

Scientific Programme Overview

Tuesday 20th June

10.00 - 17.15

Pre-Congress Symposium 1

St Anne's College

Chairs: Rutger Ploeg & Klearchos Papas

'The challenges of ischaemia and hypoxia in whole pancreas and isolated islet transplantation'

- S1.1** 'Understanding hypoxia and hypoxia pathways'
Chris Pugh, Oxford, UK
- S1.2** 'Challenges and strategies for reducing hypoxia during pancreas retrieval'
Rutger Ploeg, Oxford, UK
- S1.3** 'Challenges and strategies for reducing hypoxia after pancreas transport'
Klearchos Papas, Tucson, USA
- S1.4** 'Challenges and strategies for mitigating ischaemia-reperfusion injury following whole pancreas transplantation'
Gabi Oniscu, Edinburgh, UK
- Panel Discussion
- S1.5** 'Challenges and strategies for minimising hypoxic damage during islet isolation'
Julie Kerr-Conte, Lille, France
- S1.6** 'Challenges and strategies for minimising hypoxic damage during islet culture'
Daniel Brandhorst, Oxford, UK
- S1.7** 'Challenges and strategies for mitigating hypoxic damage following islet implantation'
P O Carlsson, Uppsala, Sweden
- S1.8** 'Challenges and strategies for reducing hypoxia within macro-encapsulation devices'
Barbara Ludwig, Dresden, Germany
- Panel discussion

14.00 - 17.15

Pre-Congress Symposium 2

**Mathematical Institute
L3**

Young Investigators / Trainees Symposium: *'Lessons learnt during my career - How to find diamonds'*

Organised by the IPITA Young Investigator Committee

The symposium will take an interactive, discussion group based format, with mentors sharing their knowledge and expertise on specific topics relevant to trainees. There will be sufficient time for in depth discussion in an informal, relaxed environment with adequate opportunity to ask questions and for networking

- S2.1** 'Career planning'
Sue Fuggle, Oxford UK
Garth Warnock, Vancouver, Canada
- S2.2** 'How to engage your audience'
James Shapiro, Edmonton, Canada
- S2.3** 'Work/life balance'
Peter Stock, San Francisco, USA
- S2.4** 'Securing funding'
David Matthews, Oxford, UK
- S2.5** 'Successful collaborations'
Garry Duffy, Galway, Ireland
- S2.6** 'Meet the editor'
Thierry Berney, Geneva, Switzerland

14.00 – 17.15

Pre-Congress Symposium 3

**Mathematical Institute
C5**

'Allied Health Professionals'

- AHP1.1** 'Current immunosuppression in islet/pancreas transplantation'
Toby Coates, Adelaide, Australia
- AHP1.2** 'Future therapeutic approaches to advance islet transplant outcomes'
Shane Grey, Sydney, Australia
- AHP1.3** 'Alternative sources of islets/pancreas to increase clinical audience'
Greg Korbitt, Edmonton, Canada
- AHP1.4** 'Auto-islet transplant Research – An update from the world leaders'
Louise Berry, Minnesota, USA
- AHP1.5** 'Auto-islet transplant – Setting up a program; the Australian experience'
Toni Radford, Adelaide, Australia
- AHP1.6** 'AHP involvement in research - Is there a role for us in leading research?'
Rob Crookston, Oxford, UK
- AHP1.7** 'Psychology and support in diabetes and transplant'
Issues to be discussed:
- Psychology in transplantation
- Psychology in diabetes
- Psychology of pain for auto-transplant patients
- The role of the AHP in providing support for transplant patients

Wednesday 21st June

08.15 **Official Welcome and Opening of Congress** **L1**

08.30 - 10.00 **Opening Joint Plenary Session** **L1**
Chairs: Jon Odorico & Thierry Berney

'Global Update of Recent Activity and Outcomes of Beta-cell Replacement'

I1.1 'The Americas'
Jim Markmann, Boston, USA

I1.2 'Europe'
John Casey, Edinburgh, UK

I1.3 'Australasia and Asia'
Tom Kay, Melbourne, Australia

Followed by Round Table Discussion

10.05 - 10.30

Richard Lillehei Lecture

Introduced by: Thierry Berney

L1

I2.1 'Pancreas Transplantation - The Innsbruck Experience'
Raimund Margreiter, Innsbruck, Austria

11.00 - 12.30

**Parallel Oral Session 1: Pancreas Transplantation
- Outcomes and Complications 1**

L1

Chairs: Matthew Cooper and Raphael Meier

R1 International Pancreas Transplant Registry (IPTR) update
A Gruessner, Syracuse, USA

P01.1 The Ultimate Benefit of Pancreas Transplantation: 183,982 Life-Years Saved according to UNOS/IPTR data
A Gruessner, Syracuse, USA

P01.2 Simultaneous Pancreas and Kidney Transplantation - Outcomes and predictors of long-term patient and graft survivals
R Allen, Sydney, Australia

P01.3 Influence of the Procurement Team on Pancreas Transplant Outcomes
O Serrano, Minneapolis, USA

P01.4 The Case for Simultaneous Pancreas Kidney (SPK) Transplantation for Obese T2D Patients
T Al-Qaoud, Madison, USA

P01.5 Simultaneous Pancreas and Kidney Transplant (SPK) – The New Standard of Care for Uremic Patients with Type 2 Diabetes Mellitus (T2DM)?
A Gruessner, Syracuse, USA

P01.6 Perioperative outcomes of functional β -cell function and insulin sensitivity of functioning pancreas transplants in patients with type 2 diabetes mellitus (T2DM) compared with type 1 diabetes mellitus (T1DM)
D Han, Seoul, Korea

P01.7 Glycemic Control after Pancreas Transplantation in Non-obese, Insulin-dependent Type 2 Diabetes Patients
P Abrams, Washington DC, USA

P01.8 Revisiting Pancreas after Kidney (PAK) Transplantation
J Fridell, Indianapolis, USA

P01.9 An analysis of outcomes after whole organ pancreas transplantation in recipients aged over 55 years
S Mittal, Oxford, UK

11.00 – 12.30

Parallel Oral Session 2: Clinical Islet Allograft Transplantation 1

L2

Chairs: Olle Korsgren and Martin Rutter

P02.1 Donor insulin therapy in intensive care predicts early graft function/failure in pancreas and islet transplant recipients
I Shapey, Manchester, UK

P02.2 National registry outcomes within the UK integrated islet transplant programme
C Counter, Bristol, UK

P02.3 Mortality among patients with severe unstable Type 1 diabetes mellitus (T1DM) referred for Islet cell transplantation (ICT)
D Goodman, Melbourne, Australia

P02.4 Relationships of time to second graft and total transplanted islet mass with 12-month graft function in an integrated national transplant programme
S Forbes, Edinburgh, UK

P02.5 Does islet size really influence graft function following clinical islet transplantation?
S Hughes, Oxford, UK

P02.6 A comparative analysis of the clinical outcome of islet transplantation using donors after cardiac death versus intensive insulin therapy in patients with type 1 diabetes with severe hypoglycaemia unawareness: a 10-year follow-up at a single centre
T Anazawa, Kyoto, Japan

P02.7 Utilisation of Pancreata Declined for Solid Organ Transplant for Islet Cell Transplantation in Scotland
A Sutherland, Edinburgh, UK

P02.8 Persistent Graft Function Following Clinical Islet Transplantation In the Omentum Using a Biologic Scaffold
D Baidal, Miami, USA

P02.9 Intraomental Non-purified islet transplantation isolated from DCD donor pancreas
S Wang, Tianjin, China

P02.10 Mini-laparotomy Mesenteric Vein Infusion vs. Percutaneous Transhepatic Portal Vein Infusion: Safety and Complication Rates during Clinical Islet Allograft Transplantation
V Vakayil, Minneapolis, USA

R2 Collaborative Islet Transplant Registry (CITR) update
F Barton, Rockville, USA

11.00 – 12.30

Parallel Oral Session 3: Alternative Islet Sources

L3

Chairs: Wayne Hawthorne and Riccardo Calafiore

P03.1 Beta cell maturation in human stem-cell derived implants followed over one year

T Robert, Brussels, Belgium

- P03.2** Ischemia response of human stem cell-derived insulin-producing cells
G Faleo, San Francisco, USA
- P03.3** Differentiation of integration-free human induced pluripotent stem cells (iPSC) into insulin-producing cells
V Sordi, Milan, Italy
- P03.4** Transdifferentiation of isolated human exocrine cells to beta like-cells
S Abadpour, Oslo, Norway
- P03.5** Human pancreatic ECM-derived platforms for in vitro and in vivo enhancement of beta cell differentiation and transplantation
D Tremmel, Madison, USA
- P03.6** Creating pancreatic endoderm precursors from human urinary stem cells
K Sivanathan, Adelaide, Australia
- P03.7** Partial Pancreatectomy Induces Beta Cell Regeneration in Cynomolgus Monkey
D Shin, Seoul, Korea
- P03.8** Role of B cells in Long-term Tolerance to Porcine Islet Xenografts
X Zhang, Chicago, USA
- P03.9** Pairing pre-transplant islet function with recipient insulin requirements results in long-term normoglycemia in non-immunosuppressed spontaneously diabetic BB rats
R Holdcraft, Xenia, USA
- P03.10** Alternative cell sources for studying the Instant Blood Mediated Inflammatory Reaction (IBMIR) in vitro
R Bottino, Pittsburgh, USA
- P03.11** Assessment of Functional Beta Cell Mass in Subcutaneous Implants of Alginate-Encapsulated Porcine Pancreatic Endocrine Cells
I De Mesmaeker, Brussels, Belgium
- P03.12** Gene therapy in natural canine diabetes mellitus; a potential future treatment and a new model for research in diabetes?
R Foale, Cambridge, UK

11.00 – 12.30

Parallel Oral Session 4: Islet Biology

L4

Chairs: Patrik Rorsman and Leticia Labriola

- P04.1** Interleukin-22 reverses human islets dysfunction and apoptosis triggered by hyperglycemia and LIGHT
S Abadpour, Oslo, Norway
- P04.2** Presence of diabetes autoantigens in extracellular vesicles derived from human islets
C Hasilo, Montreal, Canada
- P04.3** HSPB1 displays a pivotal role in prolactin inhibition of ER-stress-induced beta-cell death
L Labriola, Sao Paulo, Brazil

- P04.4** Role of beta cells in the regulation of glucagon secretion during hypoglycemia
C. Barbieux, Geneva, Switzerland
- P04.5** Identification of Stress-specific microRNAs in Exosomes Released from Islets using Next-generation Sequencing
B Naziruddin, Dallas, USA
- P04.6** Effect of the conditioned medium of immortalized pancreatic mesenchymal stromal cells on the function of β -cells
O Villard, Montpellier, France
- P04.7** Syndecan-4 expression in pancreatic beta cells
E Brioude, Geneva, Switzerland
- P04.8** NLRP3 inflammasome is expressed and regulated in human islets
V Lavallard, Geneva, Switzerland
- P04.9** HPSB1 mediates beta-cell cytoprotection against oxidative stress and recovery of mitochondrial function
L Terra, Sao Paulo, Brazil
- P04.10** MicroRNA-375 analysis of human islet damage during in vitro culture
Y Shindo, Richmond, USA
- P04.11** Human Amniotic Epithelial Cells Protect Islets from Pro-Inflammatory Cytokines
F Lebreton, Geneva, Switzerland
- P04.12** In silico simulation and in vitro viability assay reveals that hypoxic core is the cause of cell death in isolated pancreatic islets
H Komatsu, Duarte, USA
- P04.13** Osteoblast-specific secreted molecule, osteocalcin; a novel therapy to reverse the decline in functional beta-cell mass in type 2 diabetes
O Sabek, Houston, USA

12.45 – 13.30

AHP Q&A Session

L6

13.30 - 14.40

Young Investigator Oral Prize Session

L1

Chairs: James Shapiro and Peter Stock

- Y1.1** Pancreas Transplants from donors <30kg: are outcomes acceptable?
T Al-Qaoud, Madison, USA
- Y1.2** Chemical Conjugation of a Cleavable TLR4 Antagonist to the Islet Surface is Well-Tolerated and Improves Islet Transplant Outcomes by Inhibiting NF κ B-Mediated Inflammation
C Chang, Waco, USA
- Y1.3** PRISM: A Fast, Compact, In-line, High Yield, Human Pancreatic Islet Isolation Method
J Doppenberg, Leiden, The Netherlands
- Y1.4** SiRNA inhibition of tissue factor expression reduces liver ischemia after pancreatic islet transplantation in rat
L Kosinova, Prague, Czech Republic

- Y1.5** Human derived pancreatic endoderm cells reversed diabetes in mice post-transplantation into a prevascularized subcutaneous site
A Pepper, Edmonton, Canada
- Y1.6** Transplantation of Bio-Engineered Vascularized Islet Organs
P Moser, Boston, USA

14.45 - 16.00

Parallel Oral Session 5: Pancreas Transplantation – Surgical Aspects **L1**

Chairs: Richard Allen and Raja Kandaswamy

- P05.1** Superior Long-Term Graft Survival of Pancreas Transplantation Alone Using Portal Venous Drainage versus Systemic Venous Drainage: Two Decades of Experience at a High-Volume Center in the United States
J Scalea, Baltimore, USA
- P05.2** Portal Endocrine and Gastric Exocrine Drainage Technique of Pancreas Transplantation: Ten-Year Experience at a Single Center
H Shokouh- Amiri, Shreveport, USA
- P05.3** Long-term outcomes of pancreas transplant recipients with partial venous thrombosis treated conservatively with anticoagulation
G Roll, San Francisco, USA
- P05.4** Pancreas Transplantation: Advantages of a retroperitoneal graft position
J Ferrer, Barcelona, Spain
- P05.5** Bladder or enteric drainage for pancreas transplantation alone?
R Smilevska, Oxford, UK
- P05.6** Enteric drainage of pancreas transplantation. Clinical impact of intra-abdominal complications
J Ferrer, Barcelona, Spain
- P05.7** Evolution of pancreas transplant complexity over 20 years
D Kaufman, Madison, USA
- P05.8** Pancreas transplant with duodeno-duodenostomy and caval drainage using a diamond patch graft. – A single center experience
B Choi, Yangsan, Korea
- P05.9** Managing Duodenal Segment Leaks With Surgical Repair Is Successful At Pancreas Graft Salvage
D Al-Adra, Toronto, Canada
- P05.10** Pancreas transplantation with Isolated Splenic Artery Supply
I Dmitriev, Moscow, Russia
- P05.11** The True Transfusion Requirement after Pancreas Transplantation: Counseling the Jehovah’s Witness (JW) Patient Prior to Surgery
J Scalea, Baltimore, USA
- P05.12** Robotic pancreas transplantation: preliminary results
M Spaggiari, Chicago, USA

14.45 – 16.00

Parallel Oral Session 6: Islet Isolation, Culture, and Reconditioning 1 **L2**

Chairs: Sarah Cross and Marten Engelse

- P06.1** Pancreatic Extracellular Matrix Improves Human Islet Function In Vitro

Y Shindo, Richmond, USA

- P06.2** Development of a purpose-designed system for studying real-time digestion of the pancreatic matrix
D Shen, Oxford, UK
- P06.3** Donor age-related differences in the quantity and digestibility of key extracellular matrix proteins does not explain increased islet isolation success from older donors
R Spiers, Oxford, UK
- P06.4** Beneficial effect of recombinant collagenases class I (rC1) and class II (rC2) on human islet function: Efficacy of low dose enzymes on pancreas digestion and yield
G Loganathan, Louisville, USA
- P06.5** Quantifying the detrimental effects of different neutral proteases on human islet integrity
D Brandhorst, Oxford, UK
- P06.6** Development of a novel efficient cocktail of neutral proteases for isolating pancreatic islets
M Goto, Sendai, Japan
- P06.7** Serva NB1 versus Vitacyte Collagenase: Comparable Human Islet Isolation Outcomes using DCD donor pancreas in China
S Wang, Tianjin, China
- P06.8** Multicentre testing of animal tissue-free collagenase AF-1 for clinical human Islet isolation
D Brandhorst, Oxford, UK
- P06.9** Comparing SERVA GMP graded vs Premium grade of collagenase and Neutral protease in Human islet isolation
G Huang, London, UK
- P06.10** The influence of various proteases related to islet isolation procedures on the quality of isolated islets
Y Miyazaki, Sendai, Japan
- P06.11** Exogenous Clostripain Improves Human Pancreas Islet Digestion Without Impacting Islet Function
G Szot, San Francisco, USA
- P06.12** Identifying optimal enzyme blend of collagenase and protease for obtaining high islet yield from young donor pancreases
G Loganathan, Louisville, USA
- P06.13** Low cost, collagenase-protease enzyme mixtures successfully used for isolating human islets from human research pancreata
G Loganathan, Louisville, USA

14.45 – 16.00

Parallel Oral Session 7: Pancreas and Islet Graft Monitoring 1

L3

Chairs: Pratik Choudhary and Frantisek Saudek

- P07.1** Longitudinal assessment of oral glucose tolerance test parameters for the prediction of pancreas transplant dysfunction
F Guebre-Egziabher, Lyon, France

- P07.2** Use of the Glucose-Dependent Insulin Secretion Rate (GDISR) as a novel predictor of islet graft function
I Spiliotis, Oxford, UK
- P07.3** Validation of the Homeostatic Model Assessment (HOMA) of beta cell function in pancreas transplantation
J Barnes, Oxford, UK
- P07.4** Islet Transplant Alone and Pancreas Transplant Alone: the burden of life threatening complications
P Maffi, Milan, Italy
- P07.5** Comparison of beta-cellular glycoregulation parameters after meal tests in pancreas and islet transplanted patients
A Wojtusciszyn, Montpellier, France
- P07.6** Early Islet Engraftment Measured by BETA-2 Score Predicts Islet Transplant Outcomes
A Lam, Edmonton, Canada
- P07.7** Validation of the newly developed BETA-2 scoring system in the medium volume islet transplant center
J Golebiewska, Gdansk, Poland
- P07.8** Glucose Variability in Subjects with T1D about 1 month after Pancreas Transplantation
Y Kudva, Rochester, USA
- P07.9** Mathematic analysis of meal tests to evaluate functional beta cell mass and monitor islet-transplanted patients
O Villard, Montpellier, France
- P07.10** Relation between beta cell graft function and glucose control assessed by CGMS during 5 years after islet allotransplantation
F Pattou, Lille, France

14.45 – 16.00

Parallel Oral Session 8: Immunobiology and Immunosuppression 1

L4

Chairs: Sue Fuggle and Ken Brayman

- P08.1** MicroRNA biomarkers reflect beta cell destruction during immune therapy for Type 1 Diabetes Mellitus
K Brayman, Charlottesville, USA
- P08.2** Title Association of autoreactive, CXCR3+, memory CD4 T cells with recurrence of autoimmunity in recipients of pancreas-kidney transplants
G Burke, Miami, USA
- P08.3** IgM immunotherapy corrects immune function at multiple checkpoints to prevent and reverse beta cell loss
K Brayman, Charlottesville, USA
- P08.4** B, T and NK cell subsets in Type 1 Diabetes Patients wait listed for Simultaneous Kidney/Pancreas and Pancreas Transplantation Alone
Y Kudva, Rochester, USA
- P08.5** Toll-like receptor 4 contributes to the development and participates in the maintenance of autoimmune diabetes
M Alibashe Ahmed, Geneva, Switzerland

- P08.6** Circadian Variability in Flow Cytometry Measurement of Peripheral Blood Lymphocyte Counts in Type 1 Diabetes Mellitus with Normal Renal Function
Y Kudva, Rochester, USA
- P08.7** Baseline Immune Assessment to Individualize Immunosuppression in SPK recipients with type 1 diabetes
Y Kudva, Rochester, USA
- P08.8** CD40 blockade provided an excellent immunosuppression for combined islet/kidney transplantation but failed to achieve transplant tolerance of both islet and kidney allografts despite induction of mixed chimerism
T Kawai, Boston, USA

16.30 - 18.00

Parallel Plenary Session 1: 'Immunosuppression and Immunomodulation in Beta-Cell Replacement' L1

Chairs: Phil O'Connell and Rolf Barth

- PP1.1** 'Alemtuzumab in beta-cell replacement'
Peter Friend, Oxford, UK
- PP1.2** 'Novel strategies for immunosuppression'
Peter Stock, San Francisco, USA
- PP1.3** 'Peptide-based immunomodulation'
Mark Peakman, London, UK
- PP1.4** 'Latest advances in tolerance induction'
Ed Geissler, Regensburg, Germany

16.30 - 18.00

Parallel Plenary Session 2: 'Islet Auto-transplantation as a Therapy for Surgical Diabetes' L2

Chairs: Ashley Dennison and David Sutherland

- PP2.1** 'Islet auto-transplantation in children'
Melena Bellin, Minneapolis, USA
- PP2.2** 'Lessons learnt from islet isolation for islet autotransplantation'
A.N. Balamurugan, Louisville, USA
- PP2.3** 'Islet auto-transplantation for non-pancreatitis indications'
Lorenzo Piemonti, Milan, Italy
- PP2.4** 'How difficult is post-pancreatectomy diabetes to manage really?'
Alistair Lumb, Oxford, UK

Thursday 22nd June

08.30 - 10.00

Parallel Plenary Session 3: 'Pancreas Transplantation – How I do it' L1

Chairs: Jonathan Fridell and Derek Manas

- PP3.1** 'Donor selection'
Dixon Kaufman, Madison, USA
- PP3.2** 'Management of reperfusion pancreatitis'
Titus Augustine, Manchester, UK

	PP3.3	'Pancreas biopsies' <i>Pablo Uva, Buenos Aires, Argentina</i>	
	PP3.4	'Surgical pearls' <i>Jonathan Fridell, Indianapolis, USA</i>	
08.30 – 10.00	Parallel Plenary Session 4: 'Islet and Beta-Cell Biology' <i>Chairs: Steven Paraskevas and Hanne Scholz</i>		L2
	PP4.1	'Regulation of glucagon secretion in human pancreatic islets: intrinsic, paracrine or both?' <i>Patrik Rorsman, Oxford, UK</i>	
	PP4.2	'Beta-cell hubs and islet response to glucose' <i>Guy Rutter, London, UK</i>	
	PP4.3	'Islet cell-to-cell interactions in the native pancreas and following transplantation' <i>Domenico Bosco, Geneva, Switzerland</i>	
	PP4.4	'Extracellular matrix in beta-cell health and disease' <i>Charmaine Simeonovic, Canberra, Australia</i>	
10.05 - 10.30	IPITA Presidential Address		L1
	I3.1	<i>Jon Odorico, Madison, USA</i>	
10.30 - 10.45	Award of the Derek Gray Travelling Fellowship & IPITA/TTS Travel Awards <i>Presented by: Jon Odorico</i>		L1
11.15 - 12.45	Parallel Oral Session 9: Experimental Islet Transplantation <i>Chairs: Severine Sigrist and Steve Hughes</i>		L1
	P09.1	Suppression of inflammation by A20 in murine and porcine islets facilitates their survival when transplanted into mice <i>N Zammit, Sydney, Australia</i>	
	P09.2	Y1 receptor antagonism enhances insulin secretion and improves islet transplantation efficiency <i>S Walters, Sydney, Australia</i>	
	P09.3	GPR44 inhibition improves islets function and survival in transplanted human islet <i>H Scholz, Oslo, Norway</i>	
	P09.4	Diazoxide pretreatment improves islet transplant survival in vitro and functionality in vivo <i>M Nijhoff, Leiden, The Netherlands</i>	
	P09.5	Circulating miRNA-150-5p is Associated with Immune-mediated Early Human β -cell Loss in Mice <i>Z Guo, Sioux Falls, USA</i>	
	P09.6	Islet transplantation partially restores islet function in a novel Ins2 mutant mouse <i>A Austin, London, UK</i>	

- P09.7** NRG mice provide a stable and functional host for human islets and accessory cells in a diabetic transplant model
K Sivanathan, Adelaide, Australia
- P09.8** The Metalloporphyrin BMX-001 Augments Islet Function and Engraftment in a Murine, Syngeneic, Marginal Transplant Model
A Bruni, Edmonton, Canada
- P09.9** Improvement of pancreatic islet survival, function and angiogenesis targeting Prolylhydroxylases
A Langlois, Strasbourg, France
- P09.10** Mitomycin-C treatment ameliorates the survival of transplanted islet graft in intraportal islet transplantation
K Yamane, Kyoto, Japan
- P09.11** Sirolimus is not deleterious for human islets transplanted in vivo
M Vantyghem, Lille, France

11.15 – 12.45

Parallel Oral Session 10: Pancreas Donation, Procurement, and Preservation 1

L2

Chairs: Rutger Ploeg and Henry Pleass

- P010.1** The United Kingdom National Pancreas & Islet Allocation Scheme
C Counter, Bristol, UK
- P010.2** Pancreas decline rates in the UK – a 10-year national analysis
S Cornateanu, Edinburgh, UK
- P010.3** Impact of Deceased Donor Cardiac Arrest Time on Post-Pancreas Transplant Graft Function and Survival
J Fridell, Indianapolis, USA
- P010.4** Utility Maximization Model in Pancreas Transplantation: Characteristics Distinguishing Aggressive Centers from Risk-Averse Centers
O Serrano, Minneapolis, USA
- P010.5** Broadened Allocation of Pancreas Transplants across Compatible ABO Blood Types
J Fridell, Indianapolis, USA
- P010.6** Donor quality is the most important risk factor that is associated with Pancreas Transplant (PTX) outcomes
M Laftavi, Syracuse, USA
- P010.7** Pancreas Organ Underutilization: 15 Years Analysis
R Garcia-Roca, Maywood, USA
- P010.8** Prospective National Study of Discarded Pancreases in the UK
S Cornateanu, Edinburgh, UK
- P010.9** Pancreas loss due to shared vasculature with other organs: An Analysis of 15 Years
R Garcia-Roca, Maywood, USA
- P010.10** Associations of donor vasoactive drugs with pancreas transplant graft survival
I Shapey, Manchester, UK

Chairs: Steve White and Piotr Witkowski

- P011.1** 10 years or more of follow up after Total Pancreatectomy and Intra Portal Islet Auto Transplantation (TP/IAT) for treatment of Chronic Pancreatitis, Is it a durable operation?
S Chinnakotla, Minneapolis, USA
- P011.2** Pre-operative HbA1c and pain score influences on post-transplant glycemic control in high dose islet transplantation for chronic pancreatitis
B Naziruddin, Dallas, USA
- P011.3** Mechanisms of Hypoglycemia after a high carbohydrate meal in pancreatic autoislet recipients
L Bogachus, Seattle, USA
- P011.4** Quantification of miRNAs released during isolation procedure reflects islet damage and correlates with the post-transplant outcome in TPIAT
B Naziruddin, Dallas, USA
- P011.5** Intraductal delivery of alpha-1-antitrypsin during total pancreatectomy and islet autotransplantation improves islet yield in patients with severe but not minimal disease
J Wilhelm, Minneapolis, USA
- P011.6** Projection of islet isolation and metabolic outcome after TPIAT based on the evaluation of pancreas texture
B Naziruddin, Dallas, USA
- P011.7** Autologous Mesenchymal Stem Cell and Islet Co-transplantation in Patients with Chronic Pancreatitis
H Wang, Charleston, USA
- P011.8** Endoscopic islets autotransplantation into gastric submucosa– three-years-follow-up
M Wszola, Warsaw, Poland
- P011.9** Defective endogenous glucose production during exercise after total pancreatectomy/intrahepatic islet autotransplantation
L Bogachus, Seattle, USA
- P011.10** Glucose-responsive oxygen consumption rate in islets from chronic pancreatitis patients is size dependent: novel islet quality assessment through bioenergetic phenotyping
J Wilhelm, Minneapolis, USA
- P011.11** Glycemic measures correlate with long-term insulin independence and persistence of insulin independence after total pancreatectomy with islet autotransplant (TPIAT)
K Berry, Minneapolis, USA
- P011.12** Glutamic acid decarboxylase antibody positivity and total pancreatectomy with islet autotransplantation outcomes
M Bellin, Minneapolis, USA
- P011.13** Histomorphometry of insulin-stained pancreas sections and correlation with islet isolation outcomes for patients undergoing total pancreatectomy and islet autotransplantation

J Wilhelm, Minneapolis, USA

- PO11.14** Improvement of Quality of Life with Pain Resolution in Patients with Chronic Pancreatitis After Total Pancreatectomy with Islet Autotransplantation
J Golebiewska, Chicago, USA

11.15 – 12.45

Parallel Oral Session 12: Islet Encapsulation and Bioengineered Scaffolds **L4**
Chairs: Garry Duffy and Paul de Vos

- PO12.1** Hybrid pseudoislets generated from islet cells and amniotic epithelial cells reverse diabetes after marginal mass transplantation in a murine model
E Berishvili, Geneva, Switzerland
- PO12.2** Mass spectrometry-based characterization of the human pancreatic matrisome
D Tremmel, Madison, USA
- PO12.3** Pancreatic extracellular matrix – A novel microencapsulation platform for diabetes cell-based therapy
M Machluf, Haifa, Israel
- PO12.4** Biodegradable Temporizing Matrix (BTM) supports the survival of Neonatal Islet Clusters (NICC) in a porcine intra-cutaneous islet transplant model
P Coates, Adelaide, Australia
- PO12.5** Immune-protection properties of a bioartificial pancreas in an allogenic animal model
J Magisson, Strasbourg, France
- PO12.6** A novel oxygenation strategy to prevent hypoxia-induced damage in encapsulated pancreatic islets
A Moure, Nantes, France
- PO12.7** A new macro-encapsulation device for subcutaneous islet transplantation
S Sumi, Kyoto, Japan
- PO12.8** Bioengineering challenges in microwell thin film membrane islet macroencapsulation devices
A van Apeldoorn, Enschede, The Netherlands
- PO12.9** Core-Shell 3D Printing as a novel tool to improve Islet Transplantation
K Kang, Adelaide, Australia
- PO12.10** Bio-printed spheroids with human islets and adipose-derived stromal vascular fraction cells (SVF) using a 3D bio-printing technology for improving islet integrity and function
M Hughes, Louisville, USA

13.00 - 13.45

IPITA Business Meeting **L3**

13.45 - 15.15

Parallel Plenary Session 5: 'Hypoglycaemia and Recent Advances in Diabetes Technologies' **L1**
Chairs: Jim Shaw and Mike Rickels

- PP5.1** 'Definition and Assessment of severe hypoglycaemia and hypoglycaemia unawareness'

Peter Senior, Edmonton, Canada

PP5.2 'Optimal management pathway for problematic hypoglycaemia'
Pratik Choudhary, London, UK

PP5.3 'Update on new insulin regimens, pump technology and continuous glucose monitoring'
Eelco de Koning, Leiden, The Netherlands

PP5.4 'The artificial pancreas – progress towards the clinic?'
Roman Hovorka, Cambridge, UK

13.45 – 15.15

Parallel Plenary Session 6: 'Novel Technologies with Potential Applications for Beta-Cell Replacement' L2

Chairs: Bernhard Hering and Cherie Stabler

PP6.1 'Omics for understanding mechanisms and predicting outcomes'
Benedikt Kessler, Oxford, UK

PP6.2 '3D Printing'
Will Shu, Glasgow, UK

PP6.3 'Human-Animal Chimeric donors'
Hiro Nakauchi, Stanford, USA

PP6.4 'Gene profiling - personalised management of rejection'
Alex Loupy, Paris, France

15.45 - 17.00

Parallel Oral Session 13: Pancreas Transplantation – Outcomes and Complications 2 L1

Chairs: Sanjay Sinha and Helmut Arbogast

PO13.1 Quality of Life Following Pancreas Transplantation Alone: The True Benefits of Pancreas Transplantation Go Well Beyond Blood Sugar
J Scalea, Baltimore, USA

PO13.2 Employment pattern after pancreas transplantation - Facts and Risk Factors - A Registry Analysis
A Gruessner, Syracuse, USA

PO13.3 The search for factors affecting pancreatic graft survival to improve the long-term outcomes of pancreas transplantation in Japan
T Ito, Aichi, Japan

PO13.4 10 Years of Pancreas Transplantation in the UK
C Counter, Bristol, UK

PO13.5 Pregnancy Outcomes In Simultaneous Pancreas And Kidney Transplant Recipients: A National French Survey Study
G Normand, Lyon, France

PO13.6 One-year HbA1c is a robust surrogate measure for pancreas graft failure to be used in clinical trials
S Mittal, Oxford, UK

PO13.7 Pancreas Transplants in the Elderly Patient - Should it be done?
A Gruessner, Syracuse, USA

P013.8 BMI should not deprive patients receiving a SPK - what the new data shows
M Laftavi, Syracuse, USA

15.45 – 17.00

Parallel Oral Session 14: Islet Isolation, Culture, and Reconditioning 2 **L2**

Chairs: Greg Szot and Elisa Maillard-Pedracini

- P014.1** Two-Week Culture under Hyperoxia and Low Temperature Maintains Transplantable Human Islets
H Komatsu, Duarte, USA
- P014.2** Human islet isolation: what happened to the oxygen?
J Kerr-Conte, Lille, France
- P014.3** Hypoxia-induced damage in human islets is reduced by mesenchymal stem cell-preconditioned medium
D Brandhorst, Oxford, UK
- P014.4** Mesenchymal stromal cells improve islet insulin secretory function and survival via a combination of highly expressed islet GPCR peptide ligands
C Rackham, London, UK
- P014.5** Pre-culturing human islets with mesenchymal stromal cell-derived extracellular matrix or exogenous Annexin A1 enhances insulin secretion in vitro
A Arzouni, London, UK
- P014.6** The influence of donor age on pancreas and islet quality in human islet isolation
R Vaughan, Oxford, UK
- P014.7** Microenvironmental characterisation of islets of Langerhans in human deceased donor pancreas and isolated islets
N Kattner, Newcastle, UK
- P014.8** Glucose-stimulated insulin secretion in human islets: static incubation versus dynamic perfusion techniques
V Gmyr, Lille, France
- P014.9** Silk biomaterial improves Islet cell function and modulates cell surface Glut2 expression
M Fontaine, Baltimore, USA

15.45 – 17.00

Parallel Oral Session 15: Clinical Islet Allograft Transplantation 2 **L3**

Chairs: Federico Bertuzzi and Jose Oberholzer

- P015.1** β -cell secretory capacity and metabolic control during 5 years following human islet transplantation
M Rickels, Philadelphia, USA
- P015.2** Metabolic efficiency of allogeneic pancreatic islet transplantation compared to intensive insulin therapy for the treatment of type 1 diabetes: data from the randomized, controlled, phase 3 TRIMECO trial
P Benhamou, Grenoble, France
- P015.3** Islet transplant recipients with high-islet equivalents and low-oxygen consumption rates have better transplant outcomes versus those with low-islet equivalents and high- oxygen consumption rates

S Forbes, Edinburgh, UK

- P015.4** Maintained graft function without donor specific antibody sensitisation in islet transplantation preceded by alemtuzumab/etanercept induction
A Flatt, Newcastle, UK
- P015.5** Impact of long-term outcome (10 years) of seroconversion of pancreatic auto-antibodies following islet transplantation with the Edmonton protocol
M Vantyghem, Lille, France
- P015.6** Purity of islet preparations and long-term metabolic success of diabetes cell therapy
M Vantyghem, Lille, France
- P015.7** Early Double Cytokine Blockade (IL-1b and TNF-a) Facilitates Engraftment in Islet Allograft Transplantation with Decreased Inflammation
N Onaca, Dallas, USA

15.45 – 17.00

Parallel Oral Session 16: Islet Engraftment and Extra-hepatic Islet Implantation Sites

L4

Chairs: Ekaterine Berishvili and Christian Schuetz

- P016.1** Intra-omental graft with a plasma hydrogel carrier: a novel alternative for islet transplantation
A Schaschkow, Strasbourg, France
- P016.2** Peri-islet vessels formation around human islets by stimulating intra-islet endothelial cells: Bioengineering approaches to improve islet survival after transplantation
G Loganathan, Louisville, USA
- P016.3** Systemic oxygenation of recipients facilitates islet engraftment in subcutaneous site in rats – Islet dose similar to that required in hepatic site reverses diabetes with prevascularized bed
H Komatsu, Duarte, USA
- P016.4** Intracranial islet transplantation attenuates cognitive and peripheral metabolic dysfunctions in a rat model of sporadic Alzheimer's disease
K Bloch, Tel Aviv, Israel
- P016.5** Peripancreatic fat-derived stromal vascular fraction cells stimulate intra-islet endothelial cells to form peri-islet vessels in human islets
M Hughes, Louisville, USA
- P016.6** Influence of variant liver histopathology on islet graft engraftment
C Desai, Chapel Hill, USA
- P016.7** The optimal environment of islet transplantation into the prevascularised subcutaneous site
S Tada, Kyoto, Japan
- P016.8** Antioxidant thermoresponsive hydrogel as a versatile islet scaffold for islet transplantation
X Zhang, Chicago, USA
- P016.9** Function and gene expression of pancreatic islets experimentally transplanted to muscle or omentum
J Lau, Uppsala, Sweden

- P016.10** An Islet-titration Study in a Prevascularized, Retrievable Subcutaneous Scaffold as Transplantation Site for Pancreatic Islets
A Smink, Groningen, The Netherlands
- P016.11** Rapamycin eluting polyurethane scaffold - A novel approach to extra-hepatic islet transplantation
F Kette, Adelaide, Australia

17.05 - 18.00

Grand Masters: Lessons Learned

L1

Chairs: Peter Friend and Antonio Secchi

- I4.1** 'Pancreatic islet transplantation: the glass is more than half full'
Sir Peter Morris
- I4.2** 'A short historical survey of research milestones in diabetes, particularly contributions of surgeons'
Sir Roy Calne

Friday 23rd June

08.30 - 09.30

Parallel Oral Session 17: Pancreas Transplantation - Outcomes and Complications 3

L1

Chairs: Chris Watson and Robert Redfield III

- P017.1** Enhanced expression of skin neurotrophic factors in advanced diabetic neuropathy does not lead to neural regeneration despite restoration of normal glucose tolerance by pancreas transplantation
F Saudek, Prague, Czech Republic
- P017.2** Conversion from tacrolimus-mycophenolate mofetil to tacrolimus-mTOR immunosuppression after pancreas-kidney transplantation reduces the incidence of both BK and CMV viremia
R Knight, Houston, USA
- P017.3** An effective strategy to manage BK viremia in highly immunosuppressed simultaneous pancreas kidney (SPK) patients
G Roll, San Francisco, USA
- P017.4** Impact of a Targeted Therapy Strategy on the Incidence of Fungal Infections in Pancreas Transplant Recipients
S Singh, Toronto, Canada
- P017.5** Prophylaxis treatment with Mycalfungin after pancreas transplantation
D Cantarovich, Nantes, France
- P017.6** Factors in Association with Sepsis Differ Between Simultaneous Pancreas/Kidney and Single Kidney Transplant Recipients
T Schachtner, Berlin, Germany
- P017.7** Long term follow up of HIV infected patients after pancreas transplantation
G Roll, San Francisco, USA
- P017.8** Clinical Trial EMA - SPK: Everolimus versus Myphenolic Acid in Simultaneous Pancreas and Kidney Transplantation to Evaluate the Differences in Retinal Neovascularisation in Patients with Diabetic Retinopathy
B Voglova, Prague, Czech Republic

P017.9 Prevalence and outcomes of cystic lesions of the transplant pancreas
T Al-Qaoud, Madison, USA

P017.10 Comparison of objective measures of nutrition in patients with Type I diabetes listed for pancreas transplantation and healthy controls
J Fridell, Indianapolis, USA

08.30 – 09.30

Parallel Oral Session 18: Pancreas Donation, Procurement, and Preservation 2

L2

Chairs: Martin Drage and Bill Scott

P018.1 Hypothermic machine perfusion preservation of pancreas for islet transplantation in non-heart-beating canine donor model
N Akutsu, Chiba, Japan

P018.2 Normothermic regional perfusion (NRP) for DCD simultaneous pancreas and kidney (SPK) transplantation: initial experience
G Defries, Cambridge, UK

P018.3 Cold in situ perfusion and preservation prior to pancreas and liver procurement: time for a unified approach
A Hameed, Sydney, Australia

P018.4 Adenosine and oxygen combination: beneficial for pancreas preservation and favorable for islet transplantation
E Maillard, Strasbourg, France

P018.5 Ischemia-reperfusion preconditioning of the pancreas for better islet isolation outcomes
F Lemaire, Strasbourg, France

P018.6 Effect of a novel marine oxygen carrier for preservation of the pancreas during ischemia-reperfusion process
F Lemaire, Strasbourg, France

P018.7 Careful selection of donation after cardiac death (DCD) pancreas donors contributes to positive long-term outcomes
W Hawthorne, Sydney, Australia

08.30 – 09.30

Parallel Oral Session 19: Pancreas and Islet Graft Monitoring 2

L3

Chairs: Marie-Christine Vantyghem and Shruti Mittal

P019.1 Post-transplant Lymphoproliferative Disorder: Risk Analysis for Pancreas Transplant Patients
E Minja, Minneapolis, USA

P019.2 Histological aspects of native kidney diseases after Islet Transplant Alone and Pancreas Transplant Alone
P Maffi, Milan, Italy

P019.3 Value of protocol duodenal biopsies following whole organ pancreas transplantation
J Brockmann, Riyadh, Saudi Arabia

P019.4 The utility of superb microvascular imaging for monitoring venous blood flow in pancreas transplantation
K Tokodai, Tohoku, Japan

