Ph.D. Biochemistry (Immunology)

DR. MOHAMMAD MOBASHIR (Researcher)

M.Sc. Molecular Lifescience
B.Sc. Botany, Zoology, Chemistry

To obtain a responsible position as a Professor where my research/teaching experience (which I have learned from leading world class scientists) will be helpful.

EDUCATION

- 08/2010—06/2013 **Ph.D.** in **Biochemistry** from Natural Science faculty— degree awarded in Biochemistry (titled as Mathematical Modeling and Evolution of Signal Transduction Pathways and Networks), Otto-von-Guericke University, Magdeburg, Germany.
- 09/2008—08/2010 **M.Sc. Molecular Life Science**. (Majors: Molecular Biophysics and Computational Systems Biology), Jacobs University Bremen, Germany.
- 07/2004—07/2006 **M.Sc. Bioinformatics**, Department of Computer Science, Jamia Millia Islamia, New Delhi, India.
- 07/2004 **B.Sc.** (**Chemistry (Main), Botany, and Zoology**), Magadh University, Bodh-Gaya, Bihar, India.
- 1999 **I.Sc.** (**Physics, Chemistry, Biology**), BIEC, Patna, Bihar, India.
- 1997 **Xth** (**Maths, Science, Soc. Science, English, Urdu, Hindi, Persian**), BSEB, Patna, Bihar. India.

EXPERIENCE

- Since 05/2023 Working as a **Researcher** at Department of Biomedical Laboratory Science, Faculty of Natural Sciences, NTNU (Norwegian University of Science and Technology), Trondheim, Norway.
- Since 05/2018 Working as an **Assistant Professor**, Special Infectious Agents Unit, King Fahd Medical Research Centre, King Abdulaziz University, Jeddah, Saudi Arabia.
- Since 02/2016 Working as a **Postdoctoral Researcher**, Department of Microbibiology, Tumor and Cell Biology (MTC), Karolinska Institute, Stockholm, Sweden (Supervisor: Prof. Dr. Kaisa Lehti and Prof. Dr. Thomas Helleday).
- 06/2014–09/2015 Worked as a **Postdoctoral Fellow** (Differential Response by Intratumor Heterogeneity In Prostate Cancer) at SciLifeLab, Karolinska Institute, Stockholm, Sweden (Supervisor: Prof. Dr. Thomas Helleday).
- 07/2013—06/2014 Worked as a **Postdoctoral Fellow**. (To understand the T cell signaling and its relevance to inflammation and cancer) at Institute of Molecular and Clinical Immunology, Otto-von-Guericke University, Magdeburg, Germany.
- 08/2010—06/2013 Worked on **Ph.D. Thesis** (title: Mathematical Modeling and Evolution of Signal Transduction Pathways and Networks) at Institute of Molecular and Clinical Immunology, Otto-von-Guericke University, Magdeburg, Germany (Supervisor: Prof. Dr. med. Burkhart Schraven and Co-supervisor: Dr. Tilo Beyer) (Thesis Submitted: June 06, 2013, Date of Thesis Defense: Nov 14, 2013).
- 09/2009—08/2010 **Master's Thesis** (title: Simulated Evolution of Gene Regulatory Networks) at Jacobs University Bremen, Germany (Supervisor: Prof. Dr. Marc-Thorsten Hütt).
- 04/2009—07/2009 **Lab Rotation III** (title: analysis of robustness of biological networks) at Jacobs University Bremen, Germany (Supervisor: Prof. Dr. Marc-Thorsten Hütt).
- 01/2009—03/2009 **Lab Rotation II** (title: MD Simulation of Boron Cluster on the Interface of Lipid Bilayer) at Jacobs University Bremen, Germany (Supervisor: Prof. Dr. Mathias Winterhalter).
- 09/2008—12/2008 **Lab Rotation I** (title: Modeling of Protein-Ligand Docking Interactions) at Jacobs University Bremen, Germany (Supervisor: Prof. Dr. Martin Zacharias).
- 01/2006-06/2006 **M.Sc. thesis**. Title: Genome Annotation of Serratia Marcescens (Supervisor: Prof. Dr. P. Gautam, CBT, Anna University, Chennai, India)

WET LAB SKILLS

- Immunohistochemistry: Cell and tissue culture (human and mouse primary T cells), Isolation of mouse T cells, Western blot, DNA and protein isolation, PCR, Gel electrophoresis.

