SCHEDULES

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13 November 2020 - 08:30

ADS Clinical Oral Presentations - Foot care/Pregnancy

Session - ADS Clinical - 75.0 mins - Melbourne Room

08:30
Introduction
Joel Lasschuit
08:32
Presentation Time to Interdisciplinary High Risk Foot Services: An Audit of Real World Data Across 20 years
Anna Crawford
Abstract #187
08:44
The Diabetes Debridement Study: Addressing the Frequency Effect of Sharp Wound Debridement on Healing Outcomes in Diabetes-Related Foot Ulcers
Vanessa Nube
Abstract #107
08:56
Reliability of a three-dimensional wound camera and correlation with standard ruler measurement in diabetes-related foot ulceration
Joel Lasschuit
Abstract #43
09:08
Lower third trimester HbA1c associated with improvements in perinatal outcomes for mothers with type 1 and 2 diabetes mellitus at Western Health
Jean Lu
Abstract #230
09:20
Maternal microbiota displays minor changes in overweight and obese women with GDM
Thomas Mullins
Abstract #178
09:32
Panel Q&A
Vanessa Nube, Thomas Mullins, Joel Lasschuit, Jean Lu, Anna Crawford

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13 November 2020 - 09:00

Diabetes Australia – NDSS Hosted Symposium

Session - - 45.0 mins - Darwin Room

09:05
Panel Discussion
Renza Scibilia, Susan Buchanan, Jane Speight, Christel Hendrieckx
Diabetes and mental health – a conversation about the real impact diabetes can have on a person’s mental and emotional wellbeing.

Diabetes is relentless. Every minute of every day, a person with diabetes faces decisions, thoughts, worries and fears about their diabetes and the future impact the condition may have on their health.

Diabetes Australia CEO Professor Greg Johnson, Foundation Director of the Australian Centre for Behavioural Research in Diabetes (ACBRD) Jane Speight and Deputy Director of the Australian Centre for Behavioural Research Christel Hendrieckx talk diabetes and its impact on mental health.

MSD Hosted Symposium

Session - - 45.0 mins - Brisbane Room

VERTIS CV (Ertugliflozin CVOT): Putting it all together

09:00
Introduction
Mark Cooper
09:05
Overview of VERTIS CV primary data and Heart Failure sub analyses
Christoper Cannon
09:22
VERTIS CV renal sub analyses
Per-Henrik Groop
09:39
Panel Q&A

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13 November 2020 - 10:00

ADS Clinical Oral Presentations - Current and future diabetes care

Session - ADS Clinical - 120.0 mins - Adelaide Room

10:00
Introduction
Christopher Nolan
10:02
Glycaemic control and β-cell function in a CGM-guided, rapid treatment intensification strategy for young adults with type 2 diabetes: A 12-month, pilot randomised controlled trial
Timothy Middleton
Abstract #255
10:14
Islet Transplantation with Belatacept Based Immunosuppression: Progress Report on a National Phase II Clinical Trial
Linda Wu
Abstract #93
10:26
Clinical correlates of non-invasively measured vascular function and structure in adults with type 1 diabetes
David Chen
Abstract #164
10:38
DXA-derived Trabecular Bone Score and Hip Structural Analysis Parameters in Patients with Type 1 diabetes mellitus undergoing Simultaneous Pancreas Kidney Transplantation
Jasna Aleksova
Abstract #251
10:50
Focus on Patient-Centred Practice: Changes in Patient Activation Measure Scores and Health Outcomes in a Specialist-Primary Care Patient-Centred Diabetes Alliance Model
Emma Croker
Abstract #64
11:02
Misconceptions and barriers to treating obesity in Australia: An ACTION IO country analysis
Georgia Rigas
Abstract #17
11:14
Peri-procedural euglycaemic diabetic ketoacidosis (EDKA) associated with sodium-glucose co-transporter-2 inhibitor (SGLT2i) therapy during colonoscopy.
Emily Meyer
Abstract #44
11:26
Establishing a Point of Care Test for MMP-9 in Diabetes-Related Foot Ulcer Post-debridement Fluid
Matilda Longfield
Abstract #201
11:38
Q&A

ADS/ADEA Joint Symposium: Practical tips for management of adults with type 1

diabetes

Session - Joint ADEA/ADS - 120.0 mins - Melbourne Room

10:00
Introduction
Sybil McAuley
10:05
Tips and tricks for skin reaction reactions and allergies to pump and CGM tapes and lipo-hypertrophy with injection and pump sites and how to manage them
Jane Overland
10:30
Does one size fit all? - How to have a meaningful discussion about pump therapy
Cheryl Steele
Insulin pump therapy continues to be a popular choice for many people living with type 1 diabetes. There are currently several choices of pumps available and covered in Australia. People will often seek out information from their Health Care Professional (HCP) on which pump is the most suitable for their needs.
It is very important that the HCP provides factual and impartial information. Not all HCPs will be in a role where they deal with pumps on a regular basis but they can refer if necessary. It is important to ask questions to ensure that you are meeting your client's needs rather than selling a product. Depending on the individual, variables like the size of the pump, the volume of the reservoir, connectivity to Continuous Glucose Monitoring (CGM) or simplicity of use can all influence a client's choice.
For some individuals having a device with the latest features will be very important. Often these individuals have done their research on the internet and are coming to you to consolidate their options. It is very important to realise that not all people living with diabetes want or need CGM. For some the constant alarms or volume of information can be overwhelming.
Each individual living with diabetes has their own lived experience and can feel that a HCP is pushing them toward a device based on sales material rather than respecting the individual's opinion. Company representatives are sales people even if they have a background in a health care discipline.
All HCPs working in the diabetes field should be able to give basic advice on pump therapy and know where to refer for ongoing care.

