

Key 'personalised medicine' review published

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Research into 'personalised' medicine is being led by a University of Greenwich team. Currently, many medicines which are prescribed to patients either do not work properly or have some significant side effects. The aim of personalised medicine, sometimes called 'precision' medicine, is to ensure that the most appropriate medicine is given to each patient and that the medicine is both effective and safe.

Current approaches to personalised medicine are focused on using patients' [genetic information](#) to guide the choice of the best medicine. This approach ([pharmacogenomics](#)) is effective in some but not all cases. Problems arise because people are more complex than the sum of their genes: in particular, the bacteria that we carry around with us in our guts, on our skin and in various body orifices have a big influence on our health.

Professor Jeremy Everett, from the university's School of Science, was involved in the recent discovery that, as well as our genes, the levels of various [metabolites](#), or small molecules, in our [body fluids](#) can also be used to predict if drugs will work and be safe, a process called pharmacometabonomics. Now the joint research group he co-leads has published the first major review of pharmacometabonomics and its ability to predict the effect of drugs on people, in the *Annals of Clinical Biochemistry*.

His fellow researchers are Professor Frank Pullen, also from the university's School of Science, and Dr Ruey Leng Loo, from Medway School of Pharmacy, which is jointly run by the universities of

Greenwich and Kent.

Professor Everett believes that pharmacometabonomics, together with pharmacogenomics, will be used to guide treatment choices for patients in the future. This will help to deliver personalised medicine and to ensure that more drugs work in more patients, more of the time.

He concludes: "We can never make medical treatments entirely personal for each individual, but a key aim of 21st century healthcare is to deliver drugs that will be both effective and safe for significant sections of the population. The discovery of pharmacometabonomics will help us to achieve that goal."

Professor Everett is the author of more than 80 publications and reviews, and is a co-inventor on 3 patents, including one granted in Europe in 2011 on metabolic profiling. Prior to joining the University of Greenwich three years ago, he held a variety of technology leadership positions for Pfizer, SmithKline Beecham and Beecham Research Laboratories, and is an internationally recognised expert on drug discovery.

He is also speaking on the topic of personalised medicine at the NG30 Drug Discovery Summit, taking place in Madrid between September 9 and 11.

Provided by University of Greenwich

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