

NOJOOD ABDULAZIZ ALTWAIJRY
Assistant Professor of Biochemistry
Department of Biochemistry, College of Science, King Saud University

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Education

University College London (UCL) 2018

PhD in Structural and Molecular Biology

Major field: GPCR's CG-MD simulations

King Saud University

MSc in Biochemistry

Major field: Hematology; Genetic blood disorders 2005

King Saud University

BSc in Biochemistry 2001

Professional Training

Harvard business school online 2022

Management essentials

This program provides strategies for shaping and influencing managerial processes, with a particular focus on decision-making, implementation, learning and changes.

Current Academic Position

-Vice Chair of Biochemistry Department, College of Science, King Saud University, Jul. 2020 – to date.

-Assistant Professor, Department of Biochemistry, College of Science, King Saud University, Dec. 2018 – to date.

Previous Academic Positions

-Lecturer, Department of Biochemistry, King Saud University, Nov. 2008 – Aug. 2013.

-Lecturer, College of Applied Studies and Community Service, King Saud University, Nov. 2005 – Dec. 2008.

University and Community Services

- 1) Cooperating with the college and teaching in the Executive Master's Program for Criminal Sciences in 2022.
- 2) Cooperating with King Faisal Specialist Hospital and Research Center and carrying out joint research.
- 3) Supervisor of a High school student in the Mawhiba program, Riyadh, Saudi Arabia.
- 4) Cooperating with the college and teaching in the Executive Master's Program for Criminal Sciences in 2021.

- 5) Supervising one of the outstanding students in the Outstanding and Gifted Students Program, Science, King Saud University, Riyadh, Saudi Arabia 2018-2020.
- 6) Supervising a student on the apprenticeship track in the Outstanding and Gifted Students Program, Science, King Saud University, Riyadh, Saudi Arabia 2020.
- 7) Coordinator of Teaching load distribution, Department of Biochemistry, King Saud University, Riyadh, Saudi Arabia 2020 – to date.
- 8) Member of the High education committee, Department of Biochemistry, King Saud University, Riyadh, Saudi Arabia 2020 – to date.
- 9) Lecture at Elm company on Little Elmer day, Riyadh, Saudi Arabia, 2 January 2020.
- 10) Assistant Supervisor and Member of the Executive Committee of the Protein Research Chair, College of Science, Riyadh, King Saud University, 2019 – to date.
- 11) Member of the Examination Committee, Department of Biochemistry, King Saud University, Riyadh, Saudi Arabia 2019 – to date.
- 12) Lecture at College of Science during Scientific poster week, College of Science, Riyadh, Saudi Arabia, 28 November 2019.
- 13) Member of Appointing teaching assistants and lectures, Department of Biochemistry, King Saud University, Riyadh, Saudi Arabia 2018 – to date.
- 14) Member of Higher education committee, Department of Biochemistry, King Saud University, Riyadh, Saudi Arabia 2018 - 2020.
- 15) Member of Scientific research support committee, College of Science, King Saud University, Riyadh, Saudi Arabia 2018 - 2020.
- 16) Member of the Follow-up committee for the implementation of the themes stated at the scientific research workshop, College of Science, King Saud University, Riyadh, Saudi Arabia 2018 - 2020
- 17) Member of the Quality Committee, Department of Biochemistry, King Saud University, Riyadh, Saudi Arabia 2008 - 2012.
- 18) Head of the Annual Departmental Report Team, Department of Biochemistry, King Saud University, Riyadh, Saudi Arabia 2008 - 2012.
- 19) Participating in several judging committees for King Abdulaziz and his Companions Foundation for Giftedness and Creativity (MAWHIBA), Riyadh, Saudi Arabia, 2012.
- 20) Cooperated with the QIYAS: The National Center for Assessment in Higher Education, Riyadh, Saudi Arabia, 2008 - 2011.
- 21) Cooperated with the College of Applied Studies and Community Services, Riyadh, Saudi Arabia, Mar. – Jun. 2008.

Teaching and Supervision

- ***Teaching Undergraduate Level***

Basic biochemistry, Advanced biochemistry, General biochemistry, Biochemical calculations, Cellular Biochemistry, Blood biochemistry, Bioinformatics, Clinical biochemistry 1 & 2.

