020

DOI

10.32604/cmc.2021.014042

Abstract

Novel Coronavirus-19 (COVID-19) is a newer type of coronavirus that has not been formally detected in humans. It is established that this disease often affects people of different age groups, particularly those with body disorders, blood pressure, diabetes, heart problems, or weakened immune systems. The epidemic of this infection has recently had a huge impact on people around the globe with rising mortality rates. Rising levels of mortality are attributed to their transmitting behavior through physical contact between humans. It is extremely necessary to monitor the transmission of the infection and also to anticipate the early stages of the disease in such a way that the appropriate timing of effective precautionary measures can be taken. The latest global coronavirus epidemic (COVID-19) has brought new challenges to the scientific community. Artificial Intelligence (AI)-motivated methodologies may be useful in predicting the conditions, consequences, and implications of such an outbreak. These forecasts may help to monitor and prevent the spread of these outbreaks. This article proposes a predictive framework incorporating Support Vector Machines (SVM) in the forecasting of a potential outbreak of COVID-19. The findings indicate that the suggested system outperforms cutting-edge approaches. The method could be used to predict the long-term spread of such an outbreak so that we can implement proactive measures in advance. The findings of the analyses indicate that the SVM forecasting framework outperformed the Neural Network methods in terms of accuracy and computational complexity. The proposed SVM system model exhibits 98.88% and 96.79% result in terms of accuracy during training and validation respectively.

88.

Title

Campus off, education on: Uaeu students' satisfaction and attitudes towards e-learning and virtual classes during covid-19 pandemic

Authors

Malkawi, E.a, Bawaneh, A.K.b, Bawa'aneh, M.S.c

Journal name	Journal quartile (Scopus)	Publisher	Published date
Contemporary Educational Technology	Q3	Anadolu University, Faculty of Communication Sciences	2021

DOI

10.30935/cedtech/8708

Abstract

The study aims at investigating the satisfaction level and attitudes of undergraduate students at United Arab Emirates University towards eLearning and virtual classes in exceptional circumstances of COVID-19 Crisis, in view of five demographic independent variables: students' gender, educational level, residential location, college, and GPA. The researchers adopted and implemented a questionnaire where its validity and reliability for collecting data have been verified. Mean, standard deviations, and one-way ANOVA tests were conducted. The results indicate that the students' satisfaction level and attitudes towards eLearning and virtual classes are strong in general with varying degrees between items. The results did not show a significant difference at the level ($\alpha = 0.05$) for the independent variables: students' gender, residential location, college, and GPA. However, the results imply that there is a statistically significant difference in students' satisfaction level and attitudes towards eLearning and virtual classes for the independent variable of educational level. The study concluded with few recommendations; supporting the current efforts of the university to provide all the requirements of education via eLearning and virtual classes such as suitable infrastructure and technical support. Besides, there is a need for a continuous update of the teaching and learning platforms in line with continuous development and training for instructors and students.

89.

Title

SARS CoV-2 Organotropism Associated Pathogenic Relationship of Gut-Brain Axis and Illness

Authors

Shinu P., Morsy M.A., Deb P.K., Nair A.B., Goyal M., Shah J., Kotta S.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Frontiers in Molecular Biosciences	Q1	Frontiers Media S.A.	2020

DOI

10.3389/fmolb.2020.606779

Abstract

COVID-19 has resulted in a pandemic after its first appearance in a pneumonia patient in China in early December 2019. As per WHO, this global outbreak of novel COVID-19 has resulted in 28,329,790 laboratory-confirmed cases and 911,877 deaths which have been reported from 210 countries as on 12th Sep 2020. The major symptoms at the beginning of COVID-19 are fever (98%), tussis (76%), sore throat (17%), rhinorrhea (2%), chest pain (2%), and myalgia or fatigue (44%). Furthermore, acute respiratory distress syndrome (61.1%), cardiac dysrhythmia (44.4%), shock (30.6%), hemoptysis (5%), stroke (5%), acute cardiac injury (12%), acute kidney injury (36.6%), dermatological symptoms with maculopapular exanthema (36.1%), and death can occur in severe cases. Even though human coronavirus (CoV) is mainly responsible for the infections of the respiratory tract, some studies have shown CoV (in case of Severe Acute Respiratory Syndrome, SARS and Middle East Respiratory Syndrome, MERS) to possess potential to spread to extra-pulmonary organs including the nervous system as well as gastrointestinal tract (GIT). Patients infected with COVID-19 have also shown symptoms associated with neurological and enteric infection like disorders related to smell/taste, loss of appetite, nausea, emesis, diarrhea, and pain in the abdomen. In the present review, we attempt to evaluate the understanding of basic mechanisms involved in clinical manifestations of COVID-19, mainly focusing on interaction of COVID-19 with gut-brain axis. This review combines both biological characteristics of the virus and its clinical manifestations in order to comprehend an insight into the fundamental potential mechanisms of COVID-19 virus infection, and thus endorse in the advancement of prophylactic and treatment strategies.

