

CLINUVEL'S Journey to Develop and Commercialise the World's First Photoprotective Drug

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Abstract

CLINUVEL is a global biopharmaceutical company that specialises in photoprotection and repigmentation of the skin. Over more than a decade, CLINUVEL has developed and commercialised the world's first photoprotective drug. The novel pharmaceutical SCENESSE® (afamelanotide 16mg) is a subcutaneous controlled-release injectable implant for the rare genetic disorder erythropoietic protoporphyria (EPP). Afamelanotide is a synthetic analogue of the naturally occurring alpha-melanocyte stimulating hormone. It induces melanogenesis without exposure to light, providing photoprotection and acting as an antioxidant to ameliorate phototoxic reactions experienced by EPP patients when they are exposed to visible light sources. CLINUVEL is also actively progressing its product pipeline to address other unmet medical needs. This includes: a paediatric formulation of SCENESSE® for EPP; evaluating SCENESSE® in combination with narrowband UVB therapy as a treatment for the skin pigmentation disorder vitiligo; and, through its Singapore-based laboratory, topical formulations for patients for photoprotection and repigmentation.



Biography:

Dr Rai is a senior formulation scientist with VALLAURIX Pte Ltd, part of the CLINUVEL Group. A pharmacist by profession, Dr Rai graduated from the National University of Singapore and practised in Singapore and Australia, before pursuing a PhD at the Royal Melbourne Institute of Technology. Dr Rai's PhD research focused on peptide formulations for delivery to the posterior eye for the treatment of diabetic retinopathy.

Her work at the CLINUVEL Group focuses on the development of new products based on analogues of melanocortins and providing photoprotection to patients with unmet medical needs.

Speaker Publications:

- 1 "Recent advances in the management of diabetic retinopathy", Drug Discovery Today. 24.10.1016/j.drudis.2019.03.028.
2. "Release kinetics of somatostatin from self-assembled nanostructured hydrogels", Rai Uma, Biopolymers. 110. e23085. 10.1002/bip.23085, 2017.
3. "Therapeutic uses of somatostatin and its analogues: Current view and potential applications", Rai Uma, Pharmacology & therapeutics. 152.10.1016/j.pharmthera.2015.05.007.
4. "The suprachoroidal pathway: A new drug delivery route to the back of the eye", Rai Uma & Young, Drug Discovery Today. 10.1016/j.drudis.2014.10.010.

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