د. ايمان خالد المنصور الزامل

Dr. Iman K. Almansour Alzamil

Assistant Professor of Biomedical Engineering & Biotechnology

Personal Data

Nationality | Saudi

Department | Epidemic Diseases Research

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Personal Statement

University Professor of Biomedical Engineering & Biotechnology with experience interdisciplinary research of genetic engineering, immunology, and bioinformatics. Focused on preclinical and clinical developments of next generation vaccine candidates. Established Nucleic Acid Vaccine Laboratory (NAVL) and Clinical Biomanufacturing Unit (CBMU) at IRMC, IAU. Led the development of several mRNA and pDNA vaccine candidates against emerging and re-emerging viruses, such as MERS-CoV, SARS-CoV-2, Zika, and Influenza. As Chief Principal Investigator and Clinical Trial Manager, I am deeply invested in achieving the objectives for the clinical developments of pDNA vaccine candidates. Knowledgeable in GMP manufacturing, ICH-guidelines, and EMA/FDA/SFDA guidelines related to good clinical practice and Clinical Trials. Highly committed to excellence in research, innovation, and teaching.

Language Proficiency

Language	Read	Write	Speak
Arabic	Excellent	Excellent	Excellent
English	Excellent	Excellent	Excellent

Academic Qualifications

Date	Academic Degree	Specialty	Place of Issue	Address
2016	Ph.D.	Biomedical Engineering & Biotechnology	University of Massachusetts	United States
2008	M.Sc.	Clinical Laboratory Sciences	University of Rhode Island	United States
2005	B.Sc.	Medical Laboratory Technology	King Faisal University	Saudi Arabia

PhD, Master or Fellowship Research Title

PhD	Cross Reactivity of Serum Antibody Responses Elicited by DNA Vaccines Encoding HA Antigen of H1N1 Influenza Vaccines in the Past 30 Years- Dissertation
Master	Mutational analysis in Patients with Familial Mediterranean Fever

Professional Record

Job Rank	Place and Address of Work	Date
Assistant Professor	Department of Epidemic Diseases Research, IRMC Imam Abdulrahman Bin Faisal University, Saudi Arabia	Nov 2017 - Present
Academic Member	European Virus Bioinformatic Center (EVBC) Fredrich Shiller University, Germany	June 2020- Present
Ph.D. Candidate	Laboratory of Nucleic acid vaccine, Department of Medicine, University of Massachusetts Medical School, United States	2009-2016
Ph.D. Researcher, Capstone project	Bioinformatics department, University of Massachusetts Medical School, United States	2010-2010
M.Sc. Student	Clinical Laboratory Sciences Department, University of Rhode Island, United States	2007- 2008
MLT Intern	Medical Laboratories internship at King Fahad University Hospital, King Fahad Military Medical complex, Almana Hospital (Immunology, Microbiology, Hematology, Clinical Chemistry, Histopathology, and Blood Bank)	2005- 2006
MLT Trainee	Medical Laboratories training at King Fahad University Hospital, King Fahad Military Medical complex, Air-base Hospital, Dammam Central Hospital (Immunology, Microbiology, Hematology, Clinical Chemistry, Histopathology, and Blood Bank)	2003-2005

Administrative Positions Held

Administrative Position	Office	Date
Director, Nucleic Acid Vaccine Laboratory	Department of Epidemic Diseases Research, Institute for Research and Medical Consultations (IRMC), Imam Abdulrahman Bin Faisal University	2021-Present
Chair, Animal Research Facility Committee for Policies and Procedures	Institute for Research and Medical Consultations (IRMC), Imam Abdulrahman Bin Faisal University	2023-Present
Member, Department of Epidemic Diseases Research	Institute for Research and Medical Consultations (IRMC), Imam Abdulrahman Bin Faisal University	2017-Present
IAU Representative, Consortium for Infectious Diseases Research	Research Development and Innovation Authority (RDIA)	2024-Present
Member, Laboratories Assessment Task Force	Institute for Research and Medical Consultations (IRMC), Imam Abdulrahman Bin Faisal University	2023-Present
Lab Supervisor, Department of Epidemic Diseases Research	Institute for Research and Medical Consultations (IRMC), Imam Abdulrahman Bin Faisal University	2017-2021
Member, King Faisal Prize Selection Committee (Medicine Track)	King Faisal Foundations	2022-2023
M 1 6 () 6 ()	Institute for Research and Medical Consultations (IRMC), Imam Abdulrahman Bin	2022-2023
Member, Safety Committee	Faisal University	

