

CURRICULUM VITAE

Mark Christopher Westcott

PERSONAL DETAILS

Surname:	Westcott
Forenames:	Mark Christopher
Nationality:	British
Date of Birth:	September 2 nd 1966
Marital Status:	Married, 1 child
G.M.C. No.	3432369
M.D.U. No.	242778F

QUALIFICATIONS

MB BS:	June 1989 St. Thomas' Hospital Medical School, London
FRCOphth:	September 1993
Doctorate of Medicine (MD):	August 1999
CCST:	April 2002

Doctoral thesis (Doctorate of Medicine, MD)

November 1994 to February 1997, awarded by University College London in August 1999.

Research Fellow at: **Glaucoma Unit, Moorfields Eye Hospital, London**
Department of Visual Science, Institute of Ophthalmology

Supervisors: **Professor RA Hitchings, Professor FW Fitzke**

“Visual function in glaucoma: Improving the detection of early abnormalities of visual function using Motion Sensitivity testing and High Spatial Resolution Perimetry”

This thesis investigated a novel test of visual function called “motion sensitivity testing”, which selectively tests the motion sensitive (magnocellular) visual pathway. This demonstrated that abnormalities of motion sensitivity are identifiable in glaucomatous patients even when conventional perimetric tests remain normal. I also investigated the clinical use of an alternative technique called high spatial resolution perimetry.

FELLOWSHIP

JULES STEIN EYE INSTITUTE, UCLA, LOS ANGELES (July 2000 to June 2001)

Supervisor: **Professor J Caprioli**

Clinical experience

The Jules Stein is one of the leading eye institutes worldwide and attracts complicated cases from much of the Western United States. Clinic experience and formal teaching provided me with an exceptional opportunity to enhance my clinical skills in glaucoma.

Research projects

Motion detection testing in early glaucoma

This project researched a monitor-based test of motion sensitivity in collaboration with the Institute of Ophthalmology & Moorfields Eye Hospital. Ongoing research aims to further develop the test and to evaluate the test against other tests of visual function (frequency doubling perimetry) and against optic nerve head imaging.

AGIS

Identifying “true” deterioration of the visual field from the noise or variability is a major challenge in glaucoma. I have been investigating an approach using time series analysis, which is

used in economic forecasting. This project used visual field data from the Advanced Glaucoma Intervention Study (AGIS).

Functional MRI

A study to perform functional MRI in patients with glaucoma was piloted in collaboration with the Department of Psychology at UCLA. The purpose of this project was to see if it is possible to demonstrate a preferential loss of the magnocellular visual pathway using functional MRI neuro-imaging in patients with early glaucoma .

MANAGEMENT EXPERIENCE

Manager of two long-term research projects across two continents (1998 to present)

A Motion Detection Test for Glaucoma
Visual Field Deterioration in Glaucoma

Institute of Ophthalmology, London, UK
Jules Stein Eye Institute, UCLA, USA

Skills acquired as a result of this experience have included:

- Study design and grant application (see Research Awards, below)
- Project planning and costing
- Staff supervision and development (PhD student, statisticians, medical students and others)
- Project management (meeting deadlines, planning work, etc)
- Collaborating with other specialities (e.g. BioStatistics Department at UCLA)
- Extensive use of information technology (both standard desktop and research applications e.g. statistical analysis)

Research awards

Funding body	Date	Sum awarded
Friends of Moorfields Charity	1994 to 1997	£48,000
Frost Charitable Trust award	2000	£26,000
International Glaucoma Association	1999	£20,000
Bogue Trust travel award (University College, London)	2000	£6,000
Moorfields Eye Hospital Special Trustees	1995	£3,200
International Glaucoma Association Travel Awards	1994 to 1997	£2,000
ARVO travel award	2001	£500
Total		£105,700

Management Courses

'Healthcare Management for Specialist Registrars'

Keele University, November 1999

'Managerial Leadership and Decision making'

UCLA School of Public Health, Los Angeles, January – March 2001.

'Self-Awareness and Influencing skills'

Run by Catalyst, July 2002

PRIZES

Awarded 'Cup and Disc' award for best paper at the 6th Congress of the European Glaucoma Society, June 2000.

Correlating perimetric sensitivity with structure. The appropriate scaling of differential light sensitivity and the correlation with neuroretinal rim area in glaucoma.

Paper nominated for the Foulds Trophy session, The Royal College of Ophthalmologists meeting, 1997.

High spatial resolution automated perimetry can be clinically useful in the detection of early scotomas in glaucoma.

National Winner of the Duke Elder Undergraduate Ophthalmology prize, 1988.