Personal Information

Møllebakken, 39A, 7020 Trondheim, Norway

PhD Degree Awarded:
December 04, 2013

Phone **+47 4130 3360**
Email
Mohammad.mobashir@ntnu.no

DOB **February 01, 1981**
Nationality **Indian**
Languages
Hindi/Urdu
English (TOEFLiBT2007/ GRE2007)
German

Research paper statistics

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Total research articles:	29
Total impact factors:	135.151
Average impact factors:	4.9288
First author:	5 papers
First and corr. author:	5 papers
Corr. author:	19 papers
H-index:	14
WHO selected:	2 papers
Featured selected	2 paper
Encyclopedia selected	2 paper

Area of interest

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Cancer Systems Biology, Personalized medicine, Immunology, Biochemistry

COMPUTATIONAL SKILLS

- MATLAB, C, C++, PERL, Python, MySQL, Linux, High-performance computing
- Cell-type (cancer, normal, epithelial, stromal cells etc.) classification based on expression or genomic pattern, differential gene expression, gene enrichment and pathway annotations, modeling and simulation of biological pathways and networks, mutational signatures, driver and passenger mutations.
- Microarray (gene expression, copy number, and SNP), NGS, CHIP-seq, all kinds of sequencing data handling, integration, and its statistical analysis.
- Molecular biophysics and computational chemistry: MD simulations, docking, …
- Image processing and analysis: ImageJ, cell profiler, Matlab image processing, and developed our own toolbox for high-throughput image processing.

TEACHING EXPERIENCE

- Approximately 4.5 years of teaching experience, King Abudulaziz University, Jeddah, Saudi Arabia.
- Courses Taught: (1) Systems Biology (Cancer, diabetes, infection, and neurological disorders), (2) Cell Biology, (3) BiochemicalTechniques in diagnostics, (4) Molecular Genetics and Immunodiagnostics, (5) OMICs based diagnostics, (6) Biostatistics

INTERNATIONAL AWARDS

- 05/2012 Travel Grant Fellowship Award, Integrative Network biology 2012: Network Medicine, Helsingoer, Denmark.
- 09/2008—08/2010 Jacobs University Fellowship for study Molecular Life Science (Computational Biology) at Jacobs University Bremen, Germany.
- 02/2008 Travel Grant Fellowship Award, International Biomedical Modeling School and Workshop, Bangalore, India.

PUBLICATIONS (SELECTED)

- **Mobashir M****, Schraven B, and Beyer T (**2012**) Simulated Evolution of Signal Transduction Networks. **PLOS ONE** 7(12): e50905. (IF - 3.752)
- **Mobashir M****, Thati M, Isermann B, Beyer T and Schraven B (**2014**) Negative Interactions and Feedback Regulations are Required for Transient Cellular Response. **Sci. Rep.,** 4, 3718 (IF - 4.996).
- Maqbool M, **Mobashir M**, Hoda N (**2015**) Pivotal Role of glycogen synthase kinase-3: A therapeutic target for Alzheimer's disease. **Eur Jour Med Chem** (IF - 7.088).
- Gucciardo E, **Mobashir M**, and Lehti K (**2016**) Proactive for invasion: Reuse of matrix metalloproteinase for structural memory, **J Cell Biology** 213(1):11—13. (IF - 10.539).
- Jitendra Kumar, Poonam Meena, Anju Singh, Ehtesham Jameel, Mudasir Maqbool, **Mohammad Mobashir**, Ashutosh Shandilya, Manisha Tiwari, Nasimul Hoda, B. Jayaram (**2016**) Synthesis and screening of triazolopyrimidine scaffold as multi-functional agents for Alzheimer's disease therapies. **Eur Jour Med Chem**. 119:260-277 (IF - 7.088).
- Anju Singh, Mudasir Maqbool, **Mohammad Mobashir**, Nasimul Hoda (**2017**) Dihydroorotate dehydrogenase: A drug target for the development of antimalarials. **Eur Jour Med Chem**. 125:640-651 (IF - 7.088).
- Jitendra Kumar, Tarana Umar, Tasneem Kausar, **Mohammad Mobashir**, Shahid M Nayeem, Nasimul Hoda (**2017**). Identification of lead BAY60-7550 analogues as potential inhibitors that utilize the hydrophobic groove in PDE2A: a molecular dynamics simulation study. 7(23). **Journal of Molecular Modeling**. 2017. (IF: 2.172)
- **Mobashir M** and Mustafa S. (**2020**) LC--MS and docking profiling reveals potential difference between the pure and crude fucoidan metabolites (Accepted Nov 29, 2019) **International Journal of Biological Macromolecules** (IF - 8.025).
- Bhat SA, Ahmad SM, Ibeagha-Awemu EM, **Mobashir M**, Dar MA, Mumtaz T, Shah RA, Dar TA, Shabir N, Bhat HF, and Ganai NA (**2020**) Comparative milk proteome analysis of Kashmiri and Jersey cattle identifies differential expression of key proteins involved in immune system regulation and milk quality. **BMC Genomics** 21, 161 (2020). (IF—4.574).
- Mohammad Azhar Kamal, Mohiuddin Khan Warsi, Afnan Alnajeebi, Haytham A Ali, Nawal Helmi, Mohammad Asrar Izhari, Saad Mustafa, and **Mobashir M**** (**2020**) Gene expression profiling and clinical relevance to understand the role of hypoxia and immune signaling genes and pathways in breast cancer (Accepted: June 2020). **Journal of Internal Medicine: Science & Art** (IF - 0.12).
- Kumar PK, Kamal MA, Warsi MK, Alnajeebi A, Ali HA, Helmi N, Izhari MA, Mustafa S, and **Mobashir M****. (**2019**) In-silico study reveals immunological signaling pathways, their genes, and potential herbal drug targets in ovarian cancer (Accepted: September 2020) **Informatics In Medicine-Unlocked**. (IF - 2.11).