P019.5 Contrast enhanced ultrasound of the pancreas graft
M Bialobrzecka, Bochum, Germany

08.30 – 09.30

Parallel Oral Session 20: Immunobiology and Immunosuppression 2

L4

Chairs: Ed Sharples and Nathan Zammit

P020.1 Regulatory T cell viability in 3D printed structures
J Kim, Adelaide, Australia

P020.2 Immunosuppressive Ability of Pancreas Derived Mesenchymal Stem Cells
M Kanak, Richmond, USA

P020.3 Investigating the immunogenicity of autologous iPSC-derived pancreatic beta cells into humanized NSG mice
S Sackett, Madison, USA

P020.4 Dendritic cells targeting in human and non-human primates with DC-SIGN functionalised porous silicon nanoparticles
S Stead, Adelaide, Australia

P020.5 Prevention of diabetes in NOD mice by graft (TX) of G3C MAb releasing hybridoma cells within ultrapure alginate-based microcapsules (AGmc)
R Calafiore, Perugia, Italy

P020.6 The effect of Etanercept concentration on human islet integrity
S Acreman, Oxford, UK

P020.7 Immunosuppression Using NFκB Inhibitor Withaferin A
M Kanak, Richmond, USA

09.35 - 10.00

Paul Lacy Memorial Lecture

L1

Introduced by: Paul Johnson

I5.1 *Garth Warnock, Vancouver, Canada*

10.30 - 12.00

Parallel Plenary Session 7: ‘Monitoring Graft Function following Beta-Cell Replacement and Defining Success’

L1

Chairs: Francois Pattou and Shareen Forbes

PP7.1 ‘Recent developments in ‘in vivo’ islet imaging’
Martin Gotthardt, Nijmegen, The Netherlands

PP7.2 ‘Metabolic monitoring following beta-cell replacement’
Jim Shaw, Newcastle, UK

PP7.3 ‘Towards a uniform definition of outcome and success after whole pancreas and islet transplantation – the Igl’s Classification’
Raja Kandaswamy, Minneapolis, USA
Mike Rickels, Philadelphia, USA

10.30 – 12.00

Parallel Plenary Session 8: ‘Bioartificial Scaffolds and Cellular Encapsulation as Bioengineering Strategies for Islet/Beta-Cell Replacement’

L2

Chairs: Camillo Ricordi and Barbara Ludwig

PP8.1 ‘Current trials in Bio-artificial Pancreas – an update’

Olle Korsgren, Uppsala, Sweden

PP8.2 'Cell encapsulation technologies - a multidimensional challenge'
Cherie Stabler, Gainesville, USA

PP8.3 'Engineering Immuno-protective Microencapsulation Strategies'
Mark Poznansky, Boston, USA

PP8.4 'Bioengineered whole pancreas'
Giuseppe Orlando, Winston-Salem, USA

12.05 - 13.00 '**The Sky's the Limit**' – A '**Dragons Den**' for '**Out of the Box Thinking**' **L1**
Chair: Paul Johnson

Dragons: Peter Friend, Thierry Berney, James Shapiro, Shane Grey

Presenters: Camillo Ricordi, Peter Stock, Francois Pattou

13.00 - 14.00 **Industry Sponsored Lunchtime Symposiums:**

1. 'Collagenase' Sponsored by Roche and Serva **L4**
Chair: Federico Bertuzzi and A.N. Balamurugan

IS1.1 'The role of collagenases and neutral proteases in human islet isolation'
Daniel Brandhorst, Oxford, UK

IS1.2 'The different components of the pancreatic matrix during islet isolation'
Federico Bertuzzi, Milan, Italy

IS1.3 'The challenges of isolating islets from younger donors'
Greg Szot, San Francisco, USA

2. 'First Update of IXA Consensus Statement' Sponsored by Otsuka **L5**
Chair: Jose Oberholzer

IS2.1 'Clinical encapsulated islet xenotransplantation and topics from the first update of IXA consensus statement'
Shinichi Matsumoto, Naruto, Japan

14.00- 15.30 **Parallel Plenary Session 9: 'Stem Cell-Derived Islets for Transplantation'** **L1**
Chairs: Julie Kerr-Conte and Shane Grey

PP9.1 'Recent advances in our understanding of normal pancreas development'
Neil Hanley, Manchester, UK

PP9.2 'Differentiation of pluripotent stem cells to islets'
Cristina Nostro, Toronto, Canada

PP9.3 'Immune strategies for stem-cell derived islets'
Ashleigh Boyd, London, UK

PP9.4 'Translating stem-cell islet sources to the bedside'
Jon Odorico, Madison, USA

14.00- 15.30	Parallel Plenary Session 10: 'Xeno-Islets for Transplantation' <i>Chairs: Jim Markmann and David Cooper</i>	L2
	PP10.1 'Cell sources for islet xenotransplantation' <i>Greg Korbitt, Edmonton, Canada</i>	
	PP10.2 'The immunobiology of xenotransplantation' <i>Phil O'Connell, Sydney, Australia</i>	
	PP10.3 'Advances in immunosuppression for xenotransplantation' <i>Chung-Gyu Park, Seoul, Korea</i>	
	PP10.4 'What are the remaining obstacles before xenotransplantation reaches the clinic' <i>Bernhard Hering, Minneapolis, USA</i>	
 15.35 – 17.15	Closing Joint Plenary Session <i>Chairs: Lorenzo Piemonte and Tom Kay</i>	 L1
	<i>'Where will beta-cell replacement be in 10 years time?'</i>	
	I6.1 'Which tissue will we be transplanting?' <i>Thierry Berney, Geneva, Switzerland</i>	
	I6.2 'Where will we be transplanting the tissue?' <i>Camillo Ricordi, Miami, USA</i>	
	I6.3 'Which immunosuppressive-free strategy will we be using?' <i>James Shapiro, Edmonton, Canada</i>	
	I6.4 'Which recipients will ultimately benefit from our treatment?' <i>Paul Johnson, Oxford, UK</i>	
	Close of Congress (including prize presentations and presentation from LOC of IPITA 2019)	 L1