

Inas Alhudiri

Biotechnology Research Center, Tripoli, Libya

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Education and Qualifications:

The University of Nottingham, Nottingham, UK

Ph.D, School of Clinical Sciences, Breast Surgery 2012

Royal College of physicians and surgeons of Glasgow, UK

Membership of the Royal College of Surgeons (MRCS) 2009

Sabha University (Faculty of medicine), Libya

Bachelor of medicine and surgery (MB ChB) 2001

Awards and recognitions

Listed as one of 20 **Libyan Women You Must Know** by Together We Build It Organization in 2020. I was recognized for my achievements during the COVID-19 Pandemic in Libya and my role in advancing research in Libya.

Current Appointments:

1.08.2021-present Director of vaccination unit at Biotechnology Research Center

13.10.2021-present Member of Joint Committee for Combating COVID-19 between Biotechnology Research Center and National Center for Disease Control and subcommittee for preparing laboratory needs for COVID-19 diagnosis in Libya

25.03.2020-present Chairman of technical committee for combating COVID-19 at Biotechnology Research Center, Tripoli-Libya

17.07.2013-present Head of genetic engineering department at Biotechnology Research Centre, Tripoli-Libya.

2016- Present Member of bioethics committee in biotechnology research center

Previous appointments

13.12.2020-30.04 2021 **Member of Technical committee for private laboratories by the Presidency Council**

June.2020-April 2021 **Member of committee for planning country's needs for laboratory diagnostics for COVID-19 by the ministry of health**

March 2020-May 2021 **Member of the COVID-19 scientific consulting committee for the National Center for Disease Control in Libya.**

October 2018-December 2019 **Head of organizing committee of Breast cancer research conference** in Libya (8-9 October 2019) and member of the scientific committee

2001-2006 **Senior house officer in surgical departments, Sabha medical centre, Sabha-Libya.**

Personal Skills:

- Project management and leadership
- IT skills: Microsoft Word, Excel, PowerPoint and project, SPSS, GraphPad Prism, diagrams app
- Design thinking
- Problem solving

Training and development:

African Science Frontiers initiative (ASFI) Systematic Reviews & Meta-Analysis online course 25th-29th July 2022

MRC Holland MLPA® Raw Data Evaluation and Troubleshooting 13th July 2022 (Online)

Responding to SARS-CoV-2 Variants, such as Omicron: Detection and Surveillance (Webinar), 17th March 2022

Training course on Ion torrent personal genome machine and genomic data analysis of BRCA genes and SARS-COV-2, 21st September- 10th October 2021, Istanbul, Turkey

Evidence-informed policy making seminar by African Academy of Sciences and European Commission, December 2018, Pretoria, South Africa

Antimicrobial resistance seminar, NCDC and WHO in Tripoli, Libya April 2018

Fundamentals of Project Planning and Management | University of Virginia, May 2017 (Audit only)

Workshop on the role of research centres in supporting small and medium businesses, Tripoli November 2017

Workshop on: Cartagena Protocol on Biosafety to the Convention on Biological Diversity and the draft of Libyan law on GMOs, Tripoli 2016

DNA sequencing by Capillary electrophoresis training using Genetic Analyzer (ABI), Twaisha, Tripoli 2013

Writing grants workshop, AACR annual meeting, Chicago, IL 2012

IT training: Attended courses on MS excel functionality, Latex workshop, Powerpoint presentations, SPSS, University of Nottingham

Critical analysis of scientific papers and health economics courses 2009

Communication skills workshop: Nottingham City hospital 2008

Oncology course: The University of Nottingham 2007

Teaching experience:

School of life sciences- The Libyan Academy

Professor of Molecular Biology (postgraduate) - November 2021-present

Libyan Biotechnology Research Centre, Tripoli, Libya, April-present 2020

Since the start of the COVID-19 pandemic, I was involved in training laboratory personnel from many Libyan cities on the technology of RT-PCR. The training includes workshops and lab on-hands training for 5 days. Trainees from Sabha, Zliten, Gharyan, Zawia, and many others. These Labs currently have full capacity to diagnose COVID-19 using RT-PCR.

