

# OMICS GROUP



OMICS Group International through its Open Access Initiative is committed to make genuine and reliable contributions to the scientific community. OMICS Group hosts over 400 leading-edge peer reviewed Open Access Journals and organizes over 300 International Conferences annually all over the world. OMICS Publishing Group journals have over 3 million readers and the fame and success of the same can be attributed to the strong editorial board which contains over 30000 eminent personalities that ensure a rapid, quality and quick review process. OMICS Group signed an agreement with more than 1000 International Societies to make healthcare information Open Access.

# OMICS Journals are welcoming Submissions

OMICS Group welcomes submissions that are original and technically so as to serve both the developing world and developed countries in the best possible way.

OMICS Journals are poised in excellence by publishing high quality research. OMICS Group follows an Editorial Manager® System peer review process and boasts of a strong and active editorial board.

Editors and reviewers are experts in their field and provide anonymous, unbiased and detailed reviews of all submissions. The journal gives the options of multiple language translations for all the articles and all archived articles are available in HTML, XML, PDF and audio formats. Also, all the published articles are archived in repositories and indexing services like DOAJ, CAS, Google Scholar, Scientific Commons, Index Copernicus, EBSCO, HINARI and GALE.

For more details please visit our website:

<http://omicsonline.org/Submitmanuscript.php>

# Yazen M Alnouti, Ph.D.

Associate Professor

Department of Pharmaceutical Sciences

University of Nebraska Medical Center

USA



**Teaching Activities:**

At the professional level, Dr. Alnouti lectures in the areas of Drug Metabolism and Pharmacokinetics in the "Introduction to Pharmaceutical Sciences" and "Pharmaceutical Sciences II & III" courses. At the graduate level, Dr. Alnouti provides lectures in "Advanced Pharmacokinetics and Pharmacodynamics" and the "Quantitative Pharmaceutical Analysis" courses.

**Research Activities/Interests:**

Research in Dr. Alnouti's laboratory is involved in the multidisciplinary area of drug metabolism and pharmacokinetics (DMPK). His research focuses on the application of Bioanalytical Chemistry, in vitro and in vivo animal models to support ADMET (absorption, distribution, metabolism, excretion, and toxicity) and pharmacokinetic (PK) studies. This is a technique-driven enterprise; therefore expertise in liquid chromatography-mass spectrometry (LC-MS) is heavily used in his research.

Another area of interest in Dr. Alnouti's laboratory is the discovery of biomarkers for hepato-biliary diseases based on bile acid metabolism by sulfation, a phase II metabolic pathway.

### **High-Throughput Bioanalytical Chemistry:**

Qualitative and quantitative analysis of biologically active compounds in complex biological matrices using LC-MS/MS, Capillary Electrophoresis, HPLC, and robotic on-line sample preparation systems in support of high-throughput DMPK (drug metabolism and pharmacokinetics) and ADMET (absorption, distribution, metabolism, excretion, and toxicity) studies.

### **Drug Metabolism and Pharmacokinetics (DMPK):**

Study the expressional regulation and the kinetics of transporters, enzymes (phase I and II), and proteins involved in drug metabolism and disposition. Characterize the metabolic stability, metabolite identification, inhibition/induction kinetics, enzyme mapping, formation of reactive metabolites, and kinetics of reversible and irreversible protein binding of small molecules in in vitro cell lines, hepatocytes, hepatic microsomes, S9, and cytosolic fractions, and in In Vivo knock-out animal models using LC-QTRAP-MS analysis. Characterize the kinetics of drug transport and permeability across biological barriers using in vitro systems including Caco2 and lymphatic endothelial cells (LECs). Extrapolation of DMPK profiles between animal species and from in vitro to in vivo systems (IVIVE).

Study the influence of combinational therapy on the maternal/ fetal pharmacokinetics and placental transport of antiviral drugs in pregnant rats using compartmental and non-compartmental pharmacokinetic analysis with WinNonlin. Preclinical pharmacokinetic studies (toxicokinetics, bioavailability, dose proportionality, quantitative tissue distribution, and allometric scaling) in mouse, rat, and monkey animal models.

