

## Daniel M. Davis

### CAREER

Oct 2008 – Present	Head Immunology Section (the ‘Immunology and Infection’ Section prior to Oct 2011) , Imperial College London, South Kensington Campus, UK
Oct 2005 - Present	Professor in Molecular Immunology, Imperial College London, South Kensington Campus, UK.
Oct 2002 – Sept 2005	Senior Lecturer, Division of Cell and Molecular Biology, Imperial College London, South Kensington Campus, UK.
Dec 1999 – Sept 2002	Lecturer, Department of Biology, Imperial College London, South Kensington Campus, UK.
Jan 1996 – Nov 1999	Postdoctoral Research Fellow, Dept. Molecular and Cell Biology Harvard University, Cambridge, MA 02138, USA
Sept 1992 - Dec 1995	PhD. Physics, CASE Award with EPSRC/ICI/Zeneca Strathclyde University, Glasgow, UK.
Sept 1989 - June 1992	First Class BSc. (Hons) Physics, University of Manchester, UK.
1982 - 1988	4 A-Levels: Physics (A), Chemistry (A), Maths (A), Further Maths (A). 9 O-Levels including Maths, English and German. Dame Alice Owen's School, Potters Bar, Herts, UK.

## AWARDS

- June 2011      **Elected a Fellow of The Academy of Medical Sciences**
- April 2008      **Royal Society Wolfson Research Merit Award** – 5 year salary contribution
- May 2005      **The Lister Research Prize for Preventive Medicine** – A £150,000 research prize
- October 2002      **EMBO Young Investigator Award** - Includes 45,000 EURO for lab and additional funding for travel, invitation to EMBO events etc. Attended Lab Management Course in 2004.
- May 2002      **Merit Award for "Imaging the Construction of Immunological Synapses"** presented after plenary lecture at the XIIIth International Congress of Histocompatibility and Immunogenetics, Seattle, USA.
- September 2000      Winner of the **Oxford University Press/ Times Higher Education Supplement Science Writing Prize**. Prize was £2000 and Oxford English Dictionary. Essay published in the THES.
- 27-31 March 2000      One of six invited UK participants in a '**Workshop on Biotechnology and Genetic Engineering** for brilliant young British and German scientists', held in Bonn and Berlin.
- 8 March 2000      Selected as part of the '**Scientists for the New Century**' program by the Royal Institution, London to present a public lecture on my research entitled 'Natural Born Killers.' This lecture sold-out to over 500 people. Awarded **life membership of the Royal Institution, London**.
- 1997 - 2000      Postdoctoral **fellowship from The Irvington Institute** for Immunological Research, a charity based in New York.
- 1997 - 1999      Supervised two students' research projects - one won the **Hoopes Prize**, given to the 50 best theses throughout Harvard, and the other was placed in the finals of the **US National Westinghouse Competition** the top prize being \$40,000.
- Apr 1994      Joint winner of national **lecture competition at the Institute of Physics, London**. Prize was a trip to the International Conference of Physics Students held in St. Petersburg, Russia.
- Jan 1994      **Barber Trust travel award** from Institute of Physics to attend conference in LA.
- Aug 1993      **Daphne award** (£750) from Dame Alice Owen's school.

## PROFESSIONAL MEMBERSHIP

The Royal Institution (Awarded Life Membership in 2000),  
The Institute of Physics (member since 1995; elected CPhys MinstP in 2000)  
The Medical Research Club (since Dec 2007)  
The American Association of Immunology (since Oct 2006)  
The American Society for Cell Biology (since 2005)  
The Biochemical Society (since 2004)  
The British Society of Immunology (since 1999)  
The British Association for the Advancement of Science (since 1999)  
The American Association for the Advancement of Science (since 1999)  
The British Biophysical Society (1999-2004)

