

Current Position

- **Postdoctoral research fellow (Feb 2013 - till date)**, Albert Einstein College of medicine of Yeshiva University, New York, USA.
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Educational qualification

- **Ph.D. (Molecular Biosciences)**, (2008-2012) School of Biology, University of Nottingham, United Kingdom, Supervisor: Dr. Ian Duce, Dr. David Bell.
 - **M.Sc. (Biotechnology)**, (2001-2003) Department of Biotechnology, Supervisor: Dr. SPS Bisht, Kumaun University, Nainital, India.
 - **B.Sc. (Biosciences)**, (1998-2001) Government PG College, Kumaun University, India.
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Professional experience

- **Research fellow (PhD)**, University of Nottingham, UK (July 2008-July 2012).
Duties: Involved in research projects 'Generation and characterization of the cytochrome P450-4x1 (Cyp4x1) knockout mouse, and cloning, expression and purification of mouse Aip'.
- **Demonstrator/Invigilator** University of Nottingham, UK (Oct 2008- Dec 2011).
Duties: Practical assignments/ Demonstration to undergrad biology students. Conduct university half term and yearly exams as a lead or pool invigilator.
- **Project Fellow** University of Leicester (September 2007-March 2008).
Duties: Designing primers, PCR optimization; PCR testing directly on to clinical samples (stool and Blood) for the detection of various *Salmonella* strains.
- **Scientist (Molecular diagnostics)** Auroprobe Research Laboratories, India (2005-2006).
Duties: Development of ELISA and PCR based diagnostic assay for various disease causing pathogens, Molecular diagnosis of *M. tuberculosis*, HPV, HSV, Hep-B and Hep-C Virus, Conduct teaching and training program for Undergrad Students. Writing SOPs/MOPs and ISO audits.
- **Trainee Biotechnologist** Auroprobe Research Laboratories, India (2004-2005) (funded by the Department of Biotechnology, Government of India).
Duties: Decontamination of human clinical samples, DNA and RNA isolation, PCR for the detection of *M. tuberculosis* in clinical samples, ELISA testing for the detection of high risk Human Papilloma Virus from cervical samples.
- **Tutor** Quantum Social and Education Society, India (2003-2004).

Duties: demonstration and lectures (Botany, Zoology and chemistry) to Undergrad students.

Certificates/Diploma

- Currently enrolled in GCP certification training program (CRS-004) under International Clinical research society forum.
 - CITI Good Clinical Practice training, GCP, USA. May 2012.
 - Online clinical research training, National institute of health, USA. May 2012.
 - Certificate of overview of ICH Good Clinical Practice under 'introduction to clinical drug development process: ICH-Good clinical practice for clinical trial sites', SECPTETM organised by Qunitiles. March 2012
 - Certificate of Open excess Good clinical practice (ICH-GCP) test, Pharma School (Pharmaschool.co.uk). March 2012
 - Diploma in Basic computer, 1998 UPTECH Computer Education, Pithoragarh, India
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Scholarships/Awards

- Eurotox 2011 student award to attend GRC conference in New Hampshire, USA, August 2011.
 - International fellowship during PhD, School of Biology, University of Nottingham.
 - 3rd position in All India entrance examination for PhD in Molecular Biology from G.B. Pant University, India (2003) (opted out).
 - Junior Research fellowship award under diamond jubilee research internship sponsored by CSIR, Gov. of India – from CDRI, Lucknow, India.(2005)
 - Post graduate industrial traineeship for the period of six months (Nov 2004-Apr 2005), sponsored by the Department of Biotechnology, Government of India, under BCIL scheme.
 - Studentship during Masters for the period of two years (2001-2003) from Department of Biotechnology, Government of India.
 - Prime minister's Scholarship for the period of two years (1995-1997) during senior secondary school.
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Membership/Scholarly societies

- Research and technical advisor, Qunatum social and educational society, India.
- British Toxicology society (BTS)

- International Society for Transgenic Technologies (ISTT)
 - The Protein Society
 - Bioinformatics organization forum (bioinformatic.org)
 - Clinical research associates connection (CRACONNECTION.com)
 - Clinical Research society (CRS), USA
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Publications

1. Himanshu Kharkwal, Caitlin G. Smith and Duncan W. Wilson. "Blocking ESCRT-mediated envelopment inhibits microtubule-dependent trafficking of alphaherpesviruses in vitro." J Virol. 2014 Dec;88(24):14467-78.
2. Himanshu Kharkwal, Sara Shanda Furgieue, Caitlin G. Smith and Duncan W. Wilson "HSV capsid/organelle association in the absence of the large tegument protein UL36p." J Virol. (JVI01893-15R1) August 2015.
3. Himanshu Kharkwal, Caitlin G. Smith and Duncan W. Wilson. "HSV capsid localization to ESCRT-VPS4 complexes in the presence and absence of the large tegument protein UL36p." J Virol. 2016 Jun 1. pii: JVI.00857-16.

Research Skills

- Molecular Biology/Biochemistry: ELISA, DNA and RNA isolation, Plasmid (mini, midi and maxi) preparation, PCR (multiplex, nested, reverse), q PCR, q RT-PCR (Applied Biosystem 7500, Roche COBAS Amplicor), Southern Blotting, Agarose gel electrophoresis, Restriction digestion, gene cloning, site directed mutagenesis, protein expression and purification, SDS-PAGE, Western Blot, Chromatography (ion exchange, Affinity, molecular exclusion, thin layer, paper, FPLC), SSLP, SNP, RFLP, RAPD, RNA interference, pool-down assay, Flow Cytometry.
- Microbiology/Virology: Bacterial cell culture, HSV culture, *Mycobacterium* culture (Bactec™ 460- from human clinical samples), Fast plaque M TB assay-Mycobacteriophage assay), Drug (Antibiotic) susceptibility test against MTB, Ziehl-Neelsen staining for MTB identification, *Chlamydia trachomatis* and *Nisseria gonorrhoeae* culture and identification from clinical samples, Hepatitis B and C virus –Viral load estimation, Herpes Simplex Virus 1 & 2 viral load estimation, *Salmonella Typhi* and *paratyphi* culture, Blood cell counting, Herpes virus culture isolation, microscopy - confocal, fluorescent, Correlative light-electron Microscopy (CLEM)).
- Immunology: Polyclonal Antibody production, purification and estimation, Immunocytochemistry, Immunohistochemistry, Fluorescence and electron microscopy, ELISA-Human Papillomavirus (Hybrid Capture Assay-2), Agglutination/precipitation reaction (Heamagglutination), Rocket electrophoresis, IgG separation, Immuno-electrophoresis (IEP, CCIEP), Blood group identification, immunization in rabbit, Tridot ELISA (HBV, HCV), glucose tolerance test, Insulin tolerance test.
- Animal and cell Biotechnology: Chick embryo fibroblast cell isolation and culture, Mouse and human ES cell culture, Mouse Breeding, Knockout genotyping (Taqman assay) Mouse behavioural studies, Mouse sperm cryopreservation, Mouse surgery (wounds), Mouse metabolic studies using CLAMS, Blood glucose estimation, glucose and insulin tolerance test, Carrageenan induced inflammation study (Plethysmometer), Plantar test (Hargreaves method), Electron microscopy of mouse adipocytes. LC-MS studies in mouse tissues (Lipidomics)

- Biophysics (Protein): CD spectroscopy, Analytical Ultra centrifugation, Protein crystallization trials (PCT testing, Matrix Hydra II).
- Bioinformatics: Various Bioinformatics tools like BLAST, Primer and probe designing, multiple sequence alignment, homology searching, Protein structure prediction tool, Pymol, Rasmol, Spidey, Insilico PCR, cn3D CLC Genomics workbench-4, ECR Evolutionary conserved Region) analysis, homology modelling.
- Biostatics: Graphpad prism, SPSS
- Software: Chemdraw, Geneious pro, Volocity, Vector NTI, Modeller, Pymol, Rasmol, molmol etc.
- Computer skills: MS office (word, excel. PowerPoint, outlook), Adobe Photoshop.

References

References available upon request.

Himanshu Kharkwal

New York

06/22/2016