

MIB Newsletter

April 2010

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More news and information about the MIB can be found on our website:

<http://www.mib.ac.uk/>

and in the [MIB brochure](#) available online



Research News

Interview: from genes to kilos

A Royal Society of Chemistry interview with Professor Nick Turner published online is currently featured on the Highlights in Chemical Biology homepage at www.rsc.org/highlightschembiol. In this interview Nick talks about his early inspiration and discusses his views on academia collaborating with the biotechnology industry in the UK.

Recent publications from the Turner lab include:

Truppo MD, and Turner NJ. Micro-scale process development of transaminase catalysed reactions. *Org Biomol Chem*. 2010 Mar 21;8(6):1280-3. Epub 2010 Jan 22. [Abstract](#)

Transaminases are emerging as highly useful biocatalysts for the synthesis of enantiomerically pure chiral amines, especially as intermediates for the preparation of pharmaceutical drugs. This paper describes the development of scale down experiments for screening transaminases which will enable rapid identification of new substrate/enzyme combinations.

Köhler V, Bailey KR, Znabet A, Raftery J, Helliwell M, Turner NJ. Enantioselective biocatalytic oxidative desymmetrization of substituted pyrrolidines. *Angew Chem Int Ed Engl*. 2010 Mar 15;49(12):2182-4. No abstract available. [Paper](#)

Desymmetrisation of symmetrical amines to the corresponding chiral imines is difficult to achieve via conventional chemical approaches. This paper describes the use of enantioselective amine oxidases to provide chiral building blocks which are useful for the preparation of hepatitis C viral proteases inhibitors.

General News

Equality and Diversity Calendar, May: – Age Discrimination

FICTION: Age discrimination only affects the 50+age group.

FACT: Ageism at work is a bigger problem for people in their late teens than their 50s: 25% of school leavers have faced age discrimination compared to 21% of those over 50 and 18% of those over 60 (Age at Work, 2005).

FICTION: Older workers are technophobes.

FACT: The over 50s are as keen to get to grips with new technology as teenagers. 74% of the over 50s like to keep up with new technology, only 5% fewer than teenagers (Age at Work, 2005). Age discrimination can affect us all and in different ways. Common phrases around ‘the old’ and ‘the young’ just show how deep rooted stereotypes about age can be: “She’s past it!” or “He’s still wet behind the ears!” It is really important that we break the stereotype habit. People of all ages have something to offer at work and a ‘one size fits all’ approach certainly doesn’t work with regards to age, anymore than any other defining characteristic. On top of which, it can be unlawful. To find out more about what the University is doing to promote age equality visit:

[http://www.campus.manchester.ac.uk/equalityanddiversity/age/Diversity Calendar](http://www.campus.manchester.ac.uk/equalityanddiversity/age/Diversity%20Calendar)



Safety News

Safety first..!

STDU safety training courses

STDU H&S courses are run in the Sackville Street Building, close to MIB. They are available, free of charge, to all staff and research students. To book any of the courses, see:

<http://www.staffnet.manchester.ac.uk/employment/training/courses/>

Date	Course code	Course title
06/05/10	HS42	Laser training
06/05/10	HS98	Laser safety awareness
10/05/10	HS3	Office safety
10/05/10	HS15	Principles of risk assessment
12/05/10	HS85	GM training for principal investigators & senior research staff
19/05/10	HS50	COSHH assessment for lab based staff
20/05/10	HS71	Health and safety for managers
09/06/10	HS67	Risk assessment workshop for lab based staff

Focus on.....Lone working and out-of-hours working

MIB working hours are defined as follows:

- **Standard working hours** are Monday – Friday, 9am – 5pm (ie. when Reception is staffed; not Bank Holidays).
- **Standard “out of hours working”** is any work within MIB (lab or dry work) between 5pm-10pm and 6am-9am, Monday – Friday, and at any time between 6am – 10pm on weekends and Bank Holidays.
- **“Exceptional out-of-hours working”** is defined as any work within MIB (lab or dry work) between 10pm - 6am, Monday-Sunday. Work during these hours should only be carried out in exceptional circumstances, and an “exceptional access form” must be completed on each occasion, as the forms are only valid for a single 24 hour period.

The MIB H&S committee has agreed to introduce an “exceptional access” form (attached),

which would apply to all work being conducted within the MIB between 10pm - 6am, Monday-Sunday. This form must be signed by your PI/line manager, and confirms that they have reviewed the risk assessment and are satisfied that lone working and out-of-hours issues have been suitably addressed, and that this work can not be rescheduled to be completed during normal working hours. A signed copy of the form must be left in the overnight folder at Reception by 7pm, and you must retain a copy for your own records.