10:55
Counting Fat, Protein and Carbs: Tips for clinical practice
Carmel Smart
11:20
Challenges of pregnancy with pumps
Glynis Ross
11:45
Panel Q&A
Jane Overland, Glynis Ross, Cheryl Steele, Carmel Smart

ADS/ADEA Joint Symposium: Practical tips for management of paediatric/adolescent with type 1 diabetes

Session - Joint ADEA/ADS - 120.0 mins - Brisbane Room

10:00
Introduction
Tim Jones, Jodine Ball
10:05
CGM
Jan Fairchild
10:25
Diabetes in Schools Update
Elizabeth Davis
10:45
Diet including dosing for fat & protein
Brigid Knight
11:05
Exercise
Craig Taplin
11:25
Impact of COVID-19 on T1D
Leena Priyambada
11:45
Panel Q&A
Leena Priyambada, Jan Fairchild, Susan Buchanan, Elizabeth Davis, Craig Taplin, Brigid Knight

Diabetes in Private Practice

Session - ADEA - 120.0 mins - Canberra Room

Supported by KnowDiabetes
10:00
ADEA update – Private Practice resources and advocacy
Susan Davidson, Rachel Freeman, Paris Dounoukos
10:25
Looking beyond the traditional healthcare delivery models
Raghav Murali-Ganesh
10:50
Case Study marketing and growing an online presence
Faina Levin, Sam Beattie
With the digital world rapidly evolving, there has become an increased reliance on the online space, both from a business and user perspective. MyDiabetes Clinic, a humble private practice based in Launceston, Tasmania has had the privilege of serving the Tasmanian diabetes community since 2014. 2020 being the year that it is, Director of MyDiabetes, Samantha Beattie (CDE-NP), has recognized the need for an improved online presence and the development of a digital community. To explore how this could be done sustainably and effectively, Sam sought the advice from friend and marketing consultant, Faina Levin to help workshop a digital path forward, whilst acknowledging the unique nature of diabetes communication - and so, a strategic partnership was formed. Experimenting with a variety of social platforms, resources and content types, MyDiabetes has been able to establish a manageable and integrated combination of digital resources to achieve regular communication and targeted promotion within their (growing) community.

Join Sam and Faina as they discuss how they commenced the digital journey for MyDiabetes, the platforms they've used, the resources they've capitalised on, the engagement they've achieved and key learnings.
11:15
Case Study of business marketing and promotion
Martina Smidt
11:40
Panel Q&A
Susan Davidson, Sam Beattie, Raghav Murali-Ganesh, Rachel Freeman, Paris Dounoukos, Martina Smidt, Faina Levin
11:59
Introduction
Laura Zimmerman

Exercise for Type 2 Diabetes Prevention and Management Masterclass

Session - ADEA - 120.0 mins - Sydney Room

10:00
Introduction – overview Pre-diabetes joint position statement
Rachel Freeman
10:10
Exercise Guidelines and frequently asked questions - when should I exercise? What type? BGL effects with low intensity vs high intensity
Wendy Ferris
10:40
Goal setting, motivating long term behaviour change
Hayley Nicholson
11:10
Approaches to education and implementation in a rural/remote setting
Chantelle Grundy
11:40
Panel Q&A
Wendy Ferris, Rachel Freeman, Hayley Nicholson, Chantelle Grundy

Research Masterclass

Session - ADEA - 120.0 mins - Hobart Room

10:00
Introduction
Helen Phelan
10:05
Quantitative Research

Kirstine Bell
10:30
Qualitative Research
Bodil Rasmussen
10:55
Quality Improvement Activities
Irene Kopp
11:20
Translating research into clinical practice
Virginia Hagger
11:45
Panel Q&A
Virginia Hagger, Kirstine Bell, Irene Kopp, Bodil Rasmussen

Symposium: Diabetes and Cancer - Understanding the links

Session - ADS Basic - 120.0 mins - Darwin Room

10:00
Introduction
Jay Jha
10:05
Targeting metabolic vulnerabilities in prostate cancer
Renea Taylor
Altered metabolism is a hallmark of cancer pathogenesis and is required to support the malignant properties of cancer cells, particularly in endocrine-related cancers such as breast and prostate cancer. Previous studies have focused extensively on the roles of glucose, glutamate and fatty acids derived from de novo lipogenesis in modulating the bioenergetic processes and macromolecule synthesis required to sustain growth and proliferation. However, fatty acids are also derived from adipose tissue lipolysis or the breakdown of triglycerides contained in circulating chylomicrons and lipoproteins. We investigated the role of lipid metabolism in prostate cancer using tissue from patients with prostate cancer and patient-derived xenograft mouse models. We showed that fatty acid uptake was increased in human prostate cancer and that these fatty acids were directed toward biomass production. These changes were mediated, at least partly, by the fatty acid transporter CD36, which was associated with aggressive disease. Deleting Cd36 in the prostate of cancer-susceptible Pten−/− mice reduced fatty acid uptake and the abundance of oncogenic signaling lipids and slowed cancer progression. Moreover, CD36 antibody therapy reduced cancer severity in patient-derived xenografts. We further demonstrated cross-talk between fatty acid uptake and de novo lipogenesis and found that dual targeting of these pathways more potently inhibited proliferation of human cancer-derived organoids compared to the single treatments. These findings identify a critical role for CD36-mediated fatty acid uptake in prostate cancer and suggest that targeting fatty acid uptake might be an effective strategy for treating prostate cancer.
10:30
Pancreatic Cancer-Related Diabetes
Minoti Apte
10:55
Obesity-related liver tumourigenesis – cause or correlation?
Kyle Hoehn
11:20
Autoimmune diabetes associated with immune checkpoint inhibitors
Anna Galligan
Immune checkpoint inhibitors have revolutionised management of many solid organ and haematological malignancies. Survival benefits are offset by collateral immune damage to healthy tissues, termed immune related adverse events which can occur in almost any organ system. Checkpoint inhibitor Related Autoimmune Diabetes Mellitus (CPI-DM) is an abrupt onset, fulminant islet autoimmunity characterised by a presentation in diabetic ketoacidosis, and/or low insulin and c peptide levels. This immune related event occurs almost exclusively after inhibition of the PD-1/PD-L1 pathway with an incidence of around 1%. High risk class II HLA alleles are detected in two thirds of patients, most commonly HLA DR4. In contrast to spontaneous diabetes where islet antibodies are detected in >90% of patients, only half of those presenting with CPI-DM have detectable islet autoantibodies. Elevated pancreatic enzymes, exocrine failure and pancreatic atrophy on imaging are seen in a subset of patients, suggesting that exocrine insufficiency may play a role in the pathogenesis in some cases. Confounding factors such as systemic inflammation due to metastatic disease or glucocorticoids may induce insulin resistance or exacerbate T2DM, making the diagnosis challenging. A focus on identifying patients with acute or subacute islet autoimmunity is critical in the counselling and ongoing management. These patients are ideally managed under a specialist diabetes service, with access to education, technologies and complication screening.
11:45
Panel Q&A
Renea Taylor, Minoti Apte, Kyle Hoehn, Anna Galligan

13 November 2020 - 12:00

Lunch / Visit the Exhibitors / Watch a wellness session

Session - - 30.0 mins -

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13 November 2020 - 12:30

ADS Basic Oral Presentations

Session - ADS Basic - 120.0 mins - Melbourne Room

12:30
Introduction
Nicole Hallahan, Mitchell Sullivan
12:32
The role of NOX5 in diabetes-associated vascular disease
Florence Ho
Abstract #8
12:44
Metabolic characterisation of knock-in mice harbouring the CREBRF 'obesity variant'
Louise Metcalfe
Abstract #197
12:56
Analysis of gut microbiota, incretin expression and short-chain fatty acids in asprosin-deficient mice
Nhan Pham
Abstract #203
13:08
Identification of mRNA and microRNA transcripts that differ in expression across islet donor gender, age and BMI
Wilson Wong
Abstract #260
13:20
Lessons from microRNA profiling of islet beta-cell death in type 1 diabetes
Charlotte Dong
Abstract #257
13:32
Inflammatory monocyte changes in diabetic foot ulcer patients may contribute to delayed healing
Helen Williams
Abstract #76
13:44
Involvement of Integrin Activation of FAK and cSrc in Glucose-Stimulated Insulin Secretion Signalling Mechanisms
Claire Bridges
Abstract #180
13:56
Finetuning metabolic supply and demand in the adipocyte
James Krycer
14:08
Panel Q&A

ADS/ADEA Joint Symposium: Paediatric Hybrid Closed Loop Systems

Session - Joint ADEA/ADS - 120.0 mins - Brisbane Room

12:30
Introduction
Elizabeth Davis
12:35
Glycaemic and psychosocial outcomes in children and adolescents on HCL therapy
Mary Abraham
12:55

Lived experiences of children and their caregivers following commencement of HCL
13:10
Parent perspective
Ruth Pascoe
13:15
Clinical pathway and model of care for commencement of HCL
Elizabeth Broad
13:30
Clinical outcomes of children commenced on HCL: A single-centre experience
Sathyakala Vijayanand
13:45
HCL and food challenges: Case-based talk
Amelia Harray
14:00
HCL and exercise: Case-based talk
Craig Taplin
14:15
Panel Q&A
Sathyakala Vijayanand , Ruth Pascoe, Mary Abraham, Elizabeth Broad, Craig Taplin

Diabetes in Primary Care

Session - ADEA - 120.0 mins - Sydney Room

12:30
Introduction
Ashley Ng
12:35
Why bother with GPs? – Exploring the role of the GP in diabetes care in general practice
Ralph Audehm
12:50
Getting CDEs involved in general practice
Tracy Aylen
13:05
How can CDEs work incorporate EPs in diabetes care within general practice?
Nicole French
13:20
Dietetic care in diabetes management within general practice – More than just the food police
Ivan Chan
13:35
Managing the Glycaemic Tetrad and Primary Care Providers – who you gonna call?
Gary Kilov
13:50
Panel Q&A
Tracy Aylen, Ralph Audehm, Nicole French, Ivan Chan, Gary Kilov

It's Complicated: Diabetes Complications Update & How to Talk About Them

Session - ADEA - 120.0 mins - Hobart Room

12:30
Introduction
Renza Scibilia
12:35
Why reframe conversation?
Renza Scibilia
12:45
How to talk about complications - Research & Evidence
Jane Speight
13:05
Diabetes-related kidney disease
Shilpa Jesudason
13:25
Diabetes-related eye disease
Amira Howari
13:45
Oral health & diabetes
Evelyn Boyce

14:05
Panel Q&A
Shilpa Jesudason, Renza Scibilia, Jane Speight, Evelyn Boyce, Amira Howari

Symposium: Bench to bedside – Putting it all together. Multi-omics, Biomarkers and Big data

Session - ADS Clinical - 120.0 mins - Adelaide Room

12:30
Introduction
Sarah Glastras
12:35
Progression of DKD in diabetes: do biomarkers improve prediction?
Helen Colhoun
Diabetic kidney disease (DKD) remains one of the leading causes of reduced lifespan in diabetes. The quest for both prognostic biomarkers for advanced DKD and end-stage renal disease has received major investment and interest in recent years. Despite this current clinical practice still relies on measurement of estimated glomerular filtration rate (eGFR) using serum creatinine, and measurement of urinary albuminuria.
In this presentation I will consider recent data on the contemporary progression of renal disease in diabetes under modern standards of care. I will consider the performance of albuminuria and eGFR, along with other routine clinical data in predicting those who will progress to end stage renal disease most rapidly. I will discuss some of the key challenges in developing useful biomarker panels. Among these challenges are evaluating the marginal improvement in prediction, identifying the most sparse set of biomarkers from a large potential set and progressing biomarkers from the research setting to clinical implementation. I will consider some recent studies measuring a large set of potential biomarkers adopting both large scale agnostic panels and targeted candidate biomarkers and will summarise the biomarkers that have been shown to improve prediction of outcomes.

13:00
Multi-omics – putting it all together from mice to (wo)men
Katalin Susztak
13:25
Systems epidemiology approaches combining genetics, proteomics and metabolomics in large-scale population-based cohorts, biobanks and clinical trials
Qin Wang
13:50
Real world and big data in diabetes: outcomes and challenges
Dianna Magliano
14:15
Panel Q&A
Qin Wang, Katalin Susztak, Helen Colhoun, Dianna Magliano

Symposium: Metabolic co-morbidities - Focus on fibrosis and the extracellular matrix

Session - ADS Basic - 120.0 mins - Darwin Room

12:30
Introduction
Melinda Coughlan, Emma Hamilton-Williams
12:35
Endocrine regulation in non-alcoholic steatohepatitis (NASH) and liver fibrosis – Identification of novel biomarkers and therapeutic targets for NASH and type 2 diabetes
Magdalene Montgomery
Non-alcoholic fatty liver disease (NAFLD) is the most common chronic liver condition in developed countries. NAFLD involves a spectrum of liver diseases that range from simple steatosis to its progressive form, non-alcoholic steatohepatitis (NASH). We have developed a discovery platform with the primary aim of identifying novel liver-secreted proteins (known as ‘hepatokines’) that are regulated in NASH, and that impact systemic metabolism, NAFLD progression and that can be utilized as non-invasive biomarkers for this disease. This is important as there are currently no reliable, non-invasive measures for population-based NASH screening and, almost inconceivably, no approved pharmacotherapies for the treatment of NASH.

In addition, NASH and type 2 diabetes (T2D) are common co-morbidities, with 39% prevalence of NASH in individuals with T2D. While early and aggressive treatment of hyperglycemia in patients with T2D can attenuate the development of complications (e.g. retinopathy and neuropathy), existing therapies have limited efficacy, limited tolerability and significant mechanism-based side effects. Novel therapeutic targets

are urgently needed.

Our hepatokine discovery platform ranges from assessment of NASH-regulated secreted factors in mice following dietary interventions to assessment of hepatokine secretion in precision-cut liver slices of patients undergoing bariatric surgery that show progressive NAFLD. Overall, we identified >3000 liver-secreted proteins, with substantial regulation in the presence of NASH and liver fibrosis. Proteins significantly increased in patients/mice with NASH and/or F2-4 fibrosis are now being prioritized for assessment as (1) non-invasive NASH/fibrosis biomarkers, (2) therapeutic targets for liver fibrosis, and (3) therapeutic targets for type 2 diabetes.

13:00
Mechanisms of Renal Fibrosis
Sonia Saad
Renal fibrosis is the final manifestation of chronic kidney disease (CKD). It is characterised by excessive accumulation or deposition of extracellular matrix components, which occurs due to dysregulation in the wound healing process and imbalance between extracellular matrix (ECM) production and breakdown. This leads to uncontrolled inflammatory responses, glomerulosclerosis, tubulointerstitial fibrosis and eventually, end stage kidney disease.
Renal fibrosis is a progressive process that involves different factors and cells. To date there is no cure for CKD and no marker for early detection. A definitive diagnosis is only achieved by renal biopsy, which is invasive and not routinely performed. Recent studies have raised the possibility that renal fibrosis can potentially be reversed if the pro-fibrotic stimuli are removed but the recovery process occurs over a long period of time.
This presentation will cover current biomarkers for CKD and novel diagnostic methods. It will also summarise current pharmacological therapies and potential therapeutic approaches to limit renal fibrosis including blocking signaling pathways involved in disease progression, modulating inflammation and oxidative stress, inhibiting pro-fibrotic growth factors and targeting epigenetic alterations.
New data from our laboratory will be presented, including the role of fetal programming and epigenetic changes in the development of CKD and the effect of demethylating agents on intergenerational obesity-related CKD. The effect of inhibiting receptor-interacting protein kinase (RIPK)-3 and of targeting chemokine receptor type 4 (CXCR4) by i-bodies will also be shown. The potential for inhibiting Lysyl oxidases, a group of enzymes that catalyse ECM crosslinking, to dissolve collagen crosslinks and reverse renal fibrosis will be presented. Different concepts to target renal fibrosis and novel techniques we use, which include organ decellularisation and hyperspectral cell autofluorescence, to further understand the mechanisms of renal fibrosis and identify novel targets will also be discussed.

