Left to cover:

• Overview from BBSRC

• Overview from MRC

• Aims of MRC / BBSRC / EPSRC Optical Microscopy Initiative
Strategic Plan 2010 – 2015

Three major research priorities

- Food Security
- Bioenergy and Industrial Biotechnology
- Basic bioscience underpinning health

Three crucial underpinning themes

- KE, innovation and skills
- Exploiting new ways of working
- Partnerships
Funding mechanisms

• Responsive Mode:
  - Strategic priorities
  - Higher impacts
  - Basic, strategic and applied research
  - Interdisciplinary science
  - Grants of all sizes – up to £2M over 5 years
  - Strategic Longer Larger Grants (sLoLa) – above £2M over 5 years

• Managed Mode Calls:
  - Tools and Resources Development Fund - £120k, 6-18 months
  - Bioinformatics and Biological Resource Fund – up to £2M over 5 years
  - Joint Next Generation Optical Microscopy Call (MRC lead) - £1-2M over 5 years
• Small or short-duration, pump priming research technology / methods driven projects including:
  - Early-stage pilot investigations
  - Rapid exploitation of the latest cutting edge technology
  - Improvement of existing technologies through novel modifications

• Bringing together communities for collaborative purposes (e.g. data sharing)

• Fast-track, light touch assessment process

• Encourages researchers to tackle technological bottlenecks

• Facilitates generation of novel, technology oriented applications to responsive mode and initiatives.
Examples of BBSRC-funded BioImagers

• Professor Paul French, Imperial College London
  Multidimensional fluorescence imaging for microscopy, endoscopy and tomography.

• Dr Marisa Marten-Fernandez, STFC
  OCTOPUS imaging cluster - multidimensional single molecule microscopy, confocal microscopy (FLIM, FRET, and multiphoton), and optical profilometry.

• Professor Jason Swedlow, University of Dundee
  Open Microscopy Environment - aims to develop data specifications, file format translators and data management software for imaging applications.

• Professor Michael White, University of Manchester
  Multi-parameter cell imaging to investigate the dynamics of NF-kappaB signalling. Since moving to Manchester, Professor White has established the Systems Microscopy Centre.
MRC Strategic Plan 2009-2014

During 2009-2014 the MRC aims to support medical research which increases the pace of the transition to better health. We will achieve this through:

- Strategic Aim One: **Picking research that delivers**
- Strategic Aim Two: **Research to people**
- Strategic Aim Three: **Going global**
- Strategic Aim Four: **Supporting scientists**
MRC spend by health category, 2010/11

- Blood, Cardiovascular, Stroke: 6.2%
- Cancer: 8.4%
- Congenital Disorders: 0.5%
- Ear, Eye: 2.0%
- Generic Health Relevance: 25.4%
- Infection: 16.1%
- Inflammatory and Immune System: 6.1%
- Injuries and Accidents: 0.1%
- Metabolic and Endocrine: 2.9%
- Musculoskeletal: 2.2%
- Neurological, Mental: 19.5%
- Oral and Gastrointestinal: 2.3%
- Other: 2.0%
- Renal and Urogenital: 0.9%
- Reproductive Health and Childbirth: 2.8%
- Respiratory: 2.0%
- Skin: 0.5%
MRC locations

In the UK:

- 3 institutes
- 26 units
- 27 centres

2 units overseas:

- The Gambia
- Uganda

MRC core support
5-10yr grant in strategic area
Funding Mechanisms – “response mode”

- “Standard” Grants
  - Research grants
  - Programme grants
  - New investigator research grants

- Awards to promote collaboration
  - Partnership grants
  - MRC Industry Collaboration Awards

- Capacity Building
  - MRC Clinical, Non-Clinical & Strategic Skill Fellowships
  - PhD Studentships

- Strategic Programmes
  - Developmental pathway funding scheme / Developmental clinical studies (preclinical/early clinical)
  - Methodology research programme
  - Experimental Medicine Challenge Grants
Funding Mechanisms – responding to UK needs

• **Highlight Notices**
  - alert researchers to areas of biomedical science that are currently a high priority for the MRC.

• **Strategic Skill Priorities**
  - *Biomedical Imaging*: Research skills training where a major component of the work involves the methodological and technological development and validation of advanced imaging techniques. Applied to a variety of fields, including (but not limited to) whole human, whole animal or advanced cellular and sub-cellular imaging techniques.

• **Call for proposals**
  - MRC / BBSRC / EPSRC Next Generation Optical Microscopy Initiative
  - And many more: [http://www.mrc.ac.uk/Fundingopportunities/Calls/index.htm](http://www.mrc.ac.uk/Fundingopportunities/Calls/index.htm)
Identified Challenges:

• Capacity
  – MRC PET specialist postdoctoral training programmes
  – NB: possible new call ~ September 2012 deadline

• Navigating Regulatory Issues
  – MHRA and MRC PET expert panel on regulatory affairs

• Working with industry
  – Imanova Limited - centre of excellence in imaging sciences
• Help UK research community:
  – Capitalise on latest technologies
  – Develop & refine existing microscopes, probes, software
  – Establish sustainable platforms

• Pump-priming investment of up to £18 million
  – £10m capital
  – £8m resource (including £2m BBSRC and £1m EPSRC)

• Support for ~10 strategic and innovative partnerships

• Deadline: 12th July 2012

• Panel: mid-Nov 2012

http://www.mrc.ac.uk/Fundingopportunities/Calls/optical_imaging/MRC008648
Thank You!