Certain activities (eg. use of HF, radioactive material, liquid nitrogen, cyanides, etc) are expressly **forbidden** outside normal working hours. Please contact Janet, Tanya or Fiona if you require further information.

Funding News

BBSRC-EPSC Bioprocessing Research Industry Club Phase 2

Invitation for applications: £10 million new funding for excellent research with impact - making medicines of the future

Closing date: 4 PM on 5 May 2010 BBSRC, EPSRC and the Biopharmaceutical Industry invite you to apply for funding for research relevant to the biological medicines industry.

The second phase of Bioprocessing Research Industry Club (BRIC) aims to continue the success of the first phase of BRIC, with a focus on 5 priority areas, namely:

- Bioprocessing research challenges for protein products and their host cell producers
- High-throughput bioprocess development
- Effective modelling of whole bioprocesses
- Robust and effective analytics for bioprocessing
- Bioprocessing research for cellular products

The BRIC call, supported by a partnership between BBSRC, EPSRC, industry and the HealthTech & Medicines Knowledge Transfer Network, is an opportunity for researchers to work together to solve the challenges in bioprocessing. Approximately £10 million will be made available during the lifetime of BRIC phase 2 to provide a means for academics with relevant expertise to collaborate on innovative and novel scientific areas which are of relevance to this industry.

Post-Doc Knowledge Transfer Partnerships

BBSRC continues to sponsor with TSB, and other partners, Knowledge Transfer Partnerships (KTPs). Each partnership, lasting between 1 and 3 years, employs one or more high-calibre KTP Associates (early-career researchers) to work on an innovative project within a company. Associates are jointly supervised by the participating industrial and academic partners. Public sector support is delivered through a grant to the academic partner. In addition, a contribution from the participating company fully covers the academic partner's cost of participation.

BBSRC is working with the TSB to promote "Post Doc KTPs", aimed at ongoing partnerships established for example through a CASE or Industrial CASE studentship, which provide the opportunity for the Associate to embed the outcomes of their research project into the partner company.

For more information on KTPs, see the [BBSRC website](#) or [KTP website](#)

Post Docs themselves may be interested in the information at:

<http://www.ktponline.org.uk/graduates/postdocs/postdocs.aspx>

Research Council Follow-on Fund

Invitation for proposals: Up to 12 months support available to develop the commercial potential of ideas generated by EPSRC research grant funding. Closing date: 4 PM on 26 August 2010.

The Follow-on Fund helps researchers to bridge the funding gap between traditional research grants and commercial funding by supporting the very early stage of turning research outputs into a commercial proposition.

Up to 12 months support is available to develop the commercial potential of a concept and establish both commercial feasibility and scientific/technical merit through a complementary mix of both technical and business development activities. Proposals must demonstrate a strong commercial focus and not be predominantly concerned with overcoming technical obstacles or extending the original research. See more details: [website](#)

NERC deadline change

The next deadline for NERC standard grants has been brought forward from 1st July to 10th June.

Standard grants: This is an open competition for curiosity-motivated basic, strategic or applied research. Grants are for a minimum of £25,000 for directly incurred costs (total of costs under this heading). The primary criterion for assessment is scientific excellence, with all applications subjected to an [Initial Review stage](#) that makes decisions on which proposals should proceed to external review. Moderating Panels meet annually in June and December to grade the applications and make recommendations for funding.

Wellcome Trust funding changes – New “Investigator Awards”

Important changes are being made to the Trust’s biomedical science grant programmes, which will affect this scheme.

1. Changes to the Trust's biomedical science grant programmes: The Investigator Award scheme will open on 1 October 2010. During the transition to Investigator Awards, the following grant schemes are being phased out: project grants, programme grants, equipment grants, biomedical resources grants, technology development grants, university awards, flexible travel awards

2. Applications for Investigator Awards: We will be open for Investigator Award applications from 1 October 2010 onwards. If you wish to send an application for consideration at the first Investigator Awards funding round, you will need to apply before the closing date of Monday 22 November 2010. Details of the Investigator Award application form and process will be available from 2 June 2010.

3. Applying for a scheme being phased out: If you are applying for any of the schemes that are being phased out, please bear in mind the following information.

The following closing dates for full applications will apply: Friday 30 April 2010 and Friday 30 July 2010.

