

Position Description:

Two Graduate Student (PhD or MSc) positions are available immediately in the [Zhang Laboratory](#) at the Department of Molecular and Cellular Biology, University of Guelph.

Research Programs:

The overarching goal of our protein engineering research laboratory is to develop synthetic probes to manipulate human cell signal transduction cascades to identify new biological mechanisms and devise innovative therapeutic strategies (see “**Representative Publications**”). Our lab has received funding support from both federal government granting agencies (e.g. CIHR, NSERC, Canada Foundation for Innovation) and private foundations (e.g. Canadian Cancer Society, Cancer Research Society, Canadian Institute for Advanced Research). We are a dynamic team comprised of 1 postdoctoral fellow, 2 technicians, 4 graduate students, and 2 undergraduate students. We also actively engage in collaborations with researchers from Canada and around the globe in both academic and industrial sectors. **Together, we are working on three research programs: 1) Engineering protein-protein interactions in DNA repair; 2) Development of inhibitors for disease-related enzymes; and 3) Induced proximity for targeted protein degradation. Please feel free to contact Dr. Zhang to inquire about details of the potential research projects.**

Representative Publications:

1. Gabrielsen M, Buetow L, Nakasone MA, Ahmed SF, Sibbet GJ, Smith BO, Zhang W*, Sidhu SS*, Huang DT*. (2017) A general strategy for discovery of inhibitors and activators of RING and U-box E3 ligases with ubiquitin variants. *Molecular Cell* 68, 456-470. (*Corresponding authors)
2. Zhang W, Bailey-Elkin BA, Knaap RCM, Khare B, Dalebout TJ, Johnson G, van Kasteren PB, McLeish N, Gu J, He W, Kikkert M, Mark BL, Sidhu SS. (2017) Potent and selective inhibition of pathogenic viruses by engineered ubiquitin variants. *PLoS Pathogens* 13(5): e1006372.
3. Zhang W, Wu KP, Sartori MA, Kamadurai HB, Ordureau A, Jiang C, Mercredi PY, Murchie R, Hu J, Persaud A, Mukherjee M, Li N, Doye A, Walker JR, Sheng Y, Hao Z, Li Y, Brown KR, Lemichez E, Chen J, Tong Y, Harper JW, Moffat J, Rotin D, Schulman BA, Sidhu SS. (2016) System-wide modulation of HECT E3 ligases with selective ubiquitin variant probes. *Molecular Cell* 62, 121-36.

Qualifications:

- Background in Molecular Biology, Biochemistry, Genetics or related discipline
- At least 1-year lab experience in protein biochemistry, molecule biology or mammalian cell biology
- Excellent organization, time management, and communication (oral and written) skills
- Problem solving and analytical abilities for experimental design
- Self-motivated, detail oriented, and with satisfactory work performance and attendance record

Application process:

Please send cover letter, CV, three references, and transcript to Dr. Wei Zhang by email (weizhang@uoguelph.ca). The Zhang lab (www.thezhanglab.com) is committed to promote diversity, inclusion, and multicultural competence in academia and we invite and encourage applications from all qualified individuals, especially from groups that are underrepresented in higher education.