



7th Annual A-BC Islet Workshop

February 19-22, 2018

Invited Keynote Speakers
Dr. Jennifer Estall & Dr. David Hodson

Silver Star Mountain Resort, British Columbia





Program

7th Annual Alberta-BC Islet Workshop 2018

Monday, February 19, 2018

The Den Bar & Bistro (#21 on Map)

8:00 pm Welcome Mixer

Tuesday, February 20, 2018

Town Hall and Coffee (#23 on Map)

7:00 am Breakfast

NATC (#41 on Map)

7:50 am Welcome from Organizers

8:00 am	1) β -cell Signaling & Transcriptional Regulation	Chair: Bruce Verchere
Francis Lynn	<i>Sox 4: the genesis and maintenance of pancreatic β-cells</i>	PI Presentation

8:30 am Koenraad Philippaert The role of TRP ion channels in insulin secretion

8:45 am Jianyang Fu Kv2.1 clustering regulates the spatial patterning of exocytosis in human pancreatic β -cells

9:00 am Alex Kadhim Endocrine cell specification and β -cell maturation require the transcriptional co-activator MED15

9:15 am Samantha Ji Soo Yoon Characterizing the homeostatic role of the transcription factor NPAS4 in hypothalamic neurons

9:30 am Austin Bautista SENP1 is required for MAG-dependent insulin exocytosis

9:45 am Coffee Break

10:00 am	2) Islet Transplantation & T1D Therapies	Chair: Gareth Lim
Greg Korbutt	<i>The 'Edmonton Protocol': how we got there & what's next</i>	PI Presentation

10:30 am Andrew Pepper Post-transplant characterization of long-term functional hESC-derived pancreatic endoderm grafts

10:45 am Wentong Long Vitamin D directly inhibits human transient receptor potential cation channel (TRPV1) channels and reduces the activation of naive T-cells

11:00 am Honey Modi Long-term live-cell imaging of endogenous Ins2 gene activity reveals distinct β -cell states

Tuesday, February 20, 2018 — *continued*

Anne Pesenacker	<i>Measuring regulatory T cell fitness in Type 1 Diabetes – using a Treg gene signature</i>	PI Presentation
11:45 am	Break for Lunch and Activities	
	12:30 pm	Afternoon Lift Rates Begin
	4:00 pm	Last Chair Closes

4:30 pm	3) β -cell Stress & Death	Chair: Christine Doucette
4:30 pm	Thilo Speckmann	Regulation of pancreatic β -cell function by RGS2
4:45 pm	Austin Taylor	Actions of islet amyloid polypeptide in pancreatic cancer and high fat diet-induced metabolic stress
5:00 pm	Yuanjie Zou	Autophagy and lysosomal function protect pancreatic β -cells under hypoxic stress
5:15 pm	Scott Campbell	The DPP4 inhibitor sitagliptin increases intra-islet active GLP-1 levels in human islets and may confer additional protection from cell death
5:30 pm	Keynote Speaker	
Jennifer Estall	<i>Genetic variation and alternative splicing of a metabolic coactivator yields novel regulators of insulin expression, secretion, and beta cell survival</i>	IRCM Montréal, QC, Canada

Pinheads Bowling Alley (#44 on Map)

7:00 pm Dinner and Bowling

Wednesday, February 21, 2018

Town Hall and Coffee (#23 on Map)

7:00 am Breakfast

NATC (#41 on Map)

8:00 am	4) Obesity, Hyperinsulinemia & Insulin Resistance	Chair: Jenny Bruin
Peter Light	<i>The photobiology of fat cells: from serendipitous discovery to clinical implantations, fake news, & beyond</i>	PI Presentation

8:30 am	Arya Mehran	Second-generation antipsychotics disrupt insulin synthesis and promote weight gain
8:45 am	Haopeng Lin	SEN1 in compensation and failure of insulin secretion with high-fat diet
9:00 am	Jose Diego Botezelli	The role of hyperinsulinemia on SIRT activity, oxidative phosphorylation and UCP expression in adipose tissue
9:15 am	Søs Skovsø	Effects of beta-cell specific insulin resistance on glucose homeostasis, beta-cell mass and beta-cell gene expression

9:30 am Coffee Break

9:45 am	5) Islet Function & Metabolism	Chair: Jim Johnson
Erin Mulvihill	<i>Is circulating DPP4 critical for the regulation of glucose homeostasis and inflammation?</i>	PI Presentation

10:15 am	Matthew Hubert	Investigating the effects of 2-aminoadipic acid on human islet function
10:30 am	Richard Yan-Do	Glycine receptor variants and impaired signaling in human islets
10:45 am	Ben Vanderkruk	Dpy30 is required for maintenance of histone 3 lysine 4 methylation and β -cell function in mature islets

Patrick MacDonald	<i>Combined functional and transcriptomic phenotyping of single human islet cells</i>	PI Presentation
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11:30 am Break for Lunch and Activities

