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About

Peter Balfe is a Senior lecturer in Virology.

He helped set up the **HCV group** (http://www.infection.bham.ac.uk/VRG/) at the Medical School where we've been since January 2005. The group includes 14 people at present (7 post-docs, 6 Ph. D. students and 1 technician) and occupies 3 adjoining labs on the 5th floor of the IBR building, 2 cat 3 labs and have shared access to all of the facilities in the **MRC Centre for Immune Regulation** (http://www.mrc-immune.bham.ac.uk/index.shtml) . The group is involved in a wide range of collaborative studies both with colleagues within the medical school and elsewhere.

Peter's own research investigates the sequence variation of HCV, with particular emphasis on the effects of sequence change on interactions between the virus and it's 4 receptors and on the recognition of the virus by the humoral immune response. He is also responsible for **Virology teaching** (http://www.infection.bham.ac.uk/VRG/Teaching/teaching.html) to undergraduates in the Medical School

Qualifications

- PhD 1984
- B.Sc. (hons) Biological sciences 1978

Teaching

Teaching Programmes

- **BMedSci** (/undergraduate/courses/med/medical-sci.aspx)
- **MBChB** (/undergraduate/courses/med/medicine.aspx)

Postgraduate supervision

The HCV group is interested in supervising doctoral research (Ph.D.) students in the all areas of clinically relevant HCV disease

If you are interesting in studying in this subject area please contact us using the contact details above, or for more general doctoral research enquiries, please email: **dr@contacts.bham.ac.uk** (mailto:dr@contacts.bham.ac.uk) or call +44 (0)121 414 5005.

For a full list of available Doctoral Research opportunities, please visit our **Doctoral Research programme listings** (http://www.bham.findaphd.com/?es=y&apl=y&aplt=&show) .

Research

Research themes

- HCV disease
- Viral Oncology
- **HCV group website** (http://hcvpi.bham.ac.uk/)

Other activities

The **HCV research group** (http://hcvpi.bham.ac.uk/) is actively engaged in a broad range of activities to involve and inform the wider community beyond the specialist audience for our HCV research. These activities range from organising local patient events for World Hepatitis Day (28th July) to school visits and University open days. Many of the group's members are CRB accredited and visit local schools, both in response to invitations and via the national "STEMnet" scheme of which we are members. The Medical School has an active outreach committee chaired by our group (Peter Balfe) and runs regular events to promote the school's work in the local area. These programmes are coordinated with the many other public engagement activities of the Medical School and with UoB Press and Outreach Offices, ensuring that scientific and clinically relevant breakthroughs are well publicised. These activities maintain both our laboratory and the University's position as a key regional, national and international opinion leader.

In addition to postgraduate supervision and mentoring, the group is actively engaged in promoting virology teaching within the University, helping to organise all of the modules in this area to medical and science undergraduates across all years and personally delivering a third of the lectures. We run a successful, regularly updated, website detailing the work of the group (**http://www.infection.bham.ac.uk/VRG/** (http://www.infection.bham.ac.uk/VRG/)). For the last 4 years this site has been the first hit for "HCV research" on all major search engines. Our web pages are frequently accessed both by our own undergraduates and by the wider public, typically receiving up

to 2-300 hits per week.

Publications

- **Hepatoma polarization limits CD81 and hepatitis C virus dynamics (http://www.ncbi.nlm.nih.gov/pubmed/23126643)** Harris HJ, Clerte C, Farquhar MJ, Goodall M, Hu K, Rassam P, Dosset P, Wilson GK, Balfe P, Ijzendoorn SC, Milhiet PE, McKeating JA. Cellular microbiology 2012
- **In silico directed mutagenesis identifies the CD81/claudin-1 hepatitis C virus receptor interface. (http://www.ncbi.nlm.nih.gov/pubmed/22897233)** Davis C, Harris HJ, Hu K, Drummer HE, McKeating JA, Mullins JG, Balfe P. Cellular microbiology 2012 14: 1892-903
- **Hepatitis C virus induces CD81 and claudin-1 endocytosis. (http://www.ncbi.nlm.nih.gov/pubmed/22318146)** Farquhar MJ, Hu K, Harris HJ, Davis C, Brimacombe CL, Fletcher SJ, Baumert TF, Rappoport JZ, Balfe P, McKeating JA. Journal of virology 2012 86: 4305-16
- **A dual role for hypoxia inducible factor-1Œ± in the hepatitis C virus lifecycle and hepatoma migration. (http://www.ncbi.nlm.nih.gov/pubmed/22178269)** Wilson GK, Brimacombe CL, Rowe IA, Reynolds GM, Fletcher NF, Stamataki Z, Bhogal RH, Sim√µes ML, Ashcroft M, Afford SC, Mitry RR, Dhawan A, Mee CJ, H√ºbscher SG, Balfe P, McKeating JA. Journal of hepatology 2012 56: 803-9
- **Hepatitis C virus infects the endothelial cells of the blood-brain barrier. (http://www.ncbi.nlm.nih.gov/pubmed/22138189)** Fletcher NF, Wilson GK, Murray J, Hu K, Lewis A, Reynolds GM, Stamataki Z, Meredith LW, Rowe IA, Luo G, Lopez-Ramirez MA, Baumert TF, Weksler B, Couraud PO, Kim KS, Romero IA, Jopling C, Morgello S, Balfe P, McKeating JA. Gastroenterology 2012 142: 634-643.e6
- **Inferring viral quasispecies spectra from 454 pyrosequencing reads. (http://www.ncbi.nlm.nih.gov/pubmed/21989211)** Astrovskaya I, Tork B, Mangul S, Westbrooks K, MƒÉndoiu I, Balfe P, Zelikovsky A. BMC bioinformatics 2011 12 Suppl 6: S1
- **Structural characterization of CD81-Claudin-1 hepatitis C virus receptor complexes. (http://www.ncbi.nlm.nih.gov/pubmed/21428935)** Bonander N, Jamshad M, Hu K, Farquhar MJ, Stamataki Z, Balfe P, McKeating JA, Bill RM. Biochemical Society transactions 2011 39: 537-40
- **Neutralizing antibody-resistant hepatitis C virus cell-to-cell transmission. (http://www.ncbi.nlm.nih.gov/pubmed/20962076)** Brimacombe CL, Grove J, Meredith LW, Hu K, Syder AJ, Flores MV, Timpe JM, Krieger SE, Baumert TF, Tellinghuisen TL, Wong-Staal F, Balfe P, McKeating JA. Journal of virology 2011 85: 596-605
- **Hepatitis C virus infection of neuroepithelioma cell lines. (http://www.ncbi.nlm.nih.gov/pubmed/20538002)** Fletcher NF, Yang JP, Farquhar MJ, Hu K, Davis C, He Q, Dowd K, Ray SC, Krieger SE, Neyts J, Baumert TF, Balfe P, McKeating JA, Wong-Staal F. Gastroenterology 2010 139: 1365-74
- **Claudin association with CD81 defines hepatitis C virus entry. (http://www.ncbi.nlm.nih.gov/pubmed/20375010)** Harris HJ, Davis C, Mullins JG, Hu K, Goodall M, Farquhar MJ, Mee CJ, McCaffrey K, Young S, Drummer H, Balfe P, McKeating JA. The Journal of biological chemistry 2010 285: 21092-102
- **Hepatitis C virus infection reduces hepatocellular polarity in a vascular endothelial growth factor-dependent manner. (http://www.ncbi.nlm.nih.gov/pubmed/19944696)** Mee CJ, Farquhar MJ, Harris HJ, Hu K, Ramma W, Ahmed A, Maurel P, Bicknell R, Balfe P, McKeating JA. Gastroenterology 2010 138: 1134-42
- **Hepatoma cell density promotes claudin-1 and scavenger receptor BI expression and hepatitis C virus internalization. (http://www.ncbi.nlm.nih.gov/pubmed/19776133)** Schwarz AK, Grove J, Hu K, Mee CJ, Balfe P, McKeating JA. Journal of virology 2009 83: 12407-14

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