90.

Title

A sentiment analysis approach to predict an individual's awareness of the precautionary procedures to prevent covid-19 outbreaks in Saudi Arabia

Authors

Aljameel, S.S., Alabbad, D.A., Alzahrani, N.A., Alqarni, S.M., Alamoudi, F.A., Babili, L.M., Aljaafary, S.K., Alshamrani, F.M.

Journal name	Journal quartile (Scopus)	Publisher	Published date
International Journal of Environmental Research and Public Health	Q2	Multidisciplinary Digital Publishing Institute (MDPI) AG	2021

DOI

10.3390/ijerph18010218

Abstract

In March 2020, the World Health Organization (WHO) declared the outbreak of Coronavirus disease 2019 (COVID-19) as a pandemic, which affected all countries worldwide. During the outbreak, public sentiment analyses contributed valuable information toward making appropriate public health responses. This study aims to develop a model that predicts an individual's awareness of the precautionary procedures in five main regions in Saudi Arabia. In this study, a dataset of Arabic COVID-19 related tweets was collected, which fell in the period of the curfew. The dataset was processed, based on several machine learning predictive models: Support Vector Machine (SVM), K-nearest neighbors (KNN), and Naïve Bayes (NB), along with the N-gram feature extraction technique. The results show that applying the SVM classifier along with bigram in Term Frequency–Inverse Document Frequency (TF-IDF) outperformed other models with an accuracy of 85%. The results of awareness prediction showed that the south region observed the highest level of awareness towards COVID-19 containment measures, whereas the middle region was the least. The proposed model can support the medical sectors and decision-makers to decide the appropriate procedures for each region based on their attitudes towards the pandemic.

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91.

Title

Micro-RNAs in the regulation of immune response against SARS CoV-2 and other viral infections

Authors

Abu-Izneid T., AlHajri N., Ibrahim A.M., Javed M.N., Salem K.M., Pottoo F.H., Kamal M.A.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Journal of Advanced Research	Q1	Elsevier B.V.	2 December 2020

DOI

10.1016/j.jare.2020.11.013

Abstract

Micro-RNAs (miRNAS) are non-coding, small RNAs that have essential roles in different biological processes through silencing genes, they consist of 18–24 nucleotide length RNA molecules. Recently, miRNAs have been viewed as important modulators of viral infections they can function as suppressors of gene expression by targeting cellular or viral RNAs during infection. Aim of review: We describe the biological roles and effects of miRNAs on SARS-CoV-2 life-cycle and pathogenicity, and we discuss the modulation of the immune system with micro-RNAs which would serve as a new foundation for the treatment of SARS-CoV-2 and other viral infections. Key scientific concepts of review: miRNAs are the key players that regulate the expression of the gene in the post-transcriptional phase and have important effects on viral infections, thus are potential targets in the development of novel therapeutics for the treatment of viral infections. Besides, micro-RNAs (miRNAs) modulation of immune-pathogenesis responses to viral infection is one of the most-known indirect effects, which leads to suppressing of the interferon (IFN-α/β) signalling cascade or upregulation of the IFN-α/β production another IFN-stimulated gene (ISGs) that inhibit replication of the virus. These virus-mediated alterations in miRNA levels lead to an environment that might either enhance or inhibit virus replication.

92.