## INVITED LECTURES

2<sup>nd</sup> Feb 2000 - AstraZeneca, Alderley Edge.  
3<sup>rd</sup> March 2000 – Public Lecture 'Natural Born Killers', The Royal Institution, London.  
5<sup>th</sup> April 2000 - The Babraham Institute, Cambridge.  
4<sup>th</sup> May 2000 - Wales regional group, British Society of Immunology, Cardiff.  
15<sup>th</sup> May 2000- Sir William Dunn School of Pathology, University of Oxford.  
16<sup>th</sup> May 2000 - Molecular Pharmacology and Molecular Genetics Series, Imperial College.  
5-8<sup>th</sup> September 2000 - XIth International Conference of Histochemistry and Cytochemistry, York.  
16<sup>th</sup> January 2001 - Department of Immunology, Hammersmith Hospital, London.  
19<sup>th</sup> February 2001 - Wright-Fleming Seminar, St. Mary's, London.  
22<sup>nd</sup> February 2001 - The Antibody Club, British Society of Immunology, London.  
26<sup>th</sup> April 2001 - MRC Laboratory for Molecular Cell Biology, University College London.  
1<sup>st</sup> May 2001 - Institute of Child Health, Great Ormond Street Hospital, London.  
26<sup>th</sup> July 2001 - International Congress for Immunology, Stockholm, (2 short contributed talks).  
20<sup>th</sup> September 2001 - Biophysical Chemistry 2001, London.  
29<sup>th</sup> October 2001 - National Heart and Lung Institute, London.  
9<sup>th</sup> November 2001 - 'Advances in Microscopy', Natural History Museum, London.  
4<sup>th</sup> March 2002 - Windeyer Institute, Royal Free & University College Medical School.  
6<sup>th</sup> March 2002 - The Cell Club, held at Imperial College, London.  
12<sup>th</sup> March 2002 - Department of Molecular & Cell Biology, Harvard University, USA.  
17-22<sup>nd</sup> March 2002 - Keystone Symposium: The molecular and cellular biology of leukocyte regulatory receptors, Lake Tahoe, USA (Short talk in plenary session).  
8<sup>th</sup> May 2002 - Medical Research Club, ICRF, London.  
17-22<sup>nd</sup> May 2002 - XIIIth International Congress of Histocompatibility and Immunogenetics, Seattle, USA (Plenary Session).  
31<sup>st</sup> May 2002 - Immunology Seminars, Addenbrooke Hospital, Cambridge University  
7<sup>th</sup> June 2002 - Department of Biological Sciences, Imperial College, London.  
10<sup>th</sup> June 2002 - Institute for Genetics, University of Cologne, Germany.  
25<sup>th</sup> June 2002 - Peter Gorer Department of Immunobiology, Guy's Hospital, London.  
2<sup>nd</sup> December 2002 - Karolinska Institute, Stockholm, Sweden.  
7<sup>th</sup> May 2003 – Division of Immunology, Western Infirmary, Glasgow University.  
12-13<sup>th</sup> May 2003 – Symposium on Fluorescence Microscopy, EMBL, Heidelberg, Germany.  
14-15<sup>th</sup> May 2003 – EMBO Young Investigators Conference, EMBL, Heidelberg, Germany.  
19<sup>th</sup> May 2003 – Hammersmith Hospital, Imperial College London.  
2<sup>nd</sup> June 2003 – Department of Pathology, Cambridge University.  
10<sup>th</sup> June 2003 – Kennedy Institute of Rheumatology, London.  
19<sup>th</sup> June 2003 – Oxford Brookes University, Oxford.  
14-17<sup>th</sup> July 2003 – Workshop on Biomolecular Machines for Cell-Cell Recognition, Lyon, France.  
10<sup>th</sup> October 2003 – John Squire Club, Medical School, University of Birmingham.  
14<sup>th</sup> October 2003 – Interdisciplinary Program for Cellular Regulation, University of Warwick.  
27<sup>th</sup> October 2003 – Cancer Sciences Division, University of Southampton.  
27<sup>th</sup> November 2003, EEM Congressi Workshop on Cytometry, Rome, Italy

2<sup>nd</sup>-5<sup>th</sup> December 2003 - British Society of Immunology Annual Congress, Harrogate, UK.  
8-13<sup>th</sup> January 2004 – Keystone Symposium: Lymphocyte Activation and Signaling, Steamboat Springs, Colorado, USA (Plenary Session, selected from abstracts submitted).  
6<sup>th</sup> April 2004 – Imperial College Department of Biological Sciences Retreat  
24-28 April 2004 – International Natural Killer Cell Congress, Amsterdam, Holland (Plenary Lecture and Session Chair)  
8-11 May 2004 – European Federation of Immunogenetics Congress, Sofia, Bulgaria (Plenary Session)  
18<sup>th</sup> May 2004 – Dunn School of Pathology, Oxford University  
2<sup>nd</sup> June 2004 – Cancer Research UK, London Research Institute, Lincoln's Inn Fields  
23 June 2004 – London School of Hygiene and Tropical Medicine, London, UK.  
6-8 July 2004 – MicroScience 2004, The Royal Microscopical Society Congress, London, UK.  
18-22 July 2004 - BioScience 2004, Annual Congress of The Biochemical Society, Glasgow, UK.  
9 November 2004 – Department of Trade and Industry Workshop, St Andrews, UK.  
5 December 2004 – American Society of Cell Biology, Annual Congress, Washington, USA (Lecture and Session Chair)  
7 December 2004 – British Society of Immunology Congress, Harrogate, UK (Session Chair)  
14<sup>th</sup> Jan 2005 – Centre for Biophotonics, Strathclyde University, Glasgow.  
10<sup>th</sup> February 2005 – Metchnikov Club, Edinburgh University  
16<sup>th</sup> February 2005 – Department of Microbiology and Biochemistry, Leeds University  
9<sup>th</sup> March 2005 – Department of Pharmacy and Pharmacology, University of Bath  
11<sup>th</sup> April 2005 – Public Lecture at The Royal Institution, London, UK  
7-9<sup>th</sup> May 2005 – IRIS/HFSP meeting, Karolinska Institute, Sweden.  
10<sup>th</sup>-12<sup>th</sup> June 2005 – Conference: 'Molecular host response mechanisms', Karolinska Institute, Sweden.  
13<sup>th</sup> June 2005 – Cambridge University/LMB  
22<sup>nd</sup>-24<sup>th</sup> June 2005 – EMBO Young Investigator Symposium  
24<sup>th</sup> –26<sup>th</sup> June 2005 – EMBO Conference on Quantitative Biology, EMBL, Heidelberg  
7-8<sup>th</sup> September 2005 – 16th Annual conference of the British Society of Histocompatibility and Immunogenetics, Plymouth  
9<sup>th</sup> September 2005 – Lister Institute Annual Meeting, Cambridge.  
22<sup>nd</sup> September 2005 – CIML, Marseille, France  
20<sup>th</sup> October 2005 – Lister Institute Prize Lecture, Imperial College London  
26<sup>th</sup> October 2005 – University of York.  
3-8<sup>th</sup> November 2005 – The EMBO Young Investigator Lecture, Annual Natural Killer Cell Congress, Hawaii, USA  
16<sup>th</sup> November 2005 – BSI Immunology North East, Newcastle University  
1<sup>st</sup> December 2005 – Imaging Seminar Series, University of Bristol  
10-15<sup>th</sup> February 2006 – Keystone Symposia, Innate Immunity, Banff, Canada.  
27-28<sup>th</sup> March 2006 – British Transplantation Society Annual meeting, Edinburgh.  
3<sup>rd</sup> May 2006 – Division of Cell Biology & Immunology, University of Dundee  
9<sup>th</sup> May 2006 – NIH, Twinbrook II Seminar Series, Washington, USA  
16<sup>th</sup> May 2006 – Innate Immunity Symposium, Imperial College London  
6<sup>th</sup> June 2006 – Cell Biology Day, Imperial College London  
16<sup>th</sup> October 2006 – Maxwell Society, Physics Department, Kings College London  
14<sup>th</sup> November 2006 – Career Talks for Postdocs, Cancer Research UK, London  
17<sup>th</sup> November 2006 – Faculty of Life Sciences Seminars, University of Manchester  
6-9<sup>th</sup> December 2006 – NK2006, NK cell Workshop, Heidelberg, Germany  
31<sup>st</sup> January 2007 – London School of Hygiene and Tropical Medicine  
12<sup>th</sup> February 2007 – Wright Fleming Seminars, St. Mary's, London.  
15-16<sup>th</sup> February 2007 – Abacus retreat, Meeting with Merck, Hanbury Manor  
6<sup>th</sup> March 2007 – Babraham Institute, Cambridge  
15<sup>th</sup> March 2007 – Merseyside Immunology Group, University of Liverpool  
28<sup>th</sup> March 2007 – NK cell Club, UCSF, San Francisco, USA  
29<sup>th</sup> March 2007 – Biomedical Science Seminars, UCSF, San Francisco, USA  
30<sup>th</sup> March 2007 – Amgen, Seattle, USA  
11-14<sup>th</sup> April 2007 – 10<sup>th</sup> Annual Natural Killer Cell Congress, Cambridge  
12<sup>th</sup> June 2007 – Imperial College Med School, Hammersmith Hospital, London

