

Graduate Schools
Infection Immunity and Cancer, UniGe & UniL: CUS
Biology & Medicine, CMU

Seminar in Microbiology

Monday, February 9, 2015

Salle de séminaire 7172, CMU

11:30 – 12:30

Karina B. Xavier

HHMI International Early Career Scientist
Universidade Nova de Lisboa



Manipulating the interspecies quorum sensing signal AI-2 in the mouse gut

Karina Xavier at the Gulbenkian Institute of Science in Lisboa is interested in studying bacterial signaling. Whereas this seems straight forward in the laboratory in bacterial cultures where the bacteria can sense the density of the bacterial culture by the quorum sensing system, this is much less evident in bacterial communities, as for example in the gut. In this case other bacteria may interfere with the signaling and quench the response. Recent work by her laboratory has shown that *E. coli* can quench the signal of other bacteria by importing the signaling molecule AI-2 (auto-inducer 2) and by phosphorylating, sequestering and degrading the AI-2 signaling molecule.

http://www.igc.gulbenkian.pt/pages/groups.php/A=74_collection=groups_group=1

References:

- Thompson JA, Oliveira RA, **Xavier KB**. Can chatter between microbes prevent cholera? *Trends Microbiol.* 2014; 22:660-2.
- Marques JC, Oh IK, Ly DC, Lamosa P, Ventura MR, Miller ST, **Xavier KB**. LsrF, a coenzyme A-dependent thiolase, catalyzes the terminal step in processing the quorum sensing signal autoinducer-2. *PNAS.* 2014; 111:14235-40.
- Pereira CS, Thompson JA, **Xavier KB**. AI-2-mediated signalling in bacteria. *FEMS Microbiol Rev.* 2013; 37:156-81.
- Pereira CS, Santos AJ, Bejerano-Sagie M, Correia PB, Marques JC, **Xavier KB**. Phosphoenolpyruvate phosphotransferase system regulates detection and processing of the quorum sensing signal autoinducer-2. *Mol Microbiol.* 2012; 84:93-104.

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Sandwiches will be offered after the seminar