







Name: Professor K. Ravi Acharya

Affiliation: Department of Biology and Biochemistry,

University of Bath

Structure-function studies on proteins involved in Cancer

Structural studies on proteins involved in Cancer leading to drug development

Internal telephone number 6238

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Name: Timothy Atkins

Affiliation: Royal United Hospital

Medical Physics

Radiation therapy aims to deliver a radiation dose to the cancerous tissue while giving minimal dose and damage to surrounding tissue. To ensure modern treatment techniques fulfil these aims an accurate 3-dimensional method of measuring the dose delivered (dosimetry) is required.

One 3-dimensional dosimetry technique involves the use of radiation sensitive gels. Such gels are made of materials which alter their physical properties when exposed to radiation.

This project aims to investigate changes in these gels using ultrasonic scanning and develop a 3-dimensional dosimetry system based on these gels. Ultrasound is an established and cost-effective technology which, if applied to gel dosimetry, will improve the availability of the technique and therefore the advanced treatment options.

<u>Timothy.Atkins@ruh-bath.swest.nhs.uk</u>









Name: **Stefan Bagby** 

Affiliation: Department of Biology & Biochemistry,

University of Bath

Protein structure and function

Structure and function of proteins involved in the Hippo pathway, particularly YAP, TAZ and TEAD. YAP and TAZ orchestrate diverse cellular processes involved in contact inhibition, organ size control, stem cell maintenance and cancer. TEAD is the cognate DNA binding partner of YAP. (Collaboration with Makoto Furutani-Seiki, Biology & Biochemistry).

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bsssb@bath.ac.uk



Affiliation: Department of Social and Policy Sciences and Tobacco Control Research Group, University of Bath

Cancer prevention through tobacco control

Evaluation of public health policies, in particular policies and interventions to prevent smoking uptake and to help people stop smoking.

Internal telephone number 3160 (direct line) 4159 (tobacco control research group administrator)

<u>L.Bauld@bath.ac.uk</u> http://www.bath.ac.uk/health/tobacco/linda.html













Name: Dr Mark Beresford

Affiliation: Royal United Hospital, Bath

Breast and Urological cancers Radiotherapy

Prediction of response to neoadjuvant chemotherapy

Endocrine resistance

Functional imaging techniques (DCE-MRI, PET including

novel tracers)

Member of breast NCRI clinical studies group

mark.beresford@nhs.net



Name: Dr Rebecca Bowen

Affiliation: Department of Oncology, Royal United

Hospital, Bath

Breast and gynaecological cancers

Molecular profiling of cancers, inherited malignancies and epigenetics. Cytotoxics and targeted molecules.

01225 824831

Rebecca.bowen3@nhs.net











Name: Lorenzo Caggiano

Affiliation: Department of Pharmacy and Pharmacology,

University of Bath

Efficient Synthesis of Pancratistatin Analogues

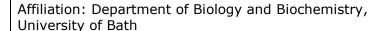
Pancratistatin is a natural product obtained from the daffodil (narcissus) that has shown very interesting anticancer activities. We wish to synthesize new pancratistatin analogues that retain the important features necessary for biological activity, yet can be synthesised using robust chemical transformations in a short, efficient route that is amenable to large scale production.

production

Internal telephone number 5709

http://people.bath.ac.uk/lc287/

Name: Jim Caunt



Understanding and overcoming cell signalling alterations that cause cancer and cancer drug resistance

Our specialist area is cell signalling. Our work focuses on a family of enzymes called the dual specificity phosphatases (DUSPs), many of which directly inactivate members of the mitogen-activated protein kinase (MAPK) family. We use robotic automated microscopy techniques to understand how DUSPs alter MAPK signalling at high spatial resolution in cells in large scale experiments. This in turn can reveal why DUSPs have apparently paradoxical roles in tumour development and drug resistance.

high content microscopy, kinase, phosphatase, signalling

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Name: Andrew Chalmers

Affiliation: Department of Biology and Biochemistry, University of Bath.

Epithelial cell junctions. Formation in normal tissue and loss in cancer cells.

