Nizar A. Al-Shar'i

BS Pharm | MPharm | PhD

Professor

Medicinal Chemistry and Computer-Aided Drug Design

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Research Gate

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Profile

I am Dr. Nizar Al-Shar'i a pharmacist with a PhD in Medicinal Chemistry and Computer-Aided Drug Design. Currently I'm a professor in Medicinal Chemistry and Drug Design in the Department of Medicinal Chemistry and Pharmacognosy at the Faculty of Pharmacy, Jordan University of Science and Technology (JUST), Irbid, Jordan. I earned a BS Pharm degree in 2001 and an MPharm in medicinal Chemistry in 2007 from the Faculty of Pharmacy, JUST. In 2013, I graduated from Strathclyde Institute of Pharmacy and Biomedical Sciences (SIPBS), University of Strathclyde, Glasgow, UK, with a PhD in Medicinal Chemistry and Computer-Aided Drug Design, and then I joined the Faculty of Pharmacy at JUST as a full time lecturer. In April 2013, I was promoted to assistant professor, then to associate professor in June 2018, and in April 2023 I was promoted to full professor.

During that time, I was appointed to many administrative positions. I started as an assistant dean for postgraduate and quality assurance affairs, then as a chairperson for the department of medicinal chemistry and pharmacognosy, and finally as a vice dean for accreditation and quality assurance where I was in charge of the ACPE accreditation file. Meanwhile, I also chaired many institutional committees such as assessment committee, accreditation and quality assurance committee, and participated in many committees such as strategic planning, scientific research, postgraduate studies, to name a few.

In terms of research, I'm interested in drug discovery via applying Computer-Aided Drug Design (CADD) methods, and Molecular Dynamics (MD) Simulation. I also published many articles in peer-reviewed international indexed journals. The core of my research work stems from my belief that the combination of experimental and theoretical approaches provides an invaluable and unique insight into the systems being studied.

Regarding my teaching philosophy, it originates from both personal and professional experiences in the classroom and out. During my undergraduate and graduate studies, I encountered many professors in different disciplines with different attitudes and teaching approaches. From that journey, I concluded that it is more important to teach than to instruct, being passionate for teaching, and more importantly, being humble. I believe, my responsibility as a teacher is to create an environment that allows for supervised exploration of the area of knowledge that students will encounter in that course. Moreover, in this environment students should be empowered to think critically and creatively, get engaged, and receive constructive feedback with "respect and dignity". These elements, I believe, massively affects the success of the educational encounter. Moreover, it is important to understand that students have different learning abilities; therefore, one must start by evaluating the needs of the students and tailoring the teaching approach to them and use variable teaching and assessment methods to ensure proper delivery of the taught material. This in turn requires continuous refinement of the teaching process and the utilization of any additional tools necessary for students to learn. Therefore, without reflecting at what we have done, we are not informed about what we might do. This active and reflective style of teaching is a cornerstone to me, that is why in my classes I ask a lot of questions to my students; probe what they know, and what they think and why, in order to help them discover their own ability to solve problems and push them to explore their potential. The two most important question I always urge my students to ask, and think about, are the WHY and HOW. That is why I prefer the problem-based way of teaching, whenever possible, because it provokes critical and analytical thinking for the students; and in this engaging and interactive learning way, I equip them with a TOOL BOX that helps them be lifelong learners. I totally agree with the saying: "Tell me and I'll forget. Show me, and I may not remember. Involve me, and I'll understand." I guess for all of us, there was one great professor who truly changed our way of learning and thinking, I would like to spend my career being that great professor to my students.

"*By learning you will teach; by teaching you will learn*", an old Latin proverb.

Education

PhD in Medicinal Chemistry - Computer Aided Drug Design **2009-2013**
Strathclyde Institute of Pharmacy and Biomedical Sciences (SIPBS)
University of Strathclyde, Glasgow, Scotland, UK

Thesis Title: A computational method for identifying allosteric binding sites in kinases.

MPharm in Medicinal Chemistry **2003-2007**
Department of Medicinal Chemistry and Pharmacognosy, Faculty of Pharmacy, Jordan University of Science and Technology (JUST), Irbid, Jordan

Thesis title: Synthesis and characterization of azole containing sulfonamides and evaluating their activity against *Candida albicans*.

