

# 生物工学研究センターセミナー

## くすりのシリコンバレーTOYAMA 講演会

### Attractive biocatalytic perspectives for green cosmetics

安全性に優れた化粧品製造のための生体触媒の効率的利用

日 時： 平成 31 年 3 月 13 日 (水)

14 時 00 分～16 時 00 分

場 所： 富山県立大学 生物工学科研究センター K115 共同会議室

来聴歓迎 (参加自由)

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(フランス：国立応用科学院(INSA)教授)



#### 講演要旨：

Enzymes are key players of biotransformation. Used in enzyme-based process or for cell engineering, they can provide innovative and sustainable solutions to access a broad variety of bio-based molecules for the cosmetic field. Numerous approaches are available to discover, optimize and even create enzymes with desired properties and showing enough robustness for industrial applications. Exploiting these valuable technologies is a challenge for the delivery of new cosmetic ingredients.

Screening the existing biodiversity via data mining coupled to functional genomics or metagenomics in the search for appropriate catalysts is definitely a good option. Alternatively, protein engineering occupies a leading position for tailor-made enzymes. Combinatorial and semi-rational approaches supported by computational biology are indeed very efficient ways to enhance enzyme stability, change their specificity and deliver green synthetic tools meeting requested specifications.

Following a presentation of the Laboratory of Engineering of Biological systems, we will present and discuss the potential of these various approaches through illustrations issued from the recent achievements of the group of catalysis and enzyme molecular engineering. The examples will favor green processes involving enzymes acting on agro-resources to yield polymers, oligomers as well as glycoconjugates of interest for the cosmetic field.