

# Rabih Halwani, MSc. Ph.D

<b>Professor of Immunology,</b> Department of Clinical Sciences, College of Medicine, University of Sharjah		
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## Current Positions

[ 2022- present]	<b>Acting Director,</b> RIMHS, University of Sharjah.
[ 2019- present]	<b>Professor of Immunology,</b> Department of Clinical Sciences, College of Medicine, University of Sharjah, Sharjah, UAE.

## Previous Positions/Titles

[ 2018- 2019]	<b>Associate Director,</b> College of Medicine Research Center (CMRC), College of Medicine, King Saud University, Riyadh, Saudi Arabia
[ 2009- 2019]	<b>Scientific Director.</b> Immunology Research Laboratory; Asthma Research Chair; College of Medicine, King Saud University, Riyadh, Saudi Arabia
[ 2018-2019]	<b>Professor of Immunology,</b> College of Medicine, King Saud University, Riyadh, Saudi Arabia.
[ 2016- 2019]	<b>Consultant of Immunology.</b> College of Medicine, King Saud University, Riyadh, Saudi Arabia.

## Research Interest

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My broad research interests include:

**Development of Novel therapeutic approaches for the treatment of chronic inflammatory diseases; Understanding the molecular mechanisms involved in chronic inflammation; and discovery of novel genetic variants associated with Primary Immunodeficiency diseases; vaccine development.**

## Education

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[2004-2009]	<b>Post-Doctorate.</b> <b>CHUM Research Center, Montreal, Canada.</b> <b>Mentor:</b> Dr. Rafick-Pierre Sekaly <b>Topic:</b> Qualitative and Quantitative Parameters of Correlates of Protection for HIV-1/SIV Vaccines.
[2000-2004]	<b>Ph.D. Microbiology and Immunology.</b> <b>McGill University/Aids Center, Montreal, Canada</b> <b>Mentor:</b> Dr. Lawrence Kleiman <b>Topic:</b> HIV-1 virus Assembly.
[1995-1997]	<b>Master of Science. Microbiology and Immunology</b> <b>American University of Beirut, Lebanon.</b>
[ 1992-1995]	<b>Bachelor of Science. Medical Lab Technology.</b> <b>American University of Beirut, Beirut, Lebanon</b>

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## Administrative Positions

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[2019- present]	<b>Acting Director, RIMHS, University of Sharjah.</b>
[2022-present]	<b>Member of the University Promotion Committee, University of Sharjah, UAE.</b>
[2020- Present]	<b>Member of Molecular Medicine graduate (PhD/MSc) program Committee, College of Medicine, University of Sharjah, Sharjah, UAE.</b>
[2019-present]	<b>Member of COVID-19 National Research committee 3, UAE.</b>
[2020-present]	<b>Member of National COVID19 diagnostic sub-committee, UAE.</b>
[2020-present]	<b>Member of National COVID19 epidemiology sub-committee, UAE.</b>
[2020-present]	<b>Chairman of Recruitment Committee, College of Medicine, University of Sharjah, Sharjah, UAE.</b>
[2018- 2019]	<b>Associate Director, College of Medicine Research Center (CMRC), College of Medicine, King Saud University, Riyadh, Saudi Arabia</b>
[2018- 2019]	<b>Board member, Deanship of Scientific Affairs, King Saud University, Riyadh, Saudi Arabia.</b>
[2018-2019]	<b>Head of Research Committee, Pediatrics Department, College of Medicine, KCUH, KSU.</b>
[2018-2019]	<b>Member of Animal Ethics Committee, King Saud University, Riyadh, Saudi Arabia.</b>
[2018-2019]	<b>Head of intra-faculty collaborative research Committee, College of Medicine, King Saud University, Riyadh, Saudi Arabia</b>
[2017-2019]	<b>Member of Dallah Grant Committee, College of Medicine, KCUH, KSU.</b>
[2013-2015]	<b>Member of the Equipment and supplies Committee of Prince Naif Bin AbdelAziz Health Research Center.</b>
[2010-2012]	<b>Member of the Founding Committee of Prince Naif Bin AbdelAziz Health Research Center.</b>
[2009-present]	<b>Scientific Director, <u>Immunology</u> Research Lab. Founding Principal Investigator.</b>
[2013-2015]	<b>Member of the Equipment and supplies Committee of Prince Naif Bin AbdelAziz Health Research Center.</b>

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## Academic Positions Held

[2019- present]	<b>Professor of Immunology</b> , Department of Clinical Sciences, College of Medicine, University of Sharjah, Sharjah, UAE.
[2018-2019]	<b>Professor</b> . College of Medicine, King Saud University, Riyadh, Saudi Arabia.
[2014- 2018]	<b>Associate Professor</b> . College of Medicine, King Saud University, Riyadh, Saudi Arabia.
[2009- 2014]	<b>Assistant Professor</b> . College of Medicine, King Saud University, Riyadh, Saudi Arabia.
[2011 - 2016]	<b>Associate Member</b> . Meakins-Christie Laboratories, McGill University, Montreal, Canada.

## Teaching experience

[Sept. 2019-]	<b>Advanced Immunology-Graduate (PhD) course</b> . College of Medicine, University of Sharjah, UAE.
[Sept. 2019-]	<b>Cellular Cytotoxicity-Graduate (PhD) course</b> . College of Medicine, University of Sharjah, UAE.
[Dec. 2020-]	<b>Immunology course for medicine year 1 and 2</b> . College of Medicine, University of Sharjah, UAE.
[Dec. 2020-]	<b>Diabetes Management Graduate (MS) course</b> . College of Medicine, University of Sharjah, UAE.
[2019-present]	<b>Supervisor and Mentor of <u>Ph.D</u> student Mashaal AlAbed thesis.</b> <b>Thesis Title:</b> Role of Statins in Airway Remodelling during Asthma.
[2019-present]	<b>Supervisor and Mentor of <u>Ph.D</u> student Swati Goel thesis.</b> <b>Thesis Title:</b> Understanding molecular mechanisms regulating polyp formation during CRS.
[2019-present]	<b>Supervisor and Mentor of <u>Ph.D</u> student Bushra Madkhana thesis.</b> <b>Thesis Title:</b> Targeting Sting pathway for the treatment of steroid resistant severe asthma.
[Sept. 2018-]	<b>Certificate in Medical Education</b> . Issued by College of Medicine, KSU in collaboration with Swansea University, UK. (April 2019).

[2014-2019]	<b>Supervisor and Mentor of <u>Ph.D</u> student Maha Enazi thesis.</b> <b>Thesis Title:</b> Role of cytokines, IL-35 and IL-37 in suppressing lung tissue inflammation during asthma via the regulation of Breg and Treg cells.
[2012-2017]	<b>Supervisor and Mentor of <u>Ph.D</u> student Rowaa Al-Qufaidi</b> <b>Thesis Title:</b> Role of Interleukin-17 (IL-17) in the recruitment of B cells to the lung tissue during asthma.
[2012-2017]	<b>Supervisor and Mentor of Master student Sara Dthikri</b> <b>Thesis Title:</b> Identifying potential Novel genes involved in familial non-Hodgkin's lymphoma.
[2010-2013]	<b>Co-supervisor of the Master student Zienab Hamad</b> <b>Thesis Title:</b> Genetic modifiers of stroke and gallstones risk in sickle cell disease.
[2013-2015]	<b>Co-supervisor of the Master student Alanoud Almutairi.</b> <b>Thesis Title:</b> Polymorphisms in TGF- $\beta$ -BMP pathway and ADRB1 and The Severity of Sickle Cell Disease.
[2011-2012]	<b>Supervisor and Mentor of 3rd year Medical students</b> <b>Medical research course CMED304.</b>
[2016-present]	<b>Training pediatric residents on basic and clinical Research: Seminars, Workshops, and Research training activities.</b>
[2010-2019]	<b>Supervising the research program for a number of Medical Interns. KSU, SA</b>
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<b>Montreal, Canada</b>	
[Fall 2002-2004]	<b>Teaching Assistant</b> Concordia University, Montreal, Canada
[2007- 2009]	<b>Research Associate</b> CHUM research Center, Montreal, Canada

## Prestigious Awards

[2020 -2022]

**Mohamed Bin Rashid Medical Research Institute Research Award 2020. Handed by his highness Sheikh Mansour bin Mohammed bin Rashid**

Determining Inborn Errors of Immunity associated with Life-threatening SARS-CoV-2 infections in previously healthy young individuals.

