

5th International Conference on **Proteomics & Bioinformatics** September 01-03, 2015 Valencia, Spain

Identification and characterization of tissue-specific kinome profiles

Brenden Van Wyk, Brett Trost, Erin Scruten and Scott Napper University of Saskatchewan, Canada

Understanding global cellular kinase (kinome) activity is an effective approach to understand complex biology, identify biomarkers and rationally select drug targets. Previously, we demonstrated species and individual-specific kinome profiles in the peripheral blood mononuclear cells of humans and pigs. Here, to expand on the concept of specialized patterns of kinome activity, signaling profiles within four porcine tissues (liver, spleen, jejunum and jejunal Peyer's patches) were characterized using species-specific peptide arrays. Distinct clustering of the kinome datasets on the basis of tissue indicates that tissue-specific signaling superseded the individual-specific kinomic profiles. The phosphorylation events and signaling pathways prioritized by these tissues were determined, information that contributes to understanding molecular specialization both within and across tissues. Defining tissue-specific kinomic profiles may provide biomarkers, inform rational selection of kinase inhibitors, and anticipate tissue-specific responses, both therapeutic and toxic, to these therapies.

Biography

Brenden Van Wyk obtained his BSc in Biochemistry at the University of Winnipeg and is currently completing his MSc in Biochemistry at the University of Saskatchewan, gaining his training at the Vaccine and Infectious Disease Organization, International Vaccine Centre (VIDO-InterVac).

brtkvw@gmail.com

Notes: