Vehicle for translation: Pioneering a cross-academic, industry and government network

Stimulating development & facilitating translation of novel technologies to AGRI-science industrial stakeholders
**VISION:** The food, fibre and fuel requirements of our ever-increasing population are some of the major challenges facing society. This is resulting in a clear need for innovation and technology to increase crop productivity in a sustainable way. It is therefore vital that existing and new technologies be applied across the agri-sciences, (defined in this context as plant, fungal and insect sciences), with multidisciplinary approaches being the drivers enabling this. Chemical Biology through *physical science innovation* (in e.g. chemistry, physics, mathematics, engineering) is able to tackle biological problems on a molecular level and in so doing will lead to the development of novel technologies that will address future agri-science needs.

**AIMS:** AGRI-net will foster collaborations between leading cross-disciplinary groups and encourage partnerships with “end-users”. This will provide opportunities to further develop high-impact multidisciplinary research targeted at one of the world’s grand challenges, Crop Sustainability, and will strengthen the development of next-generation solutions for the agri-sciences. This type of cross fertilisation helps to provide realistic and accurate problem-led pull for newer technologies and inserts an additional technical push into established technologies.

Exemplars of potential challenges that could be addressed through translation of chemical biology tools and technologies:

- Control weeds, disease and pests
- Minimise negative environmental impact – e.g. reduce greenhouse gas emissions
- Improve water use efficiency
- Increase photosynthetic efficiency
- Improve chemical agronomic and agro-ecological control measures

**GOVERNMENT AGENCIES**

**INDUSTRY**

**ACADEMIA**

**Impacting on grand challenges**

- Modelling & visualisation
- Diagnostic tools & technologies
- Intervention tools & technologies

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**Chemical Biology**
AGRI-net MISSION:

• Provide a unique communication forum for academia, industry and government agencies whose interests are focused on tackling crop sustainability and protection using Chemical Biology tools and technologies.

• Enable both organically formed and focused collaborations between like-minded researchers wanting to engage in multidisciplinary research addressing agri-science needs.

A MULTILEVEL PROGRAMME:

• Host showcase “show-&-tell” events, scientific creativity “sandpit” events, industrial based conferences and seminars.

• Provide access to a variety of web-based systems, including a state-of-the-art virtual networking environment, which can be used for meetings, discussions and collaboration between participants in real time without need for co-location.

• Fund feasibility studies based upon ideas and strategic themes arising from the network interactions.

• Provide a platform to steer future research and policy directions.

• Encourage external outreach to engage with the general public. This is essential given the societal impact of the global challenge that the network is addressing.

Building bridges with AGRI-net
Contact details:
If you would like further information, or to participate within AGRInet please contact:

Dr Laura Barter  
l.barter@ic.ac.uk  
0207 594 1885

Dr Rudiger Woscholski  
r.woscholski@ic.ac.uk  
0207 594 5305

Website:  
www.agri-net.net