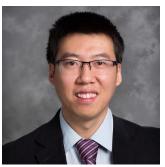


COLLEGE OF ARTS & SCIENCES
Department of Chemistry

Brown and Williamson Series
March 3, 2023
@4:00 pm
CBLL16



Xu Liu, Ph.D.
Assistant Professor
Emory University

Biochemical Mechanisms of Selective Modulators: Potential Therapeutic Strategies for Inflammatory Disorders and Metabolic Syndrome

ABSTRACT:

Corticosteroids that are currently in clinical use bind to the glucocorticoid receptor (GR) to exert anti-inflammation effects, yet are associated with undesirable side effects. Vamorolone is a recently developed drug for Duchenne muscular dystrophy; it decreases muscle inflammation and reduces side effects observed in other corticosteroid-based treatments. Our biophysical chemistry studies provide insights into how subtle modifications on a drug exploits structural and dynamic properties in the receptor to dissociate downstream side effects from therapeutic benefits. The second part of my story covers the structure, enzymology and inhibitor design on Them1, a crucial enzyme catalyzing the lipid metabolism and tipping the balance between energy storage and expenditure.

BIO:

Experienced Biochemist with a demonstrated history of working in the top institutes. Skilled in Biophysical Chemistry, X-ray crystallography, Nuclear Magnetic Resonance (NMR), and Mass Spec. Strong research experience on characterizing protein/ligands (or drugs) interactions from structural, dynamic, affinities, specificities and enzymatic activities perspectives.

2022/04-present	Emory University	Assistant Professor of Biochemistry
2022/08-present	Emory University	Member of Biological Discovery through Chemical
		Innovation (BDCI) Program
2020/05-2022/03	Emory University	Instructor of Biochemistry
2015/05-2020/04	Emory University	Postdoctoral Research Fellow
2008-2014	The University of Iowa	Graduate Research Assistant
2005-2008	BNU/IBP, CAS	Graduate Research Assistant
2004-2005	SDNU	Undergraduate Research Assistant