



Cambridge Society for the Application of Research

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## Bringing new medicines to Market The inner workings of the biopharmaceutical industry

Dr Melanie Lee DSc(Hon) FMedSci  
Executive Vice-President of Research and Development, UCB Belgium

7.30 p.m., **TUESDAY** 26<sup>th</sup> May, 2009  
The Wolfson Lecture Theatre, Churchill College, Storey's Way, Cambridge

### **Dr Lee writes:**

The pharmaceutical industry is responsible for huge advances in human health, preventing many common life threatening infectious diseases (like small pox), stabilizing destructive chronic diseases (like hypertension and diabetes) and turning fatal acute disease into chronic and well treated if not cured conditions (liquid and solid tumours of many types of cancer such as leukemia and breast and prostate cancer). Despite this extraordinary contribution to society, the reputation of the industry is at low ebb.

The fault seems to be within the industry itself and its failure to focus on the public and patients. Instead, it concentrates on the doctors and government regulatory bodies whom they have to persuade of the efficacy of their medicines in order to get them to patients.

The high cost of medicines exists to recoup the one billion US dollars or thereabouts required to discover and then launch a new drug; an event which takes 15-25 years. The invention process is relatively random – depending on discovery and innovation. A rich seam of inventive biology was tapped into during the '70s and '80s that gave rise to many medicines of today. In the late '80s and '90s came the human genome revolution with great promise, which coupled with new high throughput technologies, was going to speed up the process of drug R&D as well as enable us to "cure" most diseases. This hype brought great hope, which will be realized one day and is/will lead to huge advances in medicine, but the timescales and efficiencies have not been altered.

In trying to address these issues, pharmaceutical companies have undertaken repeated mergers and acquisitions, to combine pipelines and improve product flow and profits.

At least 20% of sales revenue is ploughed back into R&D, yet still the pipelines for new drugs threaten to run dry!!

## About the speaker:

Melanie's industrial career has been in Glaxo, Glaxo Wellcome, Celltech and now UCB in leadership roles in drug Research and Development. She spent 6 years as a Board Director with Celltech plc and for 5 years has been on the Executive Committee of UCB. Melanie has led R&D through 5 integrations as the corporations grow through Merger and Acquisition (M&A). M&A makes perfect sense on paper as finance experts estimate combined returns on investment and the inevitable "synergies".

An academic grounding in molecular genetics in three complex systems of DNA repair and recombination, RNA splicing and cell cycle was a broad and an important foundation for her future career. Melanie was cited by Sir Paul Nurse in his inaugural ceremony in Stockholm on receipt of his Nobel Prize for Medicine in 2001 for contribution to his cell cycle work.

Melanie is the Chair of Cancer Research Technology and Deputy-Chair of Cancer Research UK. She believes that importance of academia and industry working together is crucial to innovation and advancing science and human health.

Melanie has recently been honoured in the UK with a CBE for services to Medical Science.

## The Organising Secretary adds....

Another speaker with whom I have something in common; not bees this time, but I worked for Glaxo for several years, making antibiotics.

Coffee (but no antibiotics) **should** be available, as usual, in the foyer outside the lecture theatre from ~7.00 p.m.

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Organising Secretary  
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