

Position Description:

A **Postdoctoral Fellow** position is available immediately in the Zhang Laboratory (www.thezhanglab.com) at the Department of Molecular and Cellular Biology, University of Guelph.

Research Overview:

The Zhang laboratory uses structure-based combinatorial protein engineering technology to create synthetic intracellular probes modulating protein-protein interactions to accelerate understanding of biology and to facilitate development of novel therapeutics (see **Representative Publications**). Currently, we are interested in the following research projects: 1) Development of synthetic peptides and proteins to delineate biochemical mechanisms of E3 ubiquitin ligases; 2) Engineering post-translational modifications to probe and rewire DNA damage signalling; and 3) Manipulating CRISPR-based gene editing through protein engineering.

Term: This is a 1-year regular full-time position with possibility of renewal up to 3 years.

Qualifications:

- PhD in Molecular Biology, Biochemistry, Genetics, Microbiology, or related disciplines
- Experimental skills in protein biochemistry, molecule biology and mammalian cell biology
- Excellent organization, time management, and communication skills
- Problem solving and analytical abilities for experimental design
- Self-motivated, detail oriented, and with satisfactory work performance and attendance record

Representative Publications:

1. Gabrielsen M et al, **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** et al. (2017) Potent and selective inhibition of pathogenic viruses by engineered ubiquitin variants. ***PLoS Pathogens*** 13(5): e1006372.
3. **Zhang W** et al. (2016) System-wide modulation of HECT E3 ligases with selective ubiquitin variant probes. ***Molecular Cell*** 62, 121-36.

Responsibilities:

- Lead several research projects and conduct molecular biology experiments, tissue culture, and protein biochemistry assays
- Assist lab members for various projects
- Assist in literature review, grant/paper/report writing and data analysis
- Communicate and maintain records of experimental data
- Coordinate collaborations in and out of the lab

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