

UKBiobank Eye and Vision Consortium (EVC) Update
July/August 2012

SUBMITTED DATA REQUESTS

Refractive error and visual acuity (UKBB No. 669)

Project leads: Phillippa Cumberland & Jugnoo Rahi (UCL Inst of Child Health)
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Primary endpoints under study: Refractive error & visual function

Intraocular pressure (UKBB No. 393)

Project lead: Paul Foster (UCL Institute of Ophthalmology)

p.foster@ucl.ac.uk

Primary endpoints under study: IOPg, IOPcc, corneal biomechanics

Retinal Vasculature (UKBB No. 338)

Project leads: Tom McGillivray, Manuel Trucco (Edinburgh, Dundee)

T.J.McGillivray@ed.ac.uk

manueltrucco@computing.dundee.ac.uk

Primary endpoints under study: AV ratio & branch angle

Retinal Vasculature (UKBB No. 522)

Project leads: Alicja Rudnicka & Chris Owens (St Georges London)

Primary endpoints under study: absolute AV calibre & vascular tortuosity

arudnick@sgul.ac.uk ; cowen@sgul.ac.uk

Retinal Detachment

Project Lead: Danny Mitry (Edinburgh)

mitryd@gmail.com

Endpoints under study: SNPs associated with retinal detachment

EVENTS

UKBB EVC Retinal Vascular Group Meeting, Edinburgh

Hosts: Tom McGillivray & Bal Dhillon. Tuesday 26th June 2012

The meeting took place at the new Clinical Research Imaging Centre, Queens Medical Research Institute, Edinburgh, and was attended 13 researchers, including members of both teams that have submitted requests for retinal images aiming to study vascular characteristics.

Alicja Rudnicka, Chris Owens from St Georges, London and Sarah Barman from Kingston University, London presented data based on prior work on study of retinal vascular measures in previous cohort studies using CAIAR image analysis system (see www.kingston.ac.uk/sec/retinal). Tom McGillivray presented details of Vampire software and details of development and validation of the package.

The group agreed to collaborate to identify joint funding opportunities and to identify a common set of images for initial analysis. The meeting was part funded by the NIHR Biomedical Research Centre at Moorfields.

UKBiobank Chief Scientist Visits Moorfields

Wednesday 11th July

Dr Cathie Sudlow, based at Edinburgh University, has taken over from Tim Sprosen as Chief Scientist for UKBiobank. Dr Sudlow gave an update on UKBB activities, including the plans to roll out more intensive cardiac and brain imaging, as well as assessment of physical activity using wrist-worn accelerometers. We have asked that strong consideration be given to obtaining a fundus photo/OCT in people undergoing brain imaging if they have not had

Later that day, Cathie Sudlow and Paul Foster attended the House of Commons for a reception arranged by the All Party Parliamentary Group on Medical Research. The reception was themed "Unlocking the Power of Data" was arranged to mark the APPG's efforts to ensure a core role for medical research in the new Health and Social Care Bill. Details are available at (<http://www.dh.gov.uk/health/files/2012/02/C8-Embedding-research-as-a-core-function-of-the-health-service1.pdf>) UKBB featured in some of the presentations at the reception.

OCT IMAGE SEGMENTATION

Project Lead: Praveen Patel (Moorfields)

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Praveen, together with Pearse Keane and Adnan Tufail at Moorfields, have made considerable progress in an ambitious project to segment the macular OCT images of >78,000 people collected by UKBiobank, with the aim of unlocking detailed numerical data. Manpower and equipment are now available to pursue this project. An application for data access will be submitted in the next 2 weeks.

GENETIC ANALYSES

Project Lead: Chris Hammond (Kings College & St Thomas' London)

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Chris' group are well integrated with large international genetics research consortia. They are currently exploring the strategy for genetic studies of eye disease using UKBB. Expressions of interest to Chris please.

SUPPORTING ACTIVITIES OF THE E&V CONSORTIUM

Paul Foster was recently awarded funding through the NIHR Biomedical Research Centre funding stream at Moorfields for two posts: one part time administrator and an epidemiologist/statistician, both for the next 3 years. These staff will be based at Moorfields/Institute of Ophthalmology, but will be tasked primarily with supporting the activities of the UKBB Eye and Vision Group. We will be seeking additional funding to continue the support of the Eye group.

We plan to hold another consortium meeting at The Wellcome Trust in February 2013.