

Nom del Grup

Microbiologia Molecular y Antimicrobians

Membres:

Miquel Viñas **Catedràtic**
Teresa Vinuesa **Prof. Titular**
Josep Sancho **Prof. Emèrit**
Consol Truchero **Facultatiu Especialista**
Lidia Ruiz **Prof. associada**

Doctorands

Lidia López
Ester Fusté
Guadalupe Jiménez
Antonio Zalacain
Indira Labrador
Mohammed Rida
Jahlil Farwati
Franziska Lampmann
Katharina Eirich

Name of the group

Molecular Microbiology and Antimicrobials

Members

Miquel Viñas Full Professor
Teresa Vinuesa Associate Professor
Josep Sancho Emeritus Professor
Consol Truchero Senior Consultant
Lidia Ruiz Assistant professor

PhD Students

Lidia López
Ester Fusté
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Antonio Zalacain
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Mohammed Rida
Jahlil Farwati
Franziska Lampmann
Katharina Eirich



Temàtica de recerca

El nostre grup està interessat en els mecanismes moleculars de resistència als antimicrobians (Antibiòtics i desinfectants) en els bacteris Gramnegatius. Aquesta recerca inclou la caracterització de proteïnes de la membrana externa, de les bombes de reflux y eventualment altres aspectes relacionats. Estem també interessats en els mecanismes d'extensió d'aquests mecanismes en les poblacions bacterianes. El grup està particularment interessat en la interacció entre les proteïnes i les bicapes lipídiques mitjançant Microscopia de Força atòmica i altres mètodes Biofísics.

Research Interest

Our group is interested in the molecular mechanisms of resistance to antimicrobials (antibiotics and disinfectants) in Gram negative bacteria. This includes characterization of Outer membrane proteins, efflux machinery and eventually others. We are also interested in the mechanism of spread in bacterial populations of such mechanisms. Particular interest focuses the interaction between proteins and lipid bilayer by means of AFM and other biophysical methods.

Publicacions seleccionades

Selected Publications

[Role of TolC in Klebsiella oxytoca resistance to antibiotics.](#) Fenosa A, Fusté E, Ruiz L, Veiga-Crespo P, Vinuesa T, Guallar V, Villa TG, Viñas M. J Antimicrob Chemother. 2009 Feb 24.

[The contribution of efflux pumps to quinolone resistance in Streptococcus pneumoniae clinical isolates.](#) Martínez-Garriga B, Vinuesa T, Hernández-Borrell J, Viñas M. Int J Med Microbiol. 2007 Jun;297(3):187-95

[Characteristics of plasminogen binding to Trypanosoma cruzi epimastigotes.](#) Rojas M, Labrador I, Concepción JL, Aldana E, Avilán L. Acta Trop. 2008 Jul;107(1):54-8.

[Interfacial membrane effects of fluoroquinolones as revealed by a combination of fluorescence binding experiments and atomic force microscopy observations.](#) Montero MT, Pijoan M, Merino-Montero S, Vinuesa T, Hernández-Borrell J. Langmuir. 2006 Aug 29;22(18):7574-8.

[Integron presence in a multiresistant *Morganella morganii* isolate.](#) Rojas L, Vinuesa T, Tubau F, Truchero C, Benz R, Viñas M. Int J Antimicrob Agents. 2006 Jun;27(6):505-12.

[Oral pathogens in DUWL's: risk of infection and strategies for their control.](#) Ruiz N, Vinuesa T. Bull Group Int Rech Sci Stomatol Odontol. 2006 Mar;47(1):37-9

[Effects of lactose permease on the phospholipid environment in which it is reconstituted: a fluorescence and atomic force microscopy study.](#) Merino S, Domènech O, Viñas M, Montero MT, Hernández-Borrell J. Langmuir. 2005 May 10;21(10):4642-7.

[Preliminary studies of the 2D crystallization of Omp1 of *Serratia marcescens*: observation by atomic force microscopy in native membranes environment and reconstituted in proteolipid sheets.](#) Ruiz N, Merino S, Viñas M, Domènech O, Montero MT, Hernández-Borrell J. Biophys Chem. 2004 Sep 1;111(1):1-7.

[Influence of the cell wall on ciprofloxacin susceptibility in selected wild-type Gram-negative and Gram-positive bacteria.](#) Berlanga M, Montero MT, Hernández-Borrell J, Viñas M. Int J Antimicrob Agents. 2004 Jun;23(6):627-30