



DAVID B. BOLSTAD, PH.D.

TECHNICAL ADVISOR

EDUCATION

University of Montana
Chemistry
Ph.D. 2006

Central Washington
University
Chemistry
B.S. (*summa cum laude*) 2001

Central Washington
University
Biology
B.A. (*summa cum laude*) 2001

INDUSTRY GROUPS

Biotechnology
Chemistry
Pharmaceuticals

SERVICES

Patent

BACKGROUND

David Bolstad specializes in U.S. and foreign chemical and pharmaceutical patent matters. He earned degrees in Chemistry (B.S.) and Biology (B.A.) from Central Washington University (*summa cum laude*, 2001) and a Ph.D. in Chemistry from the University of Montana (2006). He spent two years as a postdoctoral researcher in the School of Pharmacy at the University of Connecticut before beginning an independent research career as an assistant professor at the University of Montana.

EXPERIENCE

Prior to joining Seed IP, David's research career focused on the development of small molecule leads targeting central nervous system receptors for antidepressant therapies, positron emission tomography (PET) imaging, and probing the structure and function of membrane bound proteins. During his postdoctoral work, and as an independent researcher, he developed novel compounds for infectious disease including dihydrofolate reductase (DHFR) inhibitors and a class of natural-product-derived polyacetynes. Additionally, David has demonstrated a breadth to his abilities as an environmental analytical chemist for the Navy and as a research chemist for a mercury instrumentation manufacturing company. David is a co-inventor on several U.S. Patents related to his work and has been a co-author on multiple peer-reviewed scientific publications.

AFFILIATIONS

David is a member of Life Science Washington.

PATENTS/PATENT APPLICATIONS

Anderson, A.C.; Wright, D.L.; Pelphrey, P.M.; Joska, T.M.; Bolstad, E.S.D.; Bolstad, D.B.; Popov, V. Inhibitors of Dihydrofolate Reductase With Antibacterial Antiprotozoal, Antifungal and Anticancer Properties. US Patent 8,426,432 B2 April 23, 2013.

Gerdes, J.M.; Bolstad, D.B.; Kusche, B.R. Enantiomers of 2'-Fluoroalkyl-6-nitroquipazine as Serotonin Transporter Positron Emission Tomography Imaging Agents and Antidepressant Therapeutics. US Patent 7,998,962 B2 Aug. 16, 2011.

Gerdes, J.M.; Bolstad, D.B.; Braden, M.R.; Barany, A.W. 1-((2'-Substituted)-piperazin-1'-yl]-isoquinolines as Norepinephrine Transporter Inhibitor Therapeutics and Positron Emission Tomography Imaging Agents. US Patent 7,887,784 Feb 15, 2011.

Hoody, J.H., Bolstad, D.B. Therapeutic Compounds for Protozoal and Microbial Infections and Cancer. US Patent Application 2013/0261133 A1 Oct. 2, 2013.

PUBLICATIONS

Paulsen, J.L.; Liu, J.; Bolstad, D.B.; Smith, A.E.; Priestley, N.D.; Wright, D.L.; Anderson, A.C. "In vitro biological activity and structural analysis of 2,4-diamino-5-(2'-arylpropargyl)pyrimidine inhibitors of *Candida albicans*" *Bioorganic & Medicinal Chemistry*, 2009, 17, 4866-4872.

Liu, J.; Bolstad, D.B.; Smith, A.E.; Priestley, N.D.; Wright, D.L.; Anderson, A.C. "Probing the active site of *Candida glabrata* dihydrofolate reductase with high resolution crystal structures and the synthesis of new inhibitors" *Chemical Biology & Drug Design*, 2009, 73, 62-74.

Liu, J.; Bolstad, D.B., Bolstad, E.S.D., Wright, D.L. and Anderson, A.C. "Towards New Antifolates Targeting Eukaryotic Opportunistic Infections" *Eukaryotic Cell*, 2009, 8, 483-486.

Beierlein, J.M.; Frey, K.M.; Bolstad, D.B.; Pelphrey, P.M.; Joska, T.M.; Smith, A.E.; Priestley, N.D.; Wright, D.L.; Anderson, A.C. "Synthetic and Crystallographic Studies of a New Inhibitor Series Targeting *Bacillus anthracis* Dihydrofolate Reductase" *Journal of Medicinal Chemistry*, 2008, 51, 7532-7540.

Bolstad, D.B.; Bolstad, E.S.D.; Frey, K.M.; Wright, D.L.; Anderson, A.C. "A Structure-based Approach to the Development of Potent and Selective Inhibitors of Dihydrofolate Reductase from *Cryptosporidium*" *Journal of Medicinal Chemistry*, 2008, 51, 6839-6852.

Liu, J.; Bolstad, D.B.; Smith, A.E.; Priestley, N.D.; Wright, D.L.; Anderson, A.C. "Structure-Guided Development of Efficacious Antifungal Agents Targeting *Candida glabrata* Dihydrofolate Reductase." *Chemistry & Biology*, 2008, 15, 990-996.

Bolstad, D.B.; Bolstad, E.S.D.; Wright, D.L.; Anderson, A.C. "Dihydrofolate reductase inhibitors: developments in antiparasitic chemotherapy" *Expert Opinion on Therapeutic Patents*, 2008, 18, 143-157.

Pelphrey, P.M.; Bolstad, D.B.; Wright, D.L. "Versatile Oxabicyclic Synthons: Studies on C8-Oxygenated Eunicellin Diterpenes" *SynLett*, 2007, 2647-2650.