

GARNet

Enabling and Supporting Research

Charis Cook

GARNet Aims 2009-2014



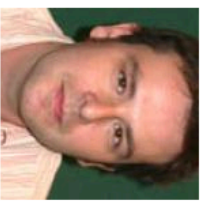
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- Inform, liaise and support UK Arabidopsis Research Community
 - Promote interactions with other UK Plant Science communities
 - Promote interactions with other research communities
 - Enhance participation in International Research



Ruth Bastow
GARNet Coordinator
University of Warwick
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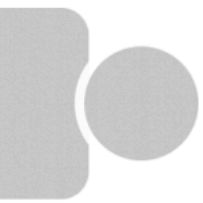
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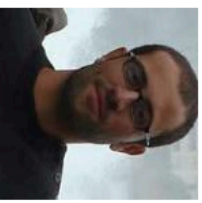
Anthony Hall
University of Liverpool
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Smriti Kurup
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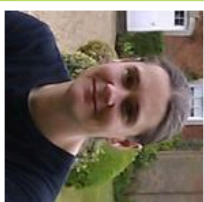
Sean May
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Sainsbury Laboratory
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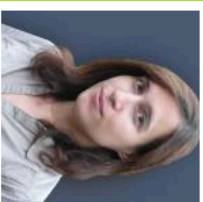
Malcolm Bennett
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Antony Dodd
University of Bristol
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Nicholas Harberd
University of Oxford
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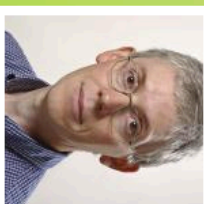
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-
- Promoted uptake and adoption of systems approaches
 - Community consultation on a report to BBSRC on Uptake of Plant Systems Biology (report published Jan 2006)
 - Numerous workshops and meetings
 - Provided a network to allow the UK become involved in ERA-PG
 - Established Mathematics in Plant Science Study Groups
 - 2 of the 6 Centres for Systems Biology funded in 2005-6 included plant science
 - 3 out of 6 Systems Approaches to Biological Research projects funded in 2011 focus on plants

ARABIDOPSIS: THE ONGOING GREEN REVOLUTION

GARNet 2014 Conference
University of Bristol
9-10 September 2014

Speakers include:
Alistair Hetherington, Bristol Andrew Millar, Edinburgh
Paul Schulze, Leifert, MPIZ Rob Martienssen, CSHL
Maarten Koornneef, MPIZ

www.garnet2014.org

Software carpentry for plant scientists

A Practical Introduction to Programming for Biologists
9-10 April 2014
University of Warwick

Introducing biologists to:

- Git and GitHub
- Python programming
- Version control
- Good practice and test-driven development
- ... and applying them them to applications including data management and scientific programming.

For more information, contact charis@garnetcommunity.org.uk or <http://www2.warwick.ac.uk/fac/sci/lifesci/news/software>

Data mining with iPlant

17-20 September 2013
University of Warwick

Day 1: Introduction to iPlant (free)
A mixture of lectures and hands-on activities to introduce and familiarise users with iPlant's major offerings and services

Days 2 and 3: Interactive tutorials in the iPlant environment
How to perform RNAseq analysis, genome-wide association studies, and inference of genetic networks in iPlant

Days 3 and 4: Advanced Topics in the iPlant Cyberinfrastructure
Bring your data to iPlant to perform RNAseq, GWAS, or network analysis to inform your own applications

For more information, contact charis@garnetcommunity.org.uk or go to <http://www2.warwick.ac.uk/fac/sci/lifesci/news/iplant>

Introduction to Opportunities in Plant Synthetic Biology

21-22 May 2013 University of Nottingham

Exploring the potential of synthetic biology for plant scientists

Speakers include:
Jim Hasehoff (Cambridge)
June Medford (Colorado)
George Tomatosoff (JIC)
Richard Kiley (Imperial)
Rob Edwards (ERA)
Anne Osbourn (JIC)
Clare Harris (KCL)

<http://www2.warwick.ac.uk/fac/sci/lifesci/news/synbio>

Registration starts from £175, including accommodation and conference dinner. Register by 26 April 2013.

For more information contact charis@garnetcommunity.org.uk

Tools and Technologies to Advance Plant Research

University of Liverpool | 26 November 2012

Exploring the many and new applications of Next Generation Sequencing in Plant Research.

Topics will include:

- RNA sequencing
- Mapping chromatin structure
- Comparative Genomics
- Identifying novel mutations

Registration is free
Registration closes 2/11/2012

Contact:
charis@garnetcommunity.org.uk

Workshop organized by GARNet and the Arabidopsis Sectional Interest group of the Genetics Society

www2.warwick.ac.uk/fac/sci/lifesci/news/newtech

gs the **genetics**society

GARNet

-
- Plant Synthetic Biology in the UK – 2013
 - Making Data Accessible – 2012
 - An International Model for the Future of Plant Science – 2010
 - EU 2020 European Vision for Plant Science – 2008
 - BBSRC requested report on Plant Systems Biology – 2006

Inform, Liaise, and Support the Arabidopsis Research Community





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WELCOME TO GARNet

GARNet supports UK scientists to develop and undertake excellent research using *Arabidopsis thaliana*

GARNET IS THE UK NETWORK FOR ARABIDOPSIS RESEARCHERS

GARNet is a **BBSRC** sponsored network set up to support Arabidopsis and the wider plant community. GARNet aims to make sure the UK Arabidopsis community remains competitive and productive at the national and international level by helping researchers make the best use of available funding, **tools and resources**. GARNet acts as information hub for the community via its **newsletter**, **mailing list** and rich content found here.