BS Pharm **1996-2001**
Faculty of Pharmacy, Jordan University of Science and Technology (JUST), Irbid, Jordan

Academic Posts

Professor **4/2023 - present**
Department of Medicinal Chemistry and Pharmacognosy, Faculty of Pharmacy, JUST, Irbid, Jordan

Associate professor **10/2022 - 4/2023**
Faculty of Pharmacy, Jadara University, Irbid, Jordan (Sabbatical leave)

Associate professor **6/2018 - 9/2022**
Department of Medicinal Chemistry and Pharmacognosy, Faculty of Pharmacy, JUST, Irbid, Jordan

Assistant professor **6/2013 - 6/2018**
Department of Medicinal Chemistry and Pharmacognosy, Faculty of Pharmacy, JUST, Irbid, Jordan

Full time lecturer **2/2013 - 6/2013**
Department of Medicinal Chemistry and Pharmacognosy, Faculty of Pharmacy, JUST, Irbid, Jordan

Lecturer **3/2007 - 7/2009**
Pharmacy Department, International Academy for Health Sciences, Hafr Elbatin, KSA.

Administrative and Executive Posts

Vice Dean **9/2019 – 9/2021**
Vice Dean for Accreditation and Quality Assurance, Faculty of Pharmacy, JUST, Irbid, Jordan

Responsibilities: As the vice dean for accreditation and QA, I was entailed to oversee and manage the accreditation and quality assurance process in the Faculty. Within this frame, there was a range of responsibilities and duties assigned to me, which included:

- Ensuring compliance with accreditation standards (the ACPE in our case).
- Developing and implementing quality assurance processes to ensure that they meet institutional and accrediting body's quality standards
- Coordinating and facilitating the accreditation process via preparing reports and other documentation required for accreditation.
- Collaborating with faculty and administrators to ensure the alignment of academic programs with accreditation standards and meet the needs of students.
- Conducting and coordinating assessments of academic programs, research, and administrative services to ensure that they meet internal and external quality standards.
- Providing leadership and support to faculty and administrators in matters related to accreditation and quality assurance.
- Staying up-to-date with accreditation standards to ensure that the Faculty is aware of and complies with these changes.

Department Head **9/2014 - 9/2018**

Department of Medicinal Chemistry and Pharmacognosy, Faculty of Pharmacy, JUST, Irbid, Jordan

Responsibilities: my duties as a department head included the followings:

- Providing leadership and guidance to the faculty and staff within the department and oversee the day-to-day operations of the department.
- Budgeting and resource allocation to ensure that the department operates effectively.
- Curriculum development and assessment to ensure that the courses offered by the department are relevant, up-to-date, and aligned with program curriculum.
- Faculty recruitment, development, and evaluation.
- Representing the department in various settings, such as meetings with other academic departments, community organizations, etc.
- Strategic planning in collaboration with faculty administration.
- Ensuring that the department in general complies with all relevant institutional policies and procedures.

Assistant Dean **9/2013 - 9/2014**

Assistant Dean of Pharmacy for Postgraduate Students Affairs and Quality Control, Faculty of Pharmacy, JUST, Irbid, Jordan

Department Head **3/2007 - 7/2009**

Pharmacy Department, International Academy for Health Sciences, Hafr Elbatin, KSA.

Other Experiences and Community Services

Councils:

- Faculty of Pharmacy Council 2014-218, 2019-2021.
- Department of Medicinal Chemistry and Pharmacognosy Council, 2013-present.

High Committees:

- Chairperson, Accreditation and Quality Assurance Committee, Faculty of Pharmacy, 9/2019-9/2021.
- Chairperson, Assessment Committee, Faculty of Pharmacy, 9/2019-9/2020.
- Sub-committee member, Jordan University of Science and technology Strategic Planning, 2021.

Other Committees:

- Member, Scientific Research Committee, Faculty of Pharmacy, 2015-2016.
- Member, Assessment Committee, Faculty of Pharmacy, 9/2020-present.
- Member, Faculty of Pharmacy Strategic Planning Committee, 2020 and 2022.
- Member, Postgraduate Studies Committee, Faculty of Pharmacy, 2013-2018.
- Member, Labs and Supplies Committee, Faculty of Pharmacy, 2013-2018.
- Member, Courses Equivalency Committee, Faculty of Pharmacy, 2014-2015, 2017-2018.
- Member, Accreditation and Quality Assurance Committee, Faculty of Pharmacy, 2015-2018, 2021-present.
- Member, Curriculum Committee, Faculty of Pharmacy, 2014-2018, 2019-2021.
- Member, Steering Committee to Prepare for US Accreditation (ACPE) Requirements, 2017-2018.
- Chairperson, 7^{th} and 14^{th} Sub-Committees to Prepare for US Accreditation (ACPE) Requirements, 2017-2018.