- ***Supervision of Undergraduate Level***

I have supervised the graduation projects for 10 undergraduate students from the department of Biochemistry from 2018 - to date.

- ***Supervision of Graduate Level***

Currently a supervisor for two masters students at KSU.

Currently a co-supervisor for 4 masters students at KSU and one masters student at UCL.

Research and Publications

Journal Articles:

- 1) Muhammad Sajjad Bilal, Syeda Abida Ejaz *, Seema Zargar, Naveed Akhtar, Tanveer A. Wani *, Naheed Riaz, Abdullahi Tunde Aborode, Farhan Siddique, **Nojood Altwaijry**, Hamad M. Alkahtani, Haruna Isiyaku Umar. "Computational Investigation of 1, 3, 4 oxadiazole derivatives as Lead Inhibitors of VEGFR 2 in comparison with EGFR: Density Functional Theory, Molecular docking and Molecular Dynamic Simulation Studies". Biomolecules. 2022. <https://doi.org/10.3390/biom12111612>
- 2) Aamer Saeed, Aqsa Khalid, Syeda Abida Ejaz, Pervaiz Ali Channar, Mubashir Aziz, Qamar Abbas, Tanveer A. Wani, Nawaf A. Alsaif, Mohammed M. Alanazi, Abdullah M. Al-Hossaini, **Nojood Altwaijry**, Seema Zargar, Muawya Abdelbagi, Tuncer Hökelek. "Acetophenone-based 3,4-dihydropyrimidine-2(1H)-thione as Potential Inhibitor of tyrosinase and Ribonucleotide reductase: Facile synthesis, Crystal Structure, In-vitro and In-silico Investigations". Int. J. Mol. Sci. 2022, 23 (21), 13164. <https://doi.org/10.3390/ijms232113164>.
- 3) **Nojood Altwaijry**, Ghaliyah Almutairi, Mohd Khan, Majed S. Alokail, Rizwan Ali. "The Novel Effect of CTZ Toward pH-Induced HEWL Amyloid Fibrillation: A Combined Spectroscopy, Microscopy, And Computational Study". (ACCEPTED)
- 4) Zarnain Jamil, Arif Uddin, Syed Sahajada Mahafujul Alam, Arijit Samanta, **Nojood Altwaijry**, Mohd Ahmar Rauf, Safdar Ali, Mohd Shahnawaz Khan, Muhammad Nadeem Asghar, Mehboob Hoque*. "Analysis of the Compositional Features and Codon Usage Pat-tern of Genes Involved in Human Autophagy". Cells 2022, 11, 3202. <https://doi.org/10.3390/cells11203203>
- 5) Mohd Shahnawaz Khan, Majed S Alokail, Amal Majed H Alenad, **Nojood Altwaijry**, Nouf Omar Al-Afaleq, Abdulaziz Mohamd Alamri, Mubarak Ali Zawba. "Binding studies of caffeic and p-coumaric acid with α -amylase: Multispectroscopic and Computational approaches deciphering the effect on Advanced glycation end products (AGEs)". Molecules, 2022 Jun 21; 27 (13):3992. <https://doi.org/10.3390/molecules27133992>
- 6) Mohd Shahnawaz Khan, Majed Saeed Althobaiti, Ghaliyah S.Almutairi, Majed S.Alokail, Nojood Altwaijry, Amal M.Alenad, Moneerah SaudAl-Bagmi, Nouf OmarAlafaleq. "Elucidating the Binding and Inhibitory Potential of p-Coumaric acid Against Amyloid Fibrillation and their Cytotoxicity: Biophysical and docking analysis". Biophysical Chemistry, May 2022, 291. <https://doi.org/10.1016/j.bpc.2022.106823>
- 7) Ghada Obeid Almutairi, Ajamaluddin Malik, Mona Alonazi, Javed Masood Khan, Abdullah S. Alhomida, Mohd Shahnawaz Khan, Amal M. Alenad, **Nojood Altwaijry**, Nouf Omar Alafaleq. "Expression, purification, and biophysical characterization of recombinant MERS-CoV main (M^{PRO}) protease". International Journal of Biological Macromolecules. 1 June 2022, 209: 984-990. <https://doi.org/10.1016/j.ijbiomac.2022.04.077>
- 8) **Nojood Altwaijry**, Qura Tul Ain, Hissah Alnuwaysir, Abir Alamro, Amani Alghamdi, Samina Hyder Haq. "A Time-course Evaluation of DNA Damage and Neurotoxicity induced by PEG-nGO in Swiss Albino mice". Journal of Biomedical Nanotechnology, 2022. Apr 1;18(4):1180-1186. <https://doi.org/10.1166/jbn.2022.3306>
- 9) Ahmad, Anas; Prakash, Ravi; Khan, Mohd; **Altwaijry, Nojood**; Asghar, Muhammad ; Raza, Syed Shadab ; Khan, Rehan. "N-carbamoyl alanine-mediated selective targeting for CHK-2-null colorectal cancer". ACS Omega, Apr 2022, 7: 13095-13101 . <https://doi.org/10.1021/acsomega.2c00527>
- 10) Alamro, Abir; Haq, Samina Hyder; Alghamdi, Amani; **Altwaijry, Nojood**; Alali, Amjad Saeed; Alotaibi, Rahaf; Murshed, Al-Anood; Ain, Qura Tul. "Hepatotoxicity induced by intravenous administration of PEG-nGO in Albino mice". Materials Express, Oct 2021, 11 (10): 1668-73. <https://doi.org/10.1166/mex.2021.2078>
- 11) Mohd Shahnawaz Khan, Rais Ahmad Khan, Md Tabish Rehman, Mohamed A. Ismael, Fohad Mabood Husain, Mohamed F. AlAjmi, Majed S. Alokail, **Nojood Altwaijry**, Ali M. Alsalmeh. "Elucidation of molecular interaction of Theaflavin monogallate with camel milk lactoferrin: Detailed spectroscopic and dynamic simulation studies". RSC Advances, Aug 2021, 11 (43): 26710-20. <https://doi.org/10.1039/d1ra03256a>
- 12) Mohd Khan, Alya Alamri, Shams Tabrez, Iftekhhar Hassan, Rizwan Wahab, Sheraz Ahmad Bhat, Nouf Omar Alafaleq, Nojood Altwaijry, Gouse Shaik, Syed Kashif Zaidi, Wessam Nouh, Majed Alokail, Mohd Ismail. "Anticancer potential of biogenic silver nanoparticles: a mechanistic