### **Biomarkers:**

Discovery and validation of biomarkers for hepato-biliary diseases and for drug-induced hepatotoxicity based on bile acid metabolism by sulfation, a phase II metabolic pathway

## Recently published articles

1. **Alnouti Y**, Klaassen CD. Mechanisms of gender-specific regulation of mouse sulfotransferases (Sults). *Xenobiotica*. **2011** Mar; 41(3):187-97. PMID: 21091322.
2. Huang J, Bathena SP, Csanaky IL, **Alnouti Y**. Simultaneous characterization of bile acids and their sulfate metabolites in mouse liver, plasma, bile, and urine using LC-MS/MS. *J Pharm Biomed Anal*. **2011** Jul 15; 55(5): 1111-9. PMID: 21530128. Not directly supported by NIH.
3. Bathena SP, Huang J, Nunn ME, Miyamoto T, Parrish LC, Lang MS, McVaney TP, Toews ML, Cerutis DR, **Alnouti Y**. Quantitative determination of lysophosphatidic acids (LPAs) in human saliva and gingival crevicular fluid (GCF) by LC-MS/MS. *J Pharm Biomed Anal*. **2011** Sep 10; 56(2): 402-7. PMID: PMC3134166.
4. Huang J, Gautam N, Bathena SP, Roy U, McMillan J, Gendelman HE, **Alnouti Y**. UPLC-MS/MS quantification of nanoformulated ritonavir, indinavir, atazanavir, and efavirenz in mouse serum and tissues. *J Chromatogr B Analyt Technol Biomed Life Sci*. **2011** Aug 1; 879(23): 2332-8. PMID: PMC3144699.
5. Bathena SP, Huang J, Epstein AA, Gendelman HE, Boska MD, **Alnouti Y**. Rapid and reliable quantitation of amino acids and myo-inositol in mouse brain by high performance liquid chromatography and tandem mass spectrometry. *J Chromatogr B Analyt Technol Biomed Life Sci*. **2012** Apr 15; 893-894: 15-20. PMID: PMC3322302.
6. Gautam N, Bathena SP, Chen Q, Natarajan A, **Alnouti Y**. Pharmacokinetics, protein binding and metabolism of a quinoxaline urea analog as an NF- $\kappa$ B inhibitor in mice and rats by LC-MS/MS. *Biomed Chromatogr*. **2013** Jul; 27(7): 900-9. PMID: PMC3760428.
7. Gautam N, Roy U, Balkundi S, Puligujja P, Guo D, Smith N, Liu XM, Lamberty B, Morsey B, Fox HS, McMillan J, Gendelman HE, **Alnouti Y**. Preclinical Pharmacokinetics and Tissue Distribution of Long-Acting Nanoformulated Antiretroviral Therapy. *Antimicrob Agents Chemother*. **2013** Jul; 57(7): 3110-20. PMID: PMC3697338. **Featured** by MDlinx in the area of Infectious Diseases.
8. Epstein AA, Narayanasamy P, Dash PK, High R, Bathena SP, Gorantla S, Poluektova LY, **Alnouti Y**, Gendelman HE, Boska MD. Combinatorial assessments of brain tissue metabolomics and histopathology in rodent models of human immunodeficiency virus infection. *J Neuroimmune Pharmacol*. **2013** Dec; 8(5): 1224-38. PMID: PMC3889226.
9. Bathena SP, Mukherjee S, Olivera M, **Alnouti Y**. The profile of bile acids and their sulfate metabolites in human urine and serum. *J Chromatogr B Analyt Technol Biomed Life Sci*. **2013** Dec; 942-943:53-62. PMID: 24212143. Not directly supported by NIH.
10. Wang L, Hartmann P, Haimerl M, Bathena SP, Sjöwall C, Almer S, **Alnouti Y**, Hofmann AF, Schnabl B. Nod2 deficiency protects mice from cholestatic liver disease by increasing renal excretion of bile acids. *J Hepatol*. **2014** Jun; 60(6): 1259-67. PMID: PMC4028388.
11. Gautam N, Puligujja P, Balkundi S, Thakare R, Liu XM, Fox HS, McMillan J, Gendelman HE, **Alnouti Y**. Pharmacokinetics, Biodistribution, and Toxicity of Folic Acid-Coated Antiretroviral Nanoformulations. *Antimicrob Agents Chemother*. 2014 Oct 6. pii: AAC.04108-14. [Epub ahead of print]

# Journal of Molecular Pharmaceutics and Organic Process Research

- Journal of Molecular Pharmaceutics and Organic Process Research
- Journal of Nanomedicine & Nanotechnology

# OMICS Group Open Access Membership

OMICS publishing Group Open Access Membership enables academic and research institutions, funders and corporations to actively encourage open access in scholarly communication and the dissemination of research published by their authors.

For more details and benefits, click on the link below:

<http://omicsonline.org/membership.php>

