



Chemical & Physical Sciences

**UNIVERSITY OF TORONTO**

M I S S I S S A U G A

## COLLOQUIUM SEMINAR SERIES

### PROTEIN SOLUBILITY UNDER ADVERSE CONDITIONS



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**Biology & Biochemistry**  
**University of California, Irvine**

Extremely soluble proteins, such as the crystallins of the eye lens, are the flip side of the protein aggregation problem. Understanding how these proteins stay in solution, even at high concentrations and in the face of photodamage and chemical modification provides insight into how to prevent protein deposition diseases. My group's research focuses on the crystallin proteins that make up the refractive tissue of the eye lens. These proteins, which are strongly conserved in all vertebrates, are mostly expressed during early development and must remain in solution for a lifetime. We use a range of biophysical techniques, including NMR spectroscopy, X-ray crystallography, mass spectrometry, and light scattering to investigate how these proteins resist post-translational modification due to aging, UV light damage, and gamma irradiation.

**Colloquium Seminar Series**

**Wednesday, March 16, 2022**

Join us on Zoom at 3:10pm

<https://utoronto.zoom.us/j/88646928603>