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**Sunday, May 31**

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**Opening Reception, Building B, Room 101 and Harvest Table (outside B101)**

Chair: Brian Dixon

6:00 Welcome and Opening Remarks

6:30 **Opening Keynote Speaker** Chris Amemiya, University of California, Merced  
*Evolution of Novelty in Vertebrates (Introduced by Kate Buckley)*

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**Monday, June 1**

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**All talks will be held in Building B, Room 101**

09:00 Opening Remarks, James Mandigo, President, University of Fraser Valley

**Session 1: NACI New Investigator Keynote**

Chair: Brian Dixon

09:30 NACI 2026 New Investigator Nathan Vo, Wilfrid Laurier University  
*Toward an Understanding of Ectopic Hematopoiesis in Teleost Fishes*

10:10 - 10:30 Coffee Break

**Session 2: Pathogenic Protection**

Chair: Kathy Magor

10:30 Tyler Smith, Auburn University  
*Immune Cell Development in a Larval Echinoderm*10:50 Jake Tatum, Auburn University  
*Defining virulence factors in a Vibrio infection*11:10 Yubing Chen, Waterloo University  
*Sex Dependent Differences in Antiviral Transcriptional Responses to ISAV Infection in Rainbow Trout*11:30 Massiel Copara Chino  
*Quantifying Environmental Thresholds for Waterborne Transmission of Aeromonas Veronii in Fish Cohabitation Systems*11:50 Courtney Smith, The George Washington University  
*The SpTransformer System in Sea Urchins: An Overall Hypothesis for Activation, Anti-Pathogen Function, and Resolution*

12:10 – 13:30 Lunch

**Session 3: Diverse Immune Mechanisms of Jawed Vertebrates**

Chair: Brian Dixon

13:30 Niels Bols, University of Fraser Valley  
*Fish Spleen Cell Line Development, Documentation, Distribution, Discoveries and the Future*

14:30 – 15:00 Coffee Break

**Session 4: New Frontiers & Omics'R'Us**

Chair: Dan Barreda

- 15:00 Tom Levy, Stanford University Germline Stem Cell Isolation, Lineage Tracing Across Generations, and Aging in a Protochordate
- 15:20 Eleanore Rhodes, North Carolina State University  
*Natural Killers: Prospecting Natural Killer Cell Lysins for Tomorrow's Antibiotics*
- 15:40 Mariam Abdulsayed, University of Waterloo  
*Establishment of Lophius americanus Brain Cell Line and Characterization of Spraguea americanus Infection on the Basis of Host Classification*
- 16:00 Maya Jacewicz, University of Waterloo  
*Establishing an in vitro Model A.P. destructans Infection in a Big Brown Bat Cell Line*
- 16:20 Tony DeTomaso, University of California, Santa Barbara  
*Metazoan allorecognition, NK-cell education and the origins of adaptive immunity*
- 16:40 Oriol Sunyer, University of Pennsylvania  
*Characterization of Neural Cell Adhesion (NCAM) Molecules and the Leukocytes Expressing them in Rainbow Trout (Oncorhynchus Mykiss)*

**17:00 – 19:00 Poster Session****Tuesday, June 2**

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**Session 5: Immunology, Innately**

Chair: Jeff Yoder

- 9:00 Sebastian Fugmann, Chang Gung University  
*The Evolution of Cytokines in Echinoderm Immunity*
- 9:20 Jacqueline Chan, Chang Gung University  
*Characterization of Interleukin-1 Receptor (Il1r) Homologs in Strongylocentrotus purpuratus*
- 9:40 Veronica Price, University of Alberta  
*The Antimicrobial Activity of Rainbow Trout (Oncorhynchus mykiss) Mucus Following Immunological Challenges under Behavioural Fever Conditions*
- 9:40 Amber Feaver, Wilfrid Laurier University  
*Using Genome Editing to Investigate RNA Interference-Dependent Double-Stranded RNA Responses in RTS11-GFP Cells*

10:20 – 10:40 Coffee Break

**Session 6: Evolution in Action**

Chair: Helen Dooley

- 10:40 Jon Rast, Emory University  
*Inferring the Early Evolutionary State of Agnathan Adaptive Immunity*
- 11:00 Masayuki Hirano, Emory University  
*Assembly Mechanism for Multimeric Lamprey VLRB Antibodies*
- 11:20 Byron Au-Yeung, Emory University  
*Functional Evidence for ITAM-Based Signaling in the Alternative Adaptive Immune Systems of Jawless Vertebrates*

