



Michèle Auger

Biophysical Chemistry

Picture: Studio Perspective

Business Address

Department of Chemistry
Université Laval
Quebec City (P.Q.)
Canada G1V 0A6

Phone: 418-656-3393
Fax: 418-656-7916
E-mail: michele.auger@chm.ulaval.ca
WEB: <http://www.chm.ulaval.ca/mauger>

Civil Status

Born in Grand-Mère, P.Q., Canada
March 30th, 1963

Academic Background

Postdoctoral Fellow		1990-1991
Massachusetts Institute of Technology		
<i>Supervisor</i> : Dr. Robert G. Griffin,		
Ph.D. (Chemistry)	University of Ottawa	1986-1990
<i>Supervisor</i> : Dr. Ian C.P. Smith		
B.Sc. (Chemistry)	Université du Québec à Trois-Rivières	1982-1985

Positions Held - Université Laval

Member	CQMF*	2009-present
Member	PROTEO (formerly CREFSIP**)	2007-present
Chair of Undergraduate Studies	Department of Chemistry	2005-present
Chair of Graduate Studies	Department of Chemistry	2004-2005
Acting Chair of Graduate Studies	Department of Chemistry	2002-2003
Associate Member	CREFSIP	2000-2007
Full Professor	Department of Chemistry	2000-present
Associate Professor	Department of Chemistry	1996-2000
Member	CERSIM (now CERMA)	1991-present
Assistant Professor	Department of Chemistry	1991-1996

* CQMF (Quebec Center on Functional Materials)
** PROTEO, CREFSIP (Protein Function, Structure and Engineering Research Center)

Distinctions, Awards and Scholarships

- › Nomination, Gala Femmes de mérite YWCA, Education Category, 2011
- › Fellow of the Chemical Institute of Canada, 2010
- › Clara Benson Award, Canadian Society for Chemistry, 2007
- › Barringer Award, Spectroscopy Society of Canada, 2002
- › Professeur étoile (outstanding teaching award), FSG, Université Laval, 1999, 2002, 2004, 2005 and 2010
- › Best Professor, Department of Chemistry, Université Laval, 1997, 2011
- › Women's Faculty Award, Natural Sciences and Engineering Research Council of Canada (NSERC), 1991-1996
- › Governor General's Gold Medal, Graduate Studies, University of Ottawa, 1990
- › Postdoctoral Fellowship, NSERC, 1990-1991
- › 1967 Science and Engineering Scholarship, NSERC, 1986-1989
- › Entrance Scholarship, University of Ottawa, 1986-1989
- › Undergraduate Research Scholarship, NSERC, 1984-1985

Students Supervised and Co-supervised

- › 11 Ph.D. and 27 M.Sc. students supervised
- › 5 Ph.D. and 10 M.Sc. students co-supervised
- › 8 postdoctoral fellows supervised since 1992

Publications, Invited Scientific Lectures and Communications

- › 87 publications
- › 97 invited scientific lectures
- › 326 communications at scientific meetings

Grant Selection Committees (last 10 years)

- › Member of the Discovery Accelerator Supplements committee, NSERC, 2007-2009
- › Member of the FQRNT Committee for the evaluation of CFI Leaders Opportunity Fund applications in chemistry and physics, 2006
- › Chair of the grant selection committee 24 (Inorganic/Organic Chem.), NSERC, 2003
- › Member of the grant selection committee 24, NSERC, 2000-2003

Participation to Different Committees (last 10 years)

- › Member of IUPAB Council (2011-present)
- › Member of the Editorial Board of Biophysical Reviews (2011-present)
- › Member of the Editorial Advisory Board of the Canadian Journal of Chemistry (2009-present)
- › Member of the «Comité paritaire sur le rattachement double» du Syndicat des Professeurs de l'Université Laval, 2009-present
- › Member of the CREPUQ Committee for the evaluation of the PhD program in Chemistry at the Université du Québec à Montréal, 2007
- › Member of the Committee on International Science, Engineering and Technology (CISSET) of the National Research Council, 2003-2008
- › Member of the Steering Committee, National Ultrahigh-Field NMR Facility for Solids, University of Ottawa, National Research Council, 2002-present
- › Member of the Management Committee, Eastern Canada High-Field NMR Facility, University of Montreal and McGill, 2002-2008

Organization of Meetings and Events (last 5 years)