Community Services:

- Member of the Licensing Committee of Pharmaceutical Factories, Jordan Food and Drug Administration (JFDA), Amman-Jordan, 12/2021-7/2022.
- Member of different audit committees within the Jordanian Accreditation and Quality Assurance Commission for Higher Education Institutions to evaluate the eligibility of pharmacy colleges applying to get the quality assurance certificate.
- Liaison officer between Irbid Chapter of Jordan Pharmaceutical Association (JPA) and the Faculty of Pharmacy, JUST, 9/2013-9/2015.

Grant Reviewing:

- Abdul Hameed Shoman Scientific Research Support Fund, Amman, Jordan.
- Scientific Research and Innovation Support Fund, Ministry of Higher Education and Scientific Research, Amman, Jordan.

Journal Reviewer:

- Computational and Structural Biotechnology Journal (Elsevier, Netherlands)
- Malaysian Journal of Medicine and Health Sciences (Universiti Putra Malaysia, Malaysia).
- Molecular Diversity (Springer, USA).
- Journal of Molecular Graphics and Modelling (Elsevier, Netherlands).
- Pharmaceutical Sciences (Tabriz University of Medical Sciences, Iran).
- Current Pharmaceutical Design (Bentham Science Publishers, UAE).
- Drug Development Research (John Wiley & Sons Inc., USA).
- Medicinal Chemistry Research (Springer, USA).
- Journal of Biomolecular Structure and Dynamics (Taylor & Francis, UK).
- Jordan Journal of Pharmaceutical Sciences (University of Jordan, Jordan).
- *In silico* Pharmacology (Springer, USA).
- The protein Journal (Springer, USA).

Teaching

- **Taught courses:**

Teaching courses for BS Pharm, PharmD, and MPharm levels.

- Medicinal Chemistry I
- Medicinal Chemistry II
- Medicinal Chemistry III
- Community pharmacy (practical training course)
- Computer-Aided Drug Design - graduate level
- Research methodology - graduate level
- Seminar - graduate level
- Special Topics A – graduate level

- **Teaching and course coordination responsibilities**

Within the academic settings, teaching and course coordination are two important responsibilities of a faculty member. They require strong communication, organizational and leadership skills, commitment to providing students with a high-quality teaching, and a deep understanding of the subject being taught. During my academic experience, a range of such responsibilities were assigned to me which are summarized below.

My teaching responsibilities included:

- Planning and delivering lectures, leading discussions, and facilitating activities that are engaging, informative, and appropriate for the level of the course being taught and the needs of the students.
- Assessing student learning outcomes using various summative and formative means, and providing students with feedback to help them improve their academic performance.
- Creating a classroom environment that fosters learning and respects privacy and diversity.
- Collaborating with other colleagues and relevant committees to develop and improve curriculum, teaching strategies, and assessment methods.
- Advising and mentoring students to support their personal and academic development.

My course coordination responsibilities included:

- Designing and updating course syllabi, learning outcomes, assessment criteria, and required materials.
- Coordinating with other faculty members to ensure consistency across different sections of the same course.
- Monitoring student progress and addressing issues that arise, such as academic misconduct.
- Communicating with students about course expectations, policies, and procedures.
- Evaluating and reflecting on course outcomes and making adjustments as needed to improve student learning experience.

Graduate Students

Main supervisor:

1. **Hafeedah Alqudah:** Computer-aided optimization of TOPK lead compounds. **Current student.**
2. **Enas Al-Darayseh:** Lead optimization of previously identified glyoxalase-1 inhibitor. **Current student.**
3. **Manar Abu-Sarhan:** Lead optimization of previously identified TOPK inhibitor. **Current student.**
4. **Sondos Muslih:** Exploration of the ATP and Non-ATP Pockets for Potential Inhibition of the CHK1 Kinase Using Molecular Dynamics Simulation and Pharmacophore Modeling. Graduated **2019.**
5. **Rand Al-waqfi:** Identification of Possible Glyoxalase-I Inhibitors Using Structure Based Pharmacophore Modeling, Virtual Screening and Molecular Dynamics-Guided Docking. Graduated **2018.**
6. **Hadil Albarqi:** Synthesis and Biological Evaluation of Glyoxalase-I Inhibitors Identified Using Fragment-Based Drug Design approach. Graduated **2018.**

Co-supervisor:

1. **Banan Al-Omari:** Lead optimization of previously identified potent Glyoxalase-I inhibitor. Graduated **2022.**
2. **Enas Alhorani:** Design, Synthesis and Biological Evaluation of LSD1 Inhibitors as Potential Anticancer Agents Using Fragment-Based Drug Design Approach. Graduated **2019.**
3. **Enas Alrousan:** Identification of Glyoxalase-I Inhibitors Using Ligand-Based Pharmacophore Modeling and Molecular Docking. Graduated **2018.**
4. **Katreen Ali Banisalman:** Design, Synthesis and Biological Evaluation of Novel Zinc Binders Targeting Human Glyoxalase-I; A Validated Target for Cancer Treatment. Graduated **2016.**

Examiner:

- Reema Alqayyam, MPharm, **2019**
- Rajaa Badarnih MPharm, **2015**
- Ghazi Al-Jabal MPharm, **2015**
- Mohamad Al-Fandi MPharm, **2014**
- Munia Sowaileh MPharm, **2013**

Professional Memberships

- Member in the Jordan Pharmaceutical Association, since January 2002.
- Registered as a professional pharmacist from the Saudi Commission for Health Specialties, March 9th, 2008.

Honors and Awards

- The Distinguished University Professor Award 2022, University-Level, First Place, JUST, Irbid, **Jordan** (**2022**).
- Certificate of appreciation for presenting at different national and international conferences. Below are some examples:
  - School of Pharmacy's first scientific day, themed "Modernistic Pharmacy in the Eyes of Scientific Research". Jadara University, Irbid, **Jordan** (2019).
  - The 2nd World Congress on Pharmaceutical and Chemical Sciences, themed "Novel approaches and techniques in Pharmaceutical and Chemical Sciences". Bologna, **Italy** (2019).
  - The 4th scientific day of the faculty of pharmacy, themed ''Novel drugs: chemistry and design'', Philadelphia University, **Jordan** (2018).
- Full PhD scholarship by Jordan University of Science and Technology (2009-2013).
- The best lecturer award, International Academy for Health Sciences, Hafr Elbatin, KSA, (2008).
- Faulty of Pharmacy honor list for distinguished academic performance (1999).

Research Skills

- Excellent experience in vast array of Computer Aided Drug Design (CADD) methods.
- Excellent experience in Molecular Dynamics (MD) simulations.
- Very good experience in organic synthesis.
- Good experience in performing *in-vitro* antifungal activity assays.
- Good experience in performing *in-vitro* enzyme inhibition assays of pharmaceutical compounds.
- Familiar with MS and NMR spectroscopy.

Professional Software and OS

- Discovery Studio and Pipeline Pilot (Biovia®)
- AMBER (molecular dynamics package)
- Chemdraw and ChemSketch
- PyMol (a molecular visualization system)
- Visual Molecular Dynamics (VMD).
- GraphPad Prism
- Good usage of MATLAB
- EndNote
- MS Windows and different Linux distributions, and their applications.

Full List of Publications

1. Ramasamy Duraia, **Nizar A. Al-Shar'i**, Sandeep Chandrashekharappa, Pran Kishore Deb, Osama I. Alwassil, Raquel M. Gleiser, Christophe Tratrat, Mohamed A. Morsy, Madhusudana Reddy Muthukurpalya Bhojegowd, Dhakshanamurthy Thirumalai, Viresh Mohanlall, Mohamad Fawzi Mahomoodallyk, Mahmoud Kandeel, Wael El-Deeb, Mahesh Attimarad, Anroop B. Nair, Nagaraja Sreeharsha, Rashmi Venugopala, Hassan H. Abdallah, Michelyne Haroun, Katharigatta N. Venugopalag and Yasmine F. Ibrahim. *"Synthesis, biological evaluation and computational investigation of ethyl 2,4,6-trisubstituted-1,4-dihydropyrimidine-5-carboxylates as potential larvicidal agents against Anopheles arabiensis"*. **Under review.**

2. Ogochukwu Ngozi Nwaefulu, **Nizar A. Al-Shar'i**, Lam Kok Wai, Mohammad Kaisarul Islam, Lim Chee Woei, Josephine Omonkhelin Owolabi, Sreenivasa Rao Sagineedu, and Johnson Stanslas. *"Isolation and structural elucidation of compounds from Synclisia scabrida (Miers) ex Oliv and their in vitro cytotoxicity and in-silico studies".* **Under review**.

3. Bhakti Pawar, Santosh Kumar Behera, Muktika Tekade, **Nizar Al-Shar'i**, Rakesh Kumar Tekade. **Chapter 9**, "*Computer-aided technologies in drug discovery and toxicity prediction*". Editor: Rakesh Tekade. In Advances in Pharmaceutical Product Development and Research. Essentials of Pharmatoxicology in Drug Research, Volume 1, Academic Press, Volume 1, **(2023)**, Pages 239-254, ISBN 9780443158407, https://doi.org/10.1016/B978-0-443-15840-7.00004-X.

