Communication Motifs: Principles of bacterial communication in non-genetically diversified populations

Fact Sheet

Project Information

COMMOTS

Grant agreement ID: 260860

Project closed

Start date
1 September 2011

End date
31 August 2016

Funded under
Specific programme: "Ideas" implementing the Seventh Framework Programme of the European Community for research, technological development and demonstration activities (2007 to 2013)

Total cost
€ 1 496 840,00

EU contribution
€ 1 496 840,00

Coordinated by
RUPRECHT-KARLS-UNIVERSITAET HEIDELBERG
Germany

Objective

Cell-to-cell communication is a central aspect for understanding how cells form and organize multi-cellular communities involving progressive cell specialization. Multi-cellularity cell specialization cell communication those keywords are frequently used

to distinguish metazoans from bacteria. Yet bacteria can form morphologically complex multi-cellular communities, they can non-genetically diversify and they can communicate. This implies that even prokaryotic networks must possess the properties to facilitate these complex functions. Thus basic network features (motifs) determining these functions can be discovered and characterized from studying simpler bacterial networks. We want to focus on communication motifs that are present in the gene-regulatory network of Bacillus subtilis. Our proposed methodology involves a combination of quantitative fluorescence microscopy techniques (QFTLM, FRET), developmental assays, signal transduction studies in controlled micro-environments and information theory to quantitatively characterize communication motifs..

Fields of science (EuroSciVoc)

natural sciences > biological sciences > microbiology > **bacteriology**

natural sciences > physical sciences > optics > **microscopy**

Programme(s)

FP7-IDEAS-ERC - Specific programme: "Ideas" implementing the Seventh Framework Programme of the European Community for research, technological development and demonstration activities (2007 to 2013)

Topic(s)

ERC-SG-LS2 - ERC Starting Grant - Genetics,Genomics,Bioinformatics and Systems Biology

Call for proposal

ERC-2010-StG_20091118
See other projects for this call

Funding Scheme

ERC-SG - ERC Starting Grant

Host institution

RUPRECHT-KARLS-UNIVERSITAET HEIDELBERG

EU contribution

€ 1 496 840,00

Total cost

No data

Address

SEMINARSTRASSE 2
69117 Heidelberg
Germany

Region

Baden-Württemberg > Karlsruhe > Heidelberg, Stadtkreis

Activity type

Higher or Secondary Education Establishments

Principal investigator

Ilka Bischofs-Pfeifer (Dr.)

Links

Contact the organisation Website
Participation in EU R&I programmes
HORIZON collaboration network

Beneficiaries (1)

RUPRECHT-KARLS-UNIVERSITAET HEIDELBERG

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Last update: 26 May 2017

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