Chair, Laboratory Safety Committee	Institute for Research and Medical Consultations (IRMC), Imam Abdulrahman Bin Faisal University	2020 - 2021
Member, Summer Research Program Committee	Institute for Research and Medical Consultations (IRMC), Imam Abdulrahman Bin Faisal University	2019 - 2020
Member, Biotechnology Master Program	Institute for Research and Medical Consultations (IRMC), Imam Abdulrahman Bin Faisal University	2017 - 2019

Scientific Achievements

Patents and patents applications

Patent Title	Inventors	USPTO number	Patent Office
Synthetic pDNA Vaccine Against COVID-19	Dr. Iman Almansour	Issue Number 11,857,621	USPTO, United States
Method for Inducing Cellular Immunity to Infection by SARS-Cov-2	Dr. Iman Almansour	Publication Number 20240165220	USPTO, United States
Nucleic Acid Vaccines Encoding S Gene Encapsulated with Nanosilica as Vaccine Candidate Against MERS-CoV	Dr. Iman Almansour alzamil and Dr. Rabindran Jermy	Filing Number 551860US	USPTO, United States

Published Refereed Scientific Research-First Author

Publications

Almansour Alzamil, I., Golovan, S., Pickens, J., Salley, K., and Roberts., M. (2024). Under review. Protective efficacy of pDNA vaccine candidates against lethal SARS-CoV-2 in Syrian golden hamsters. Frontiers in Immunology.

Almansour Alzamil, I., Leau, E., and Burton, K. (2024). In preparation. Repeated dose toxicity evaluation of pDNA vaccine candidates administered intramuscularly in NZW rabbits.

Almansour, I., & Jermy, B. R. (2024). Nucleic acid vaccine candidates encapsulated with mesoporous silica nanoparticles against MERS-CoV. Human Vaccines & Immunotherapeutics, 20(1), 2346390.

https://www.tandfonline.com/doi/full/10.1080/21645515.2024.2346390

Almansour, I., & Boudellioua, I. (2022). hCoronavirusesDB: an integrated bioinformatics resource for human coronaviruses. Database, 2022.

https://academic.oup.com/database/article/doi/10.1093/database/baac017/6554540

Almansour, I., Macadato, N. C., & Alshammari, T. (2021). Immunogenicity of multiple doses of pDNA vaccines against SARS-CoV-2. Pharmaceuticals, 14(1), 39.

https://www.mdpi.com/1424-8247/14/1/39

Almansour, I. (2020). Mumps vaccines: current challenges and future prospects. Frontiers in Microbiology, 11. https://www.frontiersin.org/journals/microbiology/articles/10.3389/fmicb.2020.01999/full

Almansour, I., & Alhagri, M. (2019). MMRdb: Measles, mumps, and rubella viruses database and analysis resource. Infection, Genetics and Evolution, 75, 103982.

https://www.sciencedirect.com/science/article/abs/pii/S156713481930200X

Almansour, I., Alfares R and Aljofi H. (2019). Large-scale analysis of B-cell epitopes of envelope: Implications for Zika vaccine and immunotherapeutic development. F1000Research 2019, 7:1624.

https://pmc.ncbi.nlm.nih.gov/articles/PMC6611143/

Almansour, I., Chen, H., Wang, S., & Lu, S. (2013). Cross reactivity of serum antibody responses elicited by DNA vaccines expressing HA antigens from H1N1 subtype influenza vaccines in the past 30 years. Human vaccines & immunotherapeutics, 9(10), 2049-2059.

https://www.tandfonline.com/doi/full/10.4161/hv.25735

Preprints

Almansour I, Alfares R and Aljofi H. Large-scale analysis of B-cell epitopes of envelope: Implications for Zika vaccine and immunotherapeutic development. F1000Research 2018, 7:1624.

https://doi.org/10.12688/f1000research.16454.1

Published Refereed Scientific Research-Co-author

Publications

Alsubaie, L,. & Almansour Alzamil, I. (2024). In preparation. Multiple B-cell epitope-Based vaccine design against Monkeypox Virus: An Immuno-informatics Approach.

