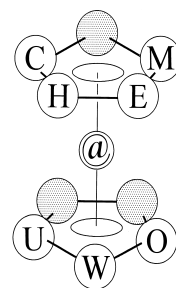




The Department of Chemistry  
Western University



*invites you to*

## THE PAUL de MAYO AWARD LECTURE

**Dr. Yan (Lucy) Pan**

Scientist

Seattle Genetics Inc.

### **Transitioning from Grad School to Industry: Protein Conformational Dynamics Explored by HDX Mass Spectrometry**

Proteins are nanomachines that carry out countless tasks in every living organism. To perform these functions, the linear amino acid chain of each protein has to fold into a specific three-dimensional structure. Misfiling and aggregation are associated with diseases such as Alzheimer's and Parkinson's. At the same time, proteins in solution are highly dynamic and always sampling different conformational states which can interconvert with each other. Functions of protein are ultimately governed by their dynamic character. The combination of hydrogen/deuterium exchange (HDX) with electrospray mass spectrometry (MS) provides an avenue for exploring the behavior of proteins in solution. This talk will focus on two specific applications, i.e., the use of HDX-MS for exploring membrane protein structure and function, and the application of HDX-MS for monitoring the solution properties of antibody-drug-conjugates. The latter represent a novel type of protein therapeutic in which a target-specific monoclonal antibody is conjugated with a cytotoxic drug molecule via a covalent chemical linker. The market share of these conjugates is increasing rapidly, and HDX-MS has emerged as a key technique for interrogating their higher order structure. Overall, this presentation will demonstrate how analytical techniques that were developed in small academic labs can mature into key tools for the drug discovery and development pipeline.

**Monday, October 21, 2013**

**at 2:30 pm**

**Room ChB 115, Chemistry Building**



If you require information in an alternate format, or if any other arrangements can make this event accessible to you,

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Campus accessibility map at: <http://accessibility.uwo.ca/maps.htm> • Departmental upcoming talks at: <http://www.uwo.ca/chem/seminars/2013-2014.htm>