

Jeremy Fitzpatrick, Chemist, in EPA's National Center for Computational Toxicology

[Mailing Address](#)

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Area of Expertise: Dr. Fitzpatrick's work at Dartmouth included the structure based drug design of a compound to inhibit the interaction of sodium hydrogen exchange regulatory factors 1 and 2 with the parathyroid hormone 1 receptor. It has been proposed that inhibiting this interaction could be helpful for the treatment of osteoporosis. Another of his projects at Dartmouth was to observe cell penetrating peptides binding to their targets in E. coli using in-cell nuclear magnetic resonance. Currently, at the National Center for Computational Chemistry, he develops methods to determine if particular chemicals may be hazardous to humans of the environment.

Select Publications:

Fitzpatrick, J., Pellegrini, M., Cushing, P., Mierke, P. (2014) [Small Molecule Inhibition of the Na⁺/H⁺ Exchange Regulatory Factor 1 and Parathyroid Hormone 1 Receptor Interaction](#). Biochemistry, 53, 5916-5922. [Exit](#)

Zheng, F., Jewell, H., Fitzpatrick, J., Zhang, J., Mierke, D., Grigorya, G. (2014) [Computational Design of Selective Peptides to Discriminate between Similar PDZ Domains in an Oncogenic Pathway](#). Journal of Molecular Biology, 427(2), 491-510 [Exit](#)

Song, G., Leslie, K., Barrick, S., Mamonova, T., Fitzpatrick, J., Drombosky, K., Peyser, N., Wang, B., Pellegrini, M., Bauer, P., Friedman, P., Mierke, D., Bisello, A. (2014) [Phosphorylation of Ezrin-Radixin-Moesin-binding Phosphoprotein 50 \(EBP50\) by Akt Promotes Stability and Mitogenic Function of S-phase Kinase-associated Protein-2 \(Skp2\)](#). The Journal of Biological Chemistry, 290(5) 2879-2887 [Exit](#)

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Education:

- B.S., University of North Carolina at Asheville; Chemistry, 2008
- Ph.D., Dartmouth College; Biophysical Chemistry, 2014

Professional Experience:

- Graduate Assistance in Areas of National Need Fellowship, Department of Education, 2012
- Research Scholar, University of North Carolina at Asheville, 2008

Additional Publications:

[National Center for Biotechnology Information](#) [Exit](#)