CAREER HISTORY

CURRENT POSITION (from February 2003)

Consultant Ophthalmologist (substantive), Barts and the London NHS Trust

Moorfields Eye Hospital NHS Trust (from 1st May 2003)

North Middlesex Hospital NHS Trust (honorary)

MOST RECENT POSITIONS

Uveitis Fellow, Moorfields Eye Hospital, London (September 2002 to January 2003)

Supervisors: Professor S Lightman, Mr C Pavesio

Fellow, Glaucoma service, Moorfields Eye Hospital, London (March 2002 to August 2003)

Supervisors: Mr K Barton

This fellowship specialised in uveitic glaucoma.

PREVIOUS OPHTHALMIC EXPERIENCE

Date and Post	Location
Specialist Registrar July 2001 to February 2002 March 1999 to June 2000 March 1998 to February 1999 March 1997 to February 1998	Moorfields Eye Hospital, London Moorfields Eye Hospital, London Whipps Cross Hospital Chelsea & Westminster Hospital
Clinical Research Fellow November 1994 to February 1997	Moorfields Eye Hospital (Glaucoma Unit) & Institute of Ophthalmology, London
Locum Registrar February 1994 to October 1994	Royal Eye Unit, Kingston
Senior House Officer July 1992 to January 1994	Western Eye Hospital, London
Senior House Officer August 1991 to June 1992	Royal Eye Unit, Kingston
House Surgeon November 1989 to January 1990	St. Thomas' Hospital Eye Unit, London
Undergraduate elective January 1989 to February 1989	Massachusetts Eye and Ear Hospital, Boston

OTHER EXPERIENCE

Date and Post	Location
Senior House Officer (Neurosurgery) February 1991 to July 1991	Atkinson Morley's Hospital, Wimbledon
House Physician February 1990 to August 1990	Queen Mary's Hospital, Sidcup, Kent
House Surgeon August 1989 to October 1989	Surgical Unit, St. Thomas' Hospital, London

SPECIALIST INTERESTS

GLAUCOMA

Moorfields Eye Hospital (Mr K Barton, Mr MH Miller, Mr IE Murdoch, Professor RA Hitchings)

Jules Stein Eye Institute (Professor J Caprioli)

I have gained extensive clinical experience in the diagnosis and management of glaucoma which is complemented by my research interests in perimetry and optic nerve head imaging. My

surgical experience covers all aspects of adult glaucoma surgery. I have performed a large number of trabeculectomies (many with antimetabolites), bleb revisions, bleb needling with antimetabolites and cyclodiode destructive procedures.

In addition, my work in specialist units has enabled me to gain experience in the management of less common problems, such as the secondary and uveitic glaucomas, hypotony and tube surgery.

UVEITIS

Moorfields Eye Hospital (Mr C Pavesio, Prof S Lightman))

This fellowship has provided comprehensive experience in all aspects of uveitis. I have also gained first hand experience in performing intravitreal treatments, and of safely managing systemic immunosuppressive therapy.

HIV Ophthalmology

Chelsea & Westminster Hospital (Miss SM Mitchell)

Moorfields Eye Hospital (Prof Lightman)

I have gained a substantial knowledge of HIV ophthalmology and have published in this field (see Publications).

Further subspecialty experience

Medical retina	Moorfields Eye Hospital (Mr J Dowler) Whipps Cross Hospital (Mr Towler)
Cornea	Moorfields Eye Hospital (Mr SJ Tuft)
Vitreoretinal	Moorfields Eye Hospital (Mr PK Leaver)
Cataract	Moorfields Eye Hospital (Miss C Cunningham)
Oculoplastics	Moorfields Eye Hospital (Mr JRO Collin) Chelsea & Westminster Hospital (Mr N Joshi)

SURGICAL LOG

My surgical experience is comprehensive and I am proficient in the performing most of the commoner ophthalmic and periocular surgical procedures.

Cases performed as primary surgeon:

Phacoemulsification / IOL	537
Extracapsular cataract extraction / IOL	45
Trabeculectomy with / without antimetabolites	61
Bleb revisions, needlings	15
Tubes	6
Squint surgery	26
Oculoplastics & Lacrimal	51
Vitreo-retinal	18

PUBLICATIONS

FIRST AUTHOR

High Spatial Resolution Perimetry in Glaucoma

Westcott MC, McNaught AI, Crabb D, Fitzke FW, Hitchings RA.
British Journal of Ophthalmology 1997, 81, 452-459.