- analysis". *Pharmaceutics*, May 2021, 13 (5):707. <https://doi.org/10.3390/pharmaceutics13050707>
- 13) Tanveer A. Wani, Ahmed H. Bakheit, Abdulrahman A. Al-Majed, **Nojood Altwaijry**, Anwar Baquaysh, Ashwaq Aljuraishy, Seema Zargar. "Binding and drug displacement study of colchicine and bovine serum albumin in presence of azithromycin using multispectroscopic techniques and molecular dynamic simulation". *Journal of Molecular Liquids*, Jul 2021, 333. <https://doi.org/10.1016/j.molliq.2021.115934>
 - 14) Mohd Shahnawaz Khan, Faizan Abul Qais, Md Tabish Rehman, Mohd Hasan Ismail, Majed S. Alokail, **Nojood Altwaijry**, Nouf Omar Alafaleg, Mohamed F. AlAjmi, Nusaibah Salem, Rawiah Alqhatani. "Mechanistic inhibition of non-enzymatic glycation and aldose reductase activity by naringenin: Binding, enzyme kinetics and molecular docking analysis". *International Journal of Biological Macromolecules*. Sep 2020, 159:87-97. <https://doi.org/10.1016/j.ijbiomac.2020.04.226>
 - 15) Nasser Abdulatif Al-Shabib, Javed Masood Khan, Ajamaluddin Malik, Md. Tabish Rehman, Mohamed F. AlAjmi, Fohad Mabood Husain, Malik Hisamuddin, **Nojood Altwaijry**. "Molecular interaction of tea catechin with bovine β -lactoglobulin: a spectroscopic and in silico studies". *Saudi Pharmaceutical Journal*, Mar 2020, 28:238-245. ISSN 1319-0164. <https://doi.org/10.1016/j.jsps.2020.01.002>
 - 16) Andrea Townsend-Nicholson, **Nojood Altwaijry**, Andrew Potterton, Inaki Morao and Alexander Heifetz. "Computational prediction of GPCR oligomerization". *Current Opinion in Structural Biology*, Apr 2019, 55:178–184. <https://doi.org/10.1016/j.sbi.2019.04.005>
 - 17) **Nojood A. Altwaijry**, Michael Baron, David W. Wright, Peter V. Coveney, and Andrea Townsend-Nicholson. "An ensemble-based protocol for the computational prediction of helix-helix interactions in G protein-coupled receptors using coarse-grained molecular dynamics", *J Chem Theory Comput* 2017, 13:2254-2270. <https://doi.org/10.1021/acs.jctc.6b01246>