12:30 pm Afternoon Lift Rates Begin

4:00 pm Last Chair Closes

Wednesday, February 21, 2018 — *continued*

4:30 pm 6) β -cell Growth & Differentiation Chair: Patrick MacDonald

4:30 pm Yang Yu Bioengineered human pseudoislets form efficiently from donated tissue, outperform native islets in vitro, and restore normoglycemia in mice

4:45 pm Derek Toms Multifactorial optimization of pseudoislet formation improves insulin response

5:00 pm Douglas Kondro Scaling up microtissue production using microwells

5:15 pm Keynote Speaker

David Hodson

*Shining light on beta cell heterogeneity
in the intact islet*

IMSR | UoB
Birmingham, United
Kingdom

1609 Restaurant & Lounge (#19 on Map)

7:00 pm Dinner and Reception

Thursday, February 22, 2017

Town Hall and Coffee (#23 on Map)

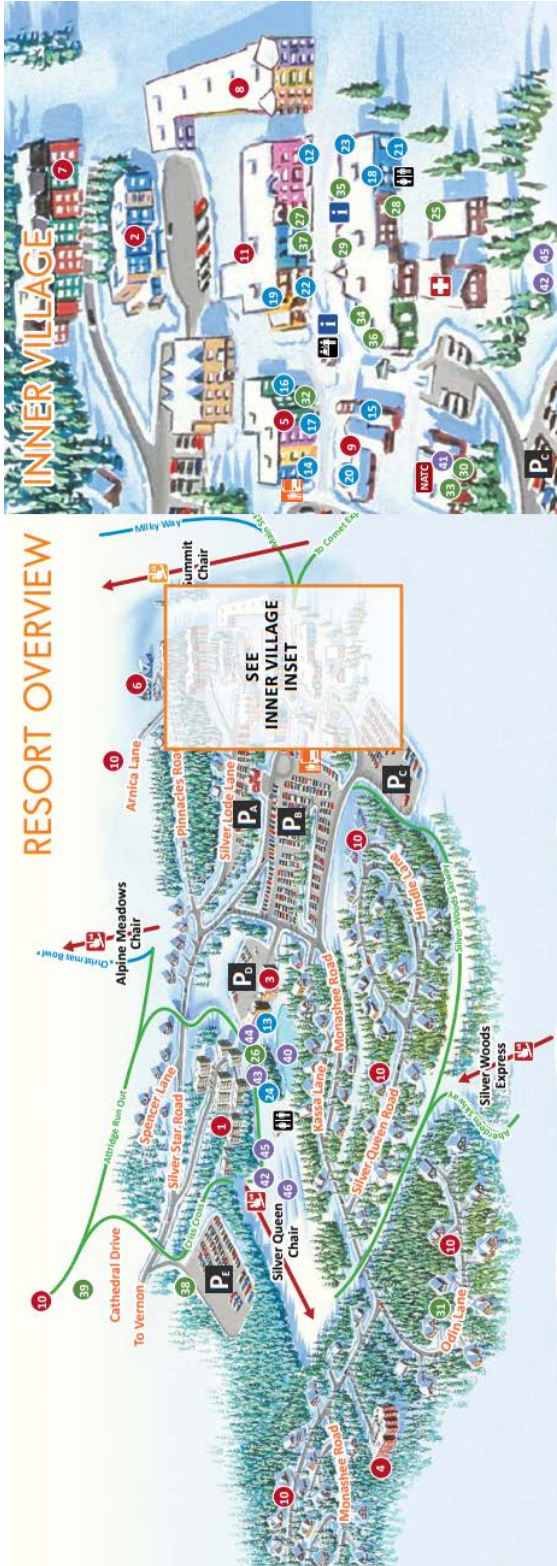
7:00 am Breakfast

8:00 am Departure



Silver Star Mountain Resort

Village Map



RESORT OVERVIEW

LEGEND

- Guest Services and Information Desk
- Ticket & Pass Office
- Patrol Clinic
- Shuttle Bus Stop
- Parking
- Washrooms
- National Altitude Training Centre (NATC)

LODGING

- 1. Creekside Condominiums
- 2. Chilcot Lodge
- 3. Firelight Lodge
- 4. Grandview Condominiums
- 5. Lord Aberdeen Hotel
- 6. Pinnacles Suite Hotel
- 7. Silver Creek Lodge
- 8. Snowbird Lodge
- 9. The Bulldog Hotel
- 10. Vacation Homes
- 11. Vance Creek Hotel

RESTAURANTS

- 12. Bugaboos
- 13. Final Run Bar & Bistro
- 14. HB Pizza
- 15. Hideaway Lounge
- 16. Long John's Pub
- 17. Out of Bounds Coffee
- 18. Silver Grill Dining
- 19. 1609 Restaurant & Lounge
- 20. The Bulldog Grand Café
- 21. The Den Bar & Bistro
- 22. The Red Antler
- 23. Town Hall & Coffee+
- 24. Tube Town Café

