

BioFutures 2011

iGEM

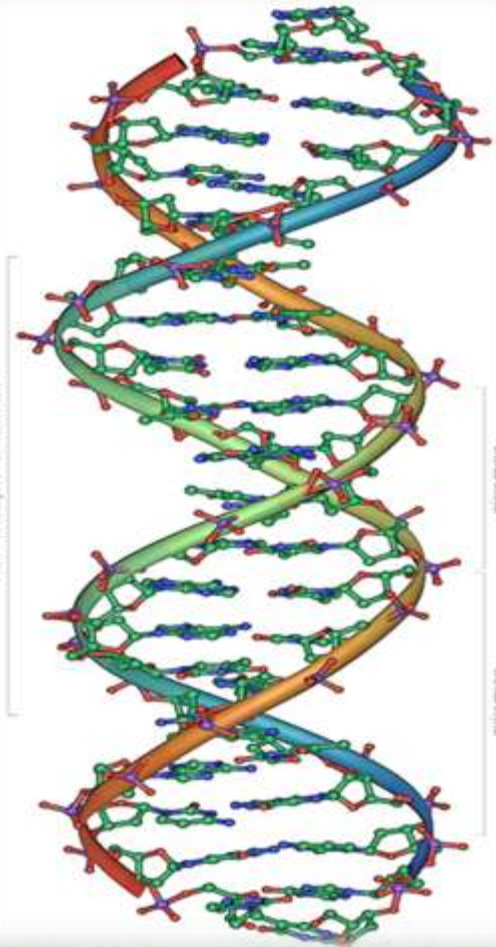
UQ-Australia 2011

What is synthetic biology?

- Biology from an Engineering perspective



Bio-Brick model



DNA

Bt Cotton and Maize

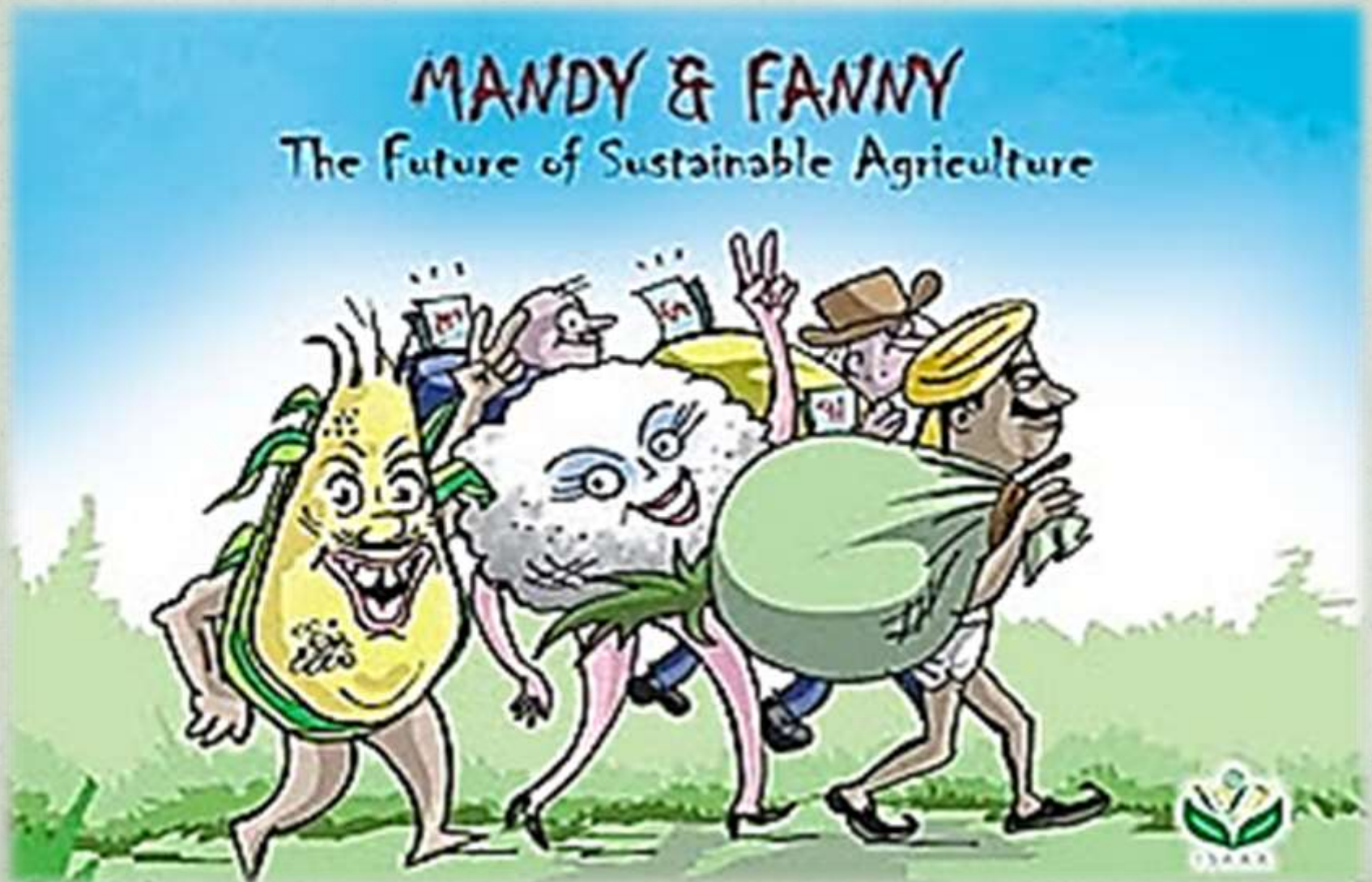
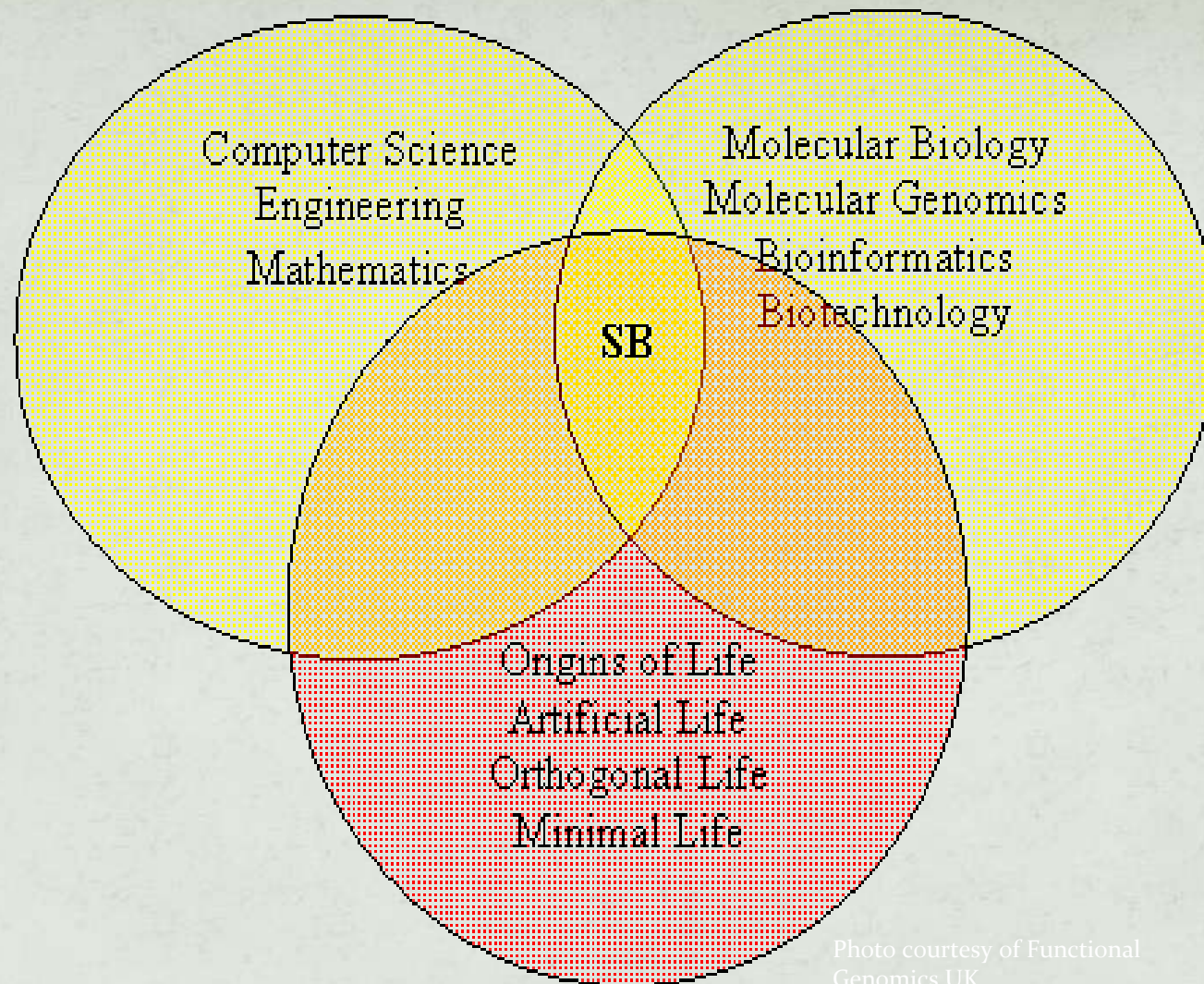