Dissertations:

- 1) **Nojood A. Altwaijry**, "A novel coarse-grained molecular dynamics method for the accurate prediction of helix-helix interactions in GPCRs", PhD Thesis, defended November 2017.
- 2) **Nojood A. Altwaijry**, "Factor V Leiden gene mutation in patients with deep vein thrombosis", MSc thesis, defended October 2004.

Conferences

- 1) *CompBioMed conference*, London, UK, 25-27 September 2019.
- 2) *Young Life Scientists Symposium*, London, UK, 13 November 2015.
- 3) *BioSM-KSU 2015*, Riyadh, Saudi Arabia, 4-5 May 2015
- 4) *Targeted Screening Conference*, Berlin, Germany, 7-8 May 2015.
- 5) *First International Conference on Biotechnology*, Riyadh, Saudi Arabia, 16-18 February 2009.
- 6) *First Assembly of Saudi Woman Scientists' Committee*, Riyadh, Saudi Arabia, 14-15 February 2004.

Training

- 1) *The basics of academic leadership*, Deanship of Skills Development, King Saud University, Riyadh, 2022.
- 2) *Workshop on determining the training needs of faculty KSU members*, Deanship of Skills Development, King Saud University, Riyadh, 2022.
- 3) *Management essentials*, Harvard business school online, USA, April-May 2022.
- 4) *Cloud computing and its applications in education*, Deanship of Skills Development, King Saud University, Riyadh, 2021.

- 5) *New Faculty Orientation and Preparation Programme*, SEDA, UK, King Saud University, Riyadh, September 2020.
- 6) *Student performance evaluation and online learning*, Deanship of Skills Development, King Saud University, Riyadh, 2020
- 7) *AI for scientific learning*, Deanship of Skills Development, King Saud University, Riyadh, 2019.
- 8) *Micro-teaching and peer-peer review*, Deanship of Skills Development, King Saud University, Riyadh, 2019.
- 9) *Evaluation of learning outcomes*, Deanship of Skills Development, King Saud University, Riyadh, 2019.
- 10) *Effective University Teaching*, Deanship of Skills Development, King Saud University, Riyadh, 2019.
- 11) *Effective University Teaching*, Deanship of Skills Development, King Saud University, Riyadh, 2019.
- 12) *Course Construction and Design*, Deanship of Skills Development, King Saud University, Riyadh, 2019.
- 13) *Event Management*, Deanship of Skills Development, King Saud University, Riyadh, Saudi Arabia, 2019.
- 14) *How to evaluate students using Rubrics*, Deanship of Skills Development, King Saud University, Riyadh, Saudi Arabia, 2019.
- 15) *Dealing with Reviewers' Comments*, London, UK, 2015.
- 16) *How to Write a Paper for Publication*, London, UK, 2015.
- 17) *Introduction to Scientific Programming in Python*, London, UK, 2015.
- 18) *Style and Structure in Written English*, London, UK, 2015.
- 19) *Management Skills for Researchers*, London, UK, 2014.
- 20) *Think-Write: Applying for 1st Grants and Fellowships*, London, UK, 2014.
- 21) *Training in Latex and BibTex*, London, UK, 2014.
- 22) *Copyright and Intellectual Property*, London, UK, 2013.
- 23) *Fundamental Concepts in Medical Statistics*, Riyadh Saudi Arabia, 2004.
- 24) *Trainee at King Faisal Hospital and Research Centre*, Riyadh, Saudi Arabia, 2002 – 2003.

Technical Skills

Productivity Applications

- Microsoft Office and most common productivity packages (for Windows and Mac OS).
- GROMACS, LATEX, Python, Unix.

Operating Systems

Microsoft Windows family and Mac OS.

Languages

Arabic – Mother tongue

English - Excellent