

Khadija Mohamed Ahmad Ibrahim

MBCHB, PhD Genetic/ Lund, Sweden

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Personal information

Work place: Sebha Medical Centre, clinical laboratory, Microbiology Unit

Faculty of medicine: Assistant professor at Microbiology department , Faculty of medicine, Sebha University

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Home Address: - Sabha, Libya P.O. Box199 36, Sebha-Libya

Citizenship: Libyan

Languages: 1. Arabic Mother tongue)

2. English

3. Swedish (Svenska, little)

Education:

➤ 1994-2000:

MBCHB, Faculty of medicine, Sebha University

- 1994-1995: Premedical year.
- 1995-2000: study of: Biochemistry, Anatomy, Physiology, Histology, Pharmacology, Microbiology, Parasitology, Community medicine, Pediatric, Medicine, and surgery.
- 2000-2001: Internship at Sebha medical center

Professional Experience:

➤ 2002-2005:

Anaesthesia

- Working as **S.H.O** at Sebha medical center (SMC) and Tripoli Medical Center (TMC)

➤ 2005-2008:

Biotechnology Research Center / Tripoli

- Working at genetic engineering
- Sharing experience and knowledge

➤ September 2009- March 2014:

PhD, Genetic, Lund University, Sweden.

- March 2014: **PhD degree**, Specialization in genetic
- PhD Thesis title: Genome dynamics and virulence in the human pathogen *Candida glabrata*.

Achievements:

1. Introductory course for Ph. D student (one week)
2. Microbiology course (two months), 2009
3. DNA amplification technology (two months), October 2010
4. Basic of PCR (polymerase chain reaction), one week
5. Sequence analysis, 2011(one week)
6. Molecular Phylogenies, 2011 (One week)
7. Microsatellite analysis, 2011 (One week)
8. Laboratory Animal Science, October 2009 (3 weeks)
9. Quantitative PCR, 2012 (One week)
10. Innovation in Biotechnology. (One week)
11. Geneco Ph. D school meeting, graduation was on 2013 (2 years)
12. Radiation safety course, (Two weeks), 2013
13. **Workshop on:**
 - a- Giardia, pathogenesis and RNAi
 - b- Pathogenic Yeast Comparative genomics and Evolution.

Conferences:

- 1- International conference on Arginine and Pyrimidines, Lund, Sweden 2006.
- 2- EMBO Conference Series Experimental Approaches to Evolution and Ecology in Yeast, Heidelberg, 2010 (poster presentation).
- 3- EMBO conference - Comparative Genomics of Eukaryotic Microorganisms - San Feliu de Guixols, Spain – 15th – 20th October 2011(poster presentation).
- 4- 18th Congress of the International Society for Human and Animal Mycology, Berlin, Germany (poster presentation).
- 5- National conference of hospital infection prevention & control 4-5 March 2017/ Misrata, Libya

- 6- First international conference on Science and technology (1st ICST-2018)
- 7- 10 days course in the infection control, Sebha Medical center.
- 8- Breast cancer research conference, 2019 Tripoli
- 9- The 7th Libyan Medical Science conference October 2022/ Zawia Libya. Scientific committee member

Research technical skills:

Molecular Biology techniques:

DNA extraction, RNA extraction, PCR and DNA purification, RT-qPCR, Pulse field gel electrophoresis (PFGE), Southern Blotting, Northern blotting, Phylogeny construction, Plasmid extraction and transformation, Primer design

Research interest:

Antibiotic resistance, the mechanisms and combination therapy (Synergism) - Nosocomial infection prevention and control

Publications:

- 1- Small chromosomes among Danish *Candida glabrata* isolates originated through different mechanisms. Ahmad KM, Ishchuk OP, Hellborg L, Jørgensen G, Skvarc M, Stenderup J, Jørck-Ramberg D, Polakova S, Piškur J. *Antonie Van Leeuwenhoek*. 2013 Jul; 104 (1):111-22.
- 2- Genome Structure and Dynamics of the Yeast Pathogen *Candida glabrata*. Khadija Mohamed Ahmad, Janez Kokošar, Xiaoxian Guo, Zhenglong Gu, Olena P. Ishchuk and Jure Piškur (2014). *FEMS Yeast Research*.
- 3- RNAi as a Tool to Study Virulence in the Pathogenic Yeast *Candida glabrata*. Olena P. Ishchuk, Khadija Mohamed Ahma, Katarina Koruza, Klara Bojanovič, Marcel Sprenger, Lydia Kasper, Sascha Brunke, Bernhard Hube, Torbjörn Säll, Thomas Hellmark, Birgitta Gullstrand, Christian Brion, Kelle Freel, Joseph Schacherer, Birgitte Regenber, Wolfgang Knecht, and Jure Piškur. *Front Microbiol*. 2019; 10: 1679. doi: 10.3389/fmicb.2019.01679
- 4- The haploid nature of *Candida glabrata* is advantageous under harsh conditions. Running title: *C. glabrata* haploids versus diploids. Olena P. Ishchuk, Silvia Polakova, Khadija Mohamed Ahmad, Praveen Chakravarthy, Sofia Mebrahtu Wisén, Sofia Dashko, Maryam Bakhshandeh, Leif Søndergaard, Victoria Rydengård, Artur Schmidtchen, John Synnott, Can Wang, Sarah Maguire, Geraldine Butler & Jure Piškur (Manuscript)
- 5- Genome dynamics and virulence in the human pathogen *Candida glabrata* (Ph. D thesis) 2014

- 6- Prevalence of Methicillin-resistant Staphylococcus aureus (MRSA) among Staphylococcus aureus collection at Sebha medical center. Khadija M. Ahmad, Almahdi A.M. Alamen , Fatima A. Atiya, Abdelkader A. Elzen. Journal of Advanced Laboratory Research in Biology.
- 7- Co-expression of Extended spectrum β -lactamase (ESBL) and AmpC β -lactamase among Pseudomonas aeruginosa clinical isolates in sebha medical center. 2019. Khadija Mohamed Ahmad, Almahdi Ahmed Mohamed Alamen, Shamsi Abdullah Mohamd saad shamsi, Abdelkader A. Elzen. Journal of Pure and Applied Sciences, 18(1)
- 8- Emergence of AmpC β - Lactamase and Metallo- β - Lactamase producing Klebsiella pneumoniae in Sebha, Libya. Khadija Mohamed Ahmad, Almahdi Ahmed Mohamed Alamen, Shamsi Abdullah Mohamd saad shamsi, Abdelkader A. Elzen 2019. Medical journal of Islamic world academy of sciences. DOI:10.5505/ias.2019.93798
- 9- Understand the Genomic Diversity and Evolution of Fungal Pathogen Candida glabrata by Genome-wide Analysis of Genetic Variations. 2020.Gue X, Zhang R' LI Y, Wang Z, Ishchuk OP, Ahmad KM, Wee J, Piskur J, Shapiro JA, Gu Z' . Methods
- 10- Prevalence of Malaria infection in Fezzan region (south of Libya). Nassr M. Hamid, Alsadig M. Abdalla, Ali Z. Aldlouli , Ali A. AlMaki, Abraheem M. Sciences, 13(1)
- 11- Burkholderia cepacia Complex, an Emerging Nosocomial Pathogen at Health Care Facilities in Sebha, Libya. Saad Shamsi S, A. Elzen A, M. Ahmad K. JoMMID. 2021; 9 (4): 178-184
- 12- Prevalence of acid-resistant Verotoxin-producing Escherichia coli associated with diarrhea. 2022. Shamsi S. Shamsi, Amira A. Al-Basheer, Fatima S. Alfage, Abdelkader A. Elzen, Khadija M. Ahmad. Acta Microbiologica Hellenica, June 2022, 67(1): 49.
- 13- The haploid nature of Candida glabrata is advantageous under harsh conditions. OP Ishchuk, S Polakova, KM Ahmad, P Chakravarthy, SM Wisen, YEAST 32, S215-S215.
- 14- Co-infection as a Risk Factor in COVID-19 Mortality Rate. AAA Senussi, KM Ahmad - Journal of Medical Sciences, vol 17 No. 1 (2022).

Work experience:

➤ October 2022:

The 7th Libyan Medical Science conference

Achievement:

- Membership of scientific committee
- Evaluation of 149 manuscript presented to the conference
- I got AWARD OF EXCELLENCE according to ISO26000 Social responsibility

➤ December 2020- August 2021:

COVID-19 Infection prevention and control (IPC) Training program- Sebha-Libya

Training of medical staff at Sebha medical center on COVID-19 IPC

Focus on:

- Importance of implementation of infection prevention and control
- Practical exercise how to use PPE
- Collection, Storage & Transportation of Specimens for Coronavirus Diagnosis

➤ 29 November - 1 December 2020:

International organization for migration (IOM)

Training of trainer (TOT) COVID-19 IPC and case management course implemented by the international organization for migration (IOM)

Includes:

- Overviews of critical COVID-19
- Management of critically ill COVI patient
- X-RAY & COVID-19 patients
- COVID 19 Infection prevention and control (IPC)

➤ October 2020:

Head of infection control department at Sebha medical center.