Alshahrani M., **Almansour Alzamil, I.**, et al. (2024). Accepted. Binding antibodies responses to SARS-CoV-2 infection in hospitalized patients and vaccinated subjects: A longitudinal, prospective observational study. Saudi Journal of Medicine and Medical Sciences.

Khan, F. A., Lammari, N., Muhammad Siar, A. S., Alkhater, K. M., Asiri, S., Akhtar, S., **Almansour, I.,** & Meniai, A. H. (2020). Quantum dots encapsulated with curcumin inhibit the growth of colon cancer, breast cancer and bacterial cells. Nanomedicine.

https://www.tandfonline.com/doi/abs/10.2217/nnm-2019-0429

Alomari, M., Almohazey, D., Almofty, S., Alhibshi, A., Almansour, I., Kaewsaneha, C., ... & Elaissari, A. (2019). Magnetic-responsive polysaccharide-inorganic composite materials for cancer therapeutics. In Polysaccharide Carriers for Drug Delivery (pp. 179-216). Woodhead Publishing.

https://ouci.dntb.gov.ua/en/works/lm0M08n4

Completed Research Projects as PI

#	Research Title	Funder	Report Date
1	RNA Vaccine Delivered by Nano-silica as Novel Vaccine Candidate Against MERS-CoV	DSR	2024
2	Protective Efficacy of pDNA. (S.opt.FL) in Syrian Golden Hamsters	МОЕ	2024
3	GLP Toxicity Evaluation for the Clinical-Grade pDNA Covid-19 Vaccine	MOE	2024
4	Epitope Discovery/Mapping of SARS-CoV-2 and a Development of Multisystem, Data Driven Bioinformatics Resource for the Surveillance of Human Coronaviruses	KACST	2022
5	Development of Nucleic Acid-Based Vaccines Against SARS-CoV-2	DSR	2021
6	Humoral Antibody Responses Elicited by Engineered RNA Vaccine Against Zika	DSR	2020
7	MMRdb: Measles, Mumps, and Rubella Viruses Database and Analysis Resources	Non-funded	2019

8	IRAM: Virus Capsids Database and Analysis Resource	Non-funded	2019
9	Large-Scale Analysis of B-Cell Epitopes of Envelope for Zika	Non-funded	2019

Completed Research Projects as CO-PI

#	Research Title	Funder	Report Date
1	Antibodies Responses to SARS-CoV-2 Infection in Hospitalized Patients: Prospective Observational Study	DSR	2023

Current Research

#	Research Title	Funder
1	Phase-I, Randomized, Observer Blind, Dosage Finding Study, to Evaluate the Safety and Immunogenicity of a Prophylactic pDNA Vaccine	MOE
2	Multiple B-Cell Epitope-Based Vaccine Design Against Monkeypox Virus: An Immuno-informatics Approach	Non-funded

Contribution to Scientific Conferences and Symposia

#	Conference Title	Organizer	Place of the Conference	Date	Extent of Contribution
1	Health Innovation Weak: Breakthrough Program	Research Development and Innovation Authority (RDIA)	Riyadh, Saudi Arabia	Oct 2024	Pitch Deck, Poster
2	Consortium in Infectious Diseases Research Global Health Summit	RDIA, Global Heath Summit Ministry of Health (MOH)	Riyadh, Saudi Arabia	Oct 2024	IAU representative
3	The Human Capability Initiative: Beyond Readiness	Human Capability Initiative (HCI)	Riyadh, Saudi Arabia	Feb 2024	Invited Speaker
4	Bioengage Seminar	King Fahad University for Petroleum and Minerals (KFUPM)	Dharan, Saudi Arabia	Feb 2024	Invited Speaker
5	Sustainable Partnerships Conferences	Ministry of Education (MOE)	Riyadh, Saudi Arabia	Nov 2022	Exhibitor