13:25
Pancreatic islet heparan sulfate proteoglycans in diabetes
Charmaine Simeonovic
Heparan sulfate proteoglycans (HSPGs) carry the complex sugar heparan sulfate (HS) and are conventionally found in extracellular matrix, basement membranes and on the surface of cells. We have demonstrated that HS is not only expressed in the peri-islet basement membrane but is also highly expressed throughout both mouse and human islets. Flow cytometry analyses have revealed the unusual intracellular localisation of HS and HSPGs such as collagen type XVIII, in beta cells. Our in vitro studies have shown that intracellular HS plays a critical role in maintaining beta cell survival, due at least in part, to anti-oxidant effects. Islets can lose HS during their isolation and the death of isolated beta cells in culture can be prevented by HS replacement using HS mimetics. These properties have highlighted beta cell HS as a potential target for destruction in Type 1 diabetes (T1D) and for dysregulation in Type 2 diabetes (T2D). Pancreas specimens from human T1D donors (from the Network for Pancreas Organ Donors with Diabetes (nPOD)) and autoimmune NOD/Lt female mice, show that T1D correlates with loss of islet HS and expression of heparanase (the only known mammalian endoglycosidase that degrades HS) by insulitis leukocytes. Treatment of NOD/Lt mice with drugs expressing both heparanase inhibitor and HS replacer activities reduced T1D incidence by approximately 50%. T2D-prone db/db mouse pancreases show a dramatic reduction in islet HSPG and HS, compared to wildtype islets. In the context of T1D, loss of islet HS is primarily due to degradation by heparanase produced by inflammatory leukocytes. In contrast, we attribute the decline in beta cell HSPG levels in T2D, to endoplasmic reticulum (ER) stress which substantially reduces the synthesis/maturation of HSPG core proteins required for HS assembly, thereby diminishing intracellular HS and impairing the viability of T2D beta cells. Loss of beta cell HS, albeit via different pathways in T1D and T2D, represents a fundamental defect underpinning pre-diabetes and culminates in insurmountable oxidative damage.
13:50
Vascular remodelling - focus on atherosclerosis and aneurysm formation
Karin Jandeleit-Dahm
Diabetes is associated with accelerated atherosclerosis leading to clinical events such as myocardial infarction and stroke. Furthermore, there is evidence that diabetes leads to unstable plaques by increasing inflammation and vascular remodelling.
Diabetic plaques are characterised by increased macrophage and immune cell infiltration. In a mouse model

of plaque rupture, the induction of diabetes was associated with increased plaque instability as evidenced by increased incidence of necrotic cores, intraplaque haemorrhages and a reduced cap to core ratio. Oxidative stress produced by vascular NADPH oxidases (NOX) contributes to the accelerated atherosclerosis in diabetes. We have shown that Nox I promoted atherosclerosis, and that the vasculoprotective Nox4 isoform is reduced in diabetes, mediating plaque remodelling. Not much is known about the effects of the human isoform Nox5 in atherosclerosis. Using a Nox5 knockin mouse with specific expression of Nox5 in endothelial cells mice, we observed increased aneurysm formation associated with reduced expression of ECM proteins. Another profibrotic protein, CDA1, has been shown to mediate fibrotic changes in the vasculature in diabetes. Knockout of CDA1 was associated with increased aneurysm formation even in the absence of diabetes and this was further increased in the presence of diabetes. The vascular remodelling occurring in diabetes disrupts the fine balance between pro-fibrotic mediators, ECM production and ECM degradation by matrix metalloproteinases. Using single cell sequencing we have been able to identify diabetes-mediated cell gene signatures including infiltrating immune cells which may help to delineate novel targets to combat atherosclerosis in diabetes.

14:15
Panel Q&A
Sonia Saad, Magdalene Montgomery, Karin Jandeleit-Dahm, Charmaine Simeonovic

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13 November 2020 - 12:30

Guidelines for type 1 diabetes, disordered eating and eating disorders

Session - ADEA - 120.0 mins - Canberra Room

12:30
Introduction
Christel Hendrieckx
12:40
Consensus and gaps in knowledge in assessing and treating disordered eating in type 1 diabetes
Helen d'Emden
13:02
Disordered eating and type 1 diabetes: assessment and management for those aged 16+ years
Neisha D'Silva
13:22
Dual learnings and challenges for Eating Disorder Services and Diabetes Teams – the Qld perspective
Warren Ward
13:42
Inpatient Management of Type 1 Diabetes & Disordered Eating / Eating Disorders
Nicole Walker
14:02
Panel Q&A
Warren Ward, Nicole Walker, Neisha D'Silva, Helen d'Emden, Christel Hendrieckx