15-19<sup>th</sup> July 2007 – European Biophysics Congress, Chair/Organiser of ‘Live cell imaging’, London  
 18<sup>th</sup> July 2007 – Merck Abacus Program, London  
 23-24<sup>th</sup> July 2007 – Active and mixed membranes, Institute of Physics, London  
 5<sup>th</sup> - 8<sup>th</sup> September 2007 – Transplantation Society Congress, Nova Scotia, Canada  
 11<sup>th</sup> September 2007 – Immunology Lecture Series, Stanford University, USA  
 25<sup>th</sup> -27<sup>th</sup> October 2007 – 4<sup>th</sup> meeting for the European Initiative in Microbiology and Infectious Disease, Winchester, UK  
 6<sup>th</sup> November 2007 - ‘Cancer Immunotherapy: Beyond the T cell’, University College London.  
 28<sup>th</sup> November 2007 – Inaugural Lecture ‘Secrets of your immune system’, Imperial College London  
 7<sup>th</sup> December 2007 – Imaging symposium, Hammersmith Hospital, London  
 12-17<sup>th</sup> January 2008 – Keystone Symposium, Molecular basis for biological membrane organization, Big Sky, Montana USA  
 10<sup>th</sup> March 2008 – Department of Pathology, Cambridge University  
 14<sup>th</sup> May 2008 – Department of Physics, Strathclyde University, Glasgow  
 5<sup>th</sup> June 2008 – UCL Med School, Royal Free Hospital, Hampstead, London  
 27<sup>th</sup> June 2008 – Pasteur Institute, Paris, France  
 4<sup>th</sup>-6<sup>th</sup> July 2008 - EMBO Workshop, MHC class I Molecules at the Interface between Biology and Medicine, Porto, Portugal.  
 22-23<sup>rd</sup> Sept 2008 - New opportunities for vaccines and immunotherapies, MRC Workshop, Sanger Centre, Cambridge  
 25<sup>th</sup> Sept 2008 – Visualising Immunology, Cambridge University  
 10<sup>th</sup> October 2008 – Friday Evening Discourse, The Royal Institution, London  
 16<sup>th</sup> October 2008 – Wales College of Medicine, Cardiff University  
 5<sup>th</sup> November 2008 – Institute for Molecular Medicine, Oxford University  
 18-20<sup>th</sup> November 2008 – British Society of Immunology Congress, Glasgow  
 25<sup>th</sup> November 2008 – Immunobiology department, Guy's Hospital, Kings College London  
 15<sup>th</sup> – 17<sup>th</sup> January 2009 – EMBO Workshop ‘Visualising Immune Responses’, Marseille, France  
 23-24<sup>th</sup> February 2009 – NK cell Workshop, Vienna, Austria  
 4<sup>th</sup> March 2009 - Institute of Neurology, University College London  
 16<sup>th</sup> March 2009 - Windeyer Institute of Medical Sciences, University College London  
 19<sup>th</sup> – 20<sup>th</sup> March 2009 – Cellular Therapy, Nurnberg, Germany  
 15-16<sup>th</sup> April 2009 - Imaging the Immune system: From Cancer to Pathogens, York  
 23<sup>rd</sup> April 2009 – Laboratory of Molecular Biology (LMB), Cambridge  
 30<sup>th</sup> April 2009, National Institute of Medical Research, Mill Hill  
 1<sup>st</sup> May 2009 - Department of Biological Sciences, University of Warwick  
 18<sup>th</sup> – 20<sup>th</sup> May 2009 – Nobel Conference on ‘Two faces of the synapse – immune versus neural’, Karolinska Institute, Stockholm  
 6<sup>th</sup> November 2009 - Bionanotechnology Programme, Department of Physics, University of Oxford  
 19<sup>th</sup> November 2009 – Chemical Biology Centre colloquium, Imperial College London  
 23<sup>rd</sup> November 2009 – Wright-Fleming Seminar, St Mary’s, London  
 26<sup>th</sup> -29<sup>th</sup> January 2010 – Winter School on Physical Chemistry of Polymers and Membranes, Adelboden, Switzerland  
 27<sup>th</sup> Feb – March 4<sup>th</sup> 2010 – Keystone meeting, Lymphocyte Activation and gene expression, Beckenridge, Colorado, USA (short talk, selected from abstract submissions)  
 24<sup>th</sup> March 2010 - Division of Immunology, Infection & Inflammation, University of Glasgow  
 4<sup>th</sup> May 2010 – Immunology Colloquium Seminar Series, U Penn, USA  
 7<sup>th</sup> -11<sup>th</sup> May 2010 – ‘The Many Sides of the Natural Killer Cell Response’ at the American Association of Immunologists’ meeting, Baltimore, USA  
 11<sup>th</sup> June 2010 – John Squire Club, University of Birmingham.  
 22<sup>nd</sup> June 2010 – Institute of Child Health Seminar, London.  
 29<sup>th</sup> June- 1<sup>st</sup> July 2010 – Microscience 2010, Session Chair/Organiser, London.  
 11<sup>th</sup> – 15<sup>th</sup> Sept 2010 - NK2010, 12<sup>th</sup> Meeting of the Society for Natural Immunity, Croatia  
 17<sup>th</sup> Sept 2010 – Lister Institute Fellow’s Meeting, Christ’s College, Cambridge  
 4<sup>th</sup> November 2010 – GSK, Stevenage.  
 1<sup>st</sup> December 2010 – Dunn School of Pathology, Oxford University