PUBLICATIONS (SELECTED)

- Praveen Kumar Posa Krishnamoorthy, Sekar Subasree, Udhayachandran Arthi, **Mohammad Mobashir**, Chirag Gowda, Prasanna DR (**2020**). T-cell Epitope-based Vaccine Design for Nipah Virus by Reverse Vaccinology Approach (Accepted June: 2020). **Comb Chem High Throughput Screen**. (IF - 1.714).
- Warsi MK, Kamal MA, Baeshen MN, Izhari MA, Firoz A, and **Mobashir M**** (**2020**) Comparative Study of Gene Expression Profiling Unravels Functions associated with Pathogenesis of Dengue Infection (Accepted August: 2020). **Current Pharmaceutical Design** (IF - 3.310).
- **Mobashir M****, Trunnen SP, Izhari MA, Ashankyty IM, Helleday T, and Lehti K (**2022**). An approach for systems-level understanding of prostate cancer from high-throughput data integration to pathway modeling and simulation (**Cells 2022**)(IF - 7.666).
- Eldakhakhny BM, Sadoun HA, Choudhary H, and **Mobashir M** (2021)** Insilico study of the immune systems associated genes in case of type-2 diabetes with Insulin action and resistance and in obesity. **Frontiers in Endocrinology**. 2021. (IF - 6.055).
- Alnajeebi AM, Alharbi HFA, Babteen NA, Mustafa S, and Helleday T, and **Mobashir M****. Cancer signaling pathways crosstalk with DNA damage repair and therapeutic targets: Herbal drugs and nanoparticles. under review Seminars in Cancer Biology. 2021. (IF - 11.09).
- Manal Tashkandi and **Mohammad Mobashir****. Evolution of type-2 diabetes ER protein processing gene regulatory network. Current Pharmaceutical Biotechnology. 2021 (accepted). (IF - 4.390).
- Nawal Helmi, Dalia Alammari, and **Mohammad Mobashir** (2021)**. Role of potential COVID-19 immune system associated genes and the potential linkage with type-2 diabetes. (Accepted: 2021). **Comb Chem High Throughput Screen**. (IF - 1.714).
- HI Khouja, IM Ashankyty, LH Bajrai, PKP Kumar, MA Kamal, **M Mobashir** (2022)**. Multi-staged gene expression profiling reveals potential genes and the critical pathways in kidney cancer. **Sci Rep** 12, 7240 (2022). https://doi.org/10.1038/s41598-022-11143-6. Sci. Rep. (IF - 4.996)
- H Choudhary, A Albukhari, M Mobashir, W Abdulaal. Study of APOBEC3B focused breast cancer pathways and the clinical relevance. (Under Review: 2021). Sci. Rep. (IF - 4.996).
- Leena Bajrai, Sayed Sartaj Sohrab, Thamir Abdulaziz A Alandijany, **Mohammad Mobashir**** (**2021**), Reyaz M, Mohammad Amjad Kamal, Ahmad Firoz, Shabana Parveen, and Esam Ibraheem Azhar**. Gene expression profiling during early acute febrile stage of dengue infection and its comparative analysis with Streptococcus pneumoniae infection. (Accepted: 2021). **Front. Cell. Infect. Microbiol**. (IF - 6.073).
- Manal Tashkandi and **Mohammad Mobashir****. Evolution of type-2 diabetes ER protein processing gene regulatory network. (Accepted: 2021). Current Pharmaceutical Biotechnology. (IF - 4.390).
- Leena Hussein Bajrai, Sayed Sartaj Sohrab, **Mohammad Mobashir****, Mohammad Amjad Kamal and Esam Ibraheem Azhar(**2021**). Understanding the role of potential pathways and its components including hypoxia and immune system in case of oral cancer. (September 2021). Sci. Rep. (IF - 4.996).