4. Pobitra Borah, Sangeeta Hazarika, Dikshya Sharma, Katharigatta N. Venugopala, Deepak Chopra, **Nizar A. Al-Shar'i**, Siva Hemalatha, Ashok K. Shakya, Pratap Chandra Acharya, Pran Kishore Deb. **Chapter 9**, "*Systemic and topical antifungal drugs*". Editor(s): Pratap Chandra Acharya, Michio Kurosu. In Medicinal Chemistry of Chemotherapeutic Agents. Academic Press, **(2023)**, Pages 285-315, ISBN 9780323905756, https://doi.org/10.1016/B978-0-323-90575-6.00002-8.

5. Pobitra Borah, Sangeeta Hazarika, Ashna Chettri, Dikshya Sharma, Satyendra Deka, Katharigatta N Venugopala, Pottathil Shinu, **Nizar A Al-Shar'i**, Sanaa K Bardaweel, Pran Kishore Deb. **Chapter 61**, "*Heterocyclic compounds as antimicrobial agents*". Editors: Debasis Bagchi, Amitava Das, Bernard William Downs. In Viral, Parasitic, Bacterial, and Fungal Infections. Academic Press, **(2023)**, Pages 781-804, ISBN 9780323857307, https://doi.org/10.1016/B978-0-323-85730-7.00068-0.

6. Ogochukwu Ngozi Nwaefulu, **Nizar A. Al-Shar'i**, Josephine Omonkhelin Owolabi, Sreenivasa Rao Sagineedu, Lim Chee Woei, Lam Kok Wai, Mohammad Kaisarul Islam, Johnson Stanslas. "*The Impact of Cycleanine in Cancer Research: A Computational Study*". Journal of Molecular Modelling **(2022),** volume 340 (28)**.** https://doi.org/10.1007/s00894-022-05326-1. [Impact factor 2.172].

7. Hadeia Mashaqbeh, Rana Obaidat, **Nizar Al-Shar'i**. *"Evaluation of EDTA dianhydride versus Diphenyl carbonate Nanosponges for Curcumin"*. AAPS PharmSciTech **(2022)**, volume 23, Article number: 229. https://doi.org/10.1208/s12249-022-02372-z. [Impact factor 4.026].

8. Hadeia Mashaqbeh, Rana Obaidat, **Nizar Al-Shar'i**, Tamam El-Elimat, and Soraya Alnabulsi. " *Weak complexation of 5-fluorouracil with β-cyclodextrin, carbonate, and dianhydride crosslinked β-cyclodextrin: in vitro and in silico studies*". Research in Pharmaceutical Sciences. **(2022)**, volume 17 (4), p: 334-349. https://doi.org/10.4103/1735-5362.350235. [Impact factor 3.133].

9. Katharigatta N. Venugopala, **Nizar A. Al-Shar'i**, Lina A. Dahabiyeh, Wafa Hourani, Pran Kishore Deb, Melendhran Pillay, Bashaer Abu-Irmaileh, Yasser Bustanji, Sandeep Chandrashekharappa, Christophe Tratrat, Mahesh Attimarad, Anroop B. Nair, Nagaraja Sreeharsha, Pottathil Shinu, Michelyne Haroun, Mahmoud Kandeel, Abdulmalek Ahmed Balgoname, Rashmi Venugopala, Mohamed A. Morsy. *"Antitubercular, Cytotoxicity, and Computational Target Validation of Dihydroquinazolinone Derivatives"*. Antibiotics. **(2022)**, volume 11 (7), p: 831. https://doi.org/10.3390/antibiotics11070831. [Impact factor 4.639].

10. Suaad Abdallah Audat, **Nizar A. Al-Shar'i**, Buthina Abdallah Al-Oudat, Soraya Alnabulsi. *"Design, synthesis, and biological evaluation of SMYD3 inhibitors possessing N-thiazole benzenesulfonamide moiety as potential anti-cancer agents"*. Journal of Saudi Chemical Society. **(2022)**, volume 26 (3), article number 101482, https://doi.org/10.1016/j.jscs.2022.101482. [Impact factor 3.932].

11. Rana Obaidat, Batool Al-Ghzawi, Bashar Al-Taani, **Nizar Al-Shar'i**. *"Co-crystallization of Amoxicillin trihydrate and Potassium clavulanate Provides a Promising Approach for Preparation of Sustained-release Microspheres"*. AAPS PharmSciTech. **(2022)**, volume 23, article number 131. https://doi.org/10.1208/s12249-022-02273-1. [Impact factor 3.246].

