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Invité par le Comité de recrutement

Date : 4 décembre 2018
Heure : 10 h
Lieu : Amphithéâtre CRCEO / L'Hôtel-Dieu de Québec
6, rue McMahon
Québec (QC)

Titre : « Single-cell approaches in biological science »

Long-term live cell imaging in combination with fluorescent reporters, and computational systems biology is a powerful system enabling to study the behavior of thousand of individual cells in real-time. Contrary to whole population analyses, single-cell biology enables us to go one step further in understanding how a heterogeneous pool of individual cells behaves in real-time.

I am going to present two applications of single-cell computational systems biology to understand protein turnover around the cell cycle. For the first application, we monitored both the circadian clock and the cell cycle in thousands of individual mouse fibroblast cells to understand how the two processes are interconnected. For the second application, we use a dual fluorescent reporter to understand protein turnover (production and degradation) in mouse embryonic stem cells. We discovered that, while most proteins accumulate linearly during interphase, protein synthesis and degradation around mitosis are more heterogeneous.

Note :
Prière d’avisser vos étudiants gradués et stagiaires postdoctoraux afin d’avoir la participation de tous.