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A comprehensive database developed by King's College London researchers that features the chemical components found in traditional Chinese medicines has been released to market this month, allowing researchers to explore age-old remedies in the search for tomorrow's new drugs.

Provided under licence to Tim Tec LLC, a US-based life science supplier company, the 'Chem-TCM' database is the most comprehensive of its kind. Featuring over 12,000 chemicals found in plants used in Chinese medicine, the database provides a valuable research tool for the pharmaceutical and biotechnology industries, academic researchers, and the medical profession (including the complementary health sector).

Part-funded by Innovation China UK (ICUK), the database has been developed through collaboration between researchers in the Institute of Pharmaceutical Science at King's, Dr David Barlow, Dr Thomas Ehrman and Professor Peter Hylands, and the Shanghai Institute of Materia Medica (SIMM).

To create the Chem-TCM database, the King's researchers analysed patterns in the known and predicted biological activities of 12,000 chemicals from over 300 Chinese herbs in relation to their usage in traditional Chinese medicine. Their results reveal that many categories in Chinese medicine are translatable into Western terminology.

Dr David Barlow said: 'Traditional Chinese medicine has undergone a remarkable renaissance in recent years. However, the unique language used to describe categories of medicines has hindered effective understanding of one of the most developed and mature systems of alternative medicine in existence.'

'With the Chem-TCM database, future researchers will now be better able to understand the chemical basis of remedies that have been in use for thousands of years. This is likely to be of benefit both in the search for new drugs and, equally significantly, in understanding how Chinese medicine works.'

Chem-TCM features four major parts: chemical identification, botanical information, predicted activity against Western therapeutic targets, and estimated molecular activity according to traditional Chinese medicine categories.

Dr. Marat Niazoff, CEO of TimTec LLC, said: 'This database is a comprehensive attempt to link Chinese and Western medicine on the molecular level. It is a great contribution to the further study of natural products and their pharmacological potential. The database gathers diverse structural material and a wealth of phytochemical information, opening new possibilities for virtual screening in particular.' With over 15 years of experience in serving life-science R&D and established global customer base TimTec is well positioned to assume product development and distribution role. Chem-TCM commercial license is the protected adaptation of ChemDBsoft, TimTec chemical records and database managements software. TimTec welcomes this unique database product to its offerings.

Manyi Cristofoli, Director of ICUK, said: 'I am pleased another ICUK-funded proof-of-concept project has now been commercialised in the pharmaceutical industry – this is a very good example of how academia and industry can successfully collaborate for innovation at a truly international level. The partnership with TimTec opens up a new global channel to jointly realise the wide potential in traditional Chinese medicine.'

King's College London

King's College London is one of the top 30 universities in the world (2011/12 QS international world rankings), and was The Sunday Times 'University of the Year 2010/11', and the fourth oldest in England. A research-led university based in the heart of London, King's has nearly 23,500 students (of whom more than 9,000 are graduate students) from nearly 140 countries, and some 6,000 employees. King's is in the second phase of a £1 billion redevelopment programme which is transforming its estate.

King's has an outstanding reputation for providing world-class teaching and cutting-edge research. In the 2008 Research Assessment Exercise for British universities, 23 departments were ranked in the top quartile of British universities; over half of our academic staff work in

departments that are in the top 10 per cent in the UK in their field and can thus be classed as world leading. The College is in the top seven UK universities for research earnings and has an overall annual income of nearly £450 million.

King's has a particularly distinguished reputation in the humanities, law, the sciences (including a wide range of health areas such as psychiatry, medicine, nursing and dentistry) and social sciences including international affairs. It has played a major role in many of the advances that have shaped modern life, such as the discovery of the structure of DNA and research that led to the development of radio, television, mobile phones and radar. It is the largest centre for the education of healthcare professionals in Europe; no university has more Medical Research Council Centres.

King's College London and Guy's and St Thomas', King's College Hospital and South London and Maudsley NHS Foundation Trusts are part of King's Health Partners. King's Health Partners Academic Health Sciences Centre (AHSC) is a pioneering global collaboration between one of the world's leading research-led universities and three of London's most successful NHS Foundation Trusts, including leading teaching hospitals and comprehensive mental health services. For more information, visit: www.kingshealthpartners.org.

The College is in the midst of a five-year, £500 million fundraising campaign – World questions|King's answers – created to address some of the most pressing challenges facing humanity as quickly as feasible. The campaign's three priority areas are neuroscience and mental health, leadership and society, and cancer. More information about the campaign is available at www.kcl.ac.uk/kingsanswers.

TimTec



TimTec LLC is a privately held company located in Newark, Delaware, USA. It was founded in 1995 to begin its work in the areas of acquisition and distribution of synthetic organic and natural compounds, custom synthesis, scientific software and laboratory equipment to become a full service partner for drug discovery.

TimTec has developed strong in-house expertise in the design of screening products to offer a full line of libraries and compound sets of various specialisation for different assays. In addition, the company provides compound management, custom formatting and computational services.

www.chemtcm.com , www.timtec.net , or info@timtec.net

Innovation China UK

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