



Per Artursson's Major Contributions to the Caco-2 Cell Literature in Pharmaceutical Sciences

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Abstract:

This edition of the Journal of Pharmaceutical Sciences is dedicated to the wonderful career of Per Artursson from the Uppsala University. My Commentary focusses on Per's major contributions to the Caco-2 cell literature over the past 30 years. Two especially influential papers have been cited more than 1000 times out of a total citation count of almost 30,000 and a h-index of 93 (Google Scholar), making Per one of the most cited and influential Pharmaceutical scientists of his generation. The Caco-2 field to which Per contributed so many advances has informed the community on key areas including predictive drug fluxes across the intestine, metabolism by intestinal epithelia, the role of transporters during flux, enantiomer-selective flux, excipient interaction with tight junctions, and nanoparticle uptake by enterocytes. In this pioneering work, Per has been careful to emphasise that Caco-2 monolayers have limitations and are a model of the human small intestine where observations must be backed up with in vitro tissue and in vivo work. Throughout, he has paid great attention to detail in methodology, as reflected by co-authorship of two Nature Protocols on Caco-2 assays. The article briefly assesses some of the most important milestones in Per's published Caco-2 research.

Biography:

Dr. David Brayden is Full Professor of Advanced Drug Delivery at the School of Veterinary Medicine and a Fellow of the UCD Conway Institute. He received his Ph.D. in Pharmacology at the University of Cambridge and did a post-doctoral research



fellowship at Stanford University. Afterwards, he set up Elan Corporation's pharmacology laboratory in Dublin, where he became a senior scientist and project manager. In 2001, he joined UCD as a lecturer in veterinary pharmacology and rose to the rank of Full Professor of Advanced Drug Delivery. His major research interests are in oral peptide delivery.

Recent Publications:

1. Binding and uptake of biodegradable poly-DL-lactide micro-and nanoparticles in intestinal epithelia.
2. Keynote review: intestinal Peyer's patch M cells and oral vaccine targeting.
3. Antibacterial effects of poly (2-(dimethylamino ethyl) methacrylate) against selected gram-positive and gram-negative bacteria.

[Webinar on Pharmaceutical Sciences, December 13,2020 | Rome, Italy](#)

Citation: David J. Brayden, University College Dublin, Ireland. Webinar on Pharmaceutical Sciences, 13 December, 2020 | Rome, Italy.