EASDec Conference 2018

FINAL PROGRAMME

Thursday, 24th May 2018

VENUE: Centre for Experimental Medicine, Queen's University Belfast, 97 Lisburn Road, Belfast BT9 7BL

16.00 SATELLITE SYMPOSIUM: BIG DATA AND ARTIFICIAL INTELLIGENCE: EYES HAVE IT ALL!

INTRODUCTION AND WELCOME PROFESSOR TUNDE PETO

16.05 **Professor Usha Chakravarthy**
  Mining the UK EMR data for diabetic eye care

16.20 **Professor Lloyd Paul Aiello**
  The value of imaging and image analysis in diabetic eye care

16.35 **Google Verily Team**
  Applications of deep learning in retinal image analysis

16.50 **Barbra Hamill**
  Ground truth for AI – graders' experience

17:00 **Professor Tunde Peto**
  Way forward – Summary and discussion

17.15 **Symposium ends**

EASDec Opening Reception

VENUE: Belfast City Hall, Donegall Square, Belfast, BT1 5GS

18.00 – 18.45   A tour of the historic Belfast City Hall

18.45 – 19.30   Drinks reception and canapés

We thank Belfast City Council for their kind generosity for the use of City Hall.

FRIDAY, 25th MAY 2018

VENUE: RIDDEL HALL, Queen's University Belfast, 185 Stanmillis Road, Belfast BT9 5EE

08.00   Registration

09.00 INTRODUCTION AND WELCOME
   Professor Tunde Peto/Professor Simon Harding, UK

9.10   SESSION 1: CLINICAL TREATMENT AND OCULAR/SYSTEMIC RISK FACTORS
   Chaired by: **Professor Stela Vujosevic and Professor Tomas Sosna**

09.10   *Moderator's introduction of the session*

09.15   **Sahni, J (Switzerland)**
   Anti-VEGF/anti-angiopoietin-2 bispecific antibody RG7716 in diabetic macular oedema: complete 36-week results from the phase 2, multicentre, randomized, active treatment-controlled BOULEVARD clinical trial

09.27   **Peto, T (UK)**
   Do visual outcomes differ when ILUVIEN (fluocinolone acetonide [FAc]) is administered as a monotherapy versus delivery as a combination therapy?

09.39   **Erginay, A (France)**
   Effects of intravitreal anti-vascular endothelial growth factor on diabetic retinopathy: an evaluation comparing ultra-wide field photography and fluorescein angiography

09.51   **Gallagher, P (UK)**
   An audit of intravitreal vascular endothelial growth factor inhibition on renal function in patients with diabetic macular oedema.

10.03   **Grauslund, J (Denmark)**
   Topical treatment with brimonidine and somatostatin causes retinal vascular dilation in patients with early diabetic retinopathy from the European Consortium for the Early Treatment of Diabetic Retinopathy (EUROCONDOR)

10.15 Introduction to EVA KOHNER LECTURE: Professor Simon Harding, UK

10.18 EVA KOHNER LECTURE: Professor Lloyd Paul Aiello, Professor of Ophthalmology, Harvard Medical School, USA
   Title: Diabetic eye disease – providing the best possible care

10.55   Coffee/tea break

11.25 SESSION 2: EARLY PATHOGENIC MECHANISMS OF DIABETIC RETINOPATHY
   Chaired by: **Professor Rafael Simo and Dr Ingeborg Klaassen**

11.25   *Moderator's introduction of the session*

11.32   **Hernández, C (Spain)**

Topical administration of bosentan prevents retinal neurodegeneration and vascular leakage in experimental diabetes

11.42 **Tecilazich, F (VS)**
Diabetes primes in patrolling monocytes a transcriptional program for the protection of retinal vessels

11.52 **Solà-Adell, C (Spain)**
Differential effect of Liragluride on endothelial cells to induce tip cell phenotype by VEGF under normoxic or hypoxic conditions

12.02 **Joint winner of the EASDec Young Investigator Award in honour of Anne-Katrin Sjolie**
O'Hare, M (UK)
TRPV2 downregulation in the development of diabetic retinopathy-like lesions