Achievement:

- Education of medical staff and laboratory technicians
- Training program and risk assessment inside the SMC
- Providing good advice for medical staff on need
- Develop the strategies to reduce the antibiotic resistance and prevent nosocomial infection in collaboration with microbiology
- Apply SOP in health facilities and regular evaluation for medical staff

➤ September 2020- present:

COVID 19 IPC training of medical staff

Training of medical staff in the triage and transient isolation department at Sebha medical center

- Practical exercise how to use PPE
- Coronavirus Diagnosis Collection, Storage & Transportation of Specimens for Coronavirus Diagnosis
- Medical Waste management

➤ September 2020- present:

RT-PCR Team leader of COVID-19 laboratory technicians

Achievement:

- Lectures on COVID-19 outbreak
- How to collect the COVID 19 sample, transport and storage
- Laboratory diagnosis of COVID-19
- Detection and diagnosis using RT-PCR technique
- Medical waste management
- Leader group for diagnosis of COVID-19 using RT-PCR
- Education, training, and evaluation of the team
- Team work with triage and isolation department at SMC

➤ August and September 2020:

COVID-19 training program for medical staff and laboratory technician, Sebha-Libya by IOM

Achievement:

- Introduction for COVID-2019
- Importance of implementation of IPC and IPC modules
- Laboratory diagnosis of COVID 19 and waste management
- Practical exercise how to use PPE and Collection, Storage & Transportation of Specimens for Coronavirus Diagnosis
- Medical waste management

➤ August 2020

Medical waste management workshop

2 days workshop on medical waste management presented by Dr. Ataher Althabt

➤ 29 June- 30 of August 2020

National center for disease control Sebha- Libya collaboration
(RT-PCR group leader)

Achievement:

- Giving Lectures on COVID-19 outbreak to all laboratory technicians in NCDC-Sebha, COVID 19 sample collection, transport and storage, Laboratory diagnosis of COVID-19, Detection and diagnosis using RT-PCR technique, Medical waste management
- Ensure that all technicians know how to use PPE
- Evaluation of the work and giving any advice on need

- Assessment of quality control in the laboratory.
- 19 June 2020:
 - RT-PCR in biotechnology research center/ Tripoli
 - **6 days intensive course on RT-PCR in biotechnology research center/ Tripoli**
 - **Sharing the knowledge and experience**
- 26 May 2020 -present:
 - Triage and isolation department for COVID-19 patients
(IPC team leader)
 - Working in the triage unit in collaboration with rapid response team (RRT) at Athanwia health facility center during COVID-19 outbreak
 - Practical exercise how to use PPE and Collection, Storage & Transportation of Specimens for Coronavirus Diagnosis
 - Training of lab. Technician who are involved in IPC department
- 24 April 2020 -present:
 - Scientific committee at Sebha medical center during COVID-19 outbreak
(Member of this committee)
 - It works on:
 - Develop the strategies to control COVID-19 outbreak in Sebha medical center
 - Providing a professional advice as a head of infection and prevention control department to ensure that all medical staff are secured
 - Working closely with medical doctors at COVID-19 isolation department as IPC supervisor and giving the advice on need
 - Assessment the risks during COVID-19 outbreak inside the SMC and working seriously to reduce it
 - Discussing the needs and source of supply for all requirements for the center during COVID19 breakout
- Assistant professor
 - (Master student supervision)
 - Develop detailed projects plan in collaboration with other faculties for master students
 - Evaluation of study progress and their work success for master students
 - Co-supervisor for master students

- Designing of new experiments and leading many experiments for postgraduate students
 - Conducting job evaluation in many health care facilities
 - Coordinator for medical students (basic level) at faculty of medicine, Sebha University
- 2019 to present:
- Journal of medical Science SUMJ 2019-2022
 - Member at editorial board
 - **2019 workshop**
 - Scholarly Research Impact Metrics^[1]_{S&EP} & their uses in the Measuring Journals Impact by training and development center Sebha University
 - One week course SPPS certified by training and development center Sebha University
 - 2 days course End note 7 certified by training and development center Sebha University

Other certifications:

- **TOT** certified by international organization for migration (IOM) and ministry of health – Libya
- **MEC** project training program by GIZ organization in collaboration with ministry of health – Libya
- **AWARD OF EXCELLENCE** according to ISO26000 Social responsibility/ October 2022