- Huwait EA and **Mobashir M** (2022)**. Therapeutic role of Diosmin and human diseases. **Biomedicines**. (Accepted: April 2022) (IF - 6.081).
- Sherif El-Kafrawy, Mai M El-Daly, Leena Bajrai, Thamir Abdulaziz A Alandijany, Arwa A Faizo, **Mohammad Mobashir****, Sunbul S Ahmed, Sarfraz Ahmed, Shoaib Alam, Raja Jeet, Mohammad Amjad Kamal, and Esam Ibraheem Azhar (**2022**). Genomic profiling and network-level understanding uncover the potential genes and the pathways in hepatocellular carcinoma. (November 2022). **Frontiers in Genetics**. (IF - 4.599).
- Sarfraz Ahmed, **Mohammad Mobashir**, Lamya Ahmed Al-Keridis, Nawaf Alshammari, Mohd Adnan, Mohammad Abid and Imtaiyaz Hassan* (**2022**). A network-guided approach to discover phytochemical-based anticancer therapy targeting MARK4 for hepatocellular carcinoma. (Accepted: 2022). **Frontiers in Oncology**. (IF - 5.738)
- Nawal helmi, Dalia Alammari, and **Mohammad Mobashir** (2022)**. The understanding of the potential linkage between COVID-19, type-2 diabetes, and cancer(s) could help in better drug-targets and therapeutics. (Accepted: 2022). **Comb Chem High Throughput Screen**. (IF - 1.714).
- Syed Tauqeer Anwer, **Mohammad Mobashir****, Omer I. Fantoukh, Bushra Khan, Khalid Imtiyaz, Irshad H Naqvi, Moshahid Alam Rizvi** (**2022**). Synthesis of Silver Nano Particles Using Myricetin and the In-Vitro Assessment of Anti-colorectal Cancer Activity: in-silico Integration. (Accepted: 2022). **International Journal of Molecular Sciences**. (IF - 6.208).
- Sanaa Almowallad, Leena S. Alqahtani, and **Mohammad Mobashir** (2022)**. NF--kB in signaling patterns and its temporal dynamics encode/decode human diseases. (Accepted: 2022). **Life**. (IF - 3.251).
- Mai El-Daly, Areej Alkhaldy, Maha M Alawi, Arwa A Faizo, Isra M Alsaady, Mohammad Amjad Kamal, **Mohammad Mobashir****, Dolly Marothya, and Esam Ibraheem Azhar. Infection and inflammatory pathways their genes interplay as master regulators in encephalitis, Alzheimer's, coronary heart disease, and brain tumor: Potential herbal drug targets. (Accepted: 2022). Frontiers in Genetics (IF: 4.772).
- **Mohammad Mobashir** (2022)**. The Understanding of the Potential Linkage between COVID-19, Type-2 Diabetes, and Cancer(s) Could Help in Better Drug Targets and Therapeutics. (Accepted: 2022). **Comb Chem High Throughput Screen**. (IF - 1.714)
- Salma Saddeek, Rehab Almassabi, and **Mohammad Mobashir**** (**2022**). Role of ZNF143 and its association with gene expression patterns, and non-coding mutations and its association with immune system in human breast cancer. (Accepted: 2022). **Life**. (IF - 3.251).
- Raja Jeet1**, Arwa A. Faizo, Mai M El-daly, Aiah M Khateb, Sarah A. Altwaim, Ahmad M. Ashshi, Fazlur Rahman, Bushra Khan, Sarfraz Ahmed, Dolly Marothya, Manal Tashkandi, Mahmoud Moustafa, Mohammed Al-Shehri, Ali Shati, Hesham Hassan, **Mohammad Mobashir****, and Esam I. Azhar**. Role of herbal medicines in infection and inflammatory diseases: an application in case of Zika virus and Dengue virus infections. (Accepted: 2022). **Front. Cell. Infect. Microbiol**. (IF - 6.073).
- ****Corresponding author** (More publications: https://scholar.google.se/citations?user=evSOdtYAAAAJ&hl=en)