Photo courtesy - ISAAA

Why Synthetic Biology?



<http://www.sirusti.com/surya/eco/>



- Synthetic Biology –A conglomeration of many disciplines
- Potential to further our understanding of synthetic systems v/s natural systems

What is iGEM?

- It stands for International Genetically Engineered Machines
- Competition run by MIT-USA
- Undergraduates from all disciplines



- 150 teams from all over the world with 2 teams from Australia.
UQ is one of them😊



Aims of iGEM

- Promotion of synthetic biology
- Raise awareness of changes in biology and emphasize on multi-disciplinary nature of Science
- Build the Registry of “BioBricks”

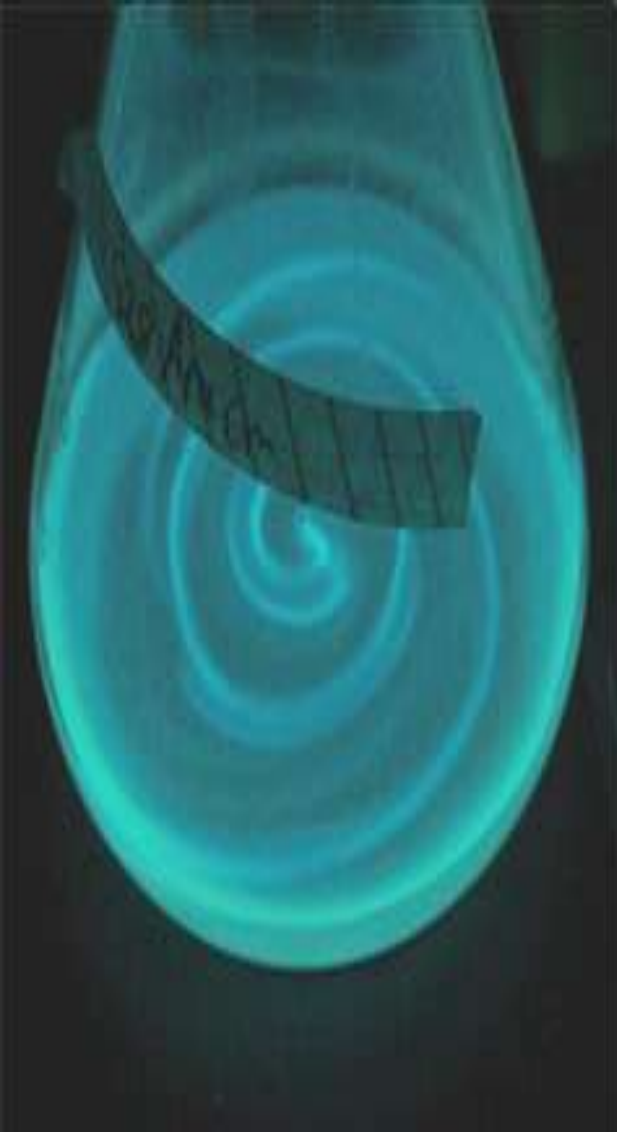
Our Project

- Circadian Rhythm or Biological clock in humans control important biological processes.
- Try and construct a biological clock in a bacterial system
- Used for regular release of drugs, design efficient bio-reactors etc.



