Benjamin Viart

Doctor in Bioinformatics

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Birth date: march 29, 1986,
Nationality: French

Education

2016 **Post Doctorate**, *CEA Genoscope*, Evry, France.

2011–2015 **PhD Bioinformatics**, *Universidade Federal do Minas Gerais (UFMG)*, Belo Horizonte, Brazil.

2010–2011 **MSc Bioinformatics, Year II**, *Université de Montpellier II*, Montpellier, France.

2009–2010 **MSc Bioinformatics, Year I**, *Birmingham University*, Birmingham, United Kingdom.
First year of Msc completed in Birmingham University, Birmingham thanks to the europeen exchange program Erasmus

2007–2009 **BSc Biochemistry**, *Université Montpellier II*, Montpellier, France.
Specialty in Bioinformatics

2005–2007 **Medical University 1st year curriculum** , *Université Montpellier I*, Montpellier, France.

2004 **Scientific Baccalauréat**, *Lycée Joffre* , Montpellier, France.
specialty Mathematics

PhD thesis

title	*Computational design of peptide ligands based on antibody-antigen interface properties*
supervisors	Pr. Liza Felicori , Dr. Franck Molina
Defense	Septembre 17, 2015
description	Drugs antibodies suffers from various limitations such as inadequate pharmacokinetics, poor tissue accessibility and adverse immunogenicity and has created the need for alternative solutions. Chemical scaffold displaying peptides is a promising alternative but require synthetic peptides with relevant affinity and specificity for desired target. Based on 3D antibody-antigen complex structures and the probability of molecular interaction we developed EPI-Peptide Designer tool that uses predicted paratope residues for an epitope of interest to generate targeted peptide ligand libraries. EPI-Peptide Designer successfully predicted 301 peptides able to bind to LiD1 target protein (65% of the experimentally tested peptides). This tool should enable the development of a new generation of synthetic interacting peptides that could be very useful in the biosensor, diagnostic and therapeutic fields.

Languages

French	Native	*Mother Tongue*
English	Fluent	*Daily practice, teaching, prensentation and written work in English*
Portuguese	Fluent	*Daily practice, teaching, presentations performed in Portuguese*

Interests

Sport Climbing, Mountainering

Experience

Mar 01,2011 – Oct 01,2011 **Internship** — *Sysdiag, CNRS / Bio-Rad, Montpellier*

- Improvement of BioNetCAD, a new designer for synthetic biology systems
- Creation and in silico validation of a protein oscillatory mechanism
- Database creation and management

Jul 01,2010 – Aug 15,2010 **Internship** — *CRLC(cancer research center) Val d'Aurelle, Montpellier*

- Treatment of Cancer cell micro arrays data's using R
- Analysis of cellular pathway modification using Cytoscape and Ontologies.

Summer 2008 **Summer job** — *PEPS, Montpellier*

- Summer camp responsibility for children

Summer 2005 **Summer job** — *IBM, Customer Solutions Center, Montpellier*

- Workstations, servers assembly and software setup

Skills

Analysis Statistical and clustering analysis, Data mining, Alignment (sequence and structures), cytoscape, cell designer, transcriptomic, docking

Programming Java(Biojava), R, MySQL, shell script, LaTeX

OS GNU/Linux, Windows, iOS

Teaching

August 01,2013 – Oct 30,2013 **Instructor** — *Introduction to biojava*, *30 hours of classes*

August 01,2014 – Oct 30,2014 **Instructor** — *Introduction to Bioinformatics*, *20 hours of classes*

Publications

E. Kozlova, B. Viart, R. de Avila, L. Felicori, and C. Chavez-Olortegui. Classification epitopes in groups based on their protein family. *BMC Bioinformatics*, 16 Suppl 19:S7, 2015.

B. Viart, E. Gonzalez Kozlova, G. Neshich, F. Molina, and L. Figueredo Felicori. EPI-Peptide Designer: a tool for designing specific peptide ligand libraries based on Epitope-Paratope interactions. *Bioinformatics*, 2015.