- › Member of the organizing committee for the Canadian Society for Chemistry Meeting to be held in Quebec City, May 26-30, 2013
- › Organization of the MOOT NMR Minisymposium to be held in Quebec City, October 2012
- › Organization of exhibits on Chemistry, Expo Québec Regional Fair, August 17-28, 2011
- › Co-organizer of the Symposium «Advances in Solid-State NMR of Biological Molecules» at Pacifichem 2010, Honolulu (Hawaii), December 15-20, 2010
- › Member of the organizing committee for the International Conference on Organized Molecular Films- LB-13 to be held in Quebec City, July 19-23, 2010
- › Member and Treasurer of the Organizing Committee for the event «Les 24 Heures de la Chimie» held in the Department of Chemistry at Université Laval, 2006, 2009 and 2012.
- › Member of the Organizing Committee for the event «Les filles et les sciences, un duo électrisant», Université Laval, February 16th, 2008
- › Organization of exhibits on Chemistry of Odors, Expo Québec Regional Fair, August 15-26, 2007

**Refereed
Publications (last 5
years)**

87. Guimond-Tremblay, J., Gagnon, M.-C., Pineault-Maltais, J.-A., Turcotte, V., Auger, M., Paquin, J.-F., **2012**. *Synthesis and properties of monofluorinated dimyristoylphosphatidylcholine derivatives: Potential fluorinated probes for the study of membrane topology*, *Org. Biomol. Chem.*, **10**, 1145-1148.
86. Leclerc, J., Lefèvre, T., Pottier, F., Morency, L.-P., Lapointe-Verreault, C., Gagné, S., Auger, M., **2012**. *Structure and pH-induced alterations of recombinant and natural spider silk proteins in solution*, *Biopolymers*, [published online](#) (DOI: 21717).
85. Lorin, A., Noël, M., Provencher, M.-E., Turcotte, V., Masson, C., Voyer, N., Auger, M., **2011**. *Revisiting peptide amphiphilicity for membrane pore formation*, *Biochemistry*, **50**, 9409-9420.
84. Cloutier, I., Leclerc, J., Lefèvre, T., Auger, M., **2011**. *Solid-state NMR spectroscopy reveals distinctive protein dynamics in closely-related spider silks*, *Can. J. Chem.*, **89**, 1047-1054.
83. Thibeault, D., Auger, M., Morin, J.-F., **2010**. *Synthesis of fluorine-containing molecular rotors and their assembly on gold nanoparticles*, *Eur. J. Org. Chem.*, 3049-3067.
82. Ouellet, M., Voyer, N., Auger, M., **2010**. *Membrane interactions and dynamics of a 21-mer cytotoxic peptide: A solid-state NMR study*, *Biochim. Biophys. Acta*, **1798**, 235-243.
81. Cloutier, I., Paradis-Bleau, C., Giroux, A.-M., Pigeon, X., Arseneault, M., Levesque, R.C., Auger, M., **2010**. *Biophysical studies of the interactions of the phage ϕ KZ gp144 lytic transglycosylase with model membranes*, *Eur. Biophys. J.*, **39**:263-276.
80. Auger, M., **2009**. *Structural and dynamics studies of lipids by solid-state NMR*, *Encycl. Mag. Reson.*, [on line](#) (DOI: 10.1002/9780470034590.emrstm1100).
79. Giguère, J.-B., Thibeault, D., Cronier, F., Marois, J.-S., Auger, M., and Morin, J.-F., **2009**. *Synthesis of [2]- and [3]rotaxanes through Sonogashira coupling*, *Tet. Lett.*, **50**, 5497-5500.
78. Labbé, J.-F., Cronier, F., C.-Gaudreault, R., and Auger, M., **2009**. *Spectroscopic characterization of DMPC/DOTAP cationic liposomes and their interaction with DNA and drugs*, *Chem. Phys. Lipids*, **159**, 91-101.
77. Le Bouch, N., Auger, M., and Leclerc, M., **2008**. *Structure and segmental motions in a substituted polythiophene: a solid-state NMR study*, *Macromol. Chem. Phys.*, **209**, 2455-2462.
76. Fournier, I., Barwicz, J., Auger, M., and Tancrède, P., **2008**. *The chain conformational order of ergosterol- or cholesterol-containing DPPC bilayers as modulated by Amphotericin B: a FTIR study*, *Chem. Phys. Lipids*, **151**, 41-50.
75. Ouellet, M., and Auger, M., **2008**. *Structure and membrane interactions of antimicrobial peptides as viewed by solid-state NMR spectroscopy*, *Ann. Rep. NMR Spectrosc.*, **63**, 1-21.
74. Lefèvre, T., Leclerc, J., Rioux-Dubé, J.F., Buffêteau, T., Paquin, M.-C., Rousseau, M.-E., Cloutier, I., Auger, M., Gagné, S.M., Boudreault, S., Cloutier, C., and Pérolet, M., **2007**. *Conformation of spider silk proteins in situ in the intact major ampullate gland and in solution*, *Biomacromolecules*, **8**, 2342-2344.
73. Bernard, G., Auger, M., Soucy, J., and Pouliot, R., **2007**. *Physical characterization of the stratum corneum of an in vitro psoriatic skin model by ATR-FTIR and Raman spectroscopies*, *Biochim. Biophys. Acta*, **1