6	Knowledge Series-Biotech Innovation	Saudi Food and Drug Authority (SFDA)	Riyadh, Saudi Arabia	Dec 2022	Invited Speaker
7	Importance of medical biotechnology research in Saudi universities and its reflection on the knowledge economy	Shaqra University	Riyadh, Saudi Arabia	Feb 2022	Invited Speaker
8	Research and Innovation in Pharmaceutical Industry	Ministry of Education (MOE)	Riyadh, Saudi Arabia	Feb 2021	Invited Speaker
9	knowledge Integration Conference	Ministry of Education (MOE)	Riyadh, Saudi Arabia	Nov 2020	Invited Speaker
10	COVID-19 Vaccines: Global Challenges and Future Prospects	King Abdullah International Medical Research Center (KAIMRC)	Riyadh, Saudi Arabia	Nov 2020	Invited Speaker
11	COVID-19 Pandemic Workshop	Ministry of Education (MOE)	Riyadh, Saudi Arabia	Apr 2020	Invited Speaker
12	Capacity Building in Tropical Diseases Implementation Research	World Heath Organization- Arabia Gulf University WHO (AGU)	Manama, Bahrain	Dec 2019	Participant
13	Arab International Pharmacy Congress (presented by Tuqa Ramadan and Abeer Alanazi)	Maarefah Management	Riyadh, Saudi Arabia	Nov 2018	Poster
14	20th DNA Vaccine Conference	International Society of Vaccines	San Diego, CA, United States	Dec 2012	Poster
15	Sigma Xi 17 Annual Research Exhibition	University of Massachusetts	Dartmouth, MA, United States	Apr 2011	Poster

Scientific Research Papers Presented to Refereed Specialized Scientific Conferences

#	Speaker	Title	Conference
1	Almansour Alzamil, I	Immune: Prophylactic and Therapeutic Vaccine Startup	Breakthrough Program, RDIA, 2024
2	Almansour, I	Scaling up our impact: from local solutions to global reach)	Human Capability Initiative, 2024
3	Almansour, I	Bioengineering strategies for pDNA vaccine: from lab scale to GMP manufacturing	Bioengage KFUPM, 2024

4	Almansour, I	Covid-19 pDNA vaccine candidate (Exhibition)	Knowledge Series, Innovation Group, SFDA, 2022
5	Almansour, I	Beyond Pandemic: Harnessing the Power of DNA vaccines	Shaqra University, 2022
6	Almansour, I	Vaccine Development in the Kingdom: Prospects and Challenges	Innovation in Pharmaceutical Industry, MOE, 2021
7	Almansour, I	Immunogenicity of pDNA Vaccines Against SARS-CoV-2	knowledge integration conference, Deputyship for Research and Innovation, MOE, 2021
8	Almansour, I	Newly Developed pDNA Vaccines for COVID-19	COVID-19 vaccines: Global challenges and future Prospects, KAIMRC, 2020.
9	Almansour, I	Nucleic Acids Based Vaccines Against SARS-CoV-2	COVID-19 pandemic workshop, MOE, 2020
10	Almansour, I	Immunogenic cross-reactivity between Zika and Dengue viruses	WHO-EMR tropical diseases research, 2019
11	Almansour, I, et al	Bioinformatics prediction of B cell Epitopes of NS5 and Their Implications in Zika Vaccine and Immunotheraputics	Arab International Pharmacy Congress, Riyadh, Saudi Arabia, 2018
12	Almansour, I et al	Antigenicity and Immunogenicity of H1N1 HA Influenza Vaccines	20th DNA Vaccine Conference, San Diego, CA, United States, 2012
13	Almansour, I	Designing Broadly Reactive Influenza H1N1 Vaccine from Antigenically Different Hemagglutinin.	Sigma Xi 17 Annual Research Exhibition, Dartmouth, MA, United States, 2011

