

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel and other significant contributors in the order listed on Form Page 2.
Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME Fabien Campagne	POSITION TITLE Assistant Professor		
eRA COMMONS USER NAME (credential, e.g., agency login) FCAMPAGNE			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Grenoble I, Joseph Fourier University, France	B.Sc.	1993	Chemistry
Grenoble I, Joseph Fourier University, France	M.Sc.	1994	Chemistry
Nancy I, Henri Poincare University, France	DEA	1995	Computational & Theoretical Chemistry
Nancy I, Henri Poincare University, France	Ph.D.	1998	Computational & Theoretical Chemistry
Mount Sinai School of Medicine, New York	Post-doc	1998-2000	Bioinformatics

Please refer to the application instructions in order to complete sections A, B, and C of the Biographical Sketch.

A. Positions and Honors**Positions and Employment**

- 1998-2000 Postdoctoral fellow, Department of Physiology and Biophysics, Mount Sinai School of Medicine, New York
- 2000-2003 Bioinformatics Officer, Institute for Computational Biomedicine, Mount Sinai School of Medicine, New York
- 2003-present **Assistant Professor**, Department of Physiology and Biophysics; **Bioinformatics Officer**, Institute for Computational Biomedicine; **Director**, Computational Genomics Core Facility. Weill Cornell Medical College, New York.
- 2007-present **Associate Director**, Biomedical Informatics Core, Clinical Translational Science Center (CTSC). Weill Cornell Medical College, New York.

Other Experience and Professional Memberships

The International Society for Computational Biology, 2000-
Society for Neuroscience, 2007-

B. Selected peer-reviewed publications (in chronological order)

- Campagne, F. and B. Maigret, Multiple sequence alignment in HTML: colored, possibly hyperlinked, compact representations. **J Mol Graph Model**, 1998. 16(1): p. 6-10, 34-5.
- Horn F, Weare J, Beukers MW, Horsch S, Bairoch A, Chen W, Edvardsen O, Campagne F, Vriend G., GPCRDB: an information system for G protein-coupled receptors. **Nucleic Acids Res**, 1998. 26(1): p. 275-9.
- Campagne, F. and H. Weinstein, Schematic representation of residue-based protein context-dependent data: an application to transmembrane proteins. **J Mol Graph Model**, 1999. 17(3-4): p. 207-13.
- Campagne, F., et al., Visualisation and integration of G protein-coupled receptor related information help the modelling: description and applications of the Viseur program. **J Comput Aided Mol Des**, 1999 13(6): p. 625-43.