Stimulus orientation can effect motion sensitivity in glaucoma

Westcott MC, Fitzke FW, Hitchings RA.
Perimetry Update 1997 pp 35-42.

Abnormal Motion Displacement Thresholds are associated with Fine Scale Luminance Sensitivity Loss in Glaucoma.

Westcott MC, Fitzke FW, Hitchings RA.
Vision Research 1998, 38, 3171-3180.

Characteristics of Frequency-of-Seeing Curves for a motion stimulus in glaucoma eyes, suspect and normal eyes

Westcott MC, Fitzke FW, Hitchings RA.
Vision Research 1999 39, 631-639

Abnormal maximum line displacement sensitivity & frequency-of-seeing curves for a motion stimulus in glaucoma

Westcott MC, Fitzke FW, Poinosawmy D.
Perimetry Update 1999.

Response time prolongation for a motion stimulus in patients with glaucoma and its relationship with elevation of the motion threshold

Westcott MC, Fitzke FW, Viswanathan AC, Hitchings RA.
J Glaucoma 2000;9(4):289-95.

Effect of age on visual outcome following cataract extraction.

Westcott MC, Tuft SJ, Minassian DC.
British Journal of Ophthalmology 2000;84(12):1380-1382.

Failure of accommodation in patients with HIV infection

Westcott MC, Ward M, Mitchell SM.
Eye 2001;15(4):474-478.

Optimum stimulus duration for motion displacement in glaucoma

Westcott MC, Verdon-Roe GV, Viswanathan A, Fitzke FW, Hitchings RH.
Perimetry Update 2001 (in press)

The nasal step revisited. High spatial resolution perimetry of the nasal field in glaucoma and glaucoma suspect eyes

Westcott MC, Garway-Heath DF, Kamal D, Fitzke FW, Hitchings RH.
British Journal of Ophthalmology 2002;86:761-766.

SECOND AUTHOR

Does topical flurbiprofen affect the response to miochol?

Jackson H, Patel CK, Westcott MC, Thompson GM, Mathalone BM.
Eye 1994 8, 329-331

Who should see eye casualties? A Comparison of Eye Care in an Accident & Emergency Department with a Dedicated Eye Casualty

Flitcroft DI, Westcott MC, Wormald R, Touquet R.

British Journal of Accident and Emergency Medicine. 1995 Mar; 12(1) 23-7

Relationship between perimetric light sensitivity and optic disc neuroretinal rim area

Garway-Heath DF, Viswanathan A, Westcott M, Kamal D, Fitzke FW, Hitchings RH.

Perimetry Update 1999

Optimum number of stimulus oscillations for motion displacement detection in glaucoma

Verdon-Roe GV, Westcott MC, Viswanathan A, Fitzke FW, Hitchings RH.

Perimetry Update 2001 (in press)

IN PREPARATION

Modelling glaucomatous deterioration of the visual field using time series analysis.

Westcott MC, Caprioli J, Li G, Zhou G, Hoffman DC, Gaasterland D.

In preparation for *IOVS*

Determining glaucomatous visual field deterioration using a time series model: Comparison with clinician and linear trend analysis.

Westcott MC, Caprioli J, Li G, Zhou G, Hoffman DC, Gaasterland D and the AGIS investigators.

In preparation for *IOVS*

PUBLISHED ABSTRACTS

Correlation of Motion Perception Losses with Luminance Sensitivity

Westcott MC, McNaught AI, Viswanathan AC, Fitzke FW, Hitchings RA

[ARVO abstract]. *Invest Ophthalmol Vis Sci* 1995.

Fine Matrix Mapping of Foveal Sensitivity Loss in Glaucoma

McNaught AI, Westcott MC, Viswanathan AC, Fitzke FW, Hitchings RA.

[ARVO abstract]. *Invest Ophthalmol Vis Sci* 1995.

The Effect of Frequency of Visual Field Measurement on ability to predict Glaucomatous Visual Fields

Viswanathan AC, Crabb DP, McNaught AI, Westcott MC, Fitzke FW, Hitchings RA

[ARVO abstract]. *Invest Ophthalmol Vis Sci* 1995.

Reaction times for motion detection are significantly prolonged in glaucoma

Westcott MC, Viswanathan A, Fitzke FW, Hitchings RA.

[ARVO abstract]. *Invest Ophthalmol Vis Sci* 1996.

Rapid Diagnosis of Field Loss in Glaucoma Using Slit-Lamp Biomicroscopy

McNaught AI, Westcott MC, Fontana L, Miller MH, Fitzke FW.

[ARVO abstract]. *Invest Ophthalmol Vis Sci* 1996.

