

第 551 回 難研セミナー

第 124 回 難治疾患共同研究拠点セミナー

第 1 回 難病筋疾患研究プロジェクト 2 セミナー

下記により難研セミナーを開催しますので、多数御来聴下さい。

記

日 時：平成 28 年 11 月 10 日（木） 17:00～18:30

場 所： M&D タワー 23 階 セミナー室

演 者： Dr. Frédéric Relaix

(フランス UPEC - Paris Est-Creteil University-INSERM IMRB U955)

演 題： **Molecular and cellular mechanisms regulating
satellite cell quiescence and growth arrest.**

要 旨：

A major challenge in the muscle field is to understand how growth arrest is coordinated in satellite cells (i.e. muscle stem cells) during muscle homeostasis/maintenance and repair. Skeletal muscle shows a remarkable capacity to regenerate after severe injuries, which is attributed to its satellite cell population. Once muscle growth is completed at early postnatal life, this stem cell population enters into a non-cycling, quiescent state. However, in response to specific needs, such as injury, it is rapidly activated to provide differentiated progeny for muscle repair as well as to self-renew the quiescent pool.

We have designed a protocol to isolate the satellite cells following direct fixation and defined molecularly the early activation following exit from quiescence. In addition, muscle differentiation is a coordinated process of tissue-specific gene expression and irreversible cell cycle exit. We have analyzed the mechanism of growth arrest during terminal differentiation, including the role of Cyclin Dependent Kinase Inhibitors p21 and p57. I will present data regarding p57 and p21 expression and function *ex vivo* and *in vivo*, in adult myofiber culture and regeneration models.

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