ON MOUNTAIN RESTAURANTS

- Paradise Camp
- The Lookout

SHOPS & SERVICES

- 25. Adventure Centre
- 26. Brewer's Pond Base
- 27. Coldstream Dry Goods
- 28. Double Diamond Service Centre
- 29. Equipment Rentals
- 30. Fitness Centre
- 31. Gallery Odin
- 32. Lord Aberdeen Market
- 33. Ousia Day Spa
- 34. Ski Dazzle

ACTIVITIES

- 35. SnowSports School
- 36. The Goody Box
- 37. Village Ski Shop
- 38. Winter Wedding Meadow
- 39. Snowshoe Studio
- 40. Brewer's Pond / Skating
- 41. Climbing Wall
- 42. Cross Country Skiing Trail Head
- 43. Mini Snowmobiles
- 44. Pinheads Bowling Alley
- 45. Snowshoe Trail Head
- 46. Tube Town

NEW BREWER'S POND BASE A new cozy hub, located near Firelight Lodge, a place to relax or get outfitted with everything you need for cross country, snowshoe, skating and fat biking adventures.



Silver Star Mountain Resort

Winter Activities

Rentals and Passes (Adult Prices):

Half-day downhill lift tickets (12:30-3:30pm):

Full-time students (student card)	\$63.00 + tax
Adult (non-student)	\$75.00 + tax
Ski/snowboard rental (beginner)	\$34.95 + tax
Ski/snowboard rental (performance)	\$45.95 + tax
Cross-country ski pass	\$18.00 + tax
Cross-country ski rental	\$19.95 + tax
Snowshoe trail pass	\$10.00 + tax
Snowshoe rental	\$19.95 + tax
Outdoor ice skating	\$6.00 + tax
Skate rental	\$10.00 + tax
Tubing (2 hours)	\$20.00 + tax
Fat bike pass	\$10.00 + tax
Fat bike rental	\$45.95 + tax

Information: (250) 558-6007 | rentals@skisilverstar.com



Keynote Speakers

Introduction and Biographies

Dr. Jennifer Estall

Montréal Clinical Research Institute

Associate Professor and Director of the
Cardiovascular and Metabolic Disease Division, IRCM
Assistant Professor, Université de Montréal
Adjunct Professor, McGill University



Dr. Jennifer Estall received her Ph.D. in 2005 from the University of Toronto and was a postdoctoral fellow at Harvard Medical School until 2011. She is currently an Associate Professor at the Montreal Clinical Research Institute, where she also serves as Director of the Cardiovascular and Metabolic Disease Division and holds academic affiliations to the University of Montreal and McGill University. She is internationally renowned for her work on transcriptional regulators in nutrient metabolism and diabetes pathogenesis. Her current research focuses on how beta cell metabolism impacts function and survival, the role of PGC-1alpha in fatty liver disease, and how mitochondrial dysfunction impacts diabetes through organ crosstalk. In 2007, she received the H.L. Holmes Award from the National Research Council of Canada and in 2012 received the honour of CIHR New Investigator. She is member of several associations, including the Montreal Diabetes Research Center (MDRC), the Cardiometabolic, Diabetes and Obesity Research Network (CMDO), the Canadian Association for the Study of Liver (CASL), and the Diabetes Quebec Professional Council (CPDQ). She is actively engaged in the diabetes research community within Canada and in 2016-17, co-organized the Boston/Ithaca Islet Club meeting.



Keynote Speakers

Introduction and Biographies

Dr. David J. Hodson

University of Birmingham, UK

Professor of Cellular Metabolism, Professorial
Research Fellow, Institute of Metabolism and
Systems Research



David J. Hodson is a Professorial Research Fellow and Chair in Cellular Metabolism based at the Institute of Metabolism of Systems Research (IMSR), University of Birmingham (UoB) (<https://tinyurl.com/laksort>). Previously, he was a Diabetes UK RD Lawrence Fellow/Non-Clinical Lecturer at Imperial College London, a postdoctoral fellow at CNRS Montpellier, and a veterinarian at the University of Bristol. David leads the Islet Biology Lab whose research revolves around the use of imaging, combined with recombinant technologies, genetic manipulation and chemical biology, to decipher the mechanisms underlying hormone secretion from endocrine tissues. Major recent contributions include: 1) the discovery that obesity impairs GLP-1 signalling in human islets; 2) showing how insulin release fails in carriers of type 2 diabetes risk alleles in/or near to ADCY5; 3) demonstrating a role for functional beta cell heterogeneity in insulin release; and 4) developing next generation tools for the optical interrogation of ion channel and GPCR function. The current presentation will explore how subtle differences in beta cell behavior influence islet function, in addition to showcasing new technologies for understanding this heterogeneity.

This event was generously supported by:



Alberta Diabetes
FOUNDATION