**AJF202019 (500,000 AED)**

**Role:** Principal investigator.



[2020-2021]

**Sandooq Al Watan Research Award. 2020.**

Development of Novel Aptamer-Based Biosensor for Detection of SARS-CoV-2 Protein in Nasopharyngeal Swabs of COVID-19 Patients.

**SWARD-S20-007 (258,000 AED)**

**Role:** Principal investigator.



[2017]

**King Saud University Award for Scientific Excellence**

**FIRST RANK**

**Branch: Research Quality Award**

Award Presented by his Excellency **Prince Faisal Bin Bandar Bin Abdulaziz Al-Saud, the Governor of Riyadh province.**

Riyadh, 25 May, 2017.



[2016]

**King Saud University Award for Scientific Excellence.**

**Branch: Elite Journals Publishing Award**

Award Presented by his Excellency **Prince Faisal Bin Bandar Bin Abdulaziz Al-Saud, the Governor of Riyadh province.**

Riyadh, 16 May, 2016.



## Awards

[2020-2021]	<p><b>Granting Agency: COVID19 Internal Grant, University of Sharjah, Sharjah, UAE (2020).</b></p> <p><b>Understanding the genetic and immunological background for resistance to SARS-CoV-2 infection.</b> <b>CoV19-0307 (210,000 AED)</b> <b>Role: Principal investigator.</b></p>
[2020 -2023]	<p><b>Granting Agency: Collaborative Internal Grant, University of Sharjah, Sharjah, UAE (2020).</b></p> <p><b>Targeting STING pathway to control lung inflammation during asthma using a novel nanocarrier approach.</b> <b>2001090278 (200,000 AED)</b> <b>Role: Principal investigator.</b></p>
[2021 -2023]	<p><b>Granting Agency: Sheikh Hamdan Bin Rashid Al Maktoum award for Medical Sciences (2021).</b></p> <p><b>Identifying steroid resistance genes underlying hypo-responsiveness to steroid treatment in bronchial biopsies of severe asthmatic patients</b></p> <p><b>MRG/20/2020 (180,000 AED)</b></p> <p><b>Role: Co-investigator.</b></p>
[2020-2022]	<p><b>Granting Agency: Internal Grant, University of Sharjah, Sharjah, UAE (2020).</b></p> <p><b>Discovery of Novel Gene Variants Predisposing to Viral Infections</b> <b>Ref. V.C.R.G. / R. 447/2020 (40,000 AED).</b></p> <p><b>Role: Principal-investigator.</b></p>
[2019 -2022]	<p><b>The National Plan for Science and Technology (NPST0 Research Award 2019.</b> <b>Association of exposure to Saudi sandstorm dust with increased risk of asthma hospitalization: Role of dust particles components in asthma pathogenesis.</b> <b>12-MED2892-02-R (1,998,000 SR)</b> <b>Role: Principal investigator.</b></p>

- [2016 -2019] Corona Research Group Award. (150,000 SR)**  
 Granting Agency: Deanship of scientific research, KSU Oct, 2016.  
 Role: Principal investigator.
- [2018 -2020] The National Plan for Science and Technology (NPST0 Research Award 2018.**  
**Eosinophil apoptosis using siRNA loaded magnetic nanoparticles for improved Asthma therapy and diagnosis using noninvasive MRI**  
 Role: Co-Investigator. (1,980,000 SR)
- [2017 -2019] The National Plan for Science and Technology (NPST0 Research Award 2017.**  
**Proposal Title: Genome-Wide Sequencing of Serum microRNAs: Exploring Next Generation Biomarkers for Diagnosis and Prognosis of Sepsis in Saudi Children**  
**Research Grant number 14-MED1053-02**  
 Role: Co-investigator. (1,800,000 SR)
- [2015 -2017] The National Plan for Science and Technology (NPST0 Research Award 2015.**  
**Proposal Title: Novel nanocarriers for the direct and efficient delivery of blocking antibodies to asthmatic lungs: noninvasive tracking using MRI**  
**Research Grant number 12-MED2536-02 (Completed)**  
 Role: Co-investigator. (Completed) (1,800,000 SR)
- [2013 -2015] The National Plan for Science and Technology (NPST0 Research Award 2013.**  
**Proposal Title: Role of IL-17 Cytokine in the recruitment of B cells into bronchial lung tissue during asthma.**  
**Research Grant number 02-MED1224-10 (Completed) (1,409,000 SR)**  
 Role: Principal investigator.
- [2011 -2013] The National Plan for Science and Technology (NPST0 Research Award 2011.**  
**Proposal Title: Role of Eosinophils in the Proliferation of Airway Smooth Muscles in Asthma**  
**Research Grant number 02-BIO97-09 (Completed) (1,200,000 SR)**  
 Role: Principal investigator.
- [2010 -2012] Merck Research Award (60,000 US\$)**  
**Proposal Title: Eosinophils enhance the Proliferation of Airway Smooth Muscles in Asthma.**





