



Gustavo Fuertes Vives

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Gustavo Fuertes Vives

Surname(s): **Fuertes Vives**
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Previous positions and activities

	Employing entity	Professional category	Start date
	European Molecular Biology Laboratory (EMBL)	Postdoctoral fellow	01/05/2011

Employing entity: European Molecular Biology Laboratory (EMBL) **Type of entity:** Public Research Body

Professional category: Postdoctoral fellow

Start-End date: 01/05/2011 - 30/04/2016

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CURRÍCULUM VITAE NORMALIZADO

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Education

University education

1st and 2nd cycle studies and pre-Bologna degrees

- 1** **University degree:** Diplomatura / Licenciatura / Grado
Name of qualification: Diploma of Advanced Studies (Spanish DEA) in "Protein Structure and Function"
Degree awarding entity: Autonomous University of Barcelona (UAB)
Date of qualification: 19/05/2006
- 2** **University degree:** Diplomatura / Licenciatura / Grado
Name of qualification: Degree in Biochemistry
Degree awarding entity: University of Valencia (UVEG)
Date of qualification: 13/07/2004

Doctorates

Doctorate programme: Nanoscience and Nanotechnology
Degree awarding entity: University of Valencia (UVEG)
Date of degree: 29/04/2011
European doctorate: Yes
Thesis title: Baxα5 at lipid membranes: structure, assembly and pore formation
Thesis director: Jesús Salgado Benito
Obtained qualification: Excellent cum laude

Specialised, lifelong, technical, professional and refresher training (other than formal academic and healthcare studies)

- 1** **Type of training:** Course
Training title: Crystallography Course
Awarding entity: EMBL Hamburg
End date: 2016
- 2** **Type of training:** Course
Training title: Solution Scattering from Biological Macromolecules
Awarding entity: European Molecular Biology Organization (EMBO)
End date: 2014



Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
German	A2	A2	A2	A2	A2
Catalan	C1	C1	C1	C1	C1
English	C1	C1	C1	C1	C1

Teaching experience

General teaching experience

Name of the course: Biochemistry and Molecular Biology

University degree: Medicine

Start date: 2007

End date: 2013

Type of hours/ ECTS credits: Credits

Hours/ECTS credits: 18

Entity: University of Valencia

Scientific and technological experience

Results

Industrial and intellectual property

Title registered industrial property: Use of nanoparticles as cytotoxic agents

Type of industrial property: Patent of invention

Inventors/authors/obtainers: Ernesto Jiménez; Gustavo Fuertes; Esteban Pedrueza; Kamal Abderrafi; Rafael Abargues; Juan Martínez-Pastor; Jesús Salgado

Entity holder of rights: UNVA - Universitat de València

Nº of application: PCT/ES2009/070575

Country of inscription: Spain

Date of register: 2010

Conferral date: 17/06/2010

Scientific and technological activities

Scientific production

Publications, scientific and technical documents

- 1** Gustavo Fuertes et al. The dimensions of disordered protein ensembles: merging experiments, simulations and theory. Proceedings of the National Academy of Science of the USA (under revision). 2016.
Type of production: Scientific paper **Format:** Journal
- 2** Davide Mercadante et al. Kirkwood-Buff Approach Rescues Overcollapse of a Disordered Protein in Canonical Protein Force Fields. Journal of Physical Chemistry B. 119 - 25, pp. 7975 - 7984. 2015.
Type of production: Scientific paper **Format:** Journal
- 3** Swati Tyagi et al. Continuous throughput and long-term observation of single-molecule FRET without immobilization. Nature Methods. 11 - 3, pp. 297 - 300. 2014.
Type of production: Scientific paper **Format:** Journal
- 4** Gustavo Fuertes et al. A lipocentric view of peptide-induced pores. European Biophysics Journal. 40 - 4, pp. 399 - 415. 2011.
Type of production: Scientific paper **Format:** Journal
- 5** Gustavo Fuertes et al. Switchable bactericidal effects from novel silica-coated silver nanoparticles mediated by light irradiation. Langmuir. 27 - 6, pp. 2826 - 2833. 2011.
Type of production: Scientific paper **Format:** Journal
- 6** Yannis Guillemin et al. Active fragments from pro- and antiapoptotic Bcl-2 proteins have distinct membrane behavior reflecting their functional divergence. Plos One. 5 - 2, 2010.
Type of production: Scientific paper **Format:** Journal
- 7** Gustavo Fuertes et al. Pores formed by Bax α 5 relax to a smaller size and keep at equilibrium. Biophysical Journal. 99 - 9, pp. 2917 - 2925. 2010.
Type of production: Scientific paper **Format:** Journal
- 8** Santi Esteban-Martin et al. Influence of whole-body dynamics on 15N PISEMA NMR spectra of membrane proteins: A theoretical analysis. Biophysical Journal. 96 - 8, pp. 3233 - 3241. 2009.
Type of production: Scientific paper **Format:** Journal
- 9** Santi Esteban-Martin et al. Orientational landscapes of peptides in membranes: prediction of (2)H NMR couplings in a dynamic context. Biochemistry. 48 - 48, pp. 11441 - 11448. 2009.
Type of production: Scientific paper **Format:** Journal
- 10** Guillermo Rodrigo et al. Vanillin cell sensor for the Valencia iGEM 2006 participation. IET Synthetic Biology. 1 - 1-2, pp. 74 - 78. 2007.
Type of production: Scientific paper **Format:** Journal