Membership of Scientific and Professional Societies and Organizations

#	Membership	Country	Date
1	International Society for Vaccine (ISV)	United States	2023- Present
2	King Faisal Foundation, King Faisal Prize (KFP)	Saudi Arabia	2022-2023
3	European Virus Bioinformatics Center (EVBC)	Germany	2020- Present
4	ECA for GMP Compliance	Germany	2022- Present
5	International Society of Global Health (ISoGH)	United Kingdom	2020- Present

Supervision and Mentorship

#	Supervision	College	Student	Duration
1	M.Sc. Student	Biotechnology Program, IRMC, IAU	Razan Aldahhan	2021-2022
2	M.Sc. Student	Biotechnology Program, IRMC, IAU	Zahra Alkhalifa	2021-2021
3	B.Sc. Student (Graduation Project)	Cell & Molecular Biology, College of Science, IAU	Nora Alsudairi	2021-2021
4	B.Sc. Student (Graduation Project)	Cell & Molecular Biology, College of Science, IAU	Nourah Alghamdi	2021-2021
5	M.Sc. Students	Biotechnology program, IRMC, IAU	Thamer Alshammari	2020-2020
6	M.Sc. Graduate	Volunteer program, IRMC, IAU	Faiza Alshehri	2019-2020
7	M.Sc. Graduate	Volunteer program, IRMC, IAU	Manal Alshehri	2018-2018
8	B.Sc. Graduate	Volunteer program, IRMC, IAU	Rahaf Alfares	2017-2018
9	PharmD Student (Graduation Project)	College of Pharmacy, IAU	Tuqa Ramadan	2017-2018
10	PharmD Student (Graduation Project)	College of Pharmacy, IAU	Abeer Alanazi	2017-2018

Teaching Activities

Postgraduate courses

#	Course/Rotation Title	No./Code
1	Immunology (Lectures)	821 MSBE M.Sc. Biotechnology Program
2	Immunology (Lab)	821 MSBE M.Sc. Biotechnology Program
3	Postgraduate Seminar	841 MSBE M.Sc. Biotechnology Program

Brief Description of Postgraduate Courses Taught

821 MSBE

The BSME821 Immunology course focuses on providing the fundamentals of the immune system and integrating the clinical aspects of immune-driven diseases with cutting-edge immuno-based technologies and therapeutics to gain the required knowledge and skills for criticizing, evaluating, and solving immunological problems. Students will gain in-depth knowledge in four areas: 1) Immune system components and types of responses, immunogenicity, immune system pathology, and cancer immunology. 2) Immunoassays and immunoinformatic. 3). Modern vaccine technologies and Immunotherapeutic. 4). Principles of GMP manufacturing of vaccines and monoclonal antibodies. In addition, the students will learn how to integrate the learnt course's materials in vaccines development, immuno-informatics, and immunological techniques by formulating a brief, written proposal, to develop modern vaccine candidates and demonstrate immuno-biotechnological solutions for the unmet health needs for immune-mediated diseases.

Undergraduate courses

#	Course/Rotation Title	No./Code
1	Graduation project (AN)	507 CLPH
1 1	Graduation project (AN)	Clinical Pharmacy Program

Guest/Invited Lectures for Postgraduate Students

#	Activity	Subject	College and University or Program	Date
1	Bioengage, Postgraduate Seminar	Bioengineering strategies for pDNA vaccine: from lab scale to GMP manufacturing	Bioengineering Department, KFUPM	2024
2	841 MSBE Postgraduate Seminar	Nucleic Acid based vaccine: Current Status and prospects	Biotechnology, IRMC, IAU	2022
3	Postgraduate Academic Half Day activities	Vaccination: what do you need to know as a clinical Microbiologist	Clinical Microbiology Fellowship Program College of Medicine, IUA	2021
4	841 MSBE Postgraduate Seminar	Nucleic Acid based vaccine and their applications	Biotechnology, IRMC, IAU	2021
5	Faculty Mentorship Certification program (FMPC)	Overview of IRMC departments and services for IAU faculty members	Deanship of Academic Development, IAU	2018

Collaborations and Partnerships

Established effective partnerships between with world leading CDMOs and CRO for the clinical development for "FIH-Covid-19 vaccine study".