11:40 Sabyasachi Das, Emory University  
*Ancient IL-6-STAT5 Signaling Orchestrates Inflammation in Jawless Vertebrates*

12:00 – 13:30 Lunch

13:30 Nick Kraieski, Auburn University  
*A Comprehensive Analysis of Toll-Like Receptor Evolution within Ambulacraria*

13:50 Christina Bowhay, University of Alberta  
*Beyond Haemocytes: Spatial and Cellular Origins of Toll-Like Receptor Mediated Immunity in Biomphalaria glabrata*

14:10 Priyanka Govindarajan, Simon Fraser University  
*A Novel Invertebrate Cytidine Deaminase Exhibits Dual RNA and DNA Editing and Unique Specificity*

14:30 Coffee Break

**Session 7: From the past, to the future!**

Chair: Rob Miller

15:00 Amelia Williams, Auburn University  
*Environmental Microbes Shape Immune Response Dynamics in Larval Sea Urchins*

15:20 Kourtney Zimmerly, The University of New Mexico  
*Circadian Rhythms and Microbiomes in a Model Marsupial*

15:40 Alison Lee You Voon, University of Alberta  
*Cellular Components of Fish Melanomacrophage Centres and their Structural Changes during Infection*

16:00 Benyamin Rosental, Ben Gurion University  
*The use of Immunology and Stem Cell Transplantation in New Frontiers: Immunity and Stem Cell Transplantation for Corals*

16:20 Ian Birchler De Allende, North Carolina State University  
*Leveraging Protein Structure Prediction to Characterize CD300 V-Domain Macroevolution In Cetaceans*

16:40 Luke Hebert, University of Texas at Austin  
*Protein Language Model Embeddings Enable Cross-Species Identification of Immunoglobulin Genes*

18:00 Banquet, Roger's Forum

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**Wednesday, June 3**

**Session 8: All over the Evolutionary Tree**

Chair: Irene Salinas

9:00 Lucy Lee, University of Fraser Valley  
*Thirty Years of RTS11, A Monocytic/Macrophage-Like Cell Line from Rainbow Trout*

9:20 Pierre Boudinout, INRAE  
*Innate and Adaptive Immune Response Induced by mRNA Vaccination in Rainbow Trout*

9:40 Louise Rollins-Smith, Vanderbilt University  
*Mass Spectrometry Reveals Variation in the Skin Antimicrobial Peptide Signatures of California Mountain Yellow-Legged Frogs*

10:00 – 10:30 Coffee Break

10:30 Barbara Katzenback, University of Waterloo  
*Establishment of an Air-Liquid Interface System to Investigate Frog Epithelial Cell Responses*

10:50 Brenna Hay, University of Fraser Valley  
*Ribosome Biogenesis Mediates the Translational Increase of Non-Optimal Codon Transcripts during IFN- $\beta$  Stimulation*

11:10 Rob Miller, The University of New Mexico  
*Marsupial IgG: with sugars like these who needs more than one?*

**11:30 Business Meeting & Departure**

**Poster Presentations**

Irene Salinas, University of New Mexico

*Role of autophagy and ERr stress in African Lungfish skin remodeling*

Irene Salinas, University of New Mexico

*Untargeted metabolomics shows extensive chemical diversity associated with antifungal properties in wild lungfish (Protopterus sp.) cocoons*

Lucy Lee, University of the Fraser Valley

*Development and characterization of a brain cell line derived from adult rainbow trout Oncorhynchus mykiss – role of astrocytes and innate immunity*

Ania Bula, University of the Fraser Valley

*Development and Characterization of Gill and Olfactory derived Cell Lines from Northern Pikeminnow (Ptychocheilus oregonensis) and Barrier Tissue Derived Immune Cells*

Quinn Thomson, University of the Fraser Valley

*Development of long-term cell cultures of aquatic animals and applications in comparative immunology*

Caio Nicholson de Figueiroa, University of the Fraser Valley

*Weak Base Trapping of Ammonia in Lysosomes Associated with Reduced Phagocytosis in Rainbow Trout*