Faculty of Medicine-Sabha University (Sabha-Libya) 2019

Visiting Professor of General surgery to 4th year medical students

Libyan Biotechnology Research Centre 2013-2019

Co-supervising master students in the lab to finish their research projects (currently 5 master students).

Running training courses and workshops on research methodology and lab techniques including PCR, DNA sequencing and western blotting.

The University of Nottingham 2011

Student tutor: helping new students with IT facilities at the University

Sabha University, Department of surgery 2003-2005

Postgraduate demonstrator at the University: involved in monitoring and tutoring intern doctors in the department of general surgery.

Peer review:

Peer reviewer in the Microbiology Spectrum journal 2021-present

Peer Reviewer in the Journal of breast cancer research and treatment (Springer Nature), 2021

Peer Reviewer in the journal of Journal of Liaquat University of Medical and Health Sciences (JLUMHS) Jamshoro, Pakistan, 2021

Peer Reviewer in Sabha University Journal of pure and applied sciences, 2019

Research Experience:

Current projects:

- Investigation of neutralizing antibodies among vaccinated populations in Libya
- Studying immune response to SARS-COV-2 in people receiving mixed vaccines
- Sequencing of SARS-COV-2 viral genome in samples from Libyan population
- Investigation of breast cancer gene variants and mutations in Libyan population.
Currently the work is on BRCA genes, one of the aims is to define criteria for BRCA testing in Libyans.
- Newborn screening in Libya
- Libyan Human genome project
- Breast and colon cancer risk assessment
- Study of genetic variants in MEFV gene in Familial Mediterranean Fever in general population and patients with end stage renal failure on dialysis.
- Relationship between Insulin resistance and vitamin D and adiponectin/ADIPOR in type II diabetic patients in Libya as well as study of genetic variants in VDR gene and Adiponectin gene.
- Assessment of prediabetes risk in Libyan population

The University of Nottingham, 2012-2013, in collaboration with the department of clinical pathology: Study of expression analysis of lamin A/C and Cathepsin D in tissue microarrays of primary early operative breast cancer and their prognostic value in breast cancer.

Laboratory skills:

- DNA Sanger sequencing and data analysis using Sequencher software.
- Ion torrent genome sequencing
- Gene cloning techniques (Primer design, conventional PCR, Splicing overlap extension PCR, vector construction, restriction analysis, genomic DNA isolation, transformation, RT-PCR).
- Protein expression in *E.Coli* and *Pichia.pastoris*.
- Protein purification using affinity chromatography (IMAC) and AKTAprime plus
- ELISA techniques and Cell culture
- Immunohistochemistry of tissue microarrays and scoring techniques
- Survival analysis and Cox-regression model.

Conferences and scientific events attended:

1. European society of human genetics Virtual conference, 28-31 August 2021

2. Science against SARS-CoV-2 Virtual Conference, Thermofisher, 23th June 2021
3. European Molecular Biology Laboratory (EMBL) Conference: SARS-CoV2: Towards a New Era in Infection Research, 03 July 2020, Heidelberg, Germany
4. AACR Virtual Annual Meeting II, 22 – 24 June 2020.
5. European society of human genetics Virtual conference, 6-9 June 2020, Berlin Germany
6. Breast cancer research conference in Libya, 13-15 December 2019, Tripoli-Libya
7. Breast cancer conference, 5-7 September 2019, Tripoli-Libya
8. American Association of Cancer Research (AACR) annual meeting –Chicago, IL, USA, April 2012
9. Pichia conference 2009-Tuscon, Az, USA
10. First conference of science and technology, Sabha-Libya February 2018
11. Science day (Biotechnology research center between ambition and reality) 2017
12. Nanotechnology research symposium, Tripoli Libya 2016
13. The first scientific conference of projects funded by the Libyan agency for research, science and technology, Tripoli 2013

Publications:

1. Jallul, M, **Alhudiri I**, AL-Eitan L, Elzagheid, A. Warfarin pharmacogenomics in African populations: the importance of ethnicity-based algorithms, 2022, Pharmacogenomics
2. Jallul, M.; Elgriw, N.; Eltaib, F.I.; Dwigen, S.M. Al; Elfallah, A.; Elgheriani, H.M.; Atwear, W.S.; Milad, M.B.; **Alhudiri, I.M.**; Elzagheid, A. Parents' Concerns and Attitudes towards School Reopening during COVID-19 Pandemic: A Cross-Sectional Survey-Tripoli, Libya, 2022. doi:10.1080/19932820.2022.2087847.
3. Mwada Jallul; Ibrahim, K.; Zaghdani, A.; Abdusalam, M.M.; Dwigen, S.M. Al; Atwair, W.S.; Elbasir, M.; **Alhudiri, I.**; Elzagheid, A. Variant-Specific RT-QPCR for Rapid Screening of B.1.617 Mutations in SARS-CoV-2. 2022, doi:10.13140/RG.2.2.10554.67521/1.
4. Ahmad M. Ramadan, Khaled M Ibrahim, Saadeddin Mohammed Belaid, Mohamed Salem Abusanina, Mohammed Ben Elfghi, Elmundr Abughnia, Ahmed Elkikkli, **Inas M Alhudiri** & Adam Elzagheid (2021) Travel during COVID-19 pandemic in Libya: reasons of travel, disease importation and travel regulations, Libyan Journal of Medicine, 16:1, 1994740, <https://doi.org/10.1080/19932820.2021.1994740>
5. Abusrewil Z, **Alhudiri IM**, Kaal HH, Meshri SE El, Ebrahim FO, Dalyoum T, et al. Time scale performance of rapid antigen testing for SARS-COV-2: evaluation of ten rapid antigen assays. J Med Virol 2021. <https://doi.org/10.1002/jmv.27186>.

6. ElJilani M, Abdusalam M, Abdalla A, Dalyoum T, Ahmad S, **Alhudiri I**, et al. Performance evaluation of seven commercial real-time polymerase chain reaction assays for SARS-COV-2 detection. *Libyan J Med Sci* 2021;5:56. https://doi.org/10.4103/ljms.ljms_5_21.
7. **Alhudiri, I.M.**, Ramadan, A.M., Ibrahim, K.M., Aboud, A.A., El Meshri, S.E., Ebrahim, F.O., Eljilani, M., Salem, M.A., Elgheriani, H.M., Abughnia, E., Efrefer, A.A., Elkikkli, A., Abdusalam, M.M., Dalyoum, T.M., Elbasir, M.O., Abusanina, M.S., Hammud, S., Altabal, S.A., Jallul, M., Belaid, S.M., Ben Elfghi, M., Ruaua, M.A., Al Dwiggen, S.M., Salama, B.H., Atwair, W., Kaal, H.H., Ibrahim, K., Abudalla, H., Milad, M.B., Zaghdani, A.A., Eltaib, F.I., Aslougi, A., Elmaghrabi, A. and Elzagheid, A. Whole genome characterization of SARS-CoV-2 in Libya. <https://www.ncbi.nlm.nih.gov/nuccore/MZ054886.1>
8. **Alhudiri I**, Ramadan AM, Ibrahim KM, Eljilani M, Aboud AA, Salem MA, et al. Whole-genome sequencing of SARS-COV-2 reveals a substantially lower frequency of the UK variant than previously announced in Libya. *MedRxiv* 2021:2021.07.03.21257942. <https://doi.org/10.1101/2021.07.03.21257942>.
9. Teka IA, BenHasan MH, Alkershini AA, Alatresh OK, Abulifa TA, Lembagga HA, et al. Reinfection with SARS-CoV-2: A case report from Libya. *Travel Med Infect Dis* 2021:102040. <https://doi.org/10.1016/j.tmaid.2021.102040>.
10. Eman Gusbi, Farag I Eltaib, Abraham F Abraham, Walid M Benbubaker, **Inas M Alhudiri**, Sameera Ahmad Al-dabea, et al. Cancer incidence in Southern Libya: Updated report from 2016 to 2018. DOI:10.4103/LJMS.LJMS_74_20
11. Abstracts from the 53rd European Society of Human Genetics (ESHG) Conference: e-Posters. *Eur J Hum Genet* 2020;28:798–1016. <https://doi.org/10.1038/s41431-020-00741-5>.
12. ElJilani M, Shebani A, Bishr A, Abdul Jalil H, Dalyoum T, Abudalla H, Abualroos R, Alhodiri H, Alemam H, Gusbi E, **Alhudiri I** (2020) Assessment of breast cancer risk in Libyan women using the gail model. *Libyan J Med Sci* 4: 115, doi:10.4103/ljms.ljms_26_20.
13. **Alhudiri IM**, Ebrahim FO, Sassi A, Meshri SE El, Fellah A, Fellah AA, et al. Overview of Epidemiology, Pathogenesis and Clinical Aspects of COVID-19: A Libyan Perspective. *IOSR J Dent Med Sci e-ISSN*. 2020;19(7):28–41.
14. **Alhudiri IM**, Nolan CC, Ellis IO, et al. (2019) Expression of Lamin A/C in early-stage breast cancer and its prognostic value. *Breast Cancer Res Treat* 0:0. doi: 10.1007/s10549-018-05092-w
15. El Jilani MM, Mohamed AA, Zeglam H Ben, **Alhudiri IM**, Ramadan AM, Saleh SS, Elkabir M, Amer I Ben, Ashammakhi N, Enattah NS, Bredan A (2015) Association between vitamin D receptor gene polymorphisms and chronic periodontitis among Libyans. *Libyan J Med* 1: 1–7, doi:10.3402/ljm.v10.26771.
16. Eman Gusbi, Islam Elzouki, Hafsa A. Alemam, Majda Musa, **Inas M. Alhudiri**, Nabil Enattah, Mokhtar Gusbi AE. Prevalence of Hepatitis C Infection in Hemodialysis Patients: Report from 37 Hemodialysis Centers in Libya. *Libyan J Med Sci [Internet]*. 2019;3(2):42–6. Available from: www.ljmsonline.com.