Stimulus orientation can effect motion sensitivity in glaucoma

Westcott MC, Fitzke FW, Hitchings RA.

[ARVO abstract]. *Invest Ophthalmol Vis Sci* 1997.

Rapid diagnosis of field loss in glaucoma using slit lamp biomicroscopy. The use of a blue stimulus to improve sensitivity'

Westcott MC, Sharma K, Fitzke FW, Franks W.
[ARVO abstract in new ideas in glaucoma session] *Invest Ophthalmol Vis Sci* 1998.

Is conventional perimetry sufficient for the evaluation of the nasal step in glaucoma? High spatial resolution perimetry can identify scotomas not apparent on conventional Humphrey testing.

Westcott MC, Garway-Heath DF, Fitzke FW, Hitchings RH
[ARVO abstract]. *Invest Ophthalmol Vis Sci* 1999.

A new method to assess the macular hole scotomas using high spatial resolution perimetry performed on an unmodified Humphrey perimeter.

Gotzarides S, Westcott MC, Anderson DF, Fitzke FW, Luff AR, Canning CR
[ARVO abstract]. *Invest Ophthalmol Vis Sci* 2000.

Correlating perimetric sensitivity with structure. The appropriate scaling of the differential light sensitivity and the correlation with neuroretinal rim area in glaucoma.

Westcott MC, Garway-Heath DF, Tan J, Fitzke FW, Hitchings RA.
[ARVO abstract]. *Invest Ophthalmol Vis Sci* 2000.

Agreement between pointwise linear regression and AGIS score change in identifying visual field deterioration in glaucoma.

Westcott MC, Hoffman D, Gaasterland D, Viswanathan A, Caprioli J.
[ARVO abstract]. *Invest Ophthalmol Vis Sci* 2001.

Comparison of methods to detect glaucomatous visual field progression

Hoffman D, Westcott M, Gaasterland D, Caprioli, J.
[ARVO abstract]. *Invest Ophthalmol Vis Sci* 2001.

A new multi-location motion displacement test for glaucoma

Verdon-Roe GM, Westcott MC, Viswanathan AC, Garway-Heath DF, Fitzke FW, Caprioli J, Hitchings RH.
[ARVO abstract]. *Invest Ophthalmol Vis Sci* 2001.

A new approach for determining glaucomatous visual field deterioration with time series analysis

Westcott MC, Li G, Zhou K, Coleman A, Hoffman D, Gaasterland D, Caprioli J.
[ARVO abstract]. *Invest Ophthalmol Vis Sci* 2002.

MEETING PRESENTATIONS

Psychophysical investigations of retinal nerve fiber layer abnormalities in glaucoma

Westcott MC, Fontana L, McNaught AI, Fitzke FW, Hitchings RH
Glaucoma Society (UK&Eire) 16th Annual meeting. November 1995.

Improving the detection of early glaucoma using high resolution perimetry and motion sensitivity testing

Westcott MC, Fitzke FW, Hitchings RA.
Paper presentation at the *Royal College of Ophthalmologists* meeting, Edinburgh, May 1996.

Rapid Diagnosis of Field Loss in Glaucoma Using Slit-Lamp Biomicroscopy

McNaught AI, Westcott MC, Fontana L, Miller MH, Fitzke FW.
Poster presentation at the *Royal College of Ophthalmologists* meeting, Edinburgh, May 1996.

Stimulus orientation can effect motion sensitivity in glaucoma

Westcott MC, Fitzke FW, Hitchings RA.

Paper presentation at the *XIIth International Perimetric Society* meeting, Wurtzburg, Germany 1996.

The use of High Resolution Perimetry to improve the detection of early luminance loss in glaucoma

Westcott MC, Garway-Heath DF, Fitzke FW, Hitchings RH

Poster presentation at the *5th Congress of the European glaucoma society*, Paris, June 1996.

The clinical use of high spatial resolution automated perimetry to detect the earliest luminance loss in glaucoma

Westcott MC, Garway-Heath DF, Kamal D, Fitzke FW, Hitchings RH

Paper presentation at the *Glaucoma Society (UK&Eire) 16th Annual meeting*, November 1996.

The effects of antipsychotic medication on visual function in schizophrenic patients

Vile JM, Mackinnell I, Fitzke FW, Westcott MC, Donnelly N, Bamber RWK, Strange PG.

Poster presentation at the *British Pharmacological Society*, December 1996.