	<b>Role: Co-investigator.</b>
[2011 -2013]	<p><b>Merck Research Award (60,000 US\$)</b></p> <p><b>Proposal Title: Novel genetic variations contributing to Asthma susceptibility in Saudi Arabia</b>  <b>Role: Co-investigator.</b></p>
[2005-2008]	<p><b>Post-Doc Fellowship (135, 000 CAD\$)</b>  <b>Source: Canadian Institutes of Health Research (CIHR)</b></p>
[2020-2023]	<p><b>Saudi Ministry of Education international collaboration Research Award</b></p> <p><b>Proposal Title: Novel Pro-apoptotic nanoparticles targeting sinus tissue eosinophils as a novel approach for Chronic Rhinosinusitis therapy.</b>  <b>Role: Principal Investigator.</b>  Consultants and Collaborators: Prof. Samer Fakhri, Head of Otolaryngology department, AUBMC, AUB, Beirut, Lebanon; Dr. Aws Alshamsan, Dean of college of Pharmacy, KSU.</p>
[2020-2023]	<p><b>Saudi Ministry of Education international collaboration Research Award</b></p> <p><b>Proposal Title: Stabilization of Recombinant Protective Antigen (rPA) for use as a vaccine against Bacillus anthracis.</b>  <b>Role: Principal Co-Investigator.</b>  Consultants and Collaborators: Maria Elena Bottazzi, PhD – (International Co-Principal Investigator). Associate Dean, National School of Tropical Medicine, Professor, Pediatrics, Section of Pediatric Tropical Medicine &amp; Molecular Virology &amp; Microbiology, Baylor College of Medicine and Texas Children’s Hospital</p>

## Webinars

Conference Title	Place, dates, year	Organizers
Emirates-German meeting	Nov 04, 2019	UOS-Lubec University
What does it take to develop an effective COVID19 vaccine?	Webinar. Oct 05, 2020	Maarefa

All what you need to know about COVID19 vaccine	Webinar. Nov 22, 2020	UOS
Roadmap to Impactful Research	Nov 27, 2019	UOS-Research Coffee
Inborn errors of Immunity: COVID-19 and beyond	Nov 10, 2020	NIH-Focus group

## Media Interviews

[27-7-2020]	<b>Sehatkom Amanah, Dubai TV</b>		
<p>The interview was related to "<b>immunity and vaccination</b>" during the emerging COVID-19 pandemic.</p>	[2-9-2020]	<b>Amasi, Sharjah TV</b>	
<p>The discussion was about the funded research by Sandoq Al Watan titled "<b>Development of Novel Aptamer-Based Biosensor for Detection of SARS-CoV-2 Protein in Nasopharyngeal Swabs of COVID-19 Patients</b>".</p>	<p>أ.د / ربيع علي دلواني          أستاذ علم المناعة بكلية الطب في جامعة الشارقة</p>		

## Journals Affiliated with as Editor or Reviewer

Prof. Halwani is an editorial board member for many journals including Clinical and Experimental Allergy Journal, the Journal of Nature and Science of Medicine (JNSM), Open Journal of Respiratory Diseases, and reviewer for many journals including Lancet, Scientific reports, PloS one, and others.

## Professional memberships

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- Member of American Thoracic Society
- Member of European Academy for Allergy and Clinical Immunology (EAACI)
- Member of American Society of Gene and Cell Therapy (ASGCT), USA.