Title

Prevalence of the sars-cov-2 infection among post-quarantine healthcare workers

Authors

Alshahrani M.S., Alnimr A., Alnassri S., Alfarag S., Aljehani Y., Alabdali M.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Journal of Multidisciplinary Healthcare	Q1	Dove Medical Press Ltd	15 December 2020

DOI

10.2147/JMDH.S279469

Abstract

Background: Coronavirus disease 2019 is an emerging highly communicable disease. Nosocomial transmission needs to be prevented through the implementation of stringent screening and infection control measures. Objective: The objective of the study is to estimate the prevalence of severe acute respiratory syndrome– coronavirus 2 (SARS-CoV-2) infection among health care workers (HCWs) post quarantine period. Methods: This is a prospective, observational study conducted at a teaching University hospital in Alkhobar, Saudi Arabia, during the period between May 1 and June 15, 2020. All (HCWs) joining work back from the quarantine areas had a real-time polymerase chain reaction (qRT-PCR) test for SARS-CoV-2. The demographic and clinical data from the staff were collected. Results: Of the 301 HCWs screened, 18 (6%) had positive PCR. The age means of the positive cases was 32.9 Y ± 8.7 compared to 33.8 Y ± 7.0 in the negatively tested group (p value = 0.90). Of the 18 PCR-positive HCWs, 7 (38.9%) were male. Majority of those who tested positive were trainees (8.2%) followed by nurses (5.1%). In PCR-positive group, a clear epidemiological exposure was found in 4/18 cases (22.2%). Male gender and residency in specific districts were observed more in the positive cases (p value = 0.01 and 0.0001, respectively). In regards to symptoms, most of the positive PCR tested HCWs (n=12, 66.7%) remained asymptomatic. Most prevalent initial symptoms were gastrointestinal symptoms (diarrhea, abdominal pain) in six HCWs representing 33.3%. No significant difference was noted in co-morbidities reported by both groups. Conclusion: Health care workers tested post-quarantine period were found to be at risk of SARS-CoV-2 infection despite very minimal or no known risks of exposure, where most of them were asymptomatic. This potentially carries risk of nosocomial transmission inside healthcare facilities. Implanting policies for routine post-quarantine screening for HCWs is recommended.

93.

Title

A Bibliometric Analysis of Scientific Output on COVID-19 Pandemic Outbreak using the Web of Science (WoS) database

Authors

Idhris, Mohamed, Prabaharan, Sivasankar, Peter, Manuelraj, Subbarayalu, Arun Vijay.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Library Philosophy and Practice	Q3	University of Idaho Library	October 2020

DOI

N/A

Abstract

The novel coronavirus disease 2019 (COVID-19) has affected almost all the countries globally, and it is considered a global pandemic. Hence, this study conducted a bibliometric analysis of scientific output on the COVID-19 pandemic outbreak using the Web of Science (WoS) database. A specific search technique was developed based on Corona virus-related keywords from January 1, 2019, until June 24, 2020. A total of 10850 documents related to COVID-19 published from January 1, 2019, to June 24, 2020, were retrieved from the WoS database. The researchers downloaded the data from WoS as a WoS plain text file, and the data were analyzed using R studio (biblioshiny) software. Out of the total of 10850 documents published in 1736 scientific journals, 10845 papers belonging to the year 2020, which constituents 99.954% of the total documents (N=10850). Wang Y is the most productive author who contributed 0.60% (n=65) of the total documents published. USA is the predominant country that produced 2701 documents related to COVID-19, and China follows it with 1937 documents. The most active collaboration held between the USA and China, and it accounted for 2.75% (n=298) of the entire documents (N=10850).

94.

Title

Predicting the level of generalized anxiety disorder of the coronavirus pandemic among college age students using artificial intelligence technology

Authors

Alharthi H.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Proceedings - 2020 19th Distributed Computing and Applications for Business Engineering and Science, DCABES 2020	CONFERENCE	Institute of Electrical and Electronics Engineers Inc.	2020

DOI

10.1109/DCABES50732.2020.00064

Abstract

Introduction: Emerging reports indicate heightened anxiety among university students during the Corona pandemic. Implications of which can impact their academic performance. Artificial intelligence (AI) through machine learning can be used to predict which students are more susceptible to anxiety which can inform closer monitoring and early intervention. To date, there are no studies that have explored the efficacy of AI to predict anxiety among college students. Objective: to develop the best fit model to predict anxiety and to rank the most important factors affecting anxiety. Method: Data was collected using an online survey that included general information; Covid19- stressors and (GAD7-). This scale categorizes level of anxiety to none, mild, moderate, and severe. We received 917 survey answers. Several machine learning classifiers were used to develop the best fit model to predict student level of anxiety. Results: the best performance based on AUC is AdaBoost (0.943) followed by neural network (0.936). Highest accuracy and F1 were for neural network (0.754) and (0.749) respectively, then neural network selected to be the best fit model. The three scoring methods revealed that the top three features that predicted anxiety to be gender; sufficient support from family and friends; and fixed family income. Conclusion: Neural network model can assist college counselors to predict which students are going through anxiety and revealed the top three features for heightened student anxiety to be gender, a support system, and family fixed income. This information can alter college councilors for early mental intervention.