17. Alayat KM, Zain AMA, Tawaty A, **Alhudiri IM** (2005) Acute Appendicitis A Prospective Study Of 128 Cases In 2 nd March Hospital-Sebha. Sebha Univ J Med Sci 4: 9–13.
18. Bushan ST, Irhuma A, **Alhudiri IM** (2005) Tuberculous Sinuses Re-Visited. Sebha Univ J Med Sci 4: 14–20.
19. Irhuma AE, Ahmed MG, Salih K, **Alhudiri IM**, El-din MH, Ali M (2006) Diabetic Foot in the South of Libya. Sebha Med J 5:1

Conference Abstracts

1. Ariej Mohammed, Inas M Alhudiri, Hamza Ben Zeglam, Abdenaser A. Mohamed, Hafsa Al-Emam, Halla Elshwekh and Nabil S Enattah. Community-based countrywide analysis of variants of the lactase-phlorizin hydrolase gene and their pathological correlates in Libya. 54th European Society of Human Genetics (ESHG) Conference: e-Posters 2021.
2. Fakhri F Aljidaemi, Ghada M Salem, Inas Alhudiri, Hamza Ben Zeglam, Nabil Enattah. The association between Lactotransferrin LTF gene polymorphism and dental caries. 54th European Society of Human Genetics (ESHG) Conference: e-Posters 2021.
3. Elhadi, I. Alhudiri, A. Elmarghani, M. Elhadi, A. Msherghi, A. Buhmeida, N. Enattah, A. Elzagheid. Assessment of knowledge and attitude towards biobanks among healthcare students and their willingness to donate biospecimens in Libya. 53rd European Society of Human Genetics (ESHG) Conference: e-Posters 2020.
4. H. Elshwekh, I. Alhudiri, H. Abdul Jalil, A. Mohamed, A. Elkikli, N. Jornaz, N. Enattah. Genetic variants of BRCA1 exon 11 in Libyan breast cancer patients. 53rd European Society of Human Genetics (ESHG) Conference: e-Posters 2020.
5. E. Alsherif, I. Alhudiri, M. ElJilani, P. Rutland, N. Enattah. Association between Interleukin 17A and Interleukin 17F Gene Polymorphisms and Periodontal Pathogens in Chronic Periodontitis among Libyans. 53rd European Society of Human Genetics (ESHG) Conference: e-Posters 2020.
6. Asma Elgeriani, Moudah Alfaydh, Agila Ali, Aeshah Miftah, Fatma Elsharif, Ammar Asloughi , Inas M Alhudiri , Miluda Rajab Elhamadi · Knowledge, attitude, and practice of Libyan women regarding breast cancer in Sabha, Libya (2019). Breast cancer research conference Libya 2019 (Tripoli, Libya).
7. Sameera Al_dabea, Inas Alhudiri, Khadija Ahmad, Fatma Alsharif, Khaled Ibrahim, Ammar Asloughi, Adam Elzagheid. (2019) Breast cancer incidence in Southern Libya: The first report 2016. Breast cancer research conference Libya 2019 (Tripoli, Libya).
8. Kalthoum Alaribi, Fatma Alsharif, Ammar Asloughi, Abdusalam Elkilani, Mohamed Elbasir, A. Elzagheid, Inas Alhudiri. (2019) Breast Cancer Risk Assessment in Libyan women: Calculating 10-year and lifetime Risk Using the Tyrer-Cuzick Model. Breast cancer research conference Libya 2019 (Tripoli, Libya).
9. Fatma Elsharif, Sarah Abdelrazeq, Inas Alhudiri. (2019) Frequency of breast disease among patients attending Tripoli Central Hospital. Breast cancer research conference Libya 2019 (Tripoli, Libya).

10. Hamza Musbah Abdul Jalil, Abdenaser A. Mohamed, Inas Alhudiri, Halla Shweikh, Ahmed Elkikli, Nabil Enattah. (2019) Study of genetic variants in different exons of BRCA1 in Libyan breast cancer patients. Breast cancer research conference Libya 2019 (Tripoli, Libya).
11. Hala Elshweikh, Inas Alhudiri, Hamza Abdul Jalil, Abdenaser A. Mohamed, Naji Jornaz, Nabil Enattah. (2019) Study of genetic variants in BRCA1 exon 11 in Libyan breast cancer patients. Breast cancer research conference Libya 2019 (Tripoli, Libya).
12. Alhudiri IM, Green AR, Ellis IO, et al. (2012) Abstract 688: Lamin A/C a novel potential prognostic marker in early operable primary breast cancer. Cancer Res 72:688 LP-688. doi: 10.1158/1538-7445.AM2012-688 (AACR annual meeting, Chicago 2012)
13. Alhudiri IM, A Murray, K Williamson, D Nunns, TJ O'Brien, JF Robertson, CJ Chapman (2011) Autoantibodies in Ovarian Cancer. Tumor Biology 32 (suppl 1):s67-s122. DOI:10.1007/s13277-011-0240-z. (ISOBM conference 2011, Italy).

Memberships and organizations:

Associate member of American Association of Cancer Research (AACR) 2022

Contributing member of American Society for Microbiology 2022

Co-founder of Libyan organization for advancement of science (LOAS)

Member of Center of studies of security and development of Saharan regions (CSSDS)

Other activities:

- Panelist in International Women's Week – Libyan Women at The Forefront event by UN Women on 8th March 2021 (Pnael-2 Humanitarian Actors & The COVID-19 Response)
- Appearing frequently in the media since the epidemic raising public's awareness about the importance of COVID-19 testing and how the tests are done in the lab. Videos were circulating in facebook and had very good interaction.
- Hebatei campaign: chairman of the campaign which was launched between 16th may-22nd May 2014 in Tripoli for blood sample collection from healthy volunteers in Tripoli area as part of a project to study genetic variants of BRCA genes in Libyan women.

Hobbies

Cycling and hiking