

GERBER Sandrine
Born LEMAIRE-AUDOIRE
50 years old (21st May 1971)
Married, two children
Swiss and French

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<https://publons.com/researcher/1225901/sandrine-gerber/#>

<https://scholar.google.ch/citations?user=9AKDCXwAAAAJ&hl=fr>

EDUCATION

2003 **Habilitation to direct research** (HDR), University Pierre et Marie Curie (Paris 6). Organic Chemistry.
1996 **PhD degree**, Ecole Nationale Supérieure de Chimie de Paris/Paris 6, France
1993 **Master degree** in Organic Chemistry (University Pierre et Marie Curie, Paris 6, France).
1990-1993 Ecole Nationale Supérieure de Chimie de Paris. **Diploma of chemical engineer**, promotion 1993.

CURRENT POSITIONS

2014 – now **Adjunct Professor** (Professeur titulaire) / Group for functionalized biomaterials (SCI-SB-SG)
Institute of Chemical Sciences and Engineering, EPFL, Switzerland
2007 – now **Deputy Director** / Institute of Chemical Sciences and Engineering, EPFL, Switzerland

EMPLOYMENT HISTORY

2006 – 2014 **Senior Scientist** (Maître d'Enseignement et de Recherche)
LGSA, ISIC, EPFL, Switzerland / LSPN, ISIC, EPFL, Switzerland
2001 – 2005 **First assistant** (2001-2003) and **scientific adjunct** (2003-2005) / LGSA, ISIC, EPFL, Switzerland
1998 – 2001 **Maître-assistante** / Institute of Organic Chemistry, University of Lausanne, Switzerland
1996 – 1998 **Post-doctoral fellow** / Institute of Organic Chemistry, University of Lausanne, Switzerland

INSTITUTIONAL RESPONSIBILITIES

Since 2007 Deputy to the Director of the Institute of Chemical Sciences and Engineering (EPFL)
Since 2006 Member of the Council of the Institute of Chemical Sciences and Engineering (ISIC, EPFL)
Since 2007 Member of the Council of the School of Basic Sciences (FSB, EPFL)
Since 2014 Member of the EDCH Program Committee (EPFL, Doctoral Program)

APPROVED RESEARCH PROJECTS (LIMITED to 2014-2021)

- **SNSF research grant**. Interdisciplinary project. CR2312_152974. Main applicant. *Functionalized polymeric hydrogels for cell immobilization*. 01.05.2014-30.04.2017. **CHF 507'561**.
- **CTI grant**. 17309.2 PFLS-LS. Co-applicant. *Microencapsulated porcine hepatocytes for acute liver disease: development of the cell therapy product*. 01.12.2014-31.05.2016. **CHF 381'399**.
- **SNSF research grant** (FNS-ANR international cooperation). 310030E-164250. Main applicant. *New standardized and functionalized microcapsules: Applications to Type 1 Diabetes Cell Therapy*. 01.02.2016 – 31.01.2019. **CHF 491'038**.
- **Programme Interreg V France-Suisse**. NANOFIMT. Main applicant. *Nanoparticules harmoniques fonctionnalisées pour l'imagerie ultra-sensible et le théranostique*. 01.10.2015 – 30.09.2018. **CHF 290'000**.
- **Fondation Insuleman**. Sole applicant. *Functionalization of alginate based hydrogels to prevent fibrotic overgrowth in cell transplantation therapy*. 01.05.2017 – 30.04.2018. **CHF 62'756**.
- **Program enable**. Sole applicant. *Development of alginate based hydrogels for porcine islets microencapsulation – Scaling-up for pre-clinical investigation*. 01.03.2017 – 31.08.2017. **CHF 50'000**.
- **SNSF Sinergia research grant**. CRSII5_180257. Co-applicant. *Development of novel synthetic gene transfer vectors for metabolic liver therapy*. 01.07.2018 – 30.06.2022. **CHF 1'700'372**.
- **Programme Interreg V France-Suisse**. OncoNanoScreen. Main applicant. *Plateforme in vitro de criblage de nanothérapies ciblant le cancer du poumon*. 01.01.2019-31.12.2021. **CHF 193'706**.
- **Fondation Insuleman**. Sole applicant. *Treatment of type 1 diabetes: Cell therapy with encapsulated porcine cells in multifunctional alginate based hydrogels*. 01.10.2019 – 31.12.2020. **CHF 60'000**.
- **Industrial Grant**. Industrial partner: Beta-Cell NV. Sole applicant. *Alginate derivatives for the microencapsulation of cells*. 01.06.2019-01.08.2020. **CHF 22'000**.
- **Innosuisse Innovation Project**. 38934.1 IP-LS. Co-applicant. *DeMoViS - Automatic Device for Mosquitos Viral Screening via DNA-based Biosensors*. 01.06.2020 – 31.05.2023. **CHF 753'572**.