95.

Title

Mapping the scientific literature on covid-19 and mental health

Authors

Gul S., Rehman S.U., Ashiq M., Khattak A.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Psychiatria Danubina	Q3	Medicinska Naklada Zagreb	2021

DOI

10.24869/PSYD.2020.463

Abstract

Background: Within a few months during COVID-19 pandemic, more than a thousand studies on this topic have been published in scientific journals. Hence, the aim of the present study was to review and analyze the publishing trends on mental health literature including top cited documents, productive countries, institutions, journals, authorship and collaboration, the most frequent keywords and funding bodies. Method: A bibliometric analysis was performed, and data were retrieved from Scopus. The relevant data was harvested and 277 relevant records were imported on July 15, 2020. The data analysis was performed using various bibliometric software. Results: These documents were published by 195 journals and received 738 citations. USA ranked first with 50 articles and China is the most influential country with the highest Citation Impact. International journal of Environmental research and Public Health is the top journal for mental health studies with highest number of papers and citation impact. The trend of multi-author publications has outnumbered single-author pattern. Conclusion: Overall research shows that most of the papers published related to mental health care and COVID-19 were in the field of medicine and psychology. This research is first bibliometric study in the field of mental health care related to COVID-19.

96.

Title

Global current practices of ventilatory support management in COVID-19 patients: An international survey

Authors

Alqahtani J.S., Mendes R.G., Aldhahir A., Rowley D., AlAhmari M.D., Ntoumenopoulos G., Alghamdi S.M., Sreedharan J.K., Aldabayan Y.S., Oyelade T., Alrajeh A., Olivieri C., AlQuaimi M., Sullivan J., Almeshari M.A., Esquinas A.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Journal of Multidisciplinary Healthcare	Q1	Dove Medical Press Ltd	18 November 2020

DOI

10.2147/JMDH.S279031

Abstract

Background: As the global outbreak of COVID-19 continues to ravage the world, it is important to understand how frontline clinicians manage ventilatory support and the various limiting factors. Methods: An online survey composed of 32 questions was developed and validated by an international expert panel. Results: Overall, 502 respondents from 40 countries across six continents completed the survey. The mean number (±SD) of ICU beds was 64 ± 84. The most popular initial diagnostic tools used for treatment initiation were arterial blood gas (48%) and clinical presentation (37.5%), while the national COVID-19 guidelines were the most used (61.2%). High flow nasal cannula (HFNC) (53.8%), non-invasive ventilation (NIV) (47%), and invasive mechanical ventilation (IMV) (92%) were mostly used for mild, moderate, and severe COVID-19 cases, respectively. However, only 38.8%, 56.6% and 82.9% of the respondents had standard protocols for HFNC, NIV, and IMV, respectively. The most frequently used modes of IMV and NIV were volume control (VC) (36.1%) and continuous positive airway pressure/pressure support (CPAP/PS) (40.6%). About 54% of the respon- dents did not adhere to the recommended, regular ventilator check interval. The majority of the respondents (85.7%) used proning with IMV, with 48.4% using it for 12-16 hours, and 46.2% had tried awake proning in combination with HFNC or NIV. Increased staff workload (45.02%), lack of trained staff (44.22%) and shortage of personal protective equipment (PPE) (42.63%) were the main barriers to COVID-19 management. Conclusion: Our results show that general clinical practices involving ventilatory support were highly heterogeneous, with limited use of standard protocols and most frontline clinicians depending on isolated and varied management guidelines. We found increased staff workload, lack of trained staff and shortage of PPE to be the main limiting factors affecting global COVID-19 ventilatory support management.

97.