Photo taken from <http://www.topnews.in/>

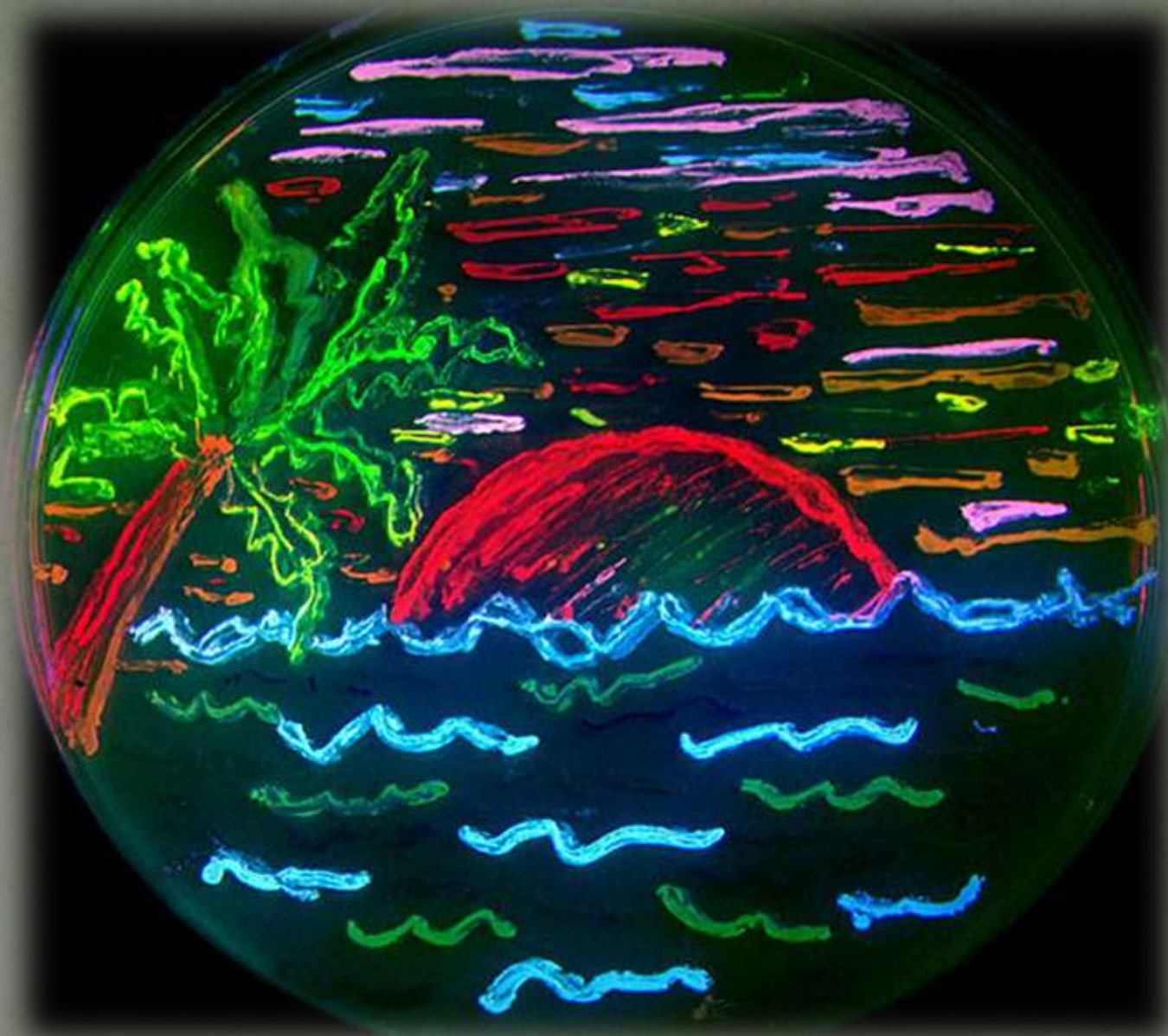
Activity



Bioluminescent E.coli (bacteria) made by 2010 Cambridge team.



These signs have glowing bacteria in them!



Beautiful sunset scene at the beach

Thank You ☺