9<sup>th</sup> -14<sup>th</sup> Jan 2011, Keystone Symposium, NK and NKT Cell Biology: Specificity and Redundancy of Innate Responses, Breckenridge, Colorado, USA  
10<sup>th</sup> -15<sup>th</sup> April 2011, Imaging, Interpretation and Modeling in Modern Immunology, Banff International Research Station (BIRS), USA  
3-5<sup>th</sup> May 2011 – 13<sup>th</sup> International Myeloma Workshop, Paris, France  
15<sup>th</sup> -17<sup>th</sup> June – KIR 2011, Stockholm, Sweden  
10<sup>th</sup> -13<sup>th</sup> Sept 2011 - The EMBO Meeting 2011, Vienna , Austria  
Oct 30-Nov 3 2011- 17th IUPAB International Biophysics Congress, Beijing, China  
5 – 8 Dec 2011- British Society of Immunology Congress, Liverpool, UK  
13<sup>th</sup> Dec 2011 – NIH Cancer and Inflammation Program retreat, USA  
14<sup>th</sup> Dec 2011 – Immunology Seminar Series, NIH, USA  
12<sup>th</sup> January 2012 – Edinburgh University

## *Teaching*

- 2011/12: Cell Biology tutorials, problem classes
- 2009-onwards: Internal examiner for the MRes in Biochemical Research
- 2010 onwards: Lectures on undergraduate courses in immunology
- 2005 onwards: 1<sup>st</sup> Year Biological Chemistry course: 4 Lectures, Problem Class, Set and Mark exam questions.
- 2003-2010: Course Convenor for 2<sup>nd</sup> Year Immunology. During my time as Convenor the class size for this course has swelled from ~75 in 2003 to 170 in 2008. I set course schedule including 30 lectures (8 Lectures given myself, others distributed), Design and implementation of 2-day Practical (2003-8 given by myself, now ran by others), Tutorial, Poster Assessments, Set and mark Exam questions, Student interviews, Mark lab work. This course is consistently highly ranked in student assessment.
- 2009-2011: Lecturer MRes Course in Systems and Synthetic Biology
- 2009: My PhD student Stephane Oddos won first prize for his short talk at the EMBO meeting on 'Visualising Immune System Complexity' in Marseille.
- 2009: My PhD student Matt Johnson won a prize as being the second best PhD student of the Year from the Division of Cell and Molecular Biology
- 2008: My PhD student Stefanie Sowinski won 'Outstanding PhD student of the Year' from the Division of Cell and Molecular Biology
- 1<sup>st</sup> Year Molecular and Cell Biology course: 1 Keynote Lecture, 6 Tutorials.
- Applied Optics MSc. Course. (Physics Dept.): 1 Lecture
- Until 2004, 2nd Year Animal and Plant Physiology course: 1 Lecture, Set and mark exam questions, 2 Tutorials.
- 2004-2008 inclusive: Assessor to undergraduate 3<sup>rd</sup> year Projects (assessing over 100,000 words of undergrad theses!)
- 2005 onwards: Member of Biology Stream Teaching Committee
- Established an Immunology Prize for Undergraduates, funded by the British Society for Immunology (awarded annually since 2005).
- 2004: Guest Lecture on the MSc Integrated Immunology course at Oxford University.
- 2002: Guest Lecturer on Immunology Program at Karolinska Institute, Stockholm (3 Lectures).
- 3 hr Seminar for Wellcome Trust PhD programme (annually).
- Review of undergraduate lectures in 2001/2 and 2004/5 (Assessment of approx. 12 staff lectures).
- Personal Tutor to numerous undergraduates (approx 9-12 at any one time).
- Lectures to sixth formers at Department Open Day (at least one per year 2002-8).

## ***Professional, administrative and other activities***

### ***Reviewing responsibilities***

Editorial Board Memberships:

2007 – Present : Immunology

2004 – 2007 : Biochemical Journal

Ad hoc (regular) reviewer for many Journals incl. Nature Immunology, Nature Cell Biology, J. Exp. Med., PNAS, Immunity, Nature Methods, Nature Biotech., Science Signaling, J. Cell Biol., Biophys. J., EMBO Reports, Trends in Immunol, Trends in Cell Biol, Nature Rev Immunol, Nat Rev Mol Cell Biol, Blood, Biochemistry, J. Immunol., Eur. J. Immunol., J. Gen Virol., Immunology, J. Microscopy, Meas. Sci. Tech, Immunol. Letts., Int. Immunol., Physics Today, FEBS Letters

Ad hoc reviewer for Grant and Fellowship awarding bodies incl. MRC (UK), Wellcome Trust, BBSRC (UK), EPSRC (UK), NIH, Science Foundation Ireland, Irish Research Council, Wellcome Trust Arts Awards, Singapore Stem Cell Consortium, Help the Aged (UK Charity), NSF (USA), EMBO (Eur), NKRF (UK), Hong Kong Government, The Netherlands Organisation for Health Research and Development, Singapore Immunology Network, Israel Science Foundation.