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13 November 2020 - 14:30

Afternoon Tea

Session - - 30.0 mins -

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13 November 2020 - 15:00

ADS/ADEA Joint Symposium: Sexual Dysfunction in Diabetes

Session - Joint ADEA/ADS - 120.0 mins - Melbourne Room

15:00
Introduction
Jane Holmes-Walker
15:05
Erectile dysfunction and diabetes

Carolyn Allan
15:30
Sexual Health and Diabetes: Let's Talk About It
Adriana Ventura
Sexual health issues among men and women with diabetes are overlooked in clinical practice, especially when it comes to the emotional well-being factors that are often associated. This presentation will provide some context into the problem of sexual dysfunction among men and women with type 1 or type 2 diabetes by examining some of the literature in relation to emotional well-being factors associated with sexual dysfunction. It will also cover other sexual health issues less commonly discussed among people with diabetes (such as hypoglycemia during sexual intercourse, or body image issues as a result of wearing devices), providing basis for more communication around sexual health for all adults with diabetes in clinical practice. With the use of case study examples, identifying and addressing sexual issues in practice will be illustrated. Finally, additional considerations (i.e. cultural factors, LGBT issues, and psychological trauma) will be discussed.
15:55
Management of Menopause in Diabetes
John Eden
400,000 Australian women are having severe menopausal symptoms and many of these women will have diabetes and so the management of menopause amongst diabetics is an important topic. Large, randomised trials have shown that menopausal hormonal therapy (MHT) reduces the risk of developing Type 2 diabetes (T2DM) and improves insulin resistance. However, all the major menopause institutions around the world agree that MHT should not be used as a preventive agent for diabetes or heart disease. About one in four Australian women will have very severe menopausal symptoms, such as hot flushes. Some women can be woken every 30 minutes by night sweats. Transdermal oestrogen (patches or gel) with "natural" progesterone in most cases will be the preferred treatment. Many T2DMs will have vascular disease and again transdermal oestrogen with progesterone is advantageous over oral oestrogen and synthetic progestins. Oral oestrogen is prothrombotic and many progestins aggravate thrombosis as well.
Breast cancer risk also varies according to the type of hormone therapy. For example, in the Women's Health Initiative (WHI), women taking conjugated equine oestrogens (CEE) and MPA had an annual increased risk of breast cancer of 8 per 10,000 women per year. Women using unopposed CEE (who have had hysterectomies) had a significantly reduced risk of breast cancer. Tibolone usage is also associated with a reduced risk of breast cancer in the LIFT study.
By the age of 60, around 80% of Australian women will have vulvovaginal dryness and topical oestrogens are safe. In select cases, non-oestrogen treatments may be used for hot flushes, such as SSRI antidepressants, gabapentin and other agents.

16:20
Sexual health and Diabetes - people with diabetes are talking about
Renza Scibilia
16:45
Panel Q&A
Renza Scibilia, John Eden, Carolyn Allan

Managing Type 1 Diabetes and Physical Activity

Session - ADEA - 120.0 mins - Sydney Room

15:00
Managing type 1 diabetes and physical activity
Vinutha Beliyurguthu Shetty, Carmel Smart, Marian Brennan
People living with type 1 diabetes (T1D) are encouraged to participate in regular physical activity (PA), owing to its benefits to cardiovascular health, insulin requirements and well-being (Yardley et al., 2014). Though beneficial, many living with T1D have difficulty participating in PA as evidenced by low activity rates in this population (Speight et al., 2011). Upon seeking information from health professionals, people living with T1D feel it is difficult to get consistent and helpful advice (Kennedy et al., 2018; Narendran & Andrews, 2018). Diabetes health professionals have also recognised they lack confidence and knowledge in this area of diabetes management (Kime & Pringle, 2019; Kime et al., 2018; Narendran & Andrews, 2018). This workshop aims to improve confidence of diabetes health professionals in discussing PA with people living with T1D. The workshop will provide foundations of the metabolic and endocrine response to exercise, before stepping through evidence-informed strategies to effectively manage PA in T1D. Delegates will have the opportunity to apply this knowledge to case studies in small and large facilitated group discussions. The session will be presented by an endocrinologist, dietitian, CDE/exercise physiologist and a T1D consumer, all with experience in T1D and PA.

Medication Masterclass

Session - ADEA - 120.0 mins - Canberra Room

15:00
Introduction
Elizabeth Obersteller
15:10
Introduction to the range of medication options for the management of type 2 diabetes and a Case Study
Donna Itzstein
15:40
How the newer medications impact nutrition advice
Pollyemma Antees
16:20
Live Case Study Discussion

Symposium: ADS Clinical Trials Update

Session - ADS Clinical - 120.0 mins - Brisbane Room

15:00
Introduction
Richard MacIsaac
15:05
Trials of behavioural and psychosocial interventions: an update
Jane Speight
15:30
Interventions to prevent exercise associated dysglycaemia
Dessi Zaharieva
15:55
A review of recent GLP-1RA trials
Jonathan Shaw
GLP-1 receptor agonists are now well established therapies for type 2 diabetes. Several cardiovascular outcomes trials have confirmed cardiovascular benefit for MACE outcomes, with some suggestions of greater efficacy on stroke prevention over prevention of myocardial infarction. Interestingly, there is also data to suggest benefits on renal outcomes, as well as for heart failure. Very exploratory analyses of the REWIND trial have also suggested a possible benefit for cognitive function.
Higher dose and more potent GLP1-RAs offer potentially greater effects on both body weight and HbA1c, while some uncertainty remains over the potential for GLP1-RAs to increase the risk of progression of retinopathy.

