



Department of Chemistry

Emerging Opportunities in Translational Genomics

Department of Chemistry Seminar Series – Fall Semester 2023
Monday, October 2nd, 2023, 9:00 am, CB2-105



Stephanie Pond, Ph.D.

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TGen, An affiliate of City of Hope*

Hosted by Stephen M. Kuebler, D.Phil.

Abstract:

Personalized medicine and cancer genomics have undergone a revolution as genomics has become high throughput. Next-generation sequencing (NGS) technologies rely on optical systems and spectroscopy to simultaneously analyze billions of biomolecules, dramatically increasing throughput and reducing cost, with emerging technologies focused on single cell resolution. NGS enables patient specific comprehensive genomic profiling to identify genetic variations linked to disease susceptibility and drug response, which enables personalized diagnostics and therapeutics. Recent applications of this technology include detection of cancer from a blood sample (Liquid Biopsy) for early detection and minimum residual disease detection as well as understanding how the immune system can be utilized in cancer therapeutics (immunotherapy).

Biography:

Dr. Stephanie Pond is the Vice President of Emerging Technologies at TGen and is focused on accelerating the adoption of new technologies into translational research and personalized medicine. Prior to joining TGen, Dr. Pond worked on product development in diverse areas of research such as biophysics, genetics, oncology, forensic science, genetics assay development, and in different environments (academic, small start-up, large biotech company, CLIA laboratories). Her expertise in these areas has focused on method/technology development and transfer of that technology to customers.

Dr. Pond has worked at a number of biotechnology companies including leading the Applied Genomics R&D team at Illumina, co-founding GalaxyWorks, and building research and operational capabilities at Prognosis Biosciences. Dr. Pond received the B.A. in Chemistry and Physics from Westminster College and the Ph.D. in Physical Chemistry from the University of Arizona.