## Publications

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1. Zhang Q, Matuozzo D, Le Pen J, Lee D, Moens L, Asano T, Bohlen J, Liu Z, Moncada-Velez M, Kendir-Demirkol Y, Jing H, Bizien L, Marchal A, Abolhassani H, Delafontaine S, et al. Recessive inborn errors of type I IFN immunity in children with COVID-19 pneumonia. **J Exp Med.** 2022;219(8).
2. Alenazy MF, Sharif-Askari FS, El-Wetidy MS, Sharif-Askari NS, Hachim IY, Temsah MH, Saddik B, Al-Kufaidy R, Omair MA, Alshawakir YA, Fathaddin AA, Hannawi S, Hamid Q, Omair MA, Al-Muhsen S, et al. Intranasal administration of abatacept enhances IL-35+ and IL-10+ producing Bregs in lung tissues of ovalbumin-sensitized asthmatic mice model. **PLoS One.** 2022;17(9):e0271689.
3. Tleyjeh IM, Kashour T, Riaz M, Amer SA, AlSwaidan N, Almutairi L, **Halwani R**, Assiri A. Persistent COVID-19 symptoms at least one month after diagnosis: A national survey. **J Infect Public Health.** 2022;15(5):578-85.
4. Temsah MH, Aljamaan F, Alenezi S, Alhasan K, Saddik B, Al-Barag A, Alhaboob A, Bahabri N, Alshahrani F, Arabiaah A, Alaraj A, Bahkali F, Alkriadees K, Jamal A, **Halwani R**, et al. Monkeypox caused less worry than COVID-19 among the general population during the first month of the WHO Monkeypox alert: Experience from Saudi Arabia. **Travel Med Infect Dis.** 2022;49:102426.
5. Temsah MH, Aljamaan F, Alenezi S, Alhasan K, Arabiaah A, Assiri R, Bassrawi R, Alhaboob A, Alshahrani F, Alarabi M, Alaraj A, Alharbi NS, **Halwani R**, Jamal A, Al-Eyadhy A, et al. SARS-CoV-2 Omicron Variant: Exploring Healthcare Workers' Awareness and Perception of Vaccine Effectiveness: A National Survey During the First Week of WHO Variant Alert. **Front Public Health.** 2022;10:878159.
6. Sharif-Askari FS, Hafezi S, Sharif-Askari NS, Alsayed HAH, Mdkhana B, Selvakumar B, Temsah MH, Saddik B, Al Anouti F, **Halwani R\***. Vitamin D modulates systemic inflammation in patients with severe COVID-19. **Life Sci.** 2022;307:120909.
7. Saheb Sharif-Askari F, Ali Hussain Alsayed H, Tleyjeh I, Saheb Sharif-Askari N, Al Sayed Hussain A, Saddik B, Hamid Q, **Halwani R\***. Sotrovimab Lowers the Risk of COVID-19 Related Hospitalization or Death in a Large Population Cohort in the United Arab Emirates. **Clin Pharmacol Ther.** 2022.
8. Saddik B, Awad MA, Al-Bluwi N, Hussein A, Shukla A, Al-Shujairi A, AlZubaidi H, Al-Hajjaj MS, **Halwani R**, Hamid Q. The impact of environmental and climate parameters on the incidence and mortality of COVID-19 in the six Gulf Cooperation Council countries: A cross-country comparison study. **PLoS One.** 2022;17(7):e0269204.