Regular (annual since 2004) interviews for EMBO Long Term Fellowships, Assessment of Short Term Fellowships. PhD thesis examiner (e.g. Cambridge University - several, Cancer Research UK/UCL, Strathclyde University, Utrecht University)

External reviewer for promotions/tenure (e.g. Johns Hopkins Med School, Weizmann Institute, Texas SouthWestern)

### ***Internal Responsibilities***

2008 – Current: Section Head, Infection and Immunity Section (comprises 16 separate labs)

2007 - Current: Faculty Committee for Imaging Strategy

2007 - Current: Imperial College Committee for Immunology

2006 - Current: Steering Committee for Imaging Centre, South Ken Campus

2006 - Current: Board of Examiners for MRes in Biochemical Research

2005 – Current: Biology Degrees Teaching Committee

2004 - Current: Academic manager of radioactive irradiator core facility

2007-8: New Faculty Search Committee, 2 new Faculty appointments made.

2006 - 2008: Academic Manager of Flow Cytometry Core Facility

2004 – 2008: Steering Committee, Imperial College Cell Club

2006: Faculty of Natural Sciences Strategic Research Committee

2004-2006: Faculty of Life Sciences Strategic Research Committee

2005 - Co-organised Cell Biology day retreat

2004 - 2006: Committee for Immunology

2000- 2003: Running of bi-weekly seminars for the Immunology Focus Group,

2002: Co-chair for Third Year Postgraduate Seminar Programme (22 seminars).

2002: Biological Safety Officer for Fleming Building and Silwood Park.

## *Broad communication of science*

2012/3: **Penguin Press will publish my popular-level book on immunology**, provisionally entitled 'The Big Inheritance'.

2011: Our research featured in **The Daily Mail**, UK newspaper and many other outlets.

2009: Feature article published on membrane nanotubes, including interview, in *Science News*.

2008: Interview for **The Guardian** newspaper on GFP (following Nobel Prize). Article published Oct 10<sup>th</sup> 2008.

2008: Interview for Feature Article on nanotubes in **New Scientist** magazine. Article published Nov 15<sup>th</sup> 2008.

2008: Friday Evening Discourse at **The Royal Institution**, Oct 10<sup>th</sup> 2008

2007: BBC filmed an experiment performed by my laboratory for broadcast in 'The History of Transplantation', first shown on **BBC FOUR**, Sept 3rd 2008.

2007: Interview for *PharmaTechnology* magazine and for *NanotechWeb*, an Institute of Physics online publication

2007 – Advised the **British Society of Immunology** on outreach activities including web-page design

2006: Note with pictures published in **Muy Interesante Magazine**, a popular science magazine in Spain

2006: Article commissioned for **Scientific American**

2005: Interview for **U. Pittsburgh newsletter**

2005: Interview broadcast on **Public Radio, USA**

2005: Article published in **Leica's European Research magazine**.

April 2005: **Public Lecture at The Royal Institution** for the University of the Third Age.

Aug and Dec 2004: Work featured in editorials in journal **Science**.

June 2003: Presented work at **The Royal Society Summer Exhibition**

Jan 2003 - Feature article in **BBSRC 'Business' quarterly magazine**

Dec 2002 - Feature article in 'Optics & Photonics News'.

Sept 2001 - Interview with Robyn Williams for 'The Science Show', Australian Broadcasting Corporation.

Sept 2000 - Essay published in **The Times Higher Education Supplement**.

March 2000 - **Public Lecture at The Royal Institution**.

Feb 2000 - '**The Times**' newspaper published a feature article on me and my research entitled 'Hot on the trail of Natural Killer cells'.

In 2000, I designed and ran a 2 day 'Master Class' for 49 school students aged 17. Activities included a 2-day laboratory experiment, presentations of my own research, videos and computer animations, demonstration of laser scanning confocal microscopy, and research discussions. I have brought several speakers to our various seminar programs including: Sir John Sulston (winner of the 2002 Nobel Prize for Medicine), Profs. Jack Strominger (Harvard), Andrew McMichael FRS, Anton van der Merwe, Gillian Griffiths, Simon Davis, Facundo Batista, Nigel Burroughs, Theresa Ward, Kirsty Newman, Charles Bangham, Frank Uhlmann, Peter Friedl, Yenan Bryceson (NIH & Karolinska), Petter Hoglund (Karolinska Institute), Ofer Mandelboim (Hebrew University), Mark Davis (Stanford University), Peter Parham (Stanford), Nicholas Gascoigne (Scripps).

