Islet Society – AISG meeting program

Sunday, 19th July 2015

Registrations from 11:30 am onwards at the Charles Perkins Centre | Sydney

Start Time	End Time	Total Time	Title and speaker
1:00 PM	1:15 PM	0:15	Welcome note – Professor Anthony Keech NHMRC Clinical Trials Centre, University of Sydney
1:15 PM	2:00 PM	0:45	***Regulation of beta-cell fate by insulin production*** Jim Johnson (Page 29)
2:00 PM	2:30 PM	0:30	***Tracking endocrine differentiation in vitro using genetically tagged pluripotent stem cells*** Ed Stanley (Page 30)
2:30 PM	3:00 PM	0:30	***ARNT2 and Islet Function in Diabetes*** Jenny Gunton (Page 31)
3:00 PM	3:30 PM	0:30	Afternoon Tea / Coffee
3:30 PM	4:00 PM	0:30	***The cell biology of beta cell failure in Type 2 diabetes*** Trevor Biden (Page 32)
4:00 PM	4:30 PM	0:30	***TRP channels of beta cells*** Md. Shahidul Islam (Page 33)
4:30 PM	4:45 PM	0:15	***Immune-regulatory Properties of Human Islet-derived Progenitor Cells*** Mugdha Joglekar (Page 34)
4:45 PM	5:00 PM	0:15	***The role of CDK4 in regulating beta cell viability and function*** Gerard Hoyne (Page 35)
5:00 PM	5:15 PM	0:15	***Regulation of pancreatic beta cell gene expression by ABCA1 and ABCG1*** Liming Hou (Page 36)
5:15 PM	5:30 PM	0:15	Move to posters area (Ground floor lobby – The Hub, Charles Perkins Centre)
5:30 PM	6:30 PM	1:00	Moderated posters (listed below), drinks and nibbles. *Presenters need to be near their posters and prepare for 3 minute presentation followed by 2 minutes of questions.*

Day One – Reception and moderated posters (5:30 – 7:00 pm): Drinks and nibbles served Ground floor lobby, CPC, University of Sydney. (Pages 37 - 46)

1. Islet heparan sulfate (HS) undergoes oxidant-mediated loss during islet isolation and recovers slowly after islet transplantation: Fui Jiun Choong, Canberra
2. The balance between adaptive and apoptotic unfolded protein responses regulates beta cell death under ER stress conditions through XBP1, CHOP and JNK: Jeng Yie Chan, Sydney
3. PDL–stimulated pancreatic duct cells generate islets and exocrine tissue in vitro: Venant Tchokonte-Nana, Stellenbosch,
4. Differentiation of Human Embronic Stem Cells into Insulin Producing Cell Precursors while Encapsulated in Immune-Protective Alginate: Luke Carroll, Sydney
5. A Gene Expression Signature representative of beta-cell dysfunction: Smithamol Sithara, Melbourne
6. Hypoxia induces beta cell death by inhibiting the adaptive UPR: Mohammed Bensellam, Sydney
7. Determination of the effect of dietary fibre on short chain fatty acid production by gut microbiome: Raymond Chong, Sydney
8. Changes in gut microbiota in rats fed a high fat diet correlate with markers of metabolic syndrome: Virginie Lecomte, Sydney

9. Differential effects of fat and sugar on central and peripheral inflammation and memory: Jessica Beilharz, Sydney
10. Persistence of Luciferase Expressing Bone Marrow-Derived Mesenchymal Stem Cells (BMSCs) in Non-Obese Diabetic (NOD) and NOD/Scid Mice: Dario Gerace, Sydney