See website link for more information

<http://www.wellcome.ac.uk/Funding/investigator-awards/Implementation/index.htm>

Funding Deadlines & Links

NERC Research, consortium, and partnership Grants 10th June <http://www.nerc.ac.uk/>

EPSRC <http://www.epsrc.ac.uk/default.htm>

BBRSC Responsive mode –14th April 2010 <http://www.bbsrc.ac.uk/funding/index.html>

MRC <http://www.mrc.ac.uk/index.htm>

Wellcome Trust <http://www.wellcome.ac.uk/Funding/Biomedical-science/index.htm>

ESRC <http://www.esrc.ac.uk/ESRCInfoCentre/index.aspx>

Congratulations

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Recent Grant Awards

John Gardiner together with Gordon Jayson (MHS, Paterson Institute) has been awarded £980K from the Medical Research Council for their study "*Development of Anti-Angiogenic Oligosaccharides*". The project aims to generate oligosaccharide lead materials to identify the optimum candidate towards in vivo studies related to development of clinical anti-angiogenic oligosaccharides.

Nick Goddard (PI), and Peter Fielden, together with colleagues from across the University (A Day, S Eichhorn, C Kielty, C Merry and C Ward), have been awarded a grant from the EPSRC for a project investigating "Stem cell fractionation using interactions with artificial matrices" worth over £2M

Seminars

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MIB Research Forum Talks 12.00 MIB LT

Thursday 29th April

Andrew Almond "*Glycosaminoglycans in 3D*" (- no 3D-glasses provided!)"

Joshua Knowles "*A Perspective on Using Formal Optimization Techniques in Experimental Biology*"

Lunch to follow sponsored by ROCHE! – all welcome to attend



The next talks will be 3rd June

MIB International Seminar Series 12.00pm MIB LT

Thursday 13th May 2010 - Professor David Beebe, University of Wisconsin-Madison

Thursday 17th June 2010 – Professor Dek Woolfson, University of Bristol

If you would like to meet with any of the speakers during their visit please contact [Ros Le Feuvre](#)

[Full seminar list](#)

MIB Internal Seminar series 12.00 MIB LT

Wednesday 5th May

Ben Small - *Chemical Biology of IL-1 beta expression*

Ross Chawner - *A QconCAT standard for calibration of ion mobility-mass spectrometry*

UMIP and UMIC – Lorna Farnsworth and Martino Picardo

Free Lunch sponsored by Seralab



Wednesday 2nd June

Farid Khan - *New tools and reagents for protein and enzyme research*

Brett Fielden Lab/AZ - *Microfluidics in Pharmaceutical Drug Discovery*

Free Lunch sponsored by Licor



Seminars throughout the University

can be found at:

- [Faculty of Life Sciences](#)

Pharmacy <http://www.pharmacy.manchester.ac.uk/aboutus/events/seminars2010/>
School of Chemical Engineering and Analytical Science <http://www.ceas.manchester.ac.uk/research/seminar/>
School of Chemistry <http://www.chemistry.manchester.ac.uk/research/seminars/>
School of Computer Science <http://www.cs.manchester.ac.uk/research/seminars/school/>
School of Materials <http://www.materials.manchester.ac.uk/aboutus/events/>
School of Mathematics <http://www.mims.manchester.ac.uk/events/>
School of Physics and Astronomy <http://www.physics.manchester.ac.uk/aboutus/events/>
School of Mechanical, Aerospace and Civil Engineering <http://www.mace.manchester.ac.uk/>
School of Electrical and Electronic Engineering <http://www.eee.manchester.ac.uk/aboutus/news/>
School of Earth, Atmospheric and Environmental Sciences <http://www.seaes.manchester.ac.uk/aboutus/events/>

Events/Symposia/Meetings

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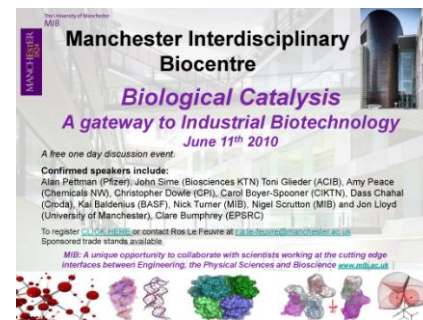
Biological Catalysis – A gateway to Industrial Biotechnology

June 11th 2010

One day discussion event with speakers from Industry, academia and gov. bodies. Confirmed speakers: Alan Pettman (Pfizer), John Sime (Biosciences KTN), Toni Glieder (IMBT), Amy Peace (Chemicals NW), Christopher Dowle (CPI), Kai Baldenius (BASF), Carol Boyer-Spooner (CIKTN), Surinder Chahal (Croda), Stuart West (Biocatalysts), Nick Turner (MIB), Nigel Scrutton (MIB), Jon Lloyd (University of Manchester), Clare Bumphrey (EPSRC) and James Phillips (BBSRC).

Please put this date in your diaries!

If you would like further information please contact [Ros Le Feuvre](#) – to register for the event please [Click Here](#)



Publications

Publications

Bassan P, Kohler A, Martens H, Lee J, Jackson E, Lockyer N, Dumas P, Brown M, Clarke N, Gardner P. RMieS-EMSC correction for infrared spectra of biological cells: Extension using full Mie theory and GPU computing. *J Biophotonics*. 2010 Apr 22. [Abstract](#)

Guilbaud JB, Vey E, Boothroyd S, Smith AM, Ulijn RV, Saiani A, Miller AF. Enzymatic Catalyzed Synthesis and Triggered Gelation of Ionic Peptides. *Langmuir*. 2010 Apr 21. [Abstract](#)

Sun S, Poon RT, Lee NP, Yeung C, Chan KL, Ng IO, Day PJ, Luk JM. Proteomics of hepatocellular carcinoma: serum vimentin as a surrogate marker for small tumors (≤ 2 cm). *J Proteome Res*. 2010 Feb 2. [Abstract](#)

Cliff MJ, Bowler MW, Varga A, Marston JP, Szabó J, Hounslow AM, Baxter NJ, Blackburn GM, Vas M, Waltho JP. Transition State Analogue Structures of Human Phosphoglycerate Kinase Establish the Importance of Charge Balance in Catalysis. *J Am Chem Soc*. 2010 Apr 19. [Abstract](#)

Wang P, Wang Q, Yang Y, Coward JK, Nzila A, Sims PF, Hyde JE. Characterisation of the bifunctional dihydrofolate synthase-folypolyglutamate synthase from *Plasmodium falciparum*; a potential novel target for antimalarial antifolate inhibition. *Mol Biochem Parasitol*. 2010 Mar 27. [Abstract](#)

Müller IB, Hyde JE, Wrenger C. Vitamin B metabolism in *Plasmodium falciparum* as a source

of drug targets. Trends Parasitol 2010;26:35-43. [Abstract](#)

Kim DH, Jarvis RM, Xu Y, Oliver AW, Allwood JW, Hampson L, Hampson IN, Goodacre R. Combining metabolic fingerprinting and footprinting to understand the phenotypic response of HPV16 E6 expressing cervical carcinoma cells exposed to the HIV anti-viral drug lopinavir. Analyst. 2010 Apr 14. [Abstract](#)

Maya-Mendoza A, Olivares-Chauvet P, Shaw A, Jackson DA. S phase progression in human cells is dictated by the genetic continuity of DNA foci. PLoS Genet. 2010 Apr 8;6(4):e1000900. [Abstract](#)

Thompson DP, Urmston M, Oldham JA, Woby SR. The association between cognitive factors, pain and disability in patients with idiopathic chronic neck pain. Disabil Rehabil. 2010 Mar 29. [Abstract](#)

Pang J, Scrutton NS, de Visser SP, Sutcliffe MJ. New insights into the multi-step reaction pathway of the reductive half-reaction catalysed by aromatic amine dehydrogenase: a QM/MM study. Chem Commun (Camb). 2010 Apr 7. [Abstract](#)

Devereux M, Popelier PL. In Silico Techniques for the Identification of Bioisosteric Replacements for Drug Design. Curr Top Med Chem. 2010 Mar 26. [Abstract](#)

Truppo MD, Turner NJ. Micro-scale process development of transaminase catalysed reactions. Org Biomol Chem. 2010 Mar 21;8(6):1280-3. [Abstract](#)

Köhler V, Bailey KR, Znabet A, Raftery J, Helliwell M, Turner NJ. Enantioselective biocatalytic oxidative desymmetrization of substituted pyrrolidines. Angew Chem Int Ed Engl. 2010 Mar 15;49(12):2182-4. No abstract available. [Paper](#)

Okazaki, N., Ananiadou, S. and Tsujii, J. (2010). Building a High Quality Sense Inventory for Improved Abbreviation Disambiguation. In: Bioinformatics [Abstract](#)

Sasaki, Y., McNaught, J. and Ananiadou, S. (2010). The value of an in-domain lexicon in genomics qa. In: Journal of bioinformatics and computational biology, 8(1), 147—161 [Abstract](#)

Kadirvel M, Stimpson WT, Moumene-Afifia S, Arsic B, Glynn N, Halliday N, Williams P, Gilbert P, McBain AJ, Freeman S, Gardiner JM. Synthesis and bioluminescence-inducing properties of autoinducer (S)-4,5-dihydroxypentane-2,3-dione and its enantiomer. Bioorg. Med. Chem. Lett. 2010; 10: 2625-2628. [Abstract](#)

Please send comments and items for inclusion in this newsletter to:

[Ros Le Feuvre](#) (Next edition deadline 25th May)