#	CDMO/CRO	Partnerships	Location
1	Cobra Biologics, CRL	GMP manufacturing of vaccine drug substance through "Mutual Manufacturing Plan"	United Kingdom
2	Symbiosis	GMP manufacturing of vaccine drug products through "Mutual manufacturing plans"	United Kingdom
3	Sharp	IMP packaging, labelling & UE QP release	United Kingdom & Netherland

4	ICON	IRT System & DMC	USA & Ireland
5	SGS	Clinical monitoring	Belgium
6	Rave, Medidata	EDC	United States
7	Southern Research	PE & Toxicity evaluations (ABSL-3)	United States
8	Synexa	V-Plex	United Kingdom

Consultancy (Industry)

#	CDMO/CRO	Partnerships	Location
1	Putnam Associates	Vaccine Clinical Trials & Commercialization	Massachusetts United States

Journal Editor and reviewer

#	Role	Journal	Publisher
1	Reviewer	Database: Journal of Biological Databases and Curation	Oxford University Press (OUP)
2	Reviewer	Nature-Scientific Report	Nature publishing group (NPJ)
3	Reviewer	Frontiers in Public Health	Frontiers

Honors, awards, and recognitions

#	Name	Affiliation	Location
1	Sustainable Partnerships Conference	Vice Presidency for Scientific Research and Innovation, IAU	Saudi Arabia
2	Testahel	Vice Presidency for Female Affairs, IAU	Saudi Arabia
3	IRMC-IAU Faculty Recognition	Summer research program, IRMC, IAU	Saudi Arabia
4	King Abdullah Bin Abdulaziz Scholarship	Doctorate program	Saudi Arabia
5	Outstanding Academic Achievement	Saudi Arabian Cultural Mission	Washington DC, USA
6	Outstanding Academic Achievement	Saudi Arabian Cultural Mission	Washington DC, USA
7	King Abdullah Bin Abdulaziz Scholarship	Master Program	Saudi Arabia
8	Honor Student	King Faisal University	Saudi Arabia

Continuing Education

Stanford University	The Exceptional Leader: A Framework for Successful, Scalable, and Impactful Leadership		
Massachusetts Institute of Technology (MITx)	Making Biologic Medicine for Patients: The Principle for Pharmaceutical Manufacturing		
Center for Clinical trial Network	Good Clinical Practice		
Research Development and Innovation Authority (RDIA)	Breakthrough Program: How to Transform Your Research Idea into Startup Business		
World Health Organization-AGU	Capacity Building in Tropical Disease Implementation Research		
Imam Abdulrahman Bin Faisal University	Faculty Mentorship Certification Program		
RTI International-Imam Abdulrahman Bin Faisal University	Health Innovation Leadership Summit		

Press/Media

#	Media	Link
1	Saudi Arabia's first COVID-19 vaccine set for clinical trials", Press interview (2021)	https://www.arabnews.com/tags/dr-iman-almansour
2	The first Saudi Vaccine against COVID-19 amongst the Strategic Projects of Research funded by Saudi Ministry of Education, A research published in Q1 Journal, Press release (2021)	https://www.iau.edu.sa/en/news/the-1st-saudi-vaccine-against-covid-19-a-research-published-in-q1-journal
3	First Saudi Vaccine for COVID-19 is Set for Clinical Trial, QS, Press release (2021)	https://qs-gen.com/first-saudi-vaccine-for-covid-19-is- set-for-clinical-trial
4	Dr. Iman Almansour Grants Saudi Arabia its First Covid-19 Vaccine, CGC (2021)	https://cgc.gov.sa/en/node/427
5	Saudi university begins clinical trials to produce first coronavirus vaccine, Saudi Gazette (2021)	https://www.saudigazette.com.sa/article/603364
6	Leading the way how Saudi Arabia is pioneering research among global partners, Nature Portfolio, Press release (2020)	https://www.nature.com/articles/d42473-021-00252-x



Links:

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LOOP: https://loop.frontiersin.org/people/815283/overview

Google scholar: https://scholar.google.com/citations?user=5rs_xhUAAAAJ&hl

LinkedIn: https://www.linkedin.com/in/iman-almansour

Last Update

14/12/2024