Approximately 90% of tumours originate from epithelial organs. In these tissues cells are held together by specialised Cell-Cell junctions. During cancer formation these junctions are lost allowing cells to metastasise. We study how epithelial junctions form and what happens to cell behaviour when junction formation is blocked. For example we study the oncogene PKCiota which regulates junctions.

Internal telephone number 5054 <a href="http://www.bath.ac.uk/bio-sci/contacts/academics/andrew">http://www.bath.ac.uk/bio-sci/contacts/academics/andrew</a> chalmers/

Name: Ben Colleypriest

### Affiliation:

- Department of Biology and Biochemistry, University of Bath *and*
- Department of Gastroenterology, RUH Bath

Reversion of Barrett's Metaplasia

I am looking at the role of the homeobox gene, cdx2, in the development of Barrett's metaplasia and oesophageal adenocarcinoma.

Internal telephone number 5548

bc248@bath.ac.uk









Name: Susan Doshi

#### Affiliation:

- Department of Mathematical Sciences, University of Bath
- Department of Medical Physics and Bioengineering, Royal United Hospital

Statistical image analysis

Statistical image analysis, applied to cone-beam CT imaging of prostate radiotherapy patients with implanted fiducial markers.

s.k.doshi@bath.ac.uk



Name: Christopher Eccleston

Affiliation: Centre of Pain Research, University of Bath

# Pain

- Pain management at end of life
- Mechanisms of pain and analgesia
- Parental and family models of pain
- Evidence based pain medicine

Internal telephone number 6439

c.eccleston@bath.ac.uk











Name: Dr Ian M. Eggleston

Affiliation: Department of Pharmacy & Pharmacology,

University of Bath

Synthetic organic chemistry and medicinal chemistry

Synthesis of biologically active peptides and enzyme inhibitors, including. inhibitors of carbohydrate-processing enzymes as antifungals, anti-asthma agents. Peptide prodrugs for aminolevulinic acid-based photodynamic therapy of cancer, peptide-targeted reagents for photochemical internalisation of anticancer drugs. Novel iron chelators as skin photoprotectants/anticancer agents.

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Name: Dr Pedro Estrela

Affiliation: Department of Electronic and Electrical

Engineering, University of Bath

Electrical and electrochemical biosensors

Development of sensors for label-free electrical detection of biomolecular interactions such as cancer markers. Use of solid state devices and electrochemical devices for biosensing.

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Name: Anna Gilmore

Affiliation:

School for Health, University of Bath

Public Health and Tobacco Control

- Evaluation of social/policy change (including globalisation and macro-economic change) and specific policy interventions on health and health behaviours (notably smoking).
- Tobacco industry influence on public health and policy
- Evidence based approaches to public health / tobacco control policies

Internal telephone number 6810

http://www.bath.ac.uk/health/tobacco/anna.html or http://www.bath.ac.uk/pip/directory/profile/505002



Name: Richard Graham

Affiliation: Consultant Radiologist (subspecialty interest in oncological imaging and nuclear medicine)
Department of Radiology, Royal United Hospital

Imaging of angiogenesis

Using Tc99m labelled RGD to image tumour angiogenesis with SPEC-CT

Internal telephone number RUH Ext 1174

richard.graham@ruh-bath.swest.nhs.uk









Name: Mrs Maria Hassard, CEO.

Affiliation: NHS Innovations SW, Enterprise House, 25-29 Boathouse Meadow Business Pk, Cherry Orchard Lane, Salisbury, SP2 7LD

Intellectual Property protection, development and commercialisation for the NHS and its partners.

Working In all healthcare areas to provide Legal advice and guidance, market research, feasibility testing, project and business planning, regulatory advice, financial planning, identification of commercialising / social enterprise partners, technology licensing and spin out company formation.

telephone number: 01722 326006

maria.hassard@nisw.co.uk



Name: Dr. Momna Hejmadi

## Affiliation:

- Dept. Biology & Biochemistry
- Centre for Extremophile Research University of Bath

Hypoxia signalling pathways and DNA repair in tumours

Integration of hypoxic signalling cascades with oncogenic and apoptotic pathways UV-induced DNA repair by novel photolyases

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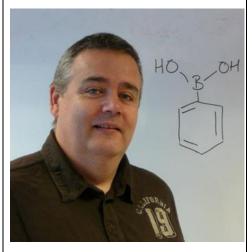
http://www.bath.ac.uk/biosci/contacts/academics/momna hejmadi/











Name: Tony D James

Affiliation: Department of Chemistry, University of Bath

Sensors for carbohydrates

Synthetic / analytical chemist with supramolecular chemistry background.

Particularly interested in the detection of carbohydrates, including those associated with disease states such as cancer. Methods employed include fluorescence, electrochemical and colorimetric methods etc.

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t.d.james@bath.ac.uk www.chemosensors.com



Name: Robert Kelsh

### Affiliation:

- Department of Biology & Biochemistry, University of Bath *and*
- Centre For Regenerative Medicine, University of Bath

Zebrafish developmental genetics, especially neural crest fate choice, differentiation and patterning

How do multipotent neural crest (stem) cells choose *in vivo* between alternative fates, stably differentiate as that chosen fate and become correctly positioned (i.e. patterned) within the developing embryo?

Zebrafish in vivo screens for RTK inhibitors

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Name: Jonathan Knight

Affiliation:

- Department of Physics, University of Bath
- Centre for Photonics and Photonic Materials, University of Bath

Spectroscopy for carcinogenesis

Development of specialised optical sources and optical fibres for portable fibre-delivered spectroscopy as a means of cancer diagnostics. Implementation and demonstration in systems. Nonlinear optical imaging. Potential for endoscopy.

Internal telephone number 3042

j.c.knight@bath.ac.uk

http://www.bath.ac.uk/physics/groups/cppm/

Name: Simon E. Lewis

Affiliation: Department of Chemistry, University of Bath

Azasugars as glycosidase inhbitors –applications as anticancer agents

Using proprietary chemical building blocks, we hope to assemble previously unknown azasugars capable of selectively inhibiting various human glycosidase enzymes. Certain of these are implicated in various cancers, thus the possibility exists for developing new therapeutic agents.

Internal telephone number 6568

S.E.Lewis@bath.ac.uk













Name: Dr Julien Licchesi

Affiliation: Department of Biology & Biochemistry,

University of Bath

Cell Signalling and Ubiquitin

Our research focuses on the role and function of enzymes regulating protein ubiquitylation (i.e. E3 ubiquitin ligases and deubiquitylases), in the context of cell growth and proliferation pathways. We are also particularly interested in the transcriptional and epigenetic regulation of Wnt signalling, a major pathway dysregulated in cancer.

Ubiquitin, E3 ligases, deubiquitylases, Wnt, Epigenetics

Internal telephone number 6287

http://www.bath.ac.uk/biosci/contacts/academics/julien-licchesi/index.html

http://people.bath.ac.uk/jdfl20/JulienLicchesi/Home.html

Name: Matthew D. Lloyd

Affiliation: Department of Pharmacy & Pharmacology,

University of Bath

Chemical Biology of branched-chain lipids

Research in my group uses the techniques of chemical biology to study enzymes implicated in cancer, typically using recombinant enzymes, activity assays, enzyme kinetics, inhibitor studies, chemical synthesis and structural biology including for drug development.

Studies are mainly focussed on alpha-methylacyl-CoA racemase (AMACR; P504S), its role in prostate, colon and other cancers and in the metabolism of fatty acids and drugs such as Ibuprofen.

Interested in collaborating on any project involving chemical biology studies on the role of enzymes in cancer or other disease states.

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http://www.bath.ac.uk/pharmacy/contacts/academics/matthew lloyd/















Name: Tracie Miles

Affiliation: Department of Gynae Oncology RUH Phd Student (final year) UWE

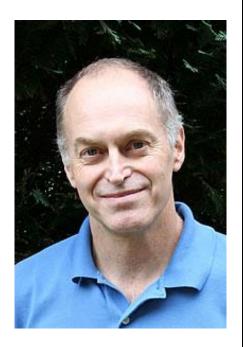
RCT of interventions to treat vaginal radiotherapy toxicity.

RCT tests hypothesis on a novel intervention for preventing radiotherapy toxicity.

Also in research program the invention of a device to measure vaginal anatomy (length, elasticity and viscosity). Its testing and valdation.

Cochrane review into research area almost complete. All areas of research are thru NRES.

telephone number 07909994831 work 01225821553 tracie.miles@btinternet.com



Name: Randy Mrsny

Affiliation: Department of Pharmacy and Pharmacology, University of Bath

Re-establishment of Functional Tight Junctions to Correct Phenotype and Genotype of Epithelial-derived Cancers

Occludin appears to function as an orchestrating element in the establishment of and stabilization of epithelial tight junctions. We have established how Raf-driven cancers down-regulate occludin and identified potential therapeutic targets to reverse the action(s) of Raf. Our studies have defined novel approaches to treat epithelial-derived cancers through the identification of molecules and methods that re-activate the expression of functional occludin.

mobile = 001-650-575-5171 <u>r.j.mrsny@bath.ac.uk</u>









Name: Adele Murrell

Affiliation: Department of Biology and Biochemistry, University of Bath

Epigenetic programming of normal and cancer cells

Epigenetics is a layer of information on top of the DNA that directs gene expression. The environment surrounding the DNA in the nucleus plays a key role in the epigenetic mechanisms that regulate DNA function. The central theme of our research is investigating the nuclear environment to discover avenues whereby epigenetic changes during tumorigenesis and metastasis can be therapeutically targeted.

Epigenetics, DNA methylation, noncoding RNA, hydroxymethylation, metastases

Telephone number 01225 383583

e-mail <u>Amm95@bath.ac.uk</u>

Name: **Dr Mike Osborn**, consultant macmillan clinical psychologist

Affiliation: Centre for Pain Research, University of Bath, and Royal United Hospital

In essence the psychology of pain and cancer and being a patient

Phenomenology of chronic pain, experience of hospital care

telephone number 01225 824586

Mike.osborn@ruh-bath.swest.nhs.uk









Name: Dr Sofia I Pascu

Affiliation: Department of Chemistry, University of Bath

Biomedical and imaging aspects of inorganic and supramolecular chemistry

Multi-modal molecular imaging (optical/MRI/PET or SPECT) is a rapidly growing field within medicinal chemistry. Our research interests span from fundamental chemistry to application oriented research in drug delivery for cancer imaging and therapy. We are using systems ranging from small molecules to nanoparticles (carbon based such as Single Walled Carbon nanotubes and fullerenes, or gold, magnetic nanoparticles and quantum nanodots and nanowires) and are specialising in the emerging filed of nanomedicine for cancer targeting applications.

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Name: Professor Barry VL Potter

Affiliation: Department of Pharmacy & Pharmacology,

University of Bath

Anticancer Drug Design & Discovery; Chemistry of Cell

Signalling

Steroid Sulfatase Inhibitors: We have pioneered a novel class of super-potent time and concentration dependent active site directed inhibitors. These steroid conjugates, which function irreversibly, are therapeutic agents for e.g. breast and prostate cancer *inter alia*. One has reached phase II clinical trial. A Phase I clinical trial of another lead compound in patients with hormone-dependent breast cancer gave very promising results, including stable disease. Other compounds are potent on cellular microtubules and one is in pre-clinical development against drug-resistant tumours. *Dehydrogenase Inhibition:* 17β-Hydroxysteroid dehydrogenase is a novel target for anticancer drug design. Potent and selective low nanomolar inhibitory druglike candidates are being designed and evaluated.

Internal telephone number 6639 <a href="http://www.bath.ac.uk/pharmacy/staff/bvlp.html">http://www.bath.ac.uk/pharmacy/staff/bvlp.html</a>











Name: Dr Charareh Pourzand

Affiliation: Department of Pharmacy and Pharmacology,

University of Bath

Caged iron chelators (CICs) a novel approach for the therapy of non melanoma skin cancer (NMSC) Depriving cancer cells of the essential nutrient iron by selective iron chelators represents an attractive possibility for cancer treatment. However systemic iron depletion upon chronic administration of iron chelators causes severe side effects. The use of caged iron chelators allows the selective targeting of cancer cells (in NMSC for instance) locally without systemic effects.

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prscap@bath.ac.uk



Name: Paula Smith

### Affiliation:

- Department of Psychology, University of Bath and
- Centre for Death and Society, University of Bath

Psycho-social oncology and patient and family experience.