Slit-Lamp Perimetry: Rapid Diagnosis of Field Loss in Glaucoma Using Slit-Lamp Biomicroscopy. A comparison between white and blue stimuli

Westcott MC, Sharma K, Fitzke FW, W Franks

Paper presentation at the *Glaucoma Society (UK&Eire) 16th Annual meeting*, November 1997.

Abnormal maximum line displacement sensitivity & frequency-of-seeing curves for a motion stimulus in glaucoma

Westcott MC, Fitzke FW, Poinosawmy D.

Paper presentation at the *XIIIth International Perimetric Society* meeting, Lake Garda, Italy, September 1998.

Correlating perimetric sensitivity with structure. The appropriate scaling of the differential light sensitivity and the correlation with neuroretinal rim area in glaucoma.

Westcott MC, Garway-Heath DF, Tan J, Fitzke FW, Hitchings RA.

Paper presentation at the 6th Congress of the *European Glaucoma Society*, June 2000.

Optimum stimulus duration for motion displacement detection in glaucoma

Westcott MC, Verdon-Roe GV, Viswanathan A, Fitzke FW, Hitchings RH

Poster presentation at the *XIVth International Perimetric Society* meeting
Halifax, Nova Scotia, September 2000.

Optimum number of stimulus oscillations for motion displacement detection in glaucoma

Verdon-Roe GV, Westcott MC, Viswanathan A, Fitzke FW, Hitchings RH

Poster presentation at the *XIVth International Perimetric Society* meeting
Halifax, Nova Scotia, September 2000.

Comparison of methods to detect glaucomatous visual field progression

Westcott M, Hoffman D, Gaasterland D, Caprioli, J.

Paper presentation at the American Glaucoma Society annual meeting, Newport Beach, USA, March, 2001.

JOURNAL REVIEWS

Reviewer of papers submitted to: **American Journal of Ophthalmology**
British Journal of Ophthalmology
Eye
Investigative Ophthalmology and Visual Science

AUDIT

Who should see eye casualties? A Comparison of Eye Care in an Accident & Emergency Department with a Dedicated Eye Casualty

Flitcroft DI, Westcott MC, Wormald R, Touquet R.

British Journal of Accident and Emergency Medicine. 1995 Mar; 12(1) 23-7.

An audit of the eye assessment of Accident and Emergency SHO's.

Effect of age on visual outcome following cataract extraction.

Westcott MC, Tuft SJ, Minassian DC.

British Journal of Ophthalmology 2000;84(12):1380-1382.

An audit of factors for poor visual outcome following cataract surgery.

TEACHING

I have given instructional lectures to a variety of audiences, including trainees, optometrists, nurse practitioners, general ophthalmologists, and experts.

REGIONAL

Various invited lectures on glaucoma

West London Regional Teaching (Western Eye Hospital, May 2000), North East Thames Region meeting (Whipps Cross, June 2002), Southampton Regional Teaching (July 2002).

NATIONAL / INTERNATIONAL

New Psychophysical tests in Glaucoma (invited speaker)

6th Congress of the European Glaucoma Society, London, June 2000.

New analytical techniques to detect visual field progression (invited speaker)

American Glaucoma Society, Laguna Beach, California, March 2001.

Imaging of the Optic Nerve Head and Retinal Nerve Fiber Layer in Glaucoma (presenter)

Instructional course at American Academy of Ophthalmology, Orlando 2002, New Orleans 2001.

Visual Fields in Glaucoma (invited speaker)

Final Fellowship Refresher Course, Moorfields Eye Hospital, January 2002.

HOBBIES AND INTERESTS

My wife and I enjoy travelling and we have travelled in China, throughout the Far East and went on honeymoon to Vietnam. We have made trips to India, most recently to visit the ancient

temples of South India. I also enjoy squash, tennis and skiing. Other interests include modern art, classical music and chess.

CAREER AIMS

I have had the benefit of working in inner city areas with substantial ethnic populations throughout my training. These populations have a high prevalence of inflammatory eye disease, and glaucoma and consequently I have gained considerable experience in the management of these diseases. My consultant appointment allows me to pursue my specialist interests. I also intend to continue my academic research interests.

REFEREES

1) Mr Keith Barton MD, MRCP FRCOphth.
Consultant Ophthalmic Surgeon
Moorfields Eye Hospital
London

2) Professor Joseph Caprioli MD
Chief, Glaucoma Division
Jules Stein Eye Institute, UCLA
Los Angeles CA 90095-7000, USA

3) Mr Carlos Pavesio MD FRCOphth.
Consultant Ophthalmic Surgeon
Moorfields Eye Hospital
London

4) Professor Frederick W Fitzke PhD
Department of Visual Science
Institute of Ophthalmology
London