5. Konvicka, K., F. Campagne, and H. Weinstein, Interactive construction of residue-based diagrams of proteins: the RbDe web service. **Protein Eng**, 2000. 13(6): p. 395-6.
6. Campagne, F., Clustalnet: the joining of clustal and CORBA. **Bioinformatics**, 2000. 16(7): p. 606-12.
7. Max, M., Shanker, Y.G., Huang, L., Rong, M., Liu, Z., Campagne, F., Weinstein, H., Damak, S. and Margolskee, R.F. Tas1r3, encoding a new candidate taste receptor, is allelic to the sweet responsiveness locus Sac. **Nat. Gen.** 2001. 28: p58-63
8. Skrabanek, L. and Campagne F. TissueInfo: high-throughput identification of tissue expression profiles and specificity. **Nucleic Acids Res.** 2001 Nov 1;29(21):E102-2.
9. Campagne, F. Interoperability calls for an unusual mix of skills. **Nature**. 2002 Jul 11;418(6894):125.
10. Horn F, Bettler E, Oliveira L, Campagne F, Cohen FE, Vriend G. GPCRDB information system for G protein-coupled receptors. **Nucleic Acids Res.** 2003 Jan 1;31(1):294-7.
11. Filizola M, Visiers I, Skrabanek L, Campagne F, Weinstein H. Functional mechanisms of GPCRs in a structural context. In *Molecular Neuropharmacology, Strategies and Methods*, Eds., A. Schousboe and H. Bräuner-Osborne, Humana Press. Dec. 2003,
12. Skrabanek L, Campagne F, Weinstein H. Building protein diagrams on the web with the Residue-based diagram editor RbDe. **Nucleic Acids Res.** Jul 2003, 1;31(13):3856-8.
13. Campagne F, Bettler E, Vriend G, Weinstein H. Batch mode generation of residue-based diagrams of proteins. **Bioinformatics**. 2003, Sep 22;19(14):1854-1855.
14. Characterization of the mouse *AAVS1* ortholog, Duthel N, Yoon-Robarts M, Ward P, Henckaerts E, Skrabanek L, Berns KI, Campagne F, and Linden RM, **J. Virol.** 2004 Aug;78(16):8917-21.
15. Quantitative information management for the biochemical computation of cellular networks. Campagne F, Neves S, Chang CW, Skrabanek L, Ram PT, Iyengar R, Weinstein H. **Science STKE**. 2004 Aug 24;(248):pl11.
16. *Pseudomonas aeruginosa* SoxR does not conform to the archetypal paradigm for SoxR-dependent regulation of the bacterial oxidative stress adaptive response. Marco Palma, Juan Zurita, Julian Ferreras, Stefan Worgall, Lei Shi, Fabien Campagne, and Luis E. N. Quadri. **Infection and Immunity**. 2005 73(5):2958-66.
17. T1r3 a novel taste receptor. Robert Margolskee, Marianna Max, Harel Weinstein, Fabien Campagne, Gopi Y. Shanker. **US Patent #20040219632** 11/04/2004.
18. Critical evaluation of the JDO API for the persistence and portability requirements of complex biological databases. Srdanovic, M., Schenk, U., Schwieger, M., Campagne, F. **BMC Bioinformatics** 2005, 6:5.
19. Building a protein name dictionary from full text: a machine learning term extraction approach. Lei Shi, Fabien Campagne **BMC Bioinformatics** 2005, 6:88.
20. Crooked tail (*Cd*) Model of Human Folate Responsive NTD is Mutated in Wnt Co-receptor LRP6. Carter M, Chen X, Minnerath S, Slowinska B, Glickstein S, Shi L, Campagne F, Weinstein H and Ross ME. **Proc Natl Acad Sci USA** 2005 Sep 6;102(36):12843-8.
21. Minimal Information Requested In the Annotation of biochemical Models (MIRIAM). N Le Novère, N. Finney, A. Hucka, M. Bhalla, U. Campagne, F. Collado-Vides, J. Crampin, E. Halstead, M. Klipp, E. Mendes, P. Nielsen, P. Sauro, H. Shapiro B., Snoep, J.L. Spence, H.D. Wanner, B.L. **Nat Biotechnol.** 2005 Dec;23(12):1509-15.
22. SNOSID, a proteomic method for identification of cysteine S-nitrosylation sites in complex protein mixtures. Gang Hao, Behrad Derakhshan, Lei Shi, Fabien Campagne and Steven S. Gross. **Proc Natl Acad Sci U S A.** 2006 Feb; 103(4):1012-17.
23. Gene expression profiling separates chromophobe renal cell carcinoma from oncocytoma and identifies vesicular transport and cell junction proteins as differentially expressed genes. Stephen Rohan, Jiangling J. Tu, Jean Kao, Piali Mukherjee, Fabien Campagne, Xi K. Zhou, Elizabeth Hyjek, Miguel A. Alonso, Yao-Tseng Chen. **Clin. Cancer Res.** 2006.
24. Mining expressed sequence tags identifies cancer markers of clinical interest. Campagne F, Skrabanek L. **BMC Bioinformatics**. 2006 Nov 1;7(1):481.
25. Lucy Skrabanek, Marta Murcia, Michel Bouvier, Lakshmi Devi, Susan R George, Martin J Lohse, Graeme Milligan, Richard Neubig, Krzysztof Palczewski, Marc Parmentier, Jean-Philippe Pin, Gerrit Vriend, Jonathan

