

LAURE BEVEN

Univ. Bordeaux, UMR INRA Fruit Biology and Pathology 1332, Villenave d'Ornon, France
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SUMMARY

Biochemist leading bacterial and artificial membrane studies in advanced research projects.

SKILLS

Scientific domains :

Bacterial membrane biochemistry
Microbiology
Functional Genomics
Bacterial Metabolism

Applied to Studies of :

Protein/Lipid interactions
Host/Pathogen interactions
Antimicrobial peptides/Membrane interactions
Biomimetic membranes (Synthetic Biology)

MAIN RESEARCH THEMES

- Identification and functional characterization of pathogenicity factors of bacteria of the class Mollicutes.
- Studies of the lateral membrane bacterial organization under biotic and abiotic stresses.
- Re-designing lipid metabolism in Mollicutes.

WORK HISTORY

Assistant Professor (Senior)

UMR 1332 University of Bordeaux, INRA Fruit Biology and Pathology,
Villenave d'Ornon, France.

Lab director : Dr. T. Candresse.

2006-Current

Assistant Professor

University of Technology of Compiègne, UMR 6022, CNRS Department Enzymatic and Cellular Bio-engineering.
Compiègne, France.

Lab director: Pr. D. Thomas.

2001-2006

Scientific director of the Agro-Industry Platform of Univ. Tech. Compiègne,

Valorization of plant by-products

Compiègne, France.

2001-2006

Postdoctoral position

Ohio State University, Molecular Biology Department.

Columbus, OH, US.

Lab director: Dr. H.-O. Park.

1999-2001

Postdoctoral position

University of Technology of Compiègne, UMR 6022, CNRS Department Enzymatic and Cellular Bio-engineering.
Compiègne, France.

Research director: Pr. J. Chopineau; lab director: Pr. D. Thomas.

1998-1999

Temporary Lecturer and Research Assistant

University of Rennes I, UMR 6026, CNRS, Department of Membranes and Osmoregulation,
Rennes, France.

Research and lab director: Pr. H. Wróblewski.

1996-1998

EDUCATION

« Habilitation à diriger les recherches »

2017

PhD : Biological Sciences, specialty Microbiology

Rennes, France.

Director: Pr. H. Wróblewski.

1997

ACADEMIC ACTIVITIES AND SERVICES

Since 2001: Lecturer in Microbiology at Univ. Bordeaux, France (192h/y): Main, directed and practical courses offered to students from 2nd to 5th year at the University.

Since 2013: Educational referent for the Lab Training Teaching Unit, Master 1 of Microbiology-Immunology in Biological Sciences at Univ. Bordeaux, France.

Since 2013: Educational referent for the Genetics Teaching Unit, Licence (2nd year) Technology for Health at Univ. Bordeaux, France.

Since 2014: Educational referent for the Teaching Unit "Tools for diagnostic in Immunology and Microbiology" of Master 2 of Microbiology-Immunology in Biological Sciences at Univ. Bordeaux, France.

Since 2016: Educational referent for the professional cursus of Master of Microbiology-Immunology in Biological Sciences at Univ. Bordeaux, France.

Since 2013: Expert HCERES-Formations (evaluation of University education at a national level).

10 representative articles in peer-reviewed international journals

-DOULIEZ, J-P, MARTIN, N, GAILLARD, C, BENEYTON, T, BARET, J-C, MANN, S, BEVEN, L (2017) Catanionic coacervate micro-droplets as a surfactant-based membrane-free protocell model. *Angew. Chem. Int. Ed. Engl.*, 56(44):13689-13693.

-GORET, J, BEVEN, L, FAUSTIN, B, CONTIN-BORDES, C, LE ROY, C, CLAVEROL, S, RENAUDIN, H, BEBEAR, C, PEREYRE, S (2017) Interaction of *Mycoplasma hominis* PG21 with human dendritic cells: IL-23-inducing mycoplasmal lipoproteins and inflammasome activation of the cell. *J. Bacteriol.*, 199 (15):e00213-17.

-DUBRANA, M-P, GUEGUENIAT, J, BERTIN, C, DURET, S, ARRICAU-BOUVERY, N, CLAVEROL, S, LARTIGUE, C, BLANCHARD, A, RENAUDIN, J, BEVEN, L (2017) Proteolytic post-translational processing of adhesins in a genome-reduced pathogenic bacterium. *J. Mol. Biol. (JMB)*, 429:1889-1902.

-MATHÉLIE-GUINLET, M, BEVEN, L, MOROTE, F, MOYNET, D, GRAUBY-HEYWANG, C, GAMMOUDI, I, DELVILLE, M-H, COHEN-BOUHACINA, T (2017) Probing the threshold of membrane damage and cytotoxicity effects induced by silica nanoparticles in *Escherichia coli* bacteria. *Advances in Colloid and Interface Science*, 245:81-91.

-GARENNE, D., BEVEN, L., NAVAILLES, L., NALLET, F., DUFOURC, E.J., DOULIEZ, J.-P. (2016) Sequestration of proteins - by fatty acid coacervates for their encapsulation within vesicles. *Angew. Chem. Int. Ed. Engl.*, 55(43):13475-13479.

-PAREDES, J., HERREN, J., SCHUPFER, F., MARIN, R. CLAVEROL, S., KUO, C.-H., LEMAITRE, B., BEVEN, L. (2015) Genome sequence of the *Drosophila melanogaster* male-killing *Spiroplasma* MRSO endosymbiont. *mBio*, 6(2): e02437-14.

-DURET, S., BATAILLER, B., DUBRANA, M.P., SAILLARD, C., RENAUDIN, J., BEVEN, L., ARRICAU-BOUVERY, N. (2014) Invasion of insect cells by *Spiroplasma citri* involves spiralin relocalization and lectin/glycoconjugate-type interactions. *Cell Microbiol.*, 16:1119-1132.

-BEVEN L., DURET S., BATAILLER B., DUBRANA M.P., SAILLARD C., RENAUDIN J., ARRICAU-BOUVERY N. (2012) The repetitive domain of ScARP3d triggers entry of *Spiroplasma citri* into cultured cells of the vector *Circulifer haematoceps*. *Plos One*, 7(10):e48606.

-BEVEN L., CHARENTON C., DAUTANT A., BOUYSSOU G., LABROUSSAA F., SKOLLERMO A, PERSSON A., BLANCHARD A, SIRAND-PUGNET P. (2012) Specific evolution of F1-like ATPases in mycoplasmas. *PLoS One*, 7(6):e38793.

-TRUCHETET M.E., BEVEN L., RENAUDIN H., DOUCHET I., FERANDON C., CHARRON A., BLANCO P., SCHAEVERBEKE T., CONTIN-BORDES C., BEBEAR C. (2011). Potential role of *Mycoplasma hominis* in interleukin (IL)-17-producing CD4+ T-cell generation via induction of IL-23 secretion by human dendritic cells. *J. Infect. Dis.*, 204:1796-1805.