DESMARAIS LLP

Bridget Belcher - Technical Advisor

Technical Advisor, San Francisco

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Bridget Belcher is a Technical Advisor whose work focuses on the review and evaluation of technology in the fields of chemistry, biotechnology, pharmaceuticals, and medical devices.

During her doctoral research at UC Berkeley, Dr. Belcher evaluated the anti-cancer activity of covalently-acting natural products and investigated their mechanisms of action using chemoproteomic profiling, evaluated the specificity of novel photo-crosslinkable chemical probes in human cells, and assessed the ligandability of E3 ligases in the context of targeted protein degradation.

Prior Experience

- Graduate Student Researcher, Nomura Research Group, University of California, Berkeley, 2019-2023
- Biochemistry Research Associate, Rogers Lab, Dept. of Chemistry, Stonehill College, 2019
- Biochemistry Research Associate, Harris Lab, Dept. of Chemistry, Stonehill College, 2017-2019
- MIT Amgen Scholar, Koehler Lab, Koch Institute for Integrative Cancer Research, Cambridge, MA, 2018
- Genetic Psychology Research Intern, McGuckin Group, Trinity College Dublin, Dublin, Ireland, 2018

Memberships and Affiliations

- American Chemical Society

Publications

- **Belcher, B.P.**; Machicao, P.A.; Tong, B.; Ho, E.; Friedli, J.; So, B.; Bui, H.; Isobe, Y.; Maimone, T.J.; Nomura, D.K. Chemoproteomic profiling reveals that anticancer natural product dankastatin B

EDUCATION

University of California, Berkeley, Ph.D., Chemistry, 2023; Certificate in Teaching and Learning in Higher Education; Chemistry Instructional Achievement Award; NSF GRFP Honorable Mention

Stonehill College, B.S., Chemistry, 2019; *summa cum laude*; Hemingway Award; Outstanding Student in Chemistry; William C. La Plante Memorial Scholarship; ACS Award for Excellence in Analytical Chemistry; Merck Index Award for Excellence in Chemistry; CRC Handbook Award for Excellence in Chemistry.

covalently targets mitochondrial VDAC3. *ChemBioChem*. 2023.

- Page, A.C.S; Scholz, S.O.; Keenan, K.N.; Spradlin, J.N.; **Belcher, B.P.**; Brittain, S.M.; Tallarico, J.R.; McKenna, J.M.; Schirle, M.; Nomura,D.K.; Toste, F.D., *Photo-Brook rearrangement of acyl silanes as a strategy for photoaffinity probe design. Chem. Sci.* **2022.**
- Henning, N.J.; Boike, L.E.; Spradlin, J.N.; Ward, C.C.; Liu, G.; Zhang, E.; **Belcher, B.P.**; Brittain, S.M.; Hesse, M.; Dovola, D.; McGregor, L.M.; Veldez Misiolek, R.; Plasschaert, L.W.; Rowlands, D.J.; Wang, F.; Frank, A.O.; Fuller, D.; Estes, A.R.; Randal, K.L.; Panidapu, A.; McKenna, J.M.; Tallarico, J.A.; Schirle, M.; Nomura, D.K., *Deubiquitinase-Targeting Chimeras for Targeted Protein Stabilization*. *Nat. Chem. Biol.* **2022**.
- **Belcher, B.**; Ward, C.C.; Nomura, D.K., *Ligandability of E3 Ligases for Targeted Protein Degradation. Biochemistry.* **2021**.
- Tong, B.; **Belcher, B.P.**; Nomura, D.K.; Maimone, T.J., *Chemical investigations into the biosynthesis of the gymnastatin and dankastatin alkaloids. Chem. Sci.* **2021**, *12*, 8884-8891.
- Mara, P.; Edgecomb, V.P.; Beaudoin, D.; Martinsen, C.; Lovely, C.; **Belcher, B**; Cox, R.; Curran, M.; Farnan, C.; Giannini, P.; Lott, S.; Paquette, K.; Pinckney, A.; Schafer, N.; Surgeon-Rogers, T.; Rogers, D.R., *Comparison of oyster aquaculture methods and their potential to enhance microbial nitrogen removal from coastal ecosystems. Front. Mar. Sci.* **2021**, *8*, 23.

Events

- **Belcher, B**; Harkins, A.; Patel, M., *TLC Takeaways: Learning and Retention of TLC in CHEM 3AL and 3BL*. Presented in partial fulfillment of Chemistry Pedagogy (CHEM 375) in the College of Chemistry at the University of California, Berkeley, Berkeley CA, December 9, 2021. Poster.
- **Belcher, B.**; Nomura, D.K., *Uncovering New Induced-Proximity Paradigms Using Chemoproteomics*. Presented in partial fulfillment of PhD Candidacy at the University of California, Berkeley, Berkeley CA, April 1, 2021. Presentation.
- **Belcher, B.P.**; Henning, N.J.; Spradlin, J.N.; Ward, C.C.; Nomura, D.K., *Synthesis of Heterobifunctional Chloroalkanes for DUBTAC Proof-of-Concept*. Presented in partial fulfillment of the Chemical Biology Graduate Program requirements at the University of California, Berkeley, Berkeley CA, February 12, 2020. Poster.
- **Belcher, B.P.**; Henning, N.J.; Spradlin, J.N.; Ward, C.C.; Nomura, D.K., *Synthesis of a Chloroalkane-Axin Ligand for DUBTAC Proof-of-Concept*. Presented in partial fulfillment of the Chemical Biology Graduate Program requirements at the University of California, Berkeley, Berkeley CA, November 20, 2019. Poster.
- **Belcher, B.**; Harris, K.M., *Improvements in the Synthesis of Fmoc-L-hGln(Cbz)-OH and its Incorporation into a Dipeptide*. Presented at the 257th National Meeting of the American Chemical Society, Orlando, FL, March 31-April 4, 2019. Poster.
- **Belcher, B**.; Richters A.; Koehler, A.N., *Synthesis of FKBP12 Ligands for Small-Molecule Microarray Optimization.* Presented at the MIT Amgen Scholars Poster Session, Cambridge, MA, August 11, 2018.

Poster.

- Lawlor, A., **Belcher, B.,** Mc Guckin, C., *22q11.2 Deletion Syndrome: From genotype to phenotype*. Educating children with rare disease. Proceedings of the Thirtieth Annual Conference of the Irish Association of Teachers in Special Education, Dublin City University, St. Patrick's Campus, Drumcondra, Dublin 9, County Dublin, Ireland; May 25-26, 2018. Conference Paper.
- **Belcher, B.**; Harris, K.M., *Synthesis of N-fluorenylmethoxycarbonyl-N-benzyloxycarbonyl-L-homoglutamine,* Presented at the Stonehill Undergraduate Research Experience Poster Session., North Easton, MA, September 29, 2017. Poster