

NIHR BioResource Centre Moorfields Eye Hospital, London

Moorfields Eye Hospital is a specialised research centre linked with the University College London Institute of Ophthalmology. We are committed to a multi-disciplinary research portfolio that furthers an understanding of normal and diseased structure and function of the eye and visual system. Ophthalmology is a very data-rich sub-speciality of medicine in which the detailed phenotyping of the eye through imaging and electrophysiological measurement has increased rapidly over the past two decades. This has led to advances in our understanding of the causes of blindness, and the advent of gene-replacement, targeted therapeutics, prosthetic devices and cellular therapies. Already, for instance, gene-replacement is now possible for one monogenic blinding disorder, and many trials using a similar approach for a wider set of disorders are ongoing at Moorfields in collaboration with a network of centres in the UK and abroad. Large sets of clinical data, acquired non-invasively and efficiently from many thousands of patients also makes the speciality ideal for the exploitation of machine-learning strategies, to further refine diagnosis, decision-making, blindness prevention and management.

The combination of the Institute of Ophthalmology's research resource with the clinical activity of Moorfields Eye Hospital, which has the largest ophthalmic patient population in the Western World, leverages these advances in ophthalmic investigation and treatment. The joint site sits within a national and international network of dedicated clinicians and vision scientists. Recruitment to the BioResource allows the collection of well characterised patients with rare and common blinding disorders. For rare disease, the site has a comprehensive Genetics Service which includes five dedicated consultants and close links with Great Ormond Street Hospital and the North Thames Genomic Medicine Centre. Professor Andrew Webster leads the Genetics Service and the Moorfields NIHR BioResource and a core team of research staff and welcomes recruitment of patients and collaborations across the UK. Our focus will be on patients and families with single-gene disorders, including optic neuropathy and inherited retinal dystrophy as well as the common blinding conditions of age-related macular disease, primary open angle glaucoma and diabetic retinopathy. Please call or email Samantha Lawrence (0207 566 2265 / samantha.lawrence1@nhs.net) for further information.