GARNet provides a point of **contact** for researchers and funding agencies. Along with other research communities, GARNet helps to promote interactions between fundamental and applied plant sciences. GARNet also works to increase opportunities for UK Arabidopsis scientists at the international level.

GARNet represents the UK Arabidopsis researchers via a **committee** of elected members.

The **GARNet blog** provides regular highlights of recent papers and meetings, as well as mentioning upcoming events and funding opportunities. You can also find GARNet on Twitter @GARNetweeds and @weedingsems.

LATEST NEWS

Student travel bursary to ICAR 2013
14th Mar 2013
I am pleased to announce that 4 travel... [More »](#)

Appointment of new members to Natural England's Science Advisory Committee
4th Mar 2013
Natural England is seeking to appoint... [More »](#)

[View all of the latest news »](#)



HAVE YOU HEARD ABOUT THE PLANT SCIENCE UK WEBSITE?



HAVE YOU SEEN THE NEW GARNet BLOG?



[CLICK HERE TO SIGN UP TO THE GARNet EMAIL LIST!](#)

www.garnetcommunity.org.uk

Inform, Liaise, and Support the Arabidopsis Research Community



[Home](#)[About GARNet](#)[Useful Links](#)[Contributors](#)[Arabidopsis basics](#)

Weeding the Gems

The GARNet Community blog



A sweet surprise: Revealing new roles for sugars in plants

by Guest Blogger

The fifth post of our Celebrating Basic Plant Science series comes from Mike Haydon, a lecturer at the University of York. He and his research group work on understanding signalling in plants. Here he explains some of his work on integrating sugar metabolism with light signals. You can see more about Mike and his group on his website. The work he discusses below was published in the journal Nature last year (Haydon et al. Nature 502:689-692).

A life based on sugar

Most of us think about sugar every day, be it consciously as we consider our calorie intake, or unconsciously when our brain tells us it's mealtime. Sugars are among the simplest of carbohydrates and they are the raw material for cellular respiration, which produces energy for almost all living cells. Glucose, a monosaccharide, is the preferred sugar for cellular respiration. Sucrose, most familiar to us as the granulated sugar in our kitchens, is a disaccharide made of allucose and







@weedinggems
@plantscience

www.blog.garnetcommunity.org.uk

Inform, Liaise, and Support the Arabidopsis Research Community



Promote interactions amongst Plant Science Communities

[About Us](#)[Find a Scientist](#)[Communities](#)[Funding](#)[Events](#)[News](#)[Get Involved](#)

UK PlantSci 2013

UK PlantSci 2013 the annual conference of the UKPSF will take place on 16-17 April 2013 in Dundee.

Recent Updates



Genetics Garden open to the public

05/07/2013 at 14:17pm

Scientists from the University of Dundee and the James Hutton Institute will this week unveil a series of living displays explaining the role of genes and genetics at the Universit...

Latest News



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Name that tree: new app offers assistance to huddling horticulists





Ash dieback resource

Promote interactions amongst Plant Science Communities







WELCOME

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Latest Story:
Field Trials and Tribulations -
Sometimes, there is no other option than to field trial.
Unfortunately, field trials go wrong...



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Brassica crops are major components of the UK arable agriculture and horticulture industries. Oilseed rape, the primary source of vegetable oil in Northern Europe, is high in polyunsaturates with huge potential to provide new nutritional and renewable non-food products. Brassica vegetables, including cabbage and Brussel sprouts, contain beneficial nutrients, including elevated levels of anti-oxidants, vitamins, anti-carcinogenic compounds, and minerals such as zinc and iron.



LATEST POST

Fields of red to keep pollen beetles at bay

Providing Added Value



We aim to democratise research in order to add value to funding put into UK plant science:

- Helping to ensure community remains competitive
- Promoting interactions amongst researchers
- Assisting researchers to make best use of funding, tools and technologies
 - Opening up access to services and collaborations
 - Organising accessible training events
- Providing a single point of contact

GARNet and Synthetic Biology



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Anne Osboum (JIC)
Claire Marris (KCL)

<http://www2.warwick.ac.uk/fac/sci/lifesci/news/synbio>

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Developing Plant Synthetic Biology in the UK



Opportunities and
Recommendations

Recommendations for UK Plant Synthetic Biology



1. Enabling community sharing of biological parts
2. Establishing an open source software repository
3. Inspiring a generation of plant synthetic biologists
4. Enabling training, partnerships and collaborations
5. Stakeholder mapping and public engagement
6. Exploring licensing options
7. Incentivising development of new tools and approaches



www.garnetcommunity.org.uk

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