

World Drug Delivery Summit

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iCRT-deter; A new approach to abuse deterrent technologies using inorganic matrices for controlled release

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Opioid medications are prone to abuse (either intentionally or accidentally) by patients, and cost the US healthcare system tens of billions of USD\$ per year. FDA is putting increasing pressure on manufacturers to reduce the risk of misuse of these drugs by developing “abuse-deterrent formulations”. This, ironically, is slowing the introduction of new, improved medications to patients in need, even though the intention is to improve the patients’ safety. Opioids are the most prominent class of addictive drugs, but other classes of drugs that may benefit from such technologies will also be discussed, for example amphetamines and benzodiazepines. Many of the currently available technologies either provide mechanical or chemical barriers to abuse, and some of the marketed technologies will be highlighted and critiqued. Inorganic controlled release carriers are receiving growing attention from pharmaceutical companies due to the ability to tightly control and manipulate the carrier microstructure and thus drug release rates. Lucideon has developed a proprietary platform (iCRT-deter) that exploits two inorganic materials and is ultimately also a new approach to providing abuse deterrent properties to oral formulations. The technology concept, a non-confidential scientific explanation of the effects and mechanism, and supporting pre-clinical data will be discussed. This event will be the first time much of this information and data has been released into the public domain and the first time Lucideon has ever presented on the technology at a conference.

Biography

Mark Cresswell was awarded his PhD from Keele University in Synthetic Organic Chemistry, after completing a Masters in Medicinal Chemistry from University of Manchester. He is now a Senior Development Scientist for Lucideon, the international materials development and testing organization, and is focused on innovative new materials research for the healthcare sector. More specifically, he is responsible for developing novel inorganic-based drug delivery systems (iCRT) for the pharmaceutical industry.

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