- A Javitch, Fabien Campagne and Marta Filizola. Requirements and Ontology for a G Protein-Coupled Receptor Oligomerization Knowledge Base. **BMC Bioinformatics**. 2007, **8**:177
26. Eliza Chan and Fabien Campagne. Applications, representation and management of signaling pathway information. Introduction to the SigPath project. **Introduction to Systems Biology**, chapter 19. Humana Press. July 2007, Humana Press. ISBN13: 978-1-58829-706-8
27. Fabien Campagne. Objective and automated protocols for the evaluation of biomedical search engines using No Title Evaluation protocols. **BMC Bioinformatics**. 2008 Feb 29;9:132.
28. Beyond TissueInfo: Functional Prediction using Tissue Expression Profile Similarity Searches Daniel Aguilar, Lucy Skrabanek, Steven S. Gross, Baldomero Oliva, Fabien Campagne. **Nucleic Acids Research**, 2008 Jun; 36(11):3728-37
29. Ute Dreses-Werringloer, Jean-Charles Lambert, Valérie Vingtdeux, Haitian Zhao, Horia Vais, Adam Siebert, Ankit Jain, Jeremy Koppel, Anne Rovelet-Lecrux, Didier Hannequin, Florence Pasquier, Daniela Galimberti, Elio Scarpini, David Mann, Corinne Lendon, Dominique Campion, Philippe Amouyel, Peter Davies, J. Kevin Foskett, Fabien Campagne, and Philippe Marambaud. A polymorphism in CALHM1 influences Ca²⁺ homeostasis, A β levels, and Alzheimer's disease risk. **Cell**, 2008 Jun 27;133(7):1149-61.
30. LIM Kinase and Cofilin regulate actin filament population required for dynamin-dependent apical carrier fission for TGN. Susana B. Salvarezza, Sylvie Deborde, Ryan Schreiner, Fabien Campagne, Michael M. Kessels, Britta Qualmann, Alfredo Caceres, Geri Kreitzer and Enrique Rodriguez-Boulan, **Mol Biol Cell**. 2009 Nov 19.
31. [CALHM1, a novel gene to blame in Alzheimer disease.] Lambert JC, Campagne F, Marambaud P. **Médecine et Sciences** (Paris). 2008 Nov;24(11):923-924. French.
32. Xutao Deng and Fabien Campagne, Biomarker discovery and validation with high-throughput measurement technologies. Book chapter. Humana Press. Statistical Methods in Molecular Biology: a Beginner's Guide, in press.
33. Response: CALHM1 Association with Alzheimer's Disease Risk Fabien Campagne, Jean-Charles Lambert, Ute Dreses-Werringloer, Valérie Vingtdeux, Corinne Lendon, Dominique Campion, Philippe Amouyel, Annette T. Lee, Peter K. Gregersen, Peter Davies and Philippe Marambaud. **Cell**, 2008.
34. Xutao Deng and Fabien Campagne. Biomarker discovery and validation with high-throughput measurement technologies. **Statistical Methods in Molecular Biology**. Editors: Bang H, Zhou XK, Van Epps HL & Mazumdar M, Human Press, in press.
35. Alex Kentsis, Flavio Monigatti, Kevin Dorff, Fabien Campagne, Richard Bachur, Hanno Steen. Urine proteomics for profiling of human disease using high accuracy mass spectrometry. **Proteomics Clinical Applications**, 2009, 3, 1052–1061.
36. Alex Kentsis, Yin Yin Lin, Kyle Kurek, Monica Calicchio, Yan Yan Wang, Flavio Monigatti, Fabien Campagne, Richard Lee, Bruce Horwitz, Hanno Steen, Richard Bachur. Discovery and validation of urine markers of acute pediatric appendicitis using high accuracy mass spectrometry. **Annals of Emergency Medicine**, 2009 Jun 25.
37. Maria E. Figueroa, Sanne Lugthart, Yushan Li, Claudia Erpelinck-Verschueren, Xutao Deng, Paul J. Christos, Elizabeth Schifano, James Booth, Wim van Putten, Lucy Skrabanek, Fabien Campagne, Madhu Mazumdar, John M. Greally, Peter J.M. Valk, Bob Löwenberg, Ruud Delwel, and Ari Melnick. DNA methylation Signatures Identify Biologically Distinct Subtypes in Acute Myeloid Leukemia. **Cancer Cell**, in press.

