Press Release

18 April 2012

Award for Top European Scientist in Stratford

Society for Applied Microbiology annual Spring Meeting
Stratford Q Hotel, Stratford-upon-Avon
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Glow in the dark microorganisms can be used to identify new drug targets for neurodegenerative diseases and for monitoring toxic waste. This work will be presented by this year's Procter and Gamble Applied Healthcare Microbiology Award (Europe) winner Professor Anne Glover, Chief Scientific Adviser to the European Commission at the Society for Applied Microbiology's Spring Meeting today.

Microorganisms which have been bioengineered to glow in the dark can be used to monitor both microbial gene expression and cellular activity. Professor Glover and her colleagues bioengineered bacteria, algae, yeasts and nematodes to bioluminesce and used these glow in the dark microorganisms to identify polluted land and water, quickly and efficiently. In the presence of toxins the microbial activity is reduced and so bioluminescence is reduced – the greater the level of toxicity the greater the reduction in the microbes 'glowing'. Professor Glover and her colleagues have successfully used this technology to evaluate and monitor toxic land. They have also incorporated microbes which are able to clean up the pollutants through bioremediation[1].

Professor Glover is now using similar systems to develop diagnostic tools and new drug targets for one of the biggest health problems affecting an ageing population – neurodegenerative diseases. Conditions, like Parkinson's and Alzheimer's have been characterised as exhibiting high levels of cellular stress. Professor Glover's laboratory has created a model system using the nematode, *Caenorhabditis elegans,* a simple organism that is easily modified making it an ideal organism to track changes in cellular stress. This model has been manipulated to establish whether altering specific genes increases cellular stress and thus may lead to development of the diseases. This is providing a better understanding of the mechanisms of these debilitating diseases to potentially find new drug targets.

Professor Glover will present the Procter and Gamble Applied Healthcare Microbiology Award Lecture, "***From microbial stress to medical application***" at the Society for Applied Microbiology's Spring Meeting on 18 April at 10:20 BST.

-Ends-

Contact Information

Additional information about the conference or speakers is available from Clare Doggett, Communications Officer [Mobile 07807 267101 email: clare@sfam.org.uk.

Notes to Editors:

1. Bioremediation is a process whereby microorganisms are used to clean up toxic waste or pollutants.
2. A full conference programme can be found at: http://www.sfam.org.uk/en/events/index.cfm/springmeeting
3. Professor Glover will be presenting the Procter and Gamble Applied Healthcare Microbiology Award lecture at 10:20am and will be available for interview after the lecture.
4. S*f*AM is the voice of Applied Microbiology within the UK. We are the oldest UK microbiology society with members worldwide. In 2006 we celebrated our 75th anniversary and a number of special events were held during the year. The final celebration was the President's Dinner which was held in the Palace of Westminster on 23rd November 2006. S*f*AM works in partnership with sister organisations and microbiological bodies such as FEMS (The European Federation of Microbiological Societies) and the Society of Biology to ensure that microbiology and microbiologists are able to exert influence on policy-makers within the UK, in Europe and world-wide.
5. The European Commission is the executive branch of the European Union which among other things proposes new legislation and funds research and innovation. Professor Glover is the European Commission's first ever Chief Scientific Adviser who was appointed by President Barroso on the 5th December 2011. More information on the work of the European commission can be found at: http://ec.europa.eu/index_en.htm