ADDITIONAL SCIENTIFIC ROLES

- Executive Guest Editors: Combinatorial Chemistry and High Throughput Screening (CCHTS); Pharmaceuticals (mdpi).
- Guest Editor since December 22, 2022 Pharmaceuticals (MDPI)
- Reviewer in Nature, elsevier, bentham, frontiers, MDPI, PLoS, BJC, WJSO, Bioengineering, and BMC journals.

CONFERENCES/SYMPOSIUMS

- Attended Ernst Klenk Symposium in Molecular Medicine (Sept 29—Oct 01, 2013), Köln, Germany.
- Presented a poster at Integrative Network biology 2012: Network Medicine, Helsingoer, Denmark.
- Presented a poster at International Biomedical Modeling School and Workshop, Bangalore, India.
- Participated in KI (Karolinska Institute, Stockholm, Sweden) annual symposia (2014—2018).
- Participated in International conference on theoretical physics and neuroscience, Bremen, Germany (2009).

SUPERVISED BACHELOR/MASTER/PHD STUDENTS

- Supervised three PhD students (KHOLOD (KSA), S. T. ANWER (JMI), BUSHRA KHAN (JMI), Fazlur Rahman (JMI)
- Supervised more than 30 master and bachelor thesis.
- Supervised a master thesis student (Ms. Sofia Stamouli, M.Sc. Bioinformatics, Uppsala University) on project entitled "Mathematical modeling of normal and cancer prostate signaling pathways" (Nov 03, 2014 — June 12, 2015).

INTERNATIONAL AWARDS

- 05/2012 Travel Grant Fellowship Award, Integrative Network biology 2012: Network Medicine, Helsingoer, Denmark.
- 09/2008—08/2010 Jacobs University Fellowship for study Molecular Life Science (Computational Biology) at Jacobs University Bremen, Germany.
- 02/2008 Travel Grant Fellowship Award, International Biomedical Modeling School and Workshop, Bangalore, India.

RESOURCE PERSON/CHAIR/CO-CHAIR FOR CONFERENCES

- Invited for talk at Uppsala University title "Intra Tumor Heterogeneity in Prostate Cancer" (February 06, 2015), Uppsala, Sweden (2015).
- Invited Speaker: for 5th Edition - Global Webinar on ENDOCRINOLOGY & DIABETES (Feb 24-25, 2022), 5201 Great America Pkwy #320, Santa Clara, CA 95054, USA. (2022)
- Delivered a lecture at Dana-Farber Cancer Institute, Harvard Medical School, Boston, MA, USA (2014)

REFERENCES

1	**Professor Dr. Kaisa Lehti** Department of Biomedical Laboratory Science Faculty of Natural Sciences Email: kaisa.lehti@ntnu.no	2	**Professor Dr. Thomas Helleday**, Department of Medical Biochemistry & Biophysics, Karolinska Institute, Stockholm, Sweden (thomas.helleday@scilifelab.se)
3	**Dr. Tilo Beyer**, former member of Institute of Molecular and Clinical Immunology, Otto-von-Guericke University, Magdeburg (tilo.beyer@gmx.de) -- PhD thesis Co-supervisor.	4	**Prof. Dr. Marc-Thorsten Hütt** (Computational Systems Biology), School of Engineering and Science, Jacobs University Bremen, Germany (m.huett@jacobs-university.de)
5	**Prof. Dr. E. I. Azhar**, Special Infectious Agents Unit, King Fahd Medical Research Centre, King Abdulaziz University, Jeddah, Saudi Arabia. eazhar@kau.edu.sa	6	**Prof. Dr. med. Burkhart Schraven**, Institute of Molecular and Clinical Immunology, Universitaets Klinikum, Magdeburg, Germany. burkhart.Schraven@med.ovgu.de