

Metabonomics discovery of a compound from the microbiome of a genetically modified mouse with anti-obesity properties

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Abstract

Metabolic profiling or metabonomics is an important systems biology methodology for disease diagnosis and prognosis. It is also an excellent methodology for the phenotyping of genetically modified mice. We recently used this technology in collaboration with the group of Professor Elizabeth Shephard at UCL, to investigate the metabolic phenotype of a genetically modified mouse that had an unusual, lean phenotype. The genetic modification in this mouse caused a change in its microbiome, and the production by the microbiome, of a new metabolite X. We identified this compound by spectroscopic methods and subsequently showed it to have anti obesity properties and to be responsible for the lean clinical phenotype. This talk will provide an overview of this work and the properties of compound X.

from Nottingham University, UK. He did post-doctoral studies at McMaster University and at McGill University in Canada. Jeremy is a Fellow of the Royal Society of Chemistry and a Chartered Chemist, a Member of the American Chemical Society, a Fellow of the Higher Education Academy and is an author or co-author on over 100 peer-reviewed publications and patents, with over 4,900 citations to date and an h-index of 31. He has delivered over 60 invited lectures.

Speaker Publications:

1. Jeremy R Everett (2020) Metabolic characterization of colorectal cancer cells harbouring different KRAS mutations in codon 12, 13, 61 and 146 using human SW48 isogenic cell lines. *Journal of Metabolics* 16(4): 51.
2. Jeremy R Everett (2020) Flavin-Containing Monooxygenase 1 (FMO1) Catalyzes the Production of Taurine from Hypotaurine. *Drug Metabolism and Disposition* 48 (90) Pages 29-30.
3. Jeremy R Everett (2019) A Unified Conceptual Framework for Metabolic Phenotyping in Diagnosis and Prognosis. *40(10) P763-773.*
4. Jeremy R Everett (2018) Pharmacometabonomics: The Prediction of Drug Effects Using Metabolic Profiling. *Concept and Principles of Pharmacology* 23(14) pp 263-299.

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Biography:

Jeremy Everett is the Professor of Pharmaceutical Technologies at the University of Greenwich UK and Visiting Professor in the Department of Surgery and Cancer at Imperial College. Jeremy conducts research in metabonomics/metabolomics and pharmaco-metabonomics. His current work is focused on genotype – metabolite correlations in the areas of obesity and ageing and he is a co-inventor on a recently filed patent on an anti-obesity agent. Jeremy received both his BSc and PhD in chemistry



<https://pharmacology.pharmaceuticalconferences.com/abstract/2020/metabonomics-discovery-of-a-compound-from-the-microbiome-of-a-genetically-modified-mouse-with-anti-obesity-properties>