12. Venugopala, Katharigatta N., Pottathil Shinu, Christophe Tratrat, Pran K. Deb, Raquel M. Gleiser, Sandeep Chandrashekharappa, Deepak Chopra, Mahesh Attimarad, Anroop B. Nair, Nagaraja Sreeharsha, Fawzi M. Mahomoodally, Michelyne Haroun, Mahmoud Kandeel, Syed M.B. Asdaq, Viresh Mohanlall, **Nizar A. Al-Shar'i**, and Mohamed A. Morsy. *"1,2,3-Triazolyl-tetrahydropyrimidine Conjugates as Potential Sterol Carrier Protein-2 Inhibitors: Larvicidal Activity against the Malaria Vector Anopheles arabiensis and In Silico Molecular Docking Study"*. Molecules. **(2022)**, volume 27 (9), p: 2676; https://doi.org/10.3390/molecules27092676. [Impact factor 4.412].

13. Buthina A. Al-Oudat, **Nizar A. Al-Shar'i**, Amanda Bryant-Friedrich, Qosay A. Al-Balas, Suaad A. Audat, Mel F. Bedi, Ali H. Hamzah, Ramez W. Hallak, Mohammad Ali Alqudah. "*Lead Optimization and Biological Evaluation of Diazenylbenzenesulfonamides Inhibitors Against Glyoxalase-I Enzyme as Potential Anticancer Agents*". Bioorganic Chemistry. **(2022)**, Volume 120, article number 105657; https://doi.org/10.1016/j.bioorg.2022.105657. [Impact factor 5.275].

14. Sarah Falah Kokaz, Pran Kishore Deb, Pobitra Borah, Ratnali Bania, Katharigatta N. Venugopala, Anroop B. Nair, Vinayak Singh, **Nizar A. Al-Shar'i**, Rakesh Kumar Tekade. Chapter 8, "*Dendrimers: Properties and Applications in Biomedical Field*". Editors: Sougata Jana, Subrata Jana. In Nanoengineering of Biomaterials. Wiley Online Library, **(2022)**, https://doi.org/10.1002/9783527832095.ch25.

15. Lara Fakhouri, **Nizar A. Al-Shar'i**. *"The Design of TOPK Inhibitors Using Structure-Based Pharmacophore Modelling and Molecular Docking Based on an MD-Refined Homology Model".* Molecular Diversity. **(2022)**, https://doi.org/10.1007/s11030-021-10361-w. [Impact factor 2.943].

16. Hadeia Mashaqbeh, Rana Obaidat and **Nizar Al-Shar'i**. "*Evaluation and Characterization of Curcumin-β-Cyclodextrin and Cyclodextrin-Based Nanosponge Inclusion Complexation*". Polymers. **(2021)**, volume 13 (23), pp 4073; https://doi.org/10.3390/polym13234073. [Impact factor 4.329].

17. Ratnali Bania, Pobitra Borah, Satyendra Deka, Lina A. Dahabiyeh, Vinayak Singh, **Nizar A. Al-Shar'i**, Anroop B. Nair, Manoj Goyal, Katharigatta N. Venugopala, Rakesh Kumar Tekade, Pran Kishore Deb. Chapter 22, "Current strategies in targeted anticancer drug delivery systems to brain". Editors: Kamal Dua, Meenu Mehta, Terezinha de Jesus Andreoli Pinto, Lisa G. Pont, Kylie A. Williams, Michael J. Rathbone. Advanced Drug Delivery Systems in the Management of Cancer. Academic Press, (**2021)**, pp 267-280, ISBN 9780323855037. https://doi.org/10.1016/B978-0-323-85503-7.00038-9.

18. Katharigatta N. Venugopala, Sandeep Chandrashekharappa, Pran Kishore Deb, Christophe Tratrat, Melendhran Pillay, Deepak Chopra, **Nizar A. Al-Shar'i**, Lina A. Dahabiyeh, Wafa Hourani, Pobitra Borah, Rahul D. Nagdeve, Susanta K. Nayak, Basavaraj Padmashali, Mohamed A. Morsy, Bandar E. Aldhubiab, Mahesh Attimarad, Anroop B. Nair, Nagaraja Sreeharsha, Michelyne Haroun, Sheena Shashikanth, Viresh Mohanlall. "*Anti-tubercular activity and molecular docking studies of indolizine derivatives targeting mycobacterial InhA enzyme*". Journal of Enzyme Inhibition and Medicinal Chemistry. **(2021),** volume 36 (1), pp 1471-1486, https://doi.org/10.1080/14756366.2021.1919889. [Impact factor 4.673].

