Oral peptide delivery: How to address the challenges of peptide stability in the GI tract and oral bioavailability

Due to their physicochemical characteristics, peptides are usually administered through the parenteral route, often several times daily. Injectable sustained-release peptide formulations based on biodegradable microparticles or implants have been very successful to enhance patient adherence and convenience, and increase safety and efficacy. They are likely to remain a significant and important part of the new peptide products coming to the market. However, the tremendous developments in alternative non-invasive routes of delivery are likely to result in more and more peptides being delivered by the transdermal, nasal, inhalation and oral routes. The main purpose of this talk will be to analyze and compare the various oral peptide delivery technologies progressing in the clinic, discussing the pros and cons of these technologies in regards to stability, bioavailability, safety/efficacy balance, impact on CoGs and manufacturability. Case studies will be presented and discussed, examining clinical results and models for oral peptides in development addressing the key points:

- Will the oral bioavailability of peptides be sufficient to fulfill the requirements of health economics and safety?
- How the oral pharmacokinetics and efficacy compare versus subcutaneous injection?
- Can oral peptide delivery technologies overcome food effects?

Biography

Joel Richard has got a PhD in Materials Science (University of Paris VI, 1987). He is Senior Vice President for Peptides Development in Ipsen. He has published 67 peer-reviewed scientific papers, 8 book chapters and 2 review editorials in various fields (colloids and interfaces, drug delivery, supercritical fluids, protein formulations, nanoparticles, sustained-release formulations etc.). He is the author of more than 120 international communications and 53 patent families.

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