Psychological adaptation and cancer survivorship for patients and their families. Palliative and end of life care as part of the cancer journey.

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p.c.smith@bath.ac.uk











Name: Dr Manuchehr Soleimani

Affiliation: Group leader for Engineering Tomography Lab (ETL), Electronic and Electrical Engineering, University of Bath

Medical Imaging, radiation therapy, tomographic imaging.

In ETL we are developing state of the art tomographic imaging software and instruments for early detection of cancer. We are also developing new techniques for image guided radiation therapy. In particular, we work for motion compensated lung imaging and adaptive treatment planning.

Image guided radio therapy, medical imaging, inverse problems

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m.soleimani@bath.ac.uk http://people.bath.ac.uk/ms350/



Name: Andrew S. Thompson

Affiliation: Department of Pharmacy and Pharmacology, University of Bath

Design, Synthesis and Evaluation of Novel Anticancer Agents.

High-field NMR studies of nucleic acid ligand complexes leading to NMR refined accurate solution structures that can be used in drug design projects.

The sirtuins are a group of enzymes that cleave acetyl groups from substrate proteins , using NAD<sup>+</sup> as an activating electrophilic substrate. Three of the isoforms (sirtuins 1, 2 and 3) are validated as targets for anticancer drug development.

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Affiliation: Department of Pharmacy & Pharmacology, University of Bath

Anticancer drug discovery, delivery and development

My group's main interest is in the rational design, synthesis and biochemical evaluation of inhibitors of enzymes which use NAD<sup>+</sup> as an electrophilic substrate, such as the sirtuins, the poly(ADP-ribose)polymerases (PARPs) and the tankyrases. We are also interested in tumour-selective drug delivery through protease-activated prodrugs and in BNCT.

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Name: Dr Julie Turner-Cobb

Affiliation: Department of Psychology, University of Bath

Psychosocial influences on endocrine responses and physical health outcomes

Cross disciplinary research examining the effects of psychosocial factors, particularly stress, coping and social support, on endocrine functioning. Research has encompassed a range of acute and chronic health outcomes and has particularly focused on including breast cancer. Current projects include cancer survivorship and the use of visualisation in presentation of treatment options in prostate cancer.

Stress; Coping; Psychoendocrinology; Survivorship; Visualisation Internal telephone number 6982

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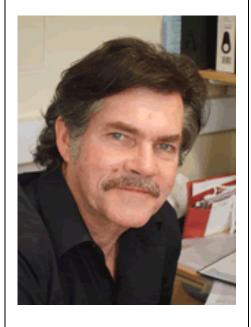












Name: Rex Tyrrell

Affiliation: Department of Pharmacy & Pharmacology,

University of Bath

Sunlight damage and protection

Sunlight effects on humans and UIVA/UVB/Visible light effects on human skin cells. Protection against carcinogenic damage from cellular to whole organism level. Stress gene regulation with focus on cellular homeostasis and negative regulatory proteins. Search for new therapeutic anti-cancer targets.

Internal telephone number 6793

http://www.bath.ac.uk/pharmacy/contacts/academics/re
x tyrrell/

Name: Andrew Ward

Affiliation: Department of Biology & Biochemistry,

University of Bath

Regulation of growth and body proportions during early life. Genetic and epigenetic programming of life-long health risks, including obesity, diabetes and cancer.

Internal telephone number 6914

http://www.bath.ac.uk/biosci/contacts/academics/andrew ward/











Name: Sue Wonnacott

Affiliation: Department of Biology & Biochemistry,

University of Bath

NICOTINE AND NICOTINIC RECEPTORS

Molecular and cellular mechanisms and regulation of nicotinic receptors in neurones; their roles in physiology,

tobacco addiction and disease

Internal telephone number

6391

http://www.bath.ac.uk/bio-sci/



Name: Tim Woodman

Affiliation: Department of Pharmacy and Pharmacology,

University of Bath

Porphyrins as DNA duplex and quadruplex ligands

Research involves the synthesis of novel pendant-arm porphyrins, and subsequent investigation of the porphyrin-DNA interaction *via* DNA melting and NMR studies. In particular DNA quadruplexes are a significant target, with the aim of refining pendant arm interactions with the loops and grooves of the structure.

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