



FRT -20th Celebration

News report from The 20th Anniversary of the Fungal Research Trust (FRT) and Meeting for Aspergillosis Patients, London.

The Fungal Research Trust (FRT) is 20 years old this year. To celebrate scientific achievements sponsored by the FRT and to look forward to the next 20 years the Trustees of the FRT, and Aspergillosis Patients London came together to host a meeting to mark the occasion. The meeting took place amongst the eighteenth century elegance and wood panelling of the Medical Society of London a fitting venue for a story that Professor David Denning informed us first started with the discovery of the fungus *Aspergillus* by the Italian botanist Micheli in the 1729.

Patrons

Lord Turnberg of Cheadle
Mrs Nicola Horlick

Trustees

Dr Geoff Scott (Chairman)
Mr John Morgan (Secretary)
Mr Richard Gourlay
Mr Phillip Oxnam
Dr Caroline Pankhurst

Research Advisory Board

Prof Jacques Bille (Lausanne)
Prof David Denning (Manchester)
Prof Roderick Hay (London)
Prof Kenneth Haynes (Exeter)
Prof Jack Sobel (Detroit)

The Fungal Research Trust supports The Aspergillus Website:
www.aspergillus.org.uk

Dr Geoffrey Scott (FRT Chairperson) not only summed up the unique contribution to advancement of the science and medicine of fungal disease sponsored by the FRT but he gave us an insight into the “beautiful world of fungi”. Through a series of photos Dr Scott showed us that it is at the microscopic level that their inherent beauty can best be appreciated. If you look at the banner photo on the FRT’s new website (www.fungalresearchtrust.org) then you can see for yourself what he meant. The photomicrograph of *Aspergillus* spores at first glance can be mistaken for a grove of cherry blossom trees in the springtime. He reminded us of the notable achievements of the FRT, which has donated over £3,500,000 pounds to supporting research carried out by 25 researchers and clinicians resulting in over 145 publications on fungi and fungal diseases, as well as supporting the *Aspergillus* website.

The three scientific speakers in the morning were representative of the international scope of research funded by the FRT. The morning started with **Dr Astrid Leck** (London School of Hygiene and Tropical Medicine) who described her work on the diagnosis and management of fungal eye infections in the developing world. She told us of the awful dilemma many patients in India and Africa face. The high cost of initial laboratory testing and diagnosis of fungal eye infections often uses up their meagre resources, leaving the patient with insufficient money to pay for the drugs they urgently need to cure their fungal eye disease and avoid blindness. In response to this dilemma her team are developing a simple, cheap clinical method for diagnosing fungal eye disease that eliminates the need for specialist and expensive laboratory testing. Thereby, helping to make accurate diagnosis and suitable treatment affordable for all.

Dr Sue Howard (University of Manchester) skilfully guided us through her FRT funded work on the genetics and molecular mechanisms of antifungal drug resistance in *Aspergillus*. Professor Denning (Scientific Advisor Fungal Research Trust, The University of Manchester, and The National Aspergillosis Centre) followed her with a fascinating talk on the development of new fungal drugs. His research has shown that to be effective antifungals need to be given early in the course of the disease. Antifungal drug resistance patterns need to be determined as for example 30 % of *Candida* species causing life threatening invasive fungal

disease are resistant to first-line drug treatments. Antifungal drug resistance is worryingly on the increase. He explained that new drugs are needed as the current drugs rely on four basic mechanisms for inhibiting and killing fungi, which as we heard in Sue Howards's talk can be outwitted by fungal resistance. New drugs are currently being developed and evaluated. But he told us to be effective and affordable ideally they should be available in tablet form for outpatient use, show good penetration of the lungs and other affected tissues, and have minimal side effects.

David Denning finished the scientific part of the day by illustrating how the National Aspergillosis Centre's theoretical studies on the genetics of drug resistance mechanisms have revolutionised the effectiveness of everyday clinical treatment of patients with fungal infections.

He showed a video clip of an interview with **Becky Jones** first seen on Channel 4 news (17/6/2011). Becky Jones made history twice by being the first person to have a double lung transplant even though she was suffering from multi-drug resistant Aspergillus and had a staggering 10 fungal balls in her old lung. Her life saving surgery would not have been possible without the advances in molecular testing for fungal resistance, which permitted the correct type of antifungals to be used that prevented her new lungs being infected yet again with Aspergillus.

He described Becky as a courageous torchbearer for others and at 21 years of age she is the perfect match to inspire the work of the FRT as it enters its 21st year.

Caroline Pankhurst (Trustee, Fungal Research Trust)