C. Research Support.

Ongoing Research Support

R21/33 DA01797 (Filizola, M PI MSSM, Campagne, PI WMC)

04/01/05 - 03/31/10

NIH/NIDA

\$87,398

Informatics of GPCR Dimers in Drug Abuse Mechanisms

Subcontract from Mount Sinai School of Medicine. Dr. Campagne supervises the development of the GPCR Oligomerization ontology and associated knowledge base.

Role: PI for the subcontract.

WMC CTSC Pilot Project (Campagne, F PI WMC,

08/09/2008-31/05/2010

Marambaud, P Co-PI NorthShore LIJ)

\$50,000

Prioritization of Candidate Risk Genes for Late-Onset Alzheimer's Disease

This pilot project will leverage digital gene expression technology to measure gene expression of low abundance genes in mouse brain regions. The collected information will be mined computationally to prioritize candidate risk genes for late onset-Alzheimer's disease.

Role: PI

R01 MH086883 EUREKA (Toth M, PI)

07/01/2009 – 6/31/2013

NIH

\$50,000

Dual Impact of genetic mutations in a pedigree: maternal and offspring genotype effects on offspring behavior and relevance to psychiatric disease

Dr. Campagne's laboratory is conducting high-throughput data analysis for the project, including gene expression, Chip-SEQ and HELP (DNA methylation) data measured in neurons from mice.

1CTSA RFA-RM-07-002 (Imperato-McGinley, PI)

09/01/07-08/31/12

NIH/NCRR

Institutional Clinical and Translational Science Award (U54)

The development of the Clinical and Translational Science Center (CTSC) fulfills the mission to advance the nation's clinical research enterprise of moving translational research seamlessly from bench to bedside and to the community. The Center represents WMC and its partnering institutions' vision to deliver the vast knowledge of recent biomedical advances to clinical application for meaningful healthcare practices and to nurture multidisciplinary translational research education and training. The CTSC has been designed to capture the collective of intellectual capital, cutting-edge resources and diverse patient base of partnering institutions and to integrate them for maximum translational research benefits.

As Associate Director of the Biomedical Informatics Core of the CTSC, Dr. Campagne supervises a high-throughput data analyst who works with clinical investigators to develop and evaluate (protein or gene expression) biomarkers.

Role: Associate Director of the Biomedical Informatics Core (20% effort)

5P01 DA012408-09 (Weinstein H, PD)

07/09/99 - 03/31/10

NIH/NIDA

Program Project Grant: Structure and Function of Neurotransmitter Transporters

This Program Project studies the Structure and Function of Neurotransmitter Transporters with a combination of experimental and computational methods. As an investigator, Dr. Campagne supervises the team that develops

Program Director/Principal Investigator (Last, First, Middle): **Campagne, Fabien**

an information management system to store interaction of neurotransmitter transporters with other signaling molecules.

Role: Bioinformatic Officer

P01 DA012923-07 (Weinstein H, PD)

02/01/00 - 06/30/12

NIH/NIDA

Program Project Grant: *Hallucinogens on 5-HT_{2A} Receptors: Mechanisms and Effects*

This component of the PPG seeks to understand the specific molecular mechanism of actions of hallucinogenic drugs of abuse on the 5-HT_{2A} GPCRs, at a level of detail that enables structure-based design from molecular models of the receptors and large scale computational simulations of mechanisms of action.