Monday 20th July 2015

Start Time	End Time	Total Time	Title and speaker
9:00 AM	9:30 AM	0:30	***Islet adaptation to pregnancy*** Chris Nolan (Page 49)
9:30 AM	10:00 AM	0:30	***Enterovirus infection – from the beta cell to bedside*** Maria Craig (Page 50)
10:00 AM	10:20 AM	0:20	***Loss of intra-islet heparan sulfate is a sensitive marker of beta cell demise during the progression of human T1D*** Charmaine Simeonovic (Page 51)
10:20 AM	10:35 AM	0:15	***Absence of HIF-1a and Coxsackie virus Infection: Two Sides of the Same Coin in the Development of T1D*** Amit Lalwani (Page 52)
10:35 AM	10:50 AM	0:15	***Coxsackievirus B5 Infection Induces Dysregulation of MicroRNAs Predicted to Target Known Type 1 Diabetes Risk Genes in Human Pancreatic Islets*** Ki Wook Kim (Page 53)
10:50 AM	11:20 AM	0:30	Morning tea
11:20 AM	11:50 AM	0:30	***Imaging insulin granule exocytosis in health and disease*** Peter Thorn (Page 54)
11:50 AM	12:10 PM	0:20	***Transcriptome of Pdx1-mediated Bmpr1a-deleted islets links to TPH1-5-HT axis*** Fang-Xu Jiang (Page 55)
12:10 PM	12:25 PM	0:15	***Integration-Free Human Induced Pluripotent Stem Cells From Type 1 Diabetes Patient Skin Fibroblasts Show Increased Abundance of Pancreas-Specific microRNAs*** Jun Liu (Page 56)
12:25 PM	12:40 PM	0:15	***Generating a transcript, microRNA and epigenome map of insulin-producing cells*** Wilson Wong (Page 57)
12:40 PM	12:55 PM	0:15	***The nPOD story*** Mark Atkinson (via webcast / recorded)
12:55 PM	1:55 PM	1:00	Lunch

Later half of lunch will include presentation of five moderated posters:

Presenters need to be near their posters and prepare for 3 minute presentation followed by 2 minutes of questions.

(Pages 59 - 63)

1. NODk mice develop obesity, hyperinsulinaemia and severe hyperglycaemia when fed a high fat diet without evidence of loss of beta-cell mass : Ainy K Hussain, Canberra
2. Pigment epithelium-derived factor (PEDF) regulates beta-cell metabolism and insulin secretion in BRIN-BD11 cells: Younan Chen, Perth
3. Studies of the Structural and Functional Changes in Islets from Diabetic Transgenic Mice that Over-express Human Amylin in their Beta-cells: Shaoping Zhang, Auckland, NZ

4. Specific measurement of the proglucagon-derived peptide glicentin in human samples: Myriam Benard (Mercodia, Germany)
5. A fiber supplement changes cultured gut microbiota: Hasinika Hewawasam, Sydney

1:55 PM	2:25 PM	0:30	***The mechanisms of beta cell death in Type 1 and Type 2 diabetes*** Helen Thomas (Page 64)
2:25 PM	2:55 PM	0:30	***The balancing act of adaptive and apoptotic unfolded Protein responses in beta cells*** Ross Laybutt (Page 65)
2:55 PM	3:15 PM	0:20	***Sorcs1 is necessary for insulin secretory granules stability in metabolically stressed pancreatic beta-cells*** Melkam Kebede (Page 66)
3:15 PM	3:35 PM	0:20	***System-L amino acid transporters: friend or foe to Pancreatic beta-cells?*** Terence Herbert (Page 67)
3:35 PM	4:05 PM	0:30	Afternoon tea
4:05 PM	4:35 PM	0:30	***Nuclear Factor κB inducing kinase activation as a mechanism of pancreatic beta cell failure in obesity*** Shane Grey (Page 68)
4:35 PM	4:55 PM	0:20	***Increased protein ubiquitination contributes to beta cell demise in type 2 diabetes*** Esteban Gurzov (Page 69)
4:55 PM	5:10 PM	0:15	***Rescue of beta cells by heparan sulfate (HS) replacement in Type 2 diabetes (T2D)*** Sarita Dhounchak (Page 70)
5:10 PM	5:25 PM	0:15	***Increased adiposity is linked to perturbed pancreatic β-cell cholesterol homeostasis*** Blake Cochran (Page 71)

Conference dinner (6:00 pm onwards – Bus will leave from the meeting venue for guests who are invited or registered for the conference dinner to take them to Le Montage, 38 Frazer St, Lilyfield, NSW 2040 and back)

