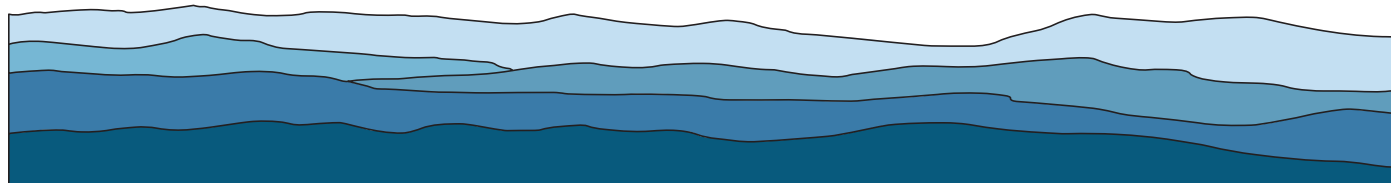


# HIGHLANDS IN CHEMISTRY SEMINAR SERIES



## WILLIAM LUBELL

UNIVERSITÉ DE MONTRÉAL

### “Synthesis of Heterocyclic Turn Mimics for Allosteric Modulation of G Protein- Coupled Receptors”

APRIL 24, 2020

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2:30PM

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HAHN HALL NORTH 140

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FACULTY HOST:  
FELICIA ETZKORN

Playing critical roles in human physiology, peptides are often used for therapeutic development, but their utility is compromised by conformational flexibility and rapid metabolism. Hence, modified peptides, so called peptidomimetics are pursued to improve capacity to effectively target receptors for therapeutic indications. Mining protein receptors, we have pioneered an approach to identify allosteric modulators as leads for peptide-based drugs. Utilizing the power of organic chemistry, we have produced heterocyclic mimics of peptide secondary structures responsible for the biological activity of these modulators. Methods will be presented for making peptide mimics, possessing amino-lactam, azabicycloalkane, and azepinone structures, which have been used to modulate G protein-coupled receptors towards the conception of therapeutic prototypes with improved physiological properties.