16:20
SGLT2i trials update
David Cherney
16:45
Panel Q&A
Jonathan Shaw, Jane Speight, Dessi Zaharieva

Symposium: Bench to Bedside – Role of T cells in diabetic kidney disease

Session - ADS Basic - 120.0 mins - Darwin Room

15:00
Introduction
Joanne Tan, Amelia Fotheringham
15:05
T regulatory cells in diabetes: A perspective from retinopathy
Jennifer Wilkinson-Berka
Diabetic retinopathy features progressive damage to the retinal microvasculature that can result in vision loss and blindness due to breakdown of the blood-retinal barrier, vascular leakage and neovascularisation. Inflammation contributes to the pathogenesis of diabetic retinopathy, although the mechanisms involved are not fully understood. A major focus of study are microglia, the resident immunocompetent cells of the retina, which have similar characteristics to macrophages. In diabetes, the activation of microglia results in their release of injurious factors and cytokines that damage the vasculature. In other inflammatory diseases, Foxp3+ regulatory T cells (Tregs) of the adaptive immune system act as master regulators of inflammation, migrating from lymphoid organs into tissues to dampen the cytokine storm elicited by effector immune cells of the innate (e.g. macrophages) and adaptive (e.g. Th17 cells, CD8+ T cells) immune systems. Indeed, Treg cell therapy is a potential treatment for some inflammatory diseases, but not previously considered for diabetic retinopathy due to the dogma that the retina is immune privileged and impenetrable to circulating immune cells. Our research identified that Tregs can traffic into the retina and when boosted in number dampen local inflammation induced by microglia and reduce damage to the vasculature. These findings open up the possibility that other cell types of the adaptive immune system contribute to retinopathy. Our recent

studies identified that CD8+ T cells migrate into retinal tissue to injury the retina through their release of cytokines and other factors. We are currently exploring a range of Treg immunotherapies that have the potential to reduce the damaging effects of effector immune cells on the retina and subsequent vision-threatening vasculopathy in order to improve the outlook for people with diabetic retinopathy.
15:30
Lessons in T cells learned from other chronic kidney diseases
Stephen Alexander
Lessons in T cells learned from other kidney diseases" T cells play an important role in a variety of kidney diseases including acute crescentic glomerulonephritis, autoimmune glomerulonephritis (membranous nephritis), proteinuric kidney diseases and acute kidney injury. A number of T cell subsets, as well as playing a pathogenic role, are involved in protecting the kidney including Tregs, MAIT cells and gamma-delta cells and ILCs and potential therapies aimed at targeting cytokines, costimulatory molecules and cell subsets are promising future therapies. Many of the pathways for injury, prevention and treatment in autoimmune renal disease are found in Type 1 Diabetes.
15:55
CD8+ T cells as initiators of diabetic kidney disease in youth
Josephine Forbes
Objective: Half of the mortality in diabetes is seen in individuals <50 years of age and commonly predicted by the early onset of kidney disease (DKD). In Type 1 diabetes, increased uACR (urinary albumin-creatinine ratio) during adolescence defines this risk, but the pathological factors responsible remain unknown. This makes it difficult to design preventative therapies for DKD, which is pertinent since first line therapies used in adults do not necessarily protect adolescents and young adults, as seen recent Phase 3 trials using anti-hypertensives and lipid lowering strategies. In this presentation, kidney function early in type 1 diabetes is discussed, and novel data relating to the changes in kidney injury molecule- 1 (KIM-1) expression and release from circulating T cells will be presented.
16:20
The role of the adaptive immune system in diabetic kidney disease
Elif Ekinci
Diabetic Kidney Disease is a leading cause of morbidity and mortality in people living with diabetes. Our understanding of this major burden is evolving over time. Whilst we recognise the functional and structural changes which are occurring in DKD, going back to kidney biopsies can allow us to study in detail the changes in DKD and the elements of the immune system. Furthermore, whilst the role of the innate immune system is recognised in the development of DKD, the role of the adaptive immune system is less well studied. Previous studies, including studies from our group, have shown that changes in tumour necrosis factor receptor levels are elevated in early kidney function decline and elements of the complement system are implicated in the development of DKD. The role of the T cells are less well understood with previous observational studies suggesting a relationship between T cell infiltration in DKD. Our preliminary studies show an increase in T cell infiltration of the intersititum in invidividuals with DKD and further studies are underway to characterise the T cell populations implicated in the development of DKD.
16:45
Panel Q&A
Stephen Alexander, Josephine Forbes, Jennifer Wilkinson-Berka, Elif Ekinci

Symposium: Type 2 diabetes and Youth

Session - ADS Clinical - 120.0 mins - Adelaide Room

15:00
Introduction
Jencia Wong
15:05
Microvascular Complications in Youth onset Type 2 diabetes : should we manage it differently ?
Ted Wu
It is well established that Youth-onset Type 2 diabetes (YT2DM) is associated with premature mortality, whether compared to T1DM diagnosed at a similar age or T2DM diagnosed in adults. Much emphasis has been placed on macrovascular risk factors and/or disease as an explanation for this association, however there is increasing evidence that some microvascular complications also occur at an increased rate in YT2DM. This presentation will focus on the development of nephropathy, retinopathy, and neuropathy in YT2DM and how new evidence may drive changes in the way we approach screening and management of these complications in this vulnerable cohort.