Tuesday 21st July 2015

Start Time	End Time	Total Time	Title and speaker
9:00 AM	9:45 AM	0:45	***Mechanisms Underlying the Developmental Programming of Type 2 Diabetes*** Susan Ozanne (Page 75)
9:45 AM	10:15 AM	0:30	***Multigenerational undernutrition increases susceptibility to obesity and diabetes that is not reversed after two generations of dietary recuperation*** Anand Hardikar (Page 76)
10:15 AM	10:35 AM	0:20	***IL-22 therapy suppresses β-cell stress restoring glycaemic control in obesity*** Danielle Borg (Page 77)

10:35 AM	10:55 AM	0:20	***Regulation on GLP-1 mediated insulin secretion by beta-catenin*** Brie Sorrenson (Page 78)
10:55 AM	11:25 AM	0:30	Morning tea
11:25 AM	11:55 AM	0:30	***Role of short chain fatty acid receptor GPR41 (FFAR3) in beta cell function*** Michael Walker (Page 79)
11:55 AM	12:25 PM	0:30	***The power of collaborative cross in identifying genes for islet function*** Sof Andrikopoulos (Page 80)
12:25 PM	12:40 PM	0:15	***GLP-1 receptor signalling boosts beta cell glucose metabolism*** Rodrigo Carlessi (Page 81)
12:40 PM	12:55 PM	0:15	***Profound hyperinsulinaemia and diabetes in the high-fat fed NOD.B10 foz/foz mouse: a consequence of failure of islet beta-cell compensation?*** Viviane Delghingaro-Augusto (Page 82)
12:55 PM	1:10 PM	0:15	***Distinct modulation of beta-cell function during the transition from pre-diabetes to early onset diabetes in animal model of type 2 diabetes*** Oanh Do (Page 83)
1:10 PM	2:10 PM	1:00	Lunch

Later half of lunch will include presentation of four moderated posters:

Presenters need to be near their posters and prepare for 3 minute presentation followed by 2 minutes of questions. (Pages 84 - 88)

1. Neuropathy in Type 2 Diabetes: Implications for physical function and quality of life: Ria Arnold, Sydney
2. Islet Transplant Sites for Human and Murine Islets: Rebecca Stokes, Sydney
3. Role of basolateral polarity determinant Scribble in insulin secretion in mouse pancreatic beta cells: Wan Gan, Brisbane
4. Validation of a high-sensitivity enzyme-linked immunosorbent assay for specific measurement of glucagon and establishment of a reference interval Myriam Kacimi-Benard (Mercodia, Germany)
5. Antioxidant and anti-inflammatory properties of sugarcane dietary fibre: Daniel Bucio Noble, Sydney

2:10 PM	2:20 PM	0:10	Stephen Simpson
2:20 PM	2:50 PM	0:30	***Can we prevent killing of beta cells by T-cells?*** Tom Kay (Page 89)
2:50 PM	3:20 PM	0:30	***Clinical Islet Transplantation Current State of Play: The Westmead Perspective*** Wayne Hawthorne (Page 90)
3:20 PM	3:40 PM	0:20	***Residual insulin secretion in adults with childhood onset type 1 diabetes*** Andrzej Januszewski (Page 91)
3:40 PM	4:00 PM	0:20	Afternoon tea

4:00 PM	4:15 PM	0:15	***Using 3-Dimensional Optical Projection Tomography to Study β-Cell Mass in Diabetes*** Jingjing Ge (Page 92)
4:15 PM	4:30 PM	0:15	***Small molecules with big potential: discovery, validation and research translation of circulating microRNA biomarkers*** Ryan Farr (Page 93)
4:30 PM	4:50 PM	0:20	***Beta Cell Replacement: Development of Melligen Cells, an Insulin-secreting Human Liver Cell Line Which is Resistant to Cytokine-induced Immune Attack*** Ann Simpson (Page 94)
4:50 PM	5:05 PM	0:15	Workshop - Selected student talk
5:05 PM	5:20 PM	0:15	Closing remarks – Professor Alicia Jenkins Presentation of six conference awards / prizes and announcements of future meetings