Title

Immunogenicity of multiple doses of pDNA vaccines against SARS-CoV-2

Authors

Almansour I., Macadato N.C., Alshammari T.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Pharmaceuticals	Q1	MDPI AG	5 January 2021

DOI

10.3390/ph14010039

Abstract

Since its identification in Wuhan, China, in December 2019, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the causative agent of coronavirus disease 2019 (COVID-19), has resulted in 46 million cases and more than one million deaths worldwide, as of 30 October 2020. Limited data exist on the magnitude and durability of antibodies generated by natural infection with SARS-CoV-2 and whether they can provide long-lasting immunity from reinfection. Vaccination has proven the most effective measure for controlling and preventing pandemics and, thus, development of a vaccine against COVID-19 is a top priority. However, the doses required to induce effective, long-lasting antibody responses against SARS-CoV-2 remain undetermined. Here, we present the development of SARS-CoV-2 vaccine candidates encoding the viral spike (S) gene, generated using plasmid (p)DNA technology, and we demonstrate the eliciting of S-specific antibodies in mice after three and four doses. The magnitude of binding and neutralizing antibody responses with three doses of synthetic, codon-optimized, full-length S (S.opt.FL) vaccine is comparable to that generated after four doses, suggesting that three doses are sufficient to elicit robust immune responses. Conversely, four doses of S1.opt pDNA vaccine, containing the S globular head, are required to elicit high levels of neutralizing antibodies. Furthermore, the S.opt.FL pDNA vaccine induces the highest serum levels of interferon (IFN)-γ, a marker for activation of cellular immune responses. Overall, our data show that three doses of S.FL pDNA vaccine elicit potent neutralizing antibody responses, with preclinical data that support the immunogenicity of these COVID-19 vaccine candidates and provide justification for further translational studies.

98.

Title

Coronavirus disease (COVID-19) and healthcare delivery system

Authors

Al-Muhanna F., Alkuwaiti A., Alwazzeh M.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Journal of Family and Community Medicine	Q4	Wolters Kluwer Medknow Publications	7-Jan-2021

DOI

10.4103/jfcm.JFCM-572-20

Abstract

No Abstract available (Letter)

99.

Title

Bibliometric analysis of coronavirus disease (COVID-19) literature published in Web of Science 2019-2020

Authors

Farooq R., Rehman S., Ashiq M., Siddique N., Ahmad S.

Journal name	Journal quartile (Scopus)	Publisher	Published date
Journal of Family and Community Medicine	Q4	Wolters Kluwer Medknow Publications	7-Jan-2021

DOI

10.4103/jfcm.JFCM-332-20

Abstract

Coronavirus outbreak in Wuhan, China, turned into a pandemic in record time. Communication of disease presentation and mechanism of spread remain keys to getting ahead of the virus and limiting its spread beyond the capacity of management. Owing to huge academic focus and pandemic concern around the globe, this bibliometric analysis investigated research productivity related to coronavirus disease (COVID-19) pandemic using the Web of Science database. The relevant data were harvested, and search query was further refined by publication years (2020 OR 2019) and document types (article, book chapter, and proceedings paper). Finally, 6694 records were imported and downloaded in Plaintext and BibTeX formats on August 1, 2020. The data analysis was performed using MS Excel, VOS viewer, and Biblioshiny software. Of the 6694 publications that appeared in that period, the USA and Chinese research institutions topped the numbers. At the same time, the Journal of Medical Virology and CUREUS (Cureus Journal of Medical Science), remained favorite journals for publications. The pattern of multi-Author publications has outstripped that of single-Authors. Apart from COVID-19 and the novel coronavirus, the important keywords mentioned included pandemic, pneumonia, epidemiology, public health, outbreak, epidemic, China, infection, and treatment. The analysis shows a strong local research response from China, with large teams reporting on the disease outbreak. Subsequent studies will document a global response as the virus spreads worldwide. The initial research related to the current coronavirus outbreak was reported from within China. The data and patterns were supposed to alter as the virus spread globally.

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100.

Title

Investigating Epidemic Growth of COVID-19 in Saudi Arabia based on Time Series Models

Authors

Torky M., Torky M.S., Azza A.A., Hassanein A.E., Said W.