- 11** A. J. García-Sáez et al. Permeabilization of the Outer Mitochondrial Membrane by Bcl-2 Proteins. Proteins: Membrane Binding and Pore Formation.pp. 200 - 215. Landes Bioscience, 2009.
Type of production: Book chapter **Format:** Book
- 12** Gustavo Fuertes et al. Role of Membrane Lipids for the Activity of Pore forming Peptides and Proteins. Proteins: Membrane Binding and Pore Formation.pp. 25 - 50. Landes Bioscience, 2009.
Type of production: Book chapter **Format:** Book

Works submitted to national or international conferences

- 1** **Title of the work:** The dimensions of intrinsically disordered proteins: a combined SAXS and single-molecule FRET study
Name of the conference: 16th International Conference on Small-Angle Scattering
Type of participation: Participatory - oral communication
City of event: Berlin, Germany
Date of event: 09/2015
- 2** **Title of the work:** Single-molecule FRET reveals proline dynamics in transmembrane helices
Name of the conference: 29th Annual Symposium of The Protein Society
Type of participation: 'Participatory - poster
City of event: Barcelona, Spain
Date of event: 07/2015
- 3** **Title of the work:** The dimensions of the unfolded protein state: reconciling single-molecule FRET and SAXS
Name of the conference: 11th International Conference Biology and Synchrotron Radiation 2013
Type of participation: 'Participatory - poster
City of event: Hamburg, Germany
Date of event: 09/2013
- 4** **Title of the work:** Pore formation by Bax-alpha5 in numbers: counting single pores and single Bax-alpha5 peptides.
Name of the conference: 11th Congress of the Spanish Biophysical Society
Type of participation: Participatory - oral communication
City of event: Murcia, Spain
Date of event: 05/2011
- 5** **Title of the work:** Stability of pores induced by membrane active peptides. The case of Bax α 5
Name of the conference: 12th Iberian Peptide Meeting
Type of participation: Participatory - oral communication
City of event: Lisbon, Portugal
Date of event: 02/2010
- 6** **Title of the work:** Structure of complexes of helix-5 from Bax with lipid membranes
Name of the conference: 53rd Annual Meeting Biophysical Society
Type of participation: 'Participatory - poster
City of event: Boston, MA, United States of America
Date of event: 02/2009



Other achievements

Stays in public or private R&D centres

- 1** **Entity:** Karlsruhe Institute of Technology (KIT, Germany)
Start date: 2010 **Duration:** 3 months
Provable tasks: Orientation and dynamics of Baxa5 in lipid membranes investigated by solid-state NMR
- 2** **Entity:** Biotechnologisches Zentrum. Technische Universität Dresden (Germany)
Start date: 2009 **Duration:** 4 months
Provable tasks: Kinetics of lipidic pore formation by Baxa5 using fluorescence microscopy
- 3** **Entity:** The Alexander Silberman Institute of Life Sciences. The Hebrew University of Jerusalem (Israel)
Start date: 2008 **Duration:** 3 months
Provable tasks: Structure of complexes of Baxa5 with lipid membranes by ATR-FTIR

Obtained grants and scholarships

- 1** **Name of the grant:** Post-doctoral fellowship Programme 'Vali+d'
Awarding entity: Generalitat Valenciana, Conselleria d'Educació, Cultura i Esport
Conferral date: 01/06/2012 **Duration:** 1 year - 6 months
- 2** **Name of the grant:** EMBL Interdisciplinary Postdoc (EIPOD) fellowship
Awarding entity: European Molecular Biology Laboratory (EMBL)
Conferral date: 01/05/2011 **Duration:** 3 years
- 3** **Name of the grant:** PhD Fellowship Programme 'V Segles'
Awarding entity: University of Valencia
Conferral date: 01/06/2005 **Duration:** 4 years

Prizes, mentions and distinctions

- 1** **Description:** Best Poster Prize 455th WE-Heraeus-Seminar: Biophysics of Membrane-Active Peptides
Awarding entity: Wilhelm und Else Heraeus-Stiftung
Conferral date: 11/04/2010
- 2** **Description:** Best conquest of adversity. International Genetically Engineered Machine (iGEM) Competition
Awarding entity: Massachusetts Institute of Technology (MIT)
Conferral date: 04/11/2006