- **SNSF NRP “COVID-19” research grant.** 4078PO_198265. Main applicant (co-applicants: I. Stefanini / SUPSI, F. Bertoni / IOR-USI). *Development of a microfluidic platform for real-time detection of SARS-CoV-2 virus based on multifunctional silica membrane biosensors.* 01.10.2020 – 30.09.2022. **CHF 1'098'174.**
- **Industrial Grant.** Industrial partner: MedXCell SA. *Monocloning antibodies packing, immobilization and functionalisation.* 15.01.2021-15.11.2021. **CHF 70'000.**

SUPERVISION OF JUNIOR RESEARCHERS

PhD theses

- Florence Popowycz (1999-2003). EPFL TH N° 2866.
- Hélène Fiaux (2003-2007). EPFL TH N° 3793.
- Gérald Coste (2003-2007). EPFL TH N° 3800.
- Sylvain Favre (2005-2009). EPFL TH N° 4383.
- Pascal Miéville (2009-2011). EPFL TH N° 5229.
- Françoise Borcard (2009-2013). EPFL TH N° 5643.
- Christophe Bovigny (2010-2014). EPFL TH N° 6310.
- Solène Passemard (2010-2014). EPFL TH N° 6248.
- Davide Staedler (2010-2014). EPFL TH N° 6209.
- François Noverraz (2014-2018). EPFL TH N° 8949.
- Jérémy Vuilleumier (2015-2019). EPFL TH N° 7330.
- Raphaël De Matos (2015-2020). EPFL TH N° 7650.
- Luca Szabó (2016-2020). EPFL TH N° 7778.
- Laura Nicolle (2018-now)
- Adrian Gheata (2020-now)
- Perrine Robin (2020-now)
- Alessandra Spada (2021-now)

Post-doctoral fellows

- Ana T. Carmona (2004-2005)
- Horacio Comas Blanco (2009-2011)
- Lucia Ucnova (2012-2013)
- Vladislav Semak (2013-2015)
- Solène Passemard (2014-2016)
- Céline Journot (2019-now)
- François Noverraz (2021-now)

Other scientific supervisions

- Supervision of 38 Master projects
- Supervision of 28 semester projects
- Supervision of 11 interns
- Supervision of 15 apprentices in chemistry

CURRENT TEACHING ACTIVITIES

- 2010-now** Course “**Organic Chemistry**”, Bachelor (BA1), 70 hours, more than 350 students
- 2012-now** Course “**Asymmetric Synthesis and Retrosynthesis**”, Bachelor (BA6), 28 hours, 20 students

MEMBERSHIPS IN PANEL, BOARDS

- Regular reviewing activity for around 8 scientific journals (Macromolecules, ACS Nano, ACS Appl. Mater. Interfaces)
- Since 2008 Member of the Board of the Division of Fundamental Research of the Swiss Chemical Society
- Since 2012 Member of the Board of Directors of the Swiss Chemical Society
- 2014-2015 Member of the Commission for the succession at the Head of the School of Biology of UNIL
- 2016 Member of the Search Committee for the new Dean of Basic Science at EPFL
- 2019 - 2021 Member of the Scientific Evaluation Committee in the panel “Technologies for Health”, ANR (FR)
- 2020 Member of the Review Board of the DWI – Leibniz Institute for Interactive Materials, Aachen (GE)
- 2020 Member of the Restart Advisory Committee (Reopening of EPFL Campuses, COVID-19 epidemics)
- 2021 Member of Review Panel *Biomaterials, biotechnology, soft matter, and biological physics and chemistry* for the Academy of Finland’s Research Council for Natural Sciences and Engineering

ORGANIZATION OF CONFERENCES

- *Swiss Chemical Society Fall Meetings* (EPFL, Lausanne, Switzerland)
- 2013 (06.09.2013) / 2015 (04.09.2015) / 2018 (07.09.2018)
- *Winter School* on “Bioimaging, Sensing and Therapeutic Applications of Nanomaterials” (03-06.03.2013, Villars-sur-Ollon, Switzerland)

PRIZES, AWARDS, FELLOWSHIPS

- *PhD fellowship* from the Ministry of Research and Education, France, **1993-1996.**
- *Prize Eugène Schueller* **1997** (for PhD thesis work).
- *Prize Dufour* **2005** (Prize Claude Dufour for prospective organic chemistry).
- *Werner Prize* **2010** (Swiss Chemical Society).
- *Special mention* in recognition of exceptional quality of pedagogic competencies in the teaching of basic sciences, given by the Direction of the School of Biology and Medicine from the University of Lausanne, **2013.**
- *Excellence in Teaching Award* **2018**, Section of Chemistry and Chemical Engineering, EPFL.
- *Fellow of International Association of Advanced Materials*, **2020.**