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Emerging MRI-based approaches for in-vivo cell tracking of cellular therapeutics and inflammation

par le Pr Eric T Ahrens

University of California, San Diego (UCSD, USA)



Vendredi 30 janvier 2015

12h30-13h30

(sandwichs offerts, s'inscrire par mail : wiaart@creatis.insa-lyon.fr)

Amphithéâtre de l'Institut Multidisciplinaire de Biochimie des Lipides (IMBL)

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Eric T Ahrens is a Professor of biological science recently appointed at **UCSD stem cell program**. His research focuses on adapting **magnetic resonance imaging (MRI) to visualize cellular and molecular processes *in-vivo***. He has developed **first-generation MRI reporters** by using transgenic and vector technologies to express **reporter genes coding for novel iron-binding proteins** in the ferritin family. In a second parallel track, he has developed a new field of cell tracking called '***in vivo* cytometry**.' Cells are initially labeled in culture using novel perfluorocarbon (PFC) nanoemulsions. Following transfer to the subject, cells are **tracked *in vivo* using fluorine-19 (¹⁹F) MRI**. **To push the field of cellular-molecular MRI forward**, his lab takes an **integrated approach** that applies principles of chemistry, biology, medicine, nuclear spin physics, and image processing.

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