19. Pran Kishore Deb, **Nizar A. Al-Shar'i**, Katharigatta N. Venugopala, Melendhran Pillay, Pobitra Borah. *"In vitro* anti-TB properties, *in silico* target validation, molecular docking and dynamics studies of substituted 1,2,4-oxadiazole analogues against *Mycobacterium tuberculosis"*. Journal of Enzyme Inhibition and Medicinal Chemistry. **(2021),** volume 36 (1), pp 869-884. https://doi.org/10.1080/14756366.2021.1900162**.** [Impact factor 4.673].

20. Rajashri Bezbaruah, Pobitra Borah, Bibhuti Bhushan Kakoti, **Nizar Al-Shar'i**, Balakumar Chandrasekaran*, Da'san Mahmoud Mousa Jaradat, Munir Al-Zeer and Saeid Abu-Romman. *"Developmental landscape of potential vaccine candidates based on viral vector for prophylaxis of COVID-19"*. Review, Frontiers in Molecular Biosciences - Molecular Diagnostics and Therapeutics. **(2021),** volume 8, article 635337. https://doi.org/10.3389/fmolb.2021.63533700. [Impact factor 4.19].

21. **Nizar A. Al-Shar'i** and Sondos Musleh. ''*CHK1 Kinase Inhibition: Identification of Allosteric Hits Using MD Simulations, Pharmacophore Modeling, Docking and MM-PBSA Calculations''.* Molecular Diversity. **(2021)**, volume 26 (2), pp 903-921. https://doi.org/10.1007/s11030-021-10202-w. [Impact factor 2.013].

22. Pobitra Borah, Pran Kishore Deb, **Nizar Al-Shar'i**, Lina Dahabiyeh, Katharigatta Narayanaswamy Venugopala, Vinayak Singh, Snawar Hussain, Shinu Pottathil, Satyendra Deka, Balakumar Chandrasekaran and Da'san Mahmoud Mousa Jaradat. "*Perspectives on RNA vaccine candidates for COVID-19"*. Frontiers in Molecular Biosciences - Molecular Diagnostics and Therapeutics. **(2021),** volume 8, article 635245. https://doi.org/10.3389/fmolb.2021.635245. [Impact factor 4.19].

23. Pobitra Borah, Pran Kishore Deb, Balakumar Chandrasekaran, Manoj Goyal, Monika Bansal, Snawar Hussain, Shinu Pottathil, Katharigatta Narayanaswamy Venugopala, **Nizar A Al-Shar'i**, Satyendra Deka and Vinayak Singh. *"Neurological consequences of SARS-CoV-2 infection and concurrence of treatment-induced neuropsychiatric adverse events in COVID-19 patients: Navigating the uncharted"*. Frontiers in Molecular Biosciences - Molecular Diagnostics and Therapeutics. **(2021)**, volume 8, article 627723. https://doi.org/10.3389/fmolb.2021.627723. [Impact factor 4.19].

24. Pobitra Borah, Pran Kishore Deb, Katharigatta N. Venugopala, **Nizar A. Al-Shar'i**, Vinayak Singh, Satyendra Deka, Amavya Srivastava, Vinod Tiwari, Raghu Prasad Mailavaram. *"Tuberculosis: An Update on Pathophysiology, Molecular Mechanisms of Drug Resistance, Newer Anti-TB Drugs, Treatment Regimens and Host-Directed Therapies"*. Current Topics in Medicinal Chemistry. **(2021),** volume 21 (6), pp 547 - 570. https://doi.org/10.2174/1568026621999201211200447. [Impact factor 3.22].

25. **Nizar A. Al-Shar'i**. *''Tackling COVID-19: identification of potential main protease inhibitors via structural analysis, virtual screening, molecular docking and MM-PBSA calculations.* Journal of Biomolecular Structure and Dynamics. **(2021)**, volume 39 (17), pp 6689-6704. https://doi.org/10.1080/07391102.2020.1800514. [Impact factor 3.31].

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Conferences and Workshops

1. **Webinar:** "A Sneak Peek into the Revisions to the CAPE Outcomes and Entrustable Professional Activities (EPAs)". January 17, **2023**. hosted by: Accreditation Council for Pharmacy Education, USA; American Association of Colleges of Pharmacy, **USA**; Al Ain University, College of Pharmacy, UAE; Commission for Academic Accreditation, Ministry of Education, **UAE**.

