

Sébastien BRIER

French citizen, born on July 13th, 1977

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KEY SKILLS

- Expertise in Mass Spectrometry (MS) including ToF, Ion Trap (3D and linear), Orbitrap and Quadrupole analyzers associated with ESI, nanoESI and/or MALDI sources. On-line coupling with UPLC, nanoUPLC.
- Expertise in Structural Proteomics & Vaccinology approaches including hydrogen/deuterium exchange labeling (HDX), covalent labeling, cross-linking and native mass spectrometry. Operational in ion mobility.
- Technical skills in Biochemistry (protein expression & purification) and Molecular Biology (PCR, cloning).
- Project management including definition of objectives and analytical strategies, drafting of reports and scientific articles, publication monitoring.
- Technical/Scientific training and management of Ph.D students, Post-Doc and technicians.

PROFESSIONAL EXPERIENCE

- Since October 2013*
Paris, France
- INSTITUT PASTEUR**
RESEARCH ENGINEER IN STRUCTURAL PROTEOMICS
- Manager of the HDX-MS platform.
 - Development of three main research axes in structural proteomics: (1) Structural characterization by HDX and native MS of proteins & large macromolecular edifices involved in infectious diseases; (2) Development of HDX-MS-based strategies to explore the structure and dynamics of **membrane proteins**; (3) Optimization of the HDX workflow.
 - Selection and management of internal and external collaborations.
 - Management and training of Post-doctoral research fellows and students.
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- 2011-2013*
Antony, France
- STALLERGENES** – Proteomics & Structural Characterization Unit
RESEARCH ENGINEER IN STRUCTURAL PROTEOMICS & VACCINOLOGY
- Epitope mapping by HDX-MS of allergen/mAb interactions for vaccine development.
 - Structural characterization of recombinant and natural allergens by MS.
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- 2009-2011*
Sienna, Italy
- NOVARTIS VACCINES** – Structural Mass Spectrometry & Proteomics Unit
RESEARCH SCIENTIST IN STRUCTURAL VACCINOLOGY
- Set-up of MS-based epitope mapping strategies for vaccine development: HDX-MS, excision, extraction.
 - Co-supervision of two Ph.D students in structural proteomics.
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- 2007-2009*
Evry, France
- CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (CNRS)** – LAMBE - UMR 8587 - **POST DOCTORAL RESEARCHER**
- Structural characterization of **large protein complexes by covalent labeling and MS**
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- 2005-2007*
Boston, USA
- BARNETT INSTITUTE OF CHEMICAL AND BIOLOGICAL ANALYSIS** - Professor John R. Engen's laboratory - **POST DOCTORAL RESEARCH ASSOCIATE**
- Optimization of the HDX-MS workflow for large protein complexes analysis.
 - Scientific training of one Ph.D student – Management of two Master students

EDUCATION

- 2005* **Ph.D in Structural Biology and Nanobiology**, specialising in mass spectrometry. Joseph Fourier University, Grenoble, France.
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- 2002* **Engineer's Degree in Biology**, specialising in macromolecules. Institute of Engineering Science, Clermont-Ferrand, France (C/U/S/T - Polytech Clermont, Eiffel Network).
Master's Degree (Diplôme d'études approfondies, DEA) in Physiology and Molecular Genetics. Blaise Pascal University, Clermont-Ferrand, France.
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- 1999* **BSc (Hons) in Applied Biochemistry with second class honours (1st division)** University of Central Lancashire, Preston, United Kingdom.