

# Jean-Patrick Francoia

## Education

- 2017–Today **Postdoctoral research assistant**, *University of Glasgow*, Scotland.  
3D printing applied to chemistry  
Supervisor: Prof. Leroy Cronin ([lee.cronin@glasgow.ac.uk](mailto:lee.cronin@glasgow.ac.uk))
- 2013–2016 **Ph. D. in chemistry**, *Université de Montpellier*, France.  
Supramolecular chemistry, biological chemistry, sensors  
Supervisor: Dr Laurent Vial ([laurent.vial@univ-lyon1.fr](mailto:laurent.vial@univ-lyon1.fr))
- 2012–2013 **Master in chemistry, with honours**, *Lund University*, Sweden.

## Professional experience, teaching activities

- 2013–2016 **Teaching assistant**, *Université de Montpellier*, France.  
Laboratories in organic and general chemistry for undergraduate students (ca. 200 hours)
- Nov. 2014 **Direct mentor**, *Université de Montpellier*, France.  
Supervision of a master student (Lena Morin), for 5 weeks
- 2012–2013 **Training period**, *Lund University*, Sweden.  
Organic synthesis, catalysis  
Supervisor: Prof. Kenneth Wärnmark ([Kenneth.Warnmark@chem.lu.se](mailto:Kenneth.Warnmark@chem.lu.se))
- Apr. 2010–  
June 2010 **Training period**, *University of Whitewater*, Wisconsin, United States.  
Organic synthesis, chemical biology  
Supervisor: Prof. Catherine Chan ([chanc@uww.edu](mailto:chanc@uww.edu))

## Chemistry skills

- Synthesis SPPS, multistep organic synthesis
- Analysis Fluorescence spectroscopy, HPLC, NMR, ICP-OES
- Modeling Amber, Gaussian, Spartan, VMD
- Microbiology Culture of bacteria and model plants
- Other 3D printing, CAD (Onshape, OpenSCAD), electronics (Arduino)

## Computer skills

- 2010 **C2i – "Certificat Informatique et Internet"**.  
Developer of ChemBrows ([www.chembrows.com](http://www.chembrows.com)).  
Deep knowledge of Python, LaTeX, HTML, CSS, SQL, Bash, git. Basis with C/C++ and PHP  
Contributor to open-source projects (scikit-learn, Cura, etc). Daily usage of GNU/Linux

## Publications

10. **Wetting the lock and key enthalpically favours polyelectrolytes binding** E. Jeamet, J. Septavaux, A. Héloin, M. Donnier-Maréchal, M. Dumartin, B. Ourri, P. K. Mandal, I. Huc, E. Bignon, E. Dumont, C. Morell, J.-P. Francoia, F. Perret, L. Vial and J. Leclaire, *Chem. Sci.*, 2019, **10**, 277
9. **Digitization of multistep organic synthesis in reactionware for on-demand pharmaceuticals** P. J. Kitson, G. Marie, J.-P. Francoia, S. S. Zalesskiy, R. C. Sigerson, J. S. Mathieson and L. Cronin, *Science*, 2018, **359**, 314 - [citation : 24](#)
8. **Everything you always wanted to know about poly-*L*-lysine dendrigrafts (but were afraid to ask)** J.-P. Francoia and L. Vial, *Chem. Eur. J.*, 2017, **24**, 2806 - [citations : 2](#)

7. **Digitizing Poly-*L*-Lysine Dendrigrafts: from Experimental Data to Molecular Dynamics Simulations** J.-P. Francoia, J.-C Rossi, G. Monard and L. Vial, *J. Chem. Inf. Model.*, 2017, **57**, 2173 - [citations : 4](#)
6. **Chirality Sensing and Discrimination of Lysine Derivatives in Physiological Conditions with a Dyn[4]arene** L. Vial, M. Dumartin, M. Donnier-Maréchal, F. Perret, J.-P. Francoia, J. Leclaire, *Chem. Commun.*, 2016, **52**, 14219 - [citation : 1](#)
5. **ChemBrows: An Open-Source Application Software To Keep Up to Date with the Current Literature** J.-P. Francoia and L. Vial, *J. Chem. Educ*, 2016, **93**, 1137 - [open access](#), [citation : 1](#)
4. **A KISS (Keep It Simple, Sensor) Array for Glycosaminoglycans** J.-P. Francoia and L. Vial, *Chem. Commun.*, 2015, **51**, 17544 - [citations : 4](#)
3. **Monitoring Clinical Levels of Heparin in Human Blood Samples with an Indicator-Displacement Assay** J.-P. Francoia, R. Pascal, and L. Vial, *Chem. Commun.*, 2015, **51**, 1953 - [citations : 13](#)
2. **A Double Conformationally Restricted Dynamic Supramolecular System for the Substrate-Selective Epoxidation of Olefins—A Comparative Study on the Influence of Preorganization** E. Lindbäck, S. Cherraben, J.-P. Francoia, E. Sheibani, B. Lukowski, A. Proñ, H. Norouzi-Arasi, K. Månsson, P. Bujalowski, A. Cederbalk, T. H. Pham, T. Wixe, S. Dawaigher and K. Wärnmark, *ChemCatChem*, 2015, **7**, 333 - [citation : 1](#)
1. **Multi-Technique Characterization of Poly-*L*-lysine Dendrigrafts–Cu(II) Complexes for Biocatalysis** J.-C. Rossi, B. Maret, K. Vidot, J.-P. Francoia, M. Cangiotti, S. Lucchi, C. Coppola, and M. F. Ottaviani, *Macromol. Biosci.*, 2015, **15**, 275 - [citations : 8](#)

## Conferences

Slides and posters available at <https://github.com/JPFrancoia/PostersSlides>

8. **Welcome Genome Campus Hackathon 2018**, *Hinxton, United Kingdom*.  
Medicine Discovery Catapult's challenge:  
*How can we combine drug and genetic data to intelligently prescribe drugs?*
7. **RSC Twitter Poster Conference 2018**, *Twitter, World*.  
Poster presentation
6. **JMJC 2016 (Journées Méditerranéennes des Jeunes Chercheurs)**, *Nice, France*.  
Poster presentation
5. **MSMLG 2016 (Molecular Sensors and Molecular Logic Gates)**, *Bath, United Kingdom*.  
Oral presentation and poster presentation
4. **JMJC 2015 (Journées Méditerranéennes des Jeunes Chercheurs)**, *Montpellier, France*.  
Oral presentation
3. **MeMoSim 2015 (Modeling Methods and multiscale Simulations)**, *Lyon, France*.  
Poster presentation
2. **Balard Chemistry Conferences 2014**, *La Grande Motte, France*.  
Poster presentation
1. **JJC 2014 (Journées des Jeunes Chercheurs)**, *Montpellier, France*.  
Poster presentation

## Hobbies

### Martial arts.

Kyokushinkai karate, brazilian jiu-jitsu, Muay-thaï, Krav-maga, Sambo, Tae Kwon do

### Salsa.

Cuban and L.A. style