The School of Pharmacy
University of London
Mezzanine Floor, BMA House
Tavistock Square
London WC1H 9JP
T 020 7874 1270
F 020 7378 5693
www.pharmacy.ac.uk

Embargo: Not for publication before 00.01 hours, Friday January 8th 2010

New approaches needed for cancer drug discovery

50 years after the discovery of the 'Philadelphia chromosome' responsible for chronic myeloid leukaemia (CML), leading anti-cancer medicines researcher Stephen Neidle is calling for changes in the strategic focus of cancer research, more fast tracking of new treatments into clinical use and stronger public/private research funding partnerships

2010 marks the fiftieth anniversary of the discovery of the Philadelphia chromosome, a landmark in the scientific understanding of cancer. Since 1960 there have been important advances in cancer prevention – most notably in reducing smoking – and the treatment of established disease. In people aged under 75 cancer mortality in England has declined by 20 cent since the start of the 1990s, saving almost 20,000 lives a year.

Amongst children and teenagers cancer death rates have fallen by more that 50 per cent in the last fifty years because of more effective treatments. Anti-cancer therapies such as platinum-based medicines, hormone-based treatments and better targeted therapies for conditions such as chronic myeloid leukaemia and brain cancers have, along with improved surgery and more effective radiotherapy, contributed to improved outcomes in other age groups.

Up to 40 new cancer treatments will be marketed between 2010 and 2015. However, leading anti-cancer medicines researcher Professor Stephen Neidle is warning that although existing medicines can relieve suffering and in some instances save lives, further radical advances are needed to cut the burden of disease caused by the major cancers. In the 2010 School of Pharmacy lecture given at the Royal Society today*, Professor Neidle said:

'Established cancers are genetically diverse, and highly complex. They quickly become resistant to narrowly targeted treatments. Future research should focus on more fundamental mechanisms, such as the increased rate of glucose metabolism in many cancer cells and the role of the enzyme telomerase in giving cancer cells immortality, and cancers the ability to grow indefinitely.'

At present 95 per cent of anticancer medicines that enter initial clinical trials fail to reach the market. Professor Neidle argues in favour of fast tracking more potential cancer treatments into human use, and for stronger research partnerships between Universities, charities, industry and governments. These should be aimed at making cancer drug discovery more efficient and cancer drugs more affordable. Professor Neidle commented:

'Britain is one of the world's leading investors in cancer research. But if new anticancer medicines are seen as too expensive to use public and private research spending could well decline, especially in the current economic climate. This would be a very expensive mistake. Even though in the short term there are unlikely to be dramatic 'cures for cancer', sustained effort over the next few decades will make the cancers we cannot prevent increasingly treatable. This country could and should play a central role in this process'.

*** Cancer drug discovery: what can it deliver? The School of Pharmacy lecture 2010**

For further information contact Professor David Taylor on 07970 139892 or Morgan Williams, Head of Communications at the School of Pharmacy, University of London, on 020 7753 5966

The 2010 School of Pharmacy annual lecture was in part funded by a contribution from Pfizer Worldwide Biopharmaceutical Businesses. Its subject and content are the responsibility Professors Taylor and Neidle.