## Previous PhD Student Supervision

<b>Date</b>	<b>Student</b>	<b>Grant Type</b>	<b>Awarding Body/Supervision</b>	<b>Subject or Title</b>
Oct 2011 - Present	C. Barthen	Quota studentship	BBSRC	HLA and disease
Oct 2011 - Present	K. Lagrue	BBSRC CASE award with Cellgene	BBSRC	How does Revlimid influence the supramolecular dynamics of human immune cell recognition and communication
Oct 2010 - Present	A. Savell	Chemical Biology Doctoral Training Centre	EPSRC / Joint supervision with Paul French and Mark Neil, Physics	Imaging nanotubes with super-resolution microscopy
Oct 2010- Present	A. Cartwright	GSK supported	Case Studentship awarded to GSK	The Immune synapse as a gasket
Oct 2008 - Present	S Pagoon	Quota Studentship	BBSRC / Sole supervisor	NK cell synapse microclusters
Oct 2007 – Viva Dec 2010	H. Evans	Wellcome Trust studentship	Wellcome Trust / Sole Supervisor	NK cell - macrophage communication
Oct 2006 – Viva Nov 2010	S. Oddos	Chemical Biology Doctoral Training Centre	EPSRC / Joint supervision with Paul French and Mark Neil, Physics	Novel techniques for imaging immune synapses
Oct 2006 – Has not submitted, extenuating circumstances	M. Johnson	Quota Studentship	BBSRC / Sole Supervisor	NK cell synapse
Oct 2006 – viva Nov 17 <sup>th</sup> 2009	A. Chauveau	French Government award	Joint supervision with Eric Vivier, Marseille	Membrane nanotubes
Oct 2004 – viva Nov 27 <sup>th</sup> 2009	S. Kumar	Chemical Biology Center	Joint supervisor with Paul French, Physics.	Quantitative FRET for imaging immune synapse assembly.
Oct 2004 – viva Feb 22 <sup>nd</sup> 2008	G. Buckland	EMBO / MRC Research grant	EMBO & MRC / Joint supervisor with Tony Magee, Med. School	Lipid modifications in immunological receptors
Oct 2004 – viva Nov 26 <sup>th</sup> 2008	S. Sowinski	Wellcome Trust studentship	Wellcome Trust / Sole Supervisor	New aspects of immune cell communication
Oct 2003 – Viva Sept 18 <sup>th</sup> 2007	G. Williams	Quota studentship	BBSRC / Sole Supervisor	Intercellular transfer at NK cell immune synapses
May 2003 – Viva May 11 <sup>th</sup> 2007	C. de Almeida	Award from the Portuguese government	Ministry of Science and Technology, Portugal / Sole Supervisor	Regulation of the NK cell Immunological Synapse

Dec 2002 – viva Oct 2006	P. Lannigan	Beacon Award - Harnessing Genomics	DTI / Joint supervisor with Paul French, Physics.	Fuorescence lifetime imaging
Dec 2002 – Viva May 24 <sup>th</sup> 2006	B. Treanor	Beacon Award - Harnessing Genomics	DTI / Joint supervisor with David Phillips, Chemistry.	Probing the immune synapse with fluorescence lifetime imaging
Oct, 2001 – Viva Nov 24 <sup>th</sup> 2005	S. Taner	BBSRC Committee Studentship	BBSRC / Sole Supervisor	Lipid rafts in human NK cell surveillance.
Dec, 2000 – Viva 12 <sup>th</sup> June 2006	K. Eleme	Employed as Research Assistant.	MRC / Sole supervisor	Viral recognition at human NK cell immune synapses.
Oct, 2001 – Viva April 7 <sup>th</sup> 2005	B. Vanherberghen	Employed as Research Assistant.	MRC & Marie Curie Fellowship. Joint supervisor with Petter Hoglund, Sweden.	Protein transfer across the NK cell immune synapse.
Oct 2000 – Dec 2003	L. Carlin.	BBSRC Studentship	BBSRC	NK cell recognition

## Members of my research lab

Current Members of the Lab (in order of arrival):

1. Maryam Mehrabi (Research Technician, June 2007 -)
2. Sophie Pigeon (PhD Student, October 2008 -)
3. Anne Aucher (Postdoc, October 2008 -)
4. Juha-Matti Alakoskela (Postdoc, June 2009 -)
5. Alice Brown (Postdoc, Oct 2009 -)
6. Dominika Rudnicka (Postdoc, Feb 2010 -)
7. Adam Cartwright (PhD student, Oct 2010 -)
8. Alex Savell (PhD student, joint with Prof. Paul French, Oct 2010 -)
9. Charlotte Barthen (PhD student, Oct 2011)
10. Katherine Lagrue (PhD student, Oct 2011)
11. Postdoc to be named (Oct 2011 onwards)

Past members:

1. Kumiko Yanagi (now Lecturer equivalent at Ryukyus University, Japan)
2. Klaus Suhling (moved to be Lecturer at Kings College, London, now Reader in Physics)
3. Leo M. Carlin (PhD Student then Postdoc, Oct 2000 - Dec 2004, now postdoc at Kings College London)
4. Bruno Vanherberghen (Research Assistant, Oct 2001 - Oct 2004, now postdoc at Karolinska Institute)
5. Sabrina Taner (PhD Student, Oct 2001 - Oct 2004, now postdoc at UCSF)
6. Konstantina Eleme (Research Assistant & PhD Student, Dec 2000 – March 2005, now clinical trials manager at Chiltern)
7. Fiona McCann (Postdoc., Feb 2001 - Dec 2005, now postdoc at Kennedy School, London)
8. Bebhinn Treanor (PhD Student, November 2002 - Nov 2005, moved to postdoc at Cancer Research UK)
9. Peter Lannigan (PhD Student, joint with Paul French (Physics), Oct 2002 - Oct 2005, now postdoc in Chemistry, Imperial College)
10. Bjorn Onfelt (Postdoc, April 2003 - April 2006, now has own laboratory in Karolinska Institute)
11. Esther Nolte-'t Hoen (Postdoc, Feb 2004 - Feb 2006, now in Amsterdam)
12. Geoff Williams (PhD Student, Oct 2003 - Oct 2006, moved to postdoc with Laex Betz, LMB, Cambridge)
13. Adam Gehring (Postdoc, in collaboration with UCL, May 2004 - Jan 2006, now in A Star, Singapore)
14. Rufina Leung (Research Technician/Lab Manager, Feb 2006 – April 2007)
15. Catarina Rodrigues de Almeida (PhD Student, May 2003 – May 2007, Postdoc, June 2007 – Sept 2007, now postdoc in Porto)
16. Shlomo Nedvetzki (Postdoc, Aug 2003 –Sept 2007)
17. Gemma Buckland (PhD student in collaboration with Tony Magee (Medicine), Aug 2004 – Feb 2008)
18. Fiona Culley (Research Lecturer, Jan 2006 – March 2008, now Lecturer at St. Mary's, London)
19. Marco Purbhoo, (Postdoc, June 2005- Sept 2008, now Lecturer at St. Mary's, London)