Journal name	Journal quartile (Scopus)	Publisher	Published date
International Journal of Advanced Computer Science and Applications	Q4	Science and Information Organization	2020

DOI

10.14569/IJACSA.2020.0111256

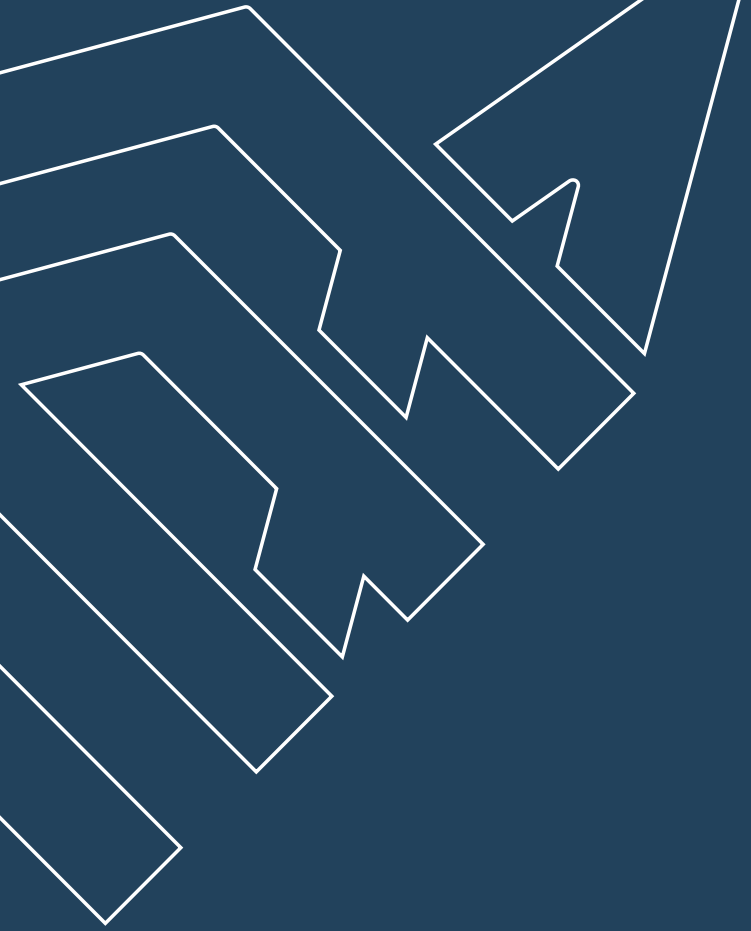
Abstract

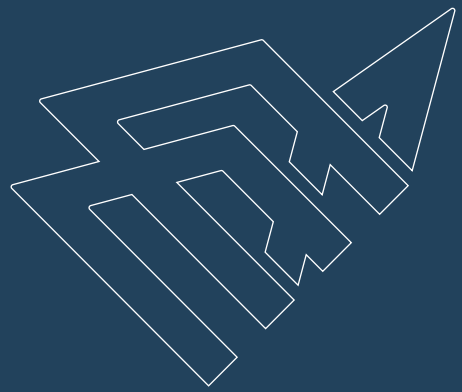
Predictive mathematical models for simulating the spread of the COVID-19 pandemic are an interesting and fundamental approach to understand the infection growth curve of the epidemic and to plan effective control strategies. Time series predictive models are one of the most important mathematical models that can be utilized for studying the pandemic growth curve. In this study, three-time series models (Susceptible-Infected-Recovered-Death (SIRD) model, Susceptible-Exposed-Infected-Recovered-Death (SEIRD) model, and Susceptible-Exposed-Infected-Quarantine-Recovered-Death-Insusceptible, (SEIQRDP) model) have been investigated and simulated on a real dataset for investigating Covid-19 outbreak spread in Saudi Arabia. The simulation results and evaluation metrics proved that SIRD and SEIQRDP models provided a minimum difference error between reported data and fitted data. So using SIRD, and SEIQRDP models are used for predicting the pandemic end in Saudi Arabia. The prediction results showed that the Covid-19 growth curve will be stable with detected zero active cases on 2 February 2021 according to the prediction computations of the SEIQRDP model. Also, the prediction results based on the SIRD model showed that the outbreak will be stable with active cases after July 2021. © 2020

Conclusion

In conclusion, Imam Abdulrahman Bin Faisal University will always dedicate everything that serves the country and society, and the research environment will keep being rich with the scientific research that confront the crisis scientifically. Deanship of Scientific Research represented by Scientific Research Marketing Unit is glad to highlight those efforts by preparing and publishing statistical books which immortalize the achievements of the university in this regard, which also clarify the researchers' efforts in helping and contributing to fight the pandemic and preserve the society.


Coronavirus
Vaccine
Injection only
20 ml.
COVID-19
Coronavirus
Vaccine
Coronavirus
Vaccine
20 ml.
Coronavirus





COVID-19

100 Publications

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