9. Saddik B, Al-Bluwi N, Shukla A, Barqawi H, Alsayed HAH, Sharif-Askari NS, Temsah MH, Bendardaf R, Hamid Q, **Halwani R\***. Determinants of healthcare workers perceptions, acceptance and choice of COVID-19 vaccines: a cross-sectional study from the United Arab Emirates. **Hum Vaccin Immunother.** 2022;18(1):1-9.
10. Ramakrishnan RK, Bajbouj K, Guimei M, Rawat SS, Kalaji Z, Hachim MY, Mahboub B, Ibrahim SM, Hamoudi R, **Halwani R**, Hamid Q. Bcl10 Regulates Lipopolysaccharide-Induced Pro-Fibrotic Signaling in Bronchial Fibroblasts from Severe Asthma Patients. **Biomedicines.** 2022;10(7).
11. Manry J, Bastard P, Gervais A, Le Voyer T, Rosain J, Philippot Q, Michailidis E, Hoffmann HH, Eto S, Garcia-Prat M, Bizien L,..... **Halwani R...** Parra-Martínez A, Yang R, Haljasmägi L, Migaud M, et al. The risk of COVID-19 death is much greater and age dependent with type I IFN autoantibodies. **Proc Natl Acad Sci U S A.** 2022;119(21):e2200413119.
12. Mahboub B, Kharaba Z, Ramakrishnan RK, Sharif Askari NS, Salameh LI, Alhariri HS, Vats MG, Erabia WT, Alshawamreh EM, Alfoteih Y, Mogas AK, **Halwani R**, Hamid Q. Continuous positive airway pressure therapy suppresses inflammatory cytokines and improves glucocorticoid responsiveness in patients with obstructive sleep apnea and asthma: A case-control study. **Ann Thorac Med.** 2022;17(3):166-72.
13. Kocarnik JM, Compton K, Dean FE, Fu W, Gaw BL, Harvey JD, Henrikson HJ, Lu D, Pennini A, Xu R, Ababneh E, Abbasi-Kangevari M, ... **Halwani R...** Abbastabar H, Abd-Elsalam SM, Abdoli A, et al. Cancer Incidence, Mortality, Years of Life Lost, Years Lived With Disability, and Disability-Adjusted Life Years for 29 Cancer Groups From 2010 to 2019: A Systematic Analysis for the Global Burden of Disease Study 2019. **JAMA Oncol.** 2022;8(3):420-44.
14. Jalaleddine N, Hachim M, Al-Hroub H, Saheb Sharif-Askari N, Senok A, Elmoselhi A, Mahboub B, Samuel Kurien NM, Kandasamy RK, Semreen MH, **Halwani R**, Soares NC, Al Heialy S. N6-Acetyl-L-Lysine and p-Cresol as Key Metabolites in the Pathogenesis of COVID-19 in Obese Patients. **Front Immunol.** 2022;13:827603.
15. Gupta A, Qaisar R, **Halwani R**, Kannan M, Ahmad F. TFPI and FXIII negatively and S100A8/A9 and Cystatin C positively correlate with D-dimer in COVID-19. **Exp Biol Med (Maywood).** 2022;15353702221102117.
16. Gupta A, Jayakumar MN, Saleh MA, Kannan M, **Halwani R**, Qaisar R, Ahmad F. SARS-CoV-2 infection- induced growth factors play differential roles in COVID-19 pathogenesis. **Life Sci.** 2022;304:120703.
17. Gupta A, Al-Tamimi AO, **Halwani R**, Alsaidi H, Kannan M, Ahmad F. Lipocalin-2, S100A8/A9, and cystatin C: Potential predictive biomarkers of cardiovascular complications in COVID-19. **Exp Biol Med (Maywood).** 2022;247(14):1205-13.
18. 23. Elemam NM, Hasswan H, Aljaibeji H, Sharif-Askari NS, **Halwani R**, Taneera J, Sulaiman N. Profiling Levels of Serum microRNAs and Soluble ACE2 in COVID-19 Patients. **Life (Basel).** 2022;12(4).