20. Steffi Sowinski (PhD student, Oct 2004 - Oct 2008, moved to postdoc at UCSF)
21. Sunil Kumar (PhD student, in collaboration with Paul French, Oct 2004 – April 2009, moved to postdoc in Physics Dept, Imperial College London).
22. Philipp Eissmann (Postdoc, Aug 2006 –Jan 2010, moved to work at MedImmune)
23. Matt Johnson (PhD student Oct 2006 – Oct 2009)
24. Anne Chauveau (PhD student in collaboration with Eric Vivier (Oct 2006 – April 2010, moved to postdoc with Morgan Huse, New York)
25. Karsten Kohler (Postdoc, June 2006 –April 2010, moved to postdoc with Chris Rudd, Cambridge)
26. Amir Horowitz (Postdoc, part-time, April 2010 – October 2010)
27. Stephane Oddos (PhD student in collaboration with Paul French, Oct 2006 –Oct 2010)
28. Henry Evans (PhD Student, October 2007 – Dec 2010, moved to postdoc in Harvard)

## Research Grants and Contracts

Source of Funds	Title of Project	Duration	Date of Start	Total Value	Names of other Holders (if any)	Other Comments
The Royal Society	Protein Recognition at Cell surfaces	2 Years	March 2000	<b>£10,000</b>	None	-
MRC	The Human Natural Killer Cell Immune Synapse	5 Years	October 2000	<b>£588,266</b>	None	Career Establishment Award
BBSRC	Imaging Natural Killer Cell Immune Synapse Formation by Green Fluorescent Protein Lifetime Microscopy	3 Years	December 2000	<b>£323,988</b>	Co-Applicants are Paul French (Physics, IC), David Phillips OBE (Chemistry, IC).	I am the Principal Investigator
BBSRC	Supramolecular Organisation at immune synapses in human T cell anergy and tolerance	2.5 Years	July 2001	<b>£247,708</b>	Co-Applicant is Margaret Dallman (Biology, IC)	I am the Principal Investigator
BBSRC	Lipid raft proteomics of human NK cells	3 years	Oct 2001	<b>PhD Student-ship £9,000</b>	-	-
The Royal Society	Immune Synapse Electron Microscopy	2 Years	March 2002	<b>£9,000</b>	None	-
EMBO	Immunological Synapses	3 Years	October 2002	<b>£30,000</b>	None	Young Investigator Program Award
The Department of Trade and Industry	Functional bioimaging using fluorescence lifetime imaging	3 Years	October 2002	<b>£1.44M (£235,298 to my lab)</b>	Consortium headed by Paul French (Physics, IC). I am the first co-applicant	-
Foundation for Science and Technology, Portugal.	Thresholds for activation and inhibition of NK cells	4 Years	May 2003	<b>139,080 Euro</b>	Sponsor for Catarina de Almeida	-
Human Frontier Science Program	The mathematics, physics and biology of Natural Killer cells	3 Years	May 2003	<b>\$750,000 (\$275,000 to my lab)</b>	Collaboration with Petter Högglund (Karolinska Institute) and Ramit Mehr (Jerusalem)	Ranked 1 <sup>st</sup> of all applications.
MRC	Confocal Microscope	-	July 2003	<b>£163,027</b>	None	MRC Equipment Supplement Scheme
BBSRC	Multiuser TIRF microscopy set up for realtime cellular and molecular imaging	-	Sept 2003	<b>£66,796</b>	I am one co-applicant in consortium	BBSRC Large Capital
Wellcome Trust	Functional and molecular analysis of virus specific tetramer-negative CD8 T cells during chronic hepatitis B virus infection.	2 Years	Oct 2003	<b>£106,000 (£12K to my lab)</b>	I am the co-applicant. PI is Antonio Bertoletti, UCL.	-
Wellcome Trust	PhD program in Infection & Immunity	3 Years	Oct 2004	<b>£125,250</b>	Studentship for S. Sowinski	Grant obtained by consortium
BBSRC	Membrane nanotubes as a novel mechanism of intercellular communication	3 Years	Jan 2005	<b>£224,000</b>	None	Final report graded A (Feb 2009)