15:30
Multimorbidity and risk of ASCVD and ACM in early and young-onset type 2 diabetes
Sanjoy Paul
15:55
Improving outcomes for Indigenous Australian Youth with Diabetes: where are we now?
Renae Kirkham
Type 2 diabetes is at epidemic proportions among Aboriginal and Torres Strait Islander communities,

significantly impairing quality of life and reducing life expectancy. Recent decades have witnessed increasing rates of type 2 diabetes in Aboriginal and Torres Strait Islander children and youth, with rates now twenty-fold higher than among non-Indigenous youth. Of great concern is the very high rate of end-stage kidney disease reported in First Nation peoples with youth-onset type 2 diabetes: 45% required dialysis by age 30-45 years (i.e. 20 years after diagnosis). Youth-onset type 2 diabetes in Aboriginal and Torres Strait Islander communities does not occur in isolation; the young people affected frequently also experience mental health conditions, socioeconomic disadvantage, food insecurity and remoteness, adding to the complexity of management. To address this issue, a collaboration of health professionals, policy makers and researchers across the Northern Territory, Far North Queensland and Kimberley has been developed. The first stage of this research has highlighted that in the Northern Territory many Aboriginal and Torres Strait Islander children and youth with type 2 diabetes feel isolation and shame associated with their condition, negatively impacting on their engagement with support services. Young people reported being more likely to access medical care when they had established meaningful relationships with relevant health professionals. Formative qualitative work is currently underway in four sites across Far North Queensland and the Kimberley. The second stage of the project will work with health professionals, community members and young people with type 2 diabetes to co-design, pilot and evaluate culturally appropriate diabetes management programs across Northern Australia.

16:20
Improving the care of children and adolescents with type 2 diabetes
Alexia Pena Vargas
The incidence of type 2 diabetes has increased in children and adolescents due largely to the obesity epidemic, particularly in high risk ethnic groups. Diabetes complications develop earlier in paediatric type 2 diabetes compared with adult-onset type 2 diabetes and glycaemic control during adolescence deteriorates faster than in adults due to greater insulin resistance and beta cell dysfunction causing higher early treatment failures. These facts highlight the importance of specific guidelines for assessment and management of paediatric type 2 diabetes in Australasia.

This presentation will discuss the first Australasian guidelines for children and adolescents with type 2 diabetes providing guidance in relation to screening, diagnosis, diabetes education, diabetes monitoring including targets, multicomponent healthy lifestyle, pharmacotherapy, assessment and management of complications and comorbidities, and transition.

Particular changes as a result of the guidelines include specific recommendations regarding screening and management of children and adolescents from Indigenous background in Australia and New Zealand; tighter diabetes targets (glycated haemoglobin, 48 mmol/mol [≤6.5%]); considering the use of newer medications approved for adults with type 2 diabetes under the guidance of a paediatric endocrinologist if glycaemic targets are not met; and the need to transition adolescents with type 2 diabetes to a diabetes multidisciplinary care team including an adult endocrinologist for their ongoing care.

16:45
Panel Q&A
Ted Wu, Sanjoy Paul, Renae Kirkham, Jencia Wong, Alexia Pena Vargas

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13 November 2020 - 15:00

Teaching and Mentoring Diabetes Education Students in the Clinical Setting

Session - ADEA - 120.0 mins - Hobart Room

15:00
Teaching and Mentoring Diabetes Education Students in the Clinical Setting
Catherine McNamara, Virginia Hagger, Bodil Rasmussen
Work integrated learning is an important component of clinical education in all healthcare fields. Students learn from experienced clinicians, apply theory, and practice with support and supervision. Health professionals studying the graduate certificate of diabetes education complete a one or two-week clinical placement during their course.

CDEs providing placements for postgraduate students and mentoring colleagues have a vital role in teaching and supporting diabetes educators in their transition from novice to expert. Facilitating learning in the clinical context requires different skills from client education. This workshop will include lectures, group discussion and practical activities to assist CDEs to develop knowledge, skills and confidence in this role. Topics include:

- Learning and teaching in the clinical setting: evidence-based best practice.
- Supervising postgraduate students from different disciplines and clinical experience.

- Asking questions and feedback for learning.
- Assessing competence and giving feedback to students or mentees who are not performing at the level expected.
- What makes a good mentor? Tips from mentors and mentees.

The workshop will be led by Virginia Hagger, Cath McNamara and Bodil Rasmussen, current and former course directors and lecturers in the Graduate Certificate of Diabetes Education at Deakin University. Presenters will include experienced CDE supervisors and mentors.

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13 November 2020 - 17:00

Closing

Session - Joint ADEA/ADS - 30.0 mins - Brisbane Room

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13 November 2020 - 18:00

Magical Social Hour

Session - - 60.0 mins -

JOIN HERE! - https://us02web.zoom.us/j/89996018670?pwd=VUUxbDhXZW5rcGplcVI0KzZBZVhDZz09 | Passcode: 812997

Join us on Friday 13 November at 6:00 pm for a fully interactive virtual experience!

Adam Axford is a breath of fresh air and a welcomed exception to the rules. Fusing psychological illusion with powerful language and storytelling, he confidently explores vulnerability, transforming setbacks and failures into alchemical gold. Far more than a mentalist or magician, Adam’s visions of sustainability, mental health, travel and connection inspire new ways of thinking about the world and our role in it.

He uses his extraordinary skills to challenge the way we think about the world and our part in it. On a quest for purpose, he has aligned his passion with what the world needs and will be sharing this with us today.

Date: Friday 13 November 2020
Time: 6:00pm to 7:00pm
Host: Adam Axford
Cost: Included with Full Registration
