





## **Science Bridges China Research Profile**

Name: Professor Laurence Patterson

Position: Director, Institute of Cancer Therapeutics; Institute/division: School of Life Sciences, University of Bradford

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#### **SUMMARY OF MY RELEVANT RESEARCH AREAS:**

Anti cancer drug discovery

Delivery devices for anticancer drugs

Taste masking of TCM  $^{\prime}$  s and API  $^{\prime}$  s

Pharmacological taste masking (bitter taste Sensomics)

Fluorescent probe development for informing cell content and cell activity

抗肿瘤药物新药研究 抗肿瘤药物载体研究 药物掩味技术研究 掩味药理学研究 荧光法检测细胞活性

# **Primary Research interests:**

- •Tumour-selective drug activation
- The glycocalyx as a target for drug discovery
- Modulators of integrin activity
- •Bioreductive activation of drugs in hypoxia tumours
- •Cytochromes P450 in tumours

Topics in which you would like to develop collaborative research:

**Cancer Therapeutics** 



#### Relevant existing collaborations (academic/clinical/commercial) inside or outside China.

Chinese collaborators 中国合作伙伴

Prof Bian, Dept Pathology, Southwest Hospital, TMMU Chongqing 卞教授,西南医院病理学研究所,第三军医大学,重庆

Prof Zhou, Inst Biopharmaceutics, TMMU, Chongqing 周教授,生物制药研究室,第三军医大学,重庆 Prof Cui, Department of Stem Cell Biology & Regenerative Medicine, Southwest University, Chongqing 崔教授,干细胞与再生医学研究所,西南大学,重庆

Prof Fang, IMM, Beijing 方教授,中国医学科学院北京协和医学院药物研究所,北京 Prof Feng, TCM University, Shanghai 冯教授,上海中医药大学,上海 Prof Zhang, SIMM, Shanghai 张教授,中国科学院上海药物研究所,上海

#### Outside China 中国以外合作伙伴

major Collaboration with St James's hospital University of Leeds (Experimental Cancer Medicine Centre partner) 利兹大学 St James's 医院(肿瘤医学实验中心)

major Collaboration with Prof Magnus Ingelman-Sundberg, Department of Physiology and Pharmacology KarolinskaInstitute, Sweden

Magnus Ingelman-Sundberg 教授,生理与药理研究所,卡罗林斯卡医学院,瑞典

### Relevant graphics, figures, pictures:



**Medicinal Chemistry** 



Proteomics & mass spectroscopy



**Drug Metabolism and Pharmacokinetics** 

#### Publications and other outputs relevant to your interest in this programme

- •Veiga, J.P., Cooper, P.A., Pors, K., Patterson, L.H., Bibby, M.C., Shnyder, S.D. "Use of the hollow fiber assay for the evaluation of DNA damaging agents," J Pharmacol Toxicol Methods (2011) Apr 30. [Epub ahead of print] PubMed PMID: 21569858.
- •Vinader, V., Al-Saraireh, Y., Wiggins, H.L., Rappoport, J.Z., Shnyder, S.D., Patterson, L.H., Afarinkia, K. "An agarose spot chemotaxis assay for chemokine receptor antagonists," J Pharmacol Toxicol Methods (2011) Feb 1. [Epub ahead of print] PubMed PMID:21292017.
- •Atkinson, J.M., Falconer, R.A., Edwards, D.R., Pennington, C.J., Siller, C.S., Shnyder, S.D., Bibby, M.C., Patterson, L.H., Loadman, P.M., Gill, J.H. "Development of a novel tumor-targeted vascular disrupting agent activated by membrane-type matrix metalloproteinases" Cancer Res. (2010) Sep 1;70(17):6902-12. Epub 2010 Jul 27.PubMed PMID: 20663911; PubMed Central PMCID: PMC2933508.
- •Sutton, C.W., Sutherland, M., Shnyder, S., Patterson, L.H. "Improved preparation and detection of cytochrome P450 isoforms using MS methods," Proteomics. (2010) Jan;10(2):327-31. PubMed PMID: 19902426.
- •Sheldrake, H.M. and Patterson, L.H., "Function and antagonism of beta3 integrins in the development of cancer therapy," Curr Cancer Drug Targets, (2009), Jun; 9(4):519-40. PMID: 19519320
- •Seibert, C., Davidson, B.R., Fuller, B.J., Patterson, L.H., Griffith, W.J., and Wang, Y., "Multiple-approaches to the identification and quantification of cytochromes P450 in human liver tissue by mass spectrometry," J Proteome Res. (2009) Apr; 8(4): 1672-81. PubMed PMID: 19714871