Source of Funds	Title of Project	Duration	Date of Start	Total Value	Names of other Holders (if any)	Other Comments
Lister Institute	Nanotubes and Synapses in Immune Cell Communication	3 Years	May 2005	<b>£150,000</b>	None	Research Prize
MRC	Immune cell communication facilitated by the supramolecular organisation and intercellular transfer of cell surface proteins	5 Years	Feb 2006	<b>£900,018</b>	None	
BBSRC	Quantification, modelling and analysis of molecular dynamics, patterning and signalling in the NK synapse	4 years	April 2006	<b>£800,000 (£279,000 to my lab)</b>	Collaboration with Nigel Burroughs (Warwick) and Anton van der Merwe (Oxford)	
BBSRC	Investigation of the molecular dynamics of the intercellular communication with advanced multi-dimensional fluorescence spectroscopy and imaging	3 Years	April 2006	<b>£279,701 (£24,000 to my lab)</b>	Collaboration with Klaus Suhling (KCL)	
Wellcome Trust	PhD program in Infection & Immunity	3 Years	Oct 2007	<b>£158,007</b>	Studentship for H. Evans with supplementary funding for specific project	Grant obtained by consortium
Merck (USA)	Communicating complex network information by intercellular transfer of macrophage proteins and RNA	1 year	Oct 2008	<b>\$75,000</b>	Collaboration with Eric Schadt (Merck)	
Imperial College London	Spatio-temporal mapping of protein interactions in live cells by multidimensional fluorescence imaging	3 Years	Oct 2008	<b>£150,000</b>	P. French (co-PI) with M. Neil, C. Dunsby, T. Magee	Research Excellence Award 2008
Wellcome Trust	Functional proteomic analysis of the ubiquitin pathway during malaria infection	5 Years	April 2009	<b>£666,320</b>	Sponsor for K. Artavanis-Tsakonas	Research Career Development Fellowship
Marie Curie Award (EU)	Membrane nanotubes—Determining the molecular basis for the formation of membrane nanotubes between immune cells	1 Year	Sept 2009	<b>91,809 Euro</b>	For Juha-Matti Alakoskela	
MRC (UK)	Understanding and manipulating Antibody Dependent Cell Cytotoxicity (ADCC) by human Natural Killer (NK) cells	3 Years	Oct 2009	<b>£338,667</b>	None	Industrial collaboration with MedImmune
Wellcome Trust	Regulatory function of NK receptors in pathologies associated with chronic inflammation	5 Years	Oct 2009	<b>£758,604</b>	Sponsor for Nadia Guerra	Research Career Development Fellowship
GSK	Probing and manipulating intercellular cross-talk	4 Years	Oct 2010	<b>£83,281</b>		Studentship
Medical Research Council	The supramolecular dynamics of human immune cell recognition and communication	5 Years	March 2011	<b>£2,231,804</b>		Sole Applicant: Program Grant

BBSRC	Drug delivery at the immune synapse	3 years	Oct 2011	<b>£453,868</b>	Sole Applicant
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1. **Davis D.M.** "Small Steps into International Orbit". Physics World, 7(10), (1994), 57.
2. **Davis D.M.**, McLoskey D., Birch D.J.S., Swart R.M., Gellert P.R., Kittlety R.S. "Fluorescence studies of tryptophan and Human Serum Albumin (HSA) in AOT reverse micelles." SPIE Proc., 2137, (1994), 331-342.
3. **Davis D.M.**, Birch D.J.S. "A fluorescence study of Nile Red bound to Human Serum Albumin in buffer, denaturant and reverse micelles." SPIE Proc., 2388, (1995), 302-313.
4. **Davis D.M.**, Birch D.J.S. "Extrinsic fluorescence probe study of Human Serum Albumin using Nile Red." Journal of Fluorescence, 6, (1996), 23-32.
5. **Davis D.M.**, McLoskey D., Birch D.J.S., Gellert P.R., Kittlety R.S., Swart R.M. "The fluorescence and circular dichroism of proteins in reverse micelles: application to the photophysics of human serum albumin and N-acetyl-L-tryptophanamide." Biophysical Chemistry, 60, (1996), 63-77.
6. Pazmany L., Mandelboim O., Vales-Gomez M., **Davis D.M.**, Reyburn H.T., Strominger J.L. "Protection from natural killer cell mediated lysis by HLA-G expression on target cells." Science, 274, (1996), 792-795.
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8. Reyburn H.T., Mandelboim O., Vales-Gomez M., Sheu E.G., Pazmany L.P., **Davis D.M.**, Strominger J.L. "Human NK cells: their ligands, receptors and function." Immunological Reviews, 155, (1997), 119-125.
9. Mandelboim O., Reyburn H.T., Sheu E.G., Vales-Gomez M., **Davis D.M.**, Wilson S.B., Pazmany L., Strominger J.L. "The binding site of NK receptors on HLA-C molecules." Immunity, 6, (1997), 341-350.
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11. **Davis D.M.**, McLoskey, D., Birch, D.J.S., Gellert, P.R., Kittlety, R.S., Swart, R.M. "The tyrosyl fluorescence of subtilisin Carlsberg in buffer and reverse micelles." Journal of Fluorescence, 7, (1997), 147s-149s.
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14. Mandelboim O., Kent S., **Davis D.M.**, Wilson S.B., Okazaki T., Jackson R., Hafler D., Strominger J.L. "Natural Killer activating receptors trigger interferon gamma secretion from T cells and natural killer cells." Proc. Natl Acad. Sci., 95, (1998), 3798-3803.
15. Gakamsky D.M.\* , **Davis D.M.**\* , Haas E., Strominger J.L., Pecht I. "Photophysical analysis of class I MHC protein assembly using a Xanthene derivatized beta-2microglobulin." Biophysical Journal, 76, (1999), 1552-1560. \*These authors contributed equally.

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25. **Davis D.M.** "Molecular recognition of disease at natural killer cell immune synapses," Science Progress, **83**, (2000), 303-316.
26. Baba E., Erskine R., Boyson J.E., Cohen G.B., **Davis D.M.**, Malik P., Mandelboim O., Reyburn H.T., Strominger J.L. "N-linked carbohydrate on human leukocyte -C and recognition by natural killer cell inhibitory receptors," Human Immunol., **61**, (2000), 1202-1218.
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29. **Davis D.M.**, "Taking stock of Stockholm." Immunology News, **8**, (2001), 20-21.
30. Carlin L.M., Eleme K., McCann F., **Davis D.M.**, "Intercellular transfer and supramolecular organization of human leukocyte antigen C at inhibitory Natural Killer cell immune synapses." J. Exp. Med., **194**, (2001), 1507-1517. *Featured on journal cover.*

31. Fassett M.S., **Davis D.M.**, Valter M.M., Cohen G.B., Strominger J.L., "Signaling at the Inhibitory Natural Killer Cell Immune Synapse Regulates Lipid Raft Polarization but not class I MHC clustering," Proc. Natl. Acad. Sci., **98**, (2001), 14547-14552.
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