12.12 **Joint winner of the EASDec Young Investigator Award in honour of Anne-Katrin Sjolie**
Simó-Servat, O (Spain)
New insights on inflammatory mediators in early diabetic retinopathy: a proteomic approach in human retinas

12.22 **Pereira Marques, I (Portugal)**
Characterization of the initial stages of diabetic retinal disease using OCT and OCTA

12:32 **Beltramo, E (Turin)**
MiRNAs shuttled by extracellular vesicles from diabetic subjects induce features of retinopathy in vitro

12.42 *Lunch and Poster Presentation* **(Poster presenters have priority for lunch)**

12.55 SESSION 3: POSTER SESSION

LABORATORY SCIENCE
Moderated by: **Dr Paul Canning**

1.   **Balyen, L (Turkey)**
Blueberry (vaccinium myrtillus) ameliorates streptozotocin-induced oxidative stress in diabetic rat retinas

2.   **Vassilev, V (UK)**
The molecular effects of Zn supplementation on neovascularization

3.   **Barabas, P (UK)**
Regional retinal blood flow differences in the akita mouse model of diabetic retinopathy

4.   **McCann, P (UK)**
Corneal thickness and innate immune cell counts in diabetic keratopathy

5.   **Lechner, J (UK)**
Retinal vessel structure unaffected by repeated intravitreal anti-VEGF injections in Ins2akita diabetic and non-diabetic mice

NEURODEGENERATION
Moderated by: **Dr Olga Simó-Servat**

6.   **Vujosevic, S (Italy)**
Early microvascular and neural changes in the retina in diabetes mellitus

7.   **Perais, J (UK)**

Peripapillary retinal nerve fibre changes in diabetes mellitus
8. **Pinilla Lozano, I (Spain)**
Relationship between OCT changes over years and modification in vascular macular capillary plexus in patient with type 1 diabetes with no retinopathy

IMAGING
Moderated by: **Professor Jacob Grauslund**
9. **Konstantinidis, L (Switzerland)**
Choroidal thickness in diabetic nephropathy patients without diabetic retinopathy
10. **Das, R (UK)**
Choroidal vascular index in diabetes mellitus
11. **Weisner, G (Denmark)**
Severe non-proliferative diabetic retinopathy associates with higher retinal arteriolar and venular oxygen saturation
12. **Hamill, B (UK)**
Disorganisation of retinal inner layers (DRIL) In patients with Diabetic Macular Oedema (DMO)
13. **Coey, R (UK)**
The relationship between retinal quantitative autofluorescence and Diabetes Mellitus in the Northern Ireland Cohort for the Longitudinal study of Ageing (NICOLA)
14. **Naska, T (UK)**
The effect of diabetes mellitus on macular pigment optical density

RISK FACTORS
Moderated by: **Professor Michael Larsen**
15. **Hampden-Martin, A (UK)**
Characterising diabetic maculopathy in patients receiving intervention for hypertension
16. **Blindbæk, S (Denmark)**
Diabetic retinopathy lesions correlate to metabolic changes in patients with diabetic macular oedema.
17. **Jamison, C (UK)**
Diabetic retinopathy in patients with diabetes mellitus secondary to chronic pancreatitis
18. **Smith, J (UK)**
Systemic risk factors at screening for referable diabetic retinopathy to Hospital Eye Services. A Type 2 Diabetes Mellitus cohort study of people in the Republic of Ireland.
19. **Hirose, A (Japan)**
Relation between retinopathy and the glycaemic exposure indicated by total ΣexcessA1C index in type 1 diabetes: a DCCT/EDIC subgroup analysis
20. **Larsen, M (UK)**
Risk factors of diabetic retinopathy in the Funen diabetes database based on latent class model analysis

CLINICAL ASPECTS OF DR
Moderated by: **Dr Geir Bertelson and Dr Dag Fosmark**
Clinical aspects/treatment

21. **Hellgren, K (Sweden)**
Monitoring Diabetic subjects with no or early stages of retinopathy using perimetry and an improved model defining limits for significant change

22. **Bezzina, A (Malta)**
Identifying factors predicting treatment response in anti-VEGF naïve diabetic macular oedema patients treated with intra-vitreal bevacizumab Injections