2. Workshop: Capacity Development Workshop for E-Learning Development (Level 1). March 30th to 31st **2022**, academic development and quality assurance center, Jordan University of Science and Technology, Irbid, **Jordan**.

3. **Virtual conference**. The Arab Universities and their Role in Facing the Challenges of the Corona Pandemic - Research and Awareness Efforts. Held virtually by Association of Arab Universities (AArU), Jordan, 7 June **2021**.

4. **Online event**. The 6th regional pharmacy faculty development workshop on best practices for planning and evaluation of inter-professional education - part 2. Al Ain University (AAU), UAE, in conjunction with Commission for Academic Accreditation in Ministry of Education (CAA), Accreditation Council for Pharmacy Education (ACPE) and American Association of Colleges of Pharmacy (AACP). 23 - 25 MAY, **2021**. Al Ain University (AAU), **UAE**.

5. **Online course**. New Academic Leaders: Strategies for Success. An online course offered by Magna Publishing, Wisconsin, USA. December, **2020**.

6. Scholarly Book Publishing with Springer Nature: Insights on Current ebook Trends **Webinar**. September 28th **2020**, Springer Nature.

7. **Virtual event**: Meet the Author: Martin Karplus, Nobel Laureate in Chemistry. September 26th **2020**, World Scientific Publishing Co Ltd, **Singapore**.

8. An international **webinar**: Coming Closer Nature for Impactful Publications (An Authors Workshop). September 22nd **2020**, NIPER-Ahmedabad, **India**.

9. An international **webinar**: Research Future with Interdisciplinary Collaboration. **Nizar Al-Shar'i** "Identification of CHK1 Kinase Inhibitors Using Structure-Based Pharmacophore Modelling and Molecular Docking". September 15th **2020**, NIPER-A, Gol, **India**.

10. Workshop: Basics of Distance Education. June 7th to 9th **2020**, academic development and quality assurance center, Jordan University of Science and Technology, Irbid, **Jordan**.

11. Workshop: Research Excellence: From Application to Publication. July 4th to 11th **2019**, academic development and quality assurance center, Jordan University of Science and Technology, Irbid, **Jordan**.

12. School of Pharmacy's first scientific day. Themed "Modernistic Pharmacy in the Eyes of Scientific Research". **Nizar Al-Shar'i** ''Discovery of Novel Glyoxalase-I Inhibitors Using Computational Fragment-Based Drug Design Approach''. March 3rd **2019**, Jadara University, Irbid, **Jordan.**

13. The "2nd World Congress on Pharmaceutical and Chemical Sciences". Themed "Novel approaches and techniques in Pharmaceutical and Chemical Sciences". July 23-25 **2018**, Bologna, **Italy**.

14. The 4th scientific day of the faculty of pharmacy entitled "Novel drugs: chemistry and design. **Nizar Al-Shar'i** "Molecular dynamics simulations in drug discovery". May 9th **2018**, Philadelphia University, **Jordan.**

15. The first Pharmacy school conference entitled new trends in pharmacy between science and industry. **Nizar Al-Shar'i** "*Explaining the autoinhibition of the SMYD enzyme family: a theoretical study".* November 22-23 **2017**, Faculty of Pharmacy, Yarmouk University, Irbid, **Jordan**

16. Workshop: Problem-Based Learning. July 6th to 13th **2017**, academic development and quality assurance center, Jordan University of Science and Technology, Irbid, **Jordan**.

17. The 2nd International Conference on Ethics in Jordan: Clinical Trials. Responsible Conduct of Research Program in collaboration with the School of Pharmacy at JUST. August 2-4 **2017**. Faculty of Pharmacy, Jordan University of Science and Technology, Irbid, **Jordan**.

18. The 4th Conference for Faculties of Pharmacy in Jordan and JUST International Pharmacy Conference. August 2-4 **2017,** Faculty of Pharmacy, Jordan University of Science and Technology, Irbid, **Jordan**.

19. ICH-GCP Good Clinical Practice workshop, Pfizer, Jordan University of Science and Technology, November 19th **2014**. Irbid, **Jordan**.

20. Zarqa University Second Scientific Day. **Nizar Al-Shar'i,** "Bioinformatics in Computer-Aided Drug Design: The impact of molecular dynamics simulations". March 4th **2014**, Zarqa University, Zarqa, **Jordan**.

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22. Cancer Research UK Medicinal Chemistry Workshop. **Nizar Al-Shar'i**, Simon Mackay, Blair Johnston, Nahoum Anthony "A computational method for identifying allosteric binding sites in kinases". November 13th **2012**, Newcastle University, Newcastle, **UK**.

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