19. 24. Campbell TM, Liu Z, Zhang Q, Moncada-Velez M, Covill LE, Zhang P, Alavi Darazam I, Bastard P, Bizien L, Buccioli G, Lind Enoksson S, Jouanguy E, Karabela Ş N, Khan T, Kendir-Demirkol Y, et al. Respiratory viral infections in otherwise healthy humans with inherited IRF7 deficiency. **J Exp Med.** 2022;219(7).
20. Brodin P, Casari G, Townsend L, O'Farrelly C, Tancevski I, Löffler-Ragg J, Mogensen TH, Casanova JL. Studying severe long COVID to understand post-infectious disorders beyond COVID-19. **Nat Med.** 2022;28(5):879-82.
21. Bastard P, Vazquez S, Liu J, Laurie MT, Wang CY, Gervais A, Le Voyer T, Bizien L, Zamecnik C, Philippot Q, Rosain J, Catherinot E,,,, **Halwani R** ,,,,Willmore A, Mitchell AM, Bair R, et al. Vaccine breakthrough hypoxemic COVID-19 pneumonia in patients with auto-Abs neutralizing type I IFNs. **Sci Immunol.** 2022:eabp8966.
22. AlJamaan F, Temsah MH, Alhasan K, Alenezi S, Alhaboob A, Alrabiaah A, Batais M, Alshahrani F, Assiri RA, Bafaqih H, Alaraj A, Al Qadrah B, Alhaidary A, Saad K, Saddik B, et al. SARS-CoV-2 variants and the global pandemic challenged by vaccine uptake during the emergence of the Delta variant: A national survey seeking vaccine hesitancy causes. **J Infect Public Health.** 2022;15(7):773-80.
23. Aljamaan F, Alhaboob A, Saddik B, Bassrawi R, Assiri R, Saeed E, Alhasan K, Alenezi S, Alarabi M, Alrabiaah A, Alkriadees Y, Al-Saud N, Alenazi B, Rabaan AA, **Halwani R**, et al. In-Person Schooling Amidst Children's COVID-19 Vaccination: Exploring Parental Perceptions Just after Omicron Variant Announcement. **Vaccines (Basel).** 2022;10(5).
24. Ali Alghamdi M, Benabdelkamel H, Masood A, Saheb Sharif-Askari N, Hachim MY, Alsheikh H, Hamad MH, Salih MA, Bashiri FA, Alhasan K, Kashour T, Guatibonza Moreno P, Schröder S, Karageorgou V, Bertoli-Avella AM, et al. Genomic, Proteomic, and Phenotypic Spectrum of Novel O-Sialoglycoprotein Endopeptidase Variant in Four Affected Individuals With Galloway-Mowat Syndrome. **Front Genet.** 2022;13:806190.
25. Alenezi S, Alarabi M, Al-Eyadhy A, Aljamaan F, Elbarazi I, Saddik B, Alhasan K, Assiri R, Bassrawi R, Alshahrani F, Alharbi NS, Fayed A, Minhaj Ahmed S, **Halwani R**, Saad K, et al. Parental perceptions and the 5C psychological antecedents of COVID-19 vaccination during the first month of omicron variant surge: A large-scale cross-sectional survey in Saudi Arabia. **Front Pediatr.** 2022;10:944165.
26. Al-Numair NS, Alyounes B, Al-Saud H, **Halwani R**, Al-Muhsen S. Clinical characteristics, risk factors, and rate of severity of a nationwide COVID-19 Saudi cohort. **Saudi J Biol Sci.** 2022;29(7):103315.
27. Al-Muhsen S, Al-Numair NS, Saheb Sharif-Askari N, Basamh R, Alyounes B, Jabaan A, Saheb Sharif-Askari F, Alosaimi MF, Alsohime F, **Halwani R**, Al-Saud H. Favipiravir Effectiveness and Safety in Hospitalized Moderate-Severe COVID-19 Patients: Observational Prospective Multicenter Investigation in Saudi Arabia. **Front Med (Lausanne).** 2022;9:826247.
28. Al Kaabi N, Oulhaj A, Ganesan S, Al Hosani FI, Najim O, Ibrahim H, Acuna J, Alsuwaidi AR, Kamour AM, Alzaabi A, Al Shehhi BA, Al Safar H, Hussein SE, Abdalla JS, Al Mansoori DSN, et

- al. Effectiveness of BBIBP-CorV vaccine against severe outcomes of COVID-19 in Abu Dhabi, United Arab Emirates. **Nat Commun.** **2022;13(1):3215.**
29. Global, regional, and national burden of colorectal cancer and its risk factors, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019. **Lancet Gastroenterol Hepatol.** **2022;7(7):627-47.**
  30. Global, regional, and national burden of hepatitis B, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019. **Lancet Gastroenterol Hepatol.** **2022;7(9):796-829.**
  31. Adolescent transport and unintentional injuries: a systematic analysis using the Global Burden of Disease Study 2019. **Lancet Public Health.** **2022;7(8):e657-e69.**
  32. Population-level risks of alcohol consumption by amount, geography, age, sex, and year: a systematic analysis for the Global Burden of Disease Study 2020. **Lancet.** **2022;400(10347):185-235.**
  33. Age-sex differences in the global burden of lower respiratory infections and risk factors, 1990-2019: results from the Global Burden of Disease Study 2019. **Lancet Infect Dis.** **2022.**
  34. The global burden of cancer attributable to risk factors, 2010-19: a systematic analysis for the Global Burden of Disease Study 2019. **Lancet.** **2022;400(10352):563-91.**
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