23. **Moutray, T (UK)**
Cochrane review 'Different lasers and techniques for proliferative diabetic retinopathy'

24. **Scanlon, P (UK)**
The development of an on-line simulation tool for teaching retinal laser treatment in English and Chinese

25. **Partyka, I (Poland)**
Panretinal photocoagulation versus intravitreal injections in proliferative diabetic retinopathy - the best way of treatment

26. **Alsayed, E (Ireland)**
Expanded 2- year follow up of visual outcome of focal Laser guided by FFA and different types of intravitreal injections of anti-VEGF drugs for Treatment of diabetic macular oedema

27. **Cicinelli, M (Italy)**
Early response to Ranibizumab predictive of functional outcome after Dexamethasone for unresponsive diabetic macular oedema

28. **Rewbury, R (UK)**
Clinical load due to diabetic macular oedema - what does it look like after changes in treatment protocols?

29. **Alonso de la Fuente, J.I. (Spain)**
Baseline tomographic morphological changes and response to Dexamethasone intravitreal implant (Ozurdex®) in patients with refractory diabetic macular oedema

30. **Douglas, T (UK)**
Is there any improvement in diabetic control when undergoing intravitreal treatment for diabetic macular oedema (DMO)?

31. **Stratton, I (UK)**
Heterogeneity between centres using anti-VEGF injections in patients with diabetic macular oedema in 21 UK centres

32. **Wang, A (UK)**
Enabling patients to be partners in research – how to ensure publicly funded applied health services research is fit-for-purpose

Clinical aspects/epidemiology
Moderated by: **Dr M Rasmussen**

33. **Jackson, J (UK)**
Diabetic eye disease as a cause of Severe Sight (SSI) & Sight (SI) Impairment Certification in Northern Ireland: an epidemiological study

34. **Haase, M (Czech Republic)**
Clinical profile of patients before pancreas transplantation

35. **Vazquez-Arango, P (UK)**
Visual impairment in a population based evaluation of people with diabetes

SCREENING
Moderated by: **Mr Steve Aldington and Dr Ali Erginay**

36. **PARKER, N (UK)**
Regional audit of diabetic patients attending the rapid access eye service (RAES) in Royal Victoria Hospital, Belfast from 1st August 2016 to 31st October 2016 - diagnosis and referral pathways

37. **Dale, A (UK)**
Reduction in blindness rates since the introduction of digital photographic screening in an English diabetic eye screening programme

38. **McElduff, P (UK)**
Audit of those patients with no perception of light recorded in the Northern Irish Diabetic Eye Screening Programme (NIDESP)

39. **McKeown, B (UK)**
Accuracy of hospital eye service discharge list: transfer from clinic to diabetic retinopathy screening in Northern Ireland

40. **D'Aloisio, R (Italy)**
Diagnostic accuracy of digital retinal fundus image (DRFI) analysis in detecting diabetic macular oedema (DME) in patients with type 2 diabetes mellitus (PwT2DM).

41. **Quinn, N (UK)**
Integrating diabetic eye screening in a haemodialysis clinic

42. **Creer, R (UK)**
The impact of virtual clinics on the diabetic retinopathy service at Manchester Royal Eye Hospital

43. **Gahir, N (UK)**
Outcome of IRMA detected in a UK diabetic retinopathy screening programme

44. **Blows, P (UK)**
Piloting a diabetic eye screening programme in Swaziland

45. **Mohan, K (UK)**
Developing a comprehensive model of diabetic eye screening programme in Vietnam

46. **Lagan, M (UK)**
Acute Angle closure glaucoma in the Northern Ireland Diabetic Retinopathy Screening Programme

47. **Robinson, R (UK)**
No longer diabetic according to the Diabetic Eye Screening Programme Northern Ireland database: Myths or truth?

48. **Purvis, M (UK)**
Follow up of Northern Ireland Diabetic Eye Screening Programme (DESPNI) active proliferative diabetic retinopathy referrals from 06/02/17-30/04/17.

49. **Csutak, A (Hungary)**
A new approach to screen and follow type 1 diabetes mellitus with and without diabetic retinopathy: a 2 years follow-up study

50. **Russell, G (UK)**
Evaluation of lesion risk zones output by an automated diabetic retinopathy screening system

51. **Foster, M (UK)**
Audit of patients attending optometry led diabetic retinopathy screening Slit-lamp Clinic in Braid Valley Health & Care Centre (NHSCT)

52. **Scott, L (UK)**
Reaching patients who do not attend diabetic retinopathy screening

15.20 SESSION 4: AUTOMATED GRADING
Chaired by: **Professor Simon Harding and Dr Frank Verbraak**

15.20   *Moderator's introduction of the session*

15.25   **KEYNOTE SPEAKER: Nicky Hekster**
         HOW INTELLIGENT IS ARTIFICIAL INTELLIGENCE?
         Introduced by Professor Simon Harding

15.56   **Pratt, H (UK)**
         Automated Diagnosis of fundus camera images for diabetic retinopathy for treatment
         referral
16.08   **Tang, H (UK)**
         Automated retinal image reading and progression analysis
16.20   **Ramos, J.D (Portugal)**
         Improved method of retmarker screening presents safer identification of referable
         diabetic retinopathy with significantly better burden reduction (higher specificity)
16.32   **Verbraak, F (The Netherlands)**
         Diversification of follow-up screening visit interval by differentiation between mild or
         more versus no diabetic retinopathy (DR) with an enhanced deep-learning device
         (IDx-DR-EU-2.1) used for the automated detection of DR.

16.45   Discussion

17.00   **ANNUAL GENERAL MEETING**
         Moderator: **Professor Reinier Schlingemann**

19.00   **CONFERENCE DINNER**
         Ulster Museum, Botanic Gardens, Belfast, BT9 5AB
         Prosecco reception from 18.30

SATURDAY, 26th MAY 2018

VENUE: RIDDEL HALL, Queen's University Belfast, 185 Stanmillis Road, Belfast BT9 5EE

08.30   Registration

09.00   SESSION 5: ADDRESSING TIMELY DETECTION — STILL AN UNMET GOAL
         Chaired by: **Professor Tunde Peto and Professor Peter Scanlon**

09.00   *Moderator's introduction of the session*

09.05   **Sharif, A (Sweden)**
         Screening for diabetic retinopathy- compliance with variable intervals: 18-36 months
09.18   **Davison, R, (UK)**
         Audit of attendance and disease severity in paediatric type 1 diabetes mellitus
         patients in the Belfast Trust
09.28   **Bell, A (UK)**

Diabetic eye screening in young adults with type 1 diabetes in Northern Ireland

09.38 **Wright, S (UK)**
The power of words: letters from a diabetic retinopathy screening programme

09.51 **Byrne, P (UK)**
Putting patients' eyes back into their bodies: implications of a social science study of screening and diabetes eye care.

10.04 **Rasmussen, M (Denmark)**
Risk factors of peripheral retinal lesions in patients with type 1 Diabetes

10.17 *Coffee/tea break*

10.55 KEYNOTE LECTURE: Professor Alan Stitt
The role of regenerative medicine in diabetic retinopathy
Introduced by Professor Reinier Schlingemann

11.30 SESSION 6: TARGETING THE VASCULAR BARRIER
Chaired by: **Professor Reinier Schlingemann and Professor Alan Stitt**

11.30 ***Moderator's introduction of the session***

11.35 **Eyre, J.J (UK)**
Developing regenerative medicine strategies for diabetic retinopathy using human retinal endothelial cells

11.48 **Schlingemann, R (The Netherlands**)
Glucocorticoids exert differential effects on the endothelium in an in vitro model of the blood-retinal barrier

12.01 **Klaassen, I (The Netherlands)**
Formation of the retinal vasculature and blood-retinal barrier during early development and the role of Plasmalemma Vesicle-Associated Protein (PLVAP)

12.14 **Feyen, J (Belgium)**
Neutralization of placental growth factor reduces retinal inflammation in diabetic animal models

12.27 **Van Bergen, T (Belgium)**
Targeting plasma kallikrein with a novel bicyclic peptide inhibitor reduces retinal leakage in a diabetic rat model

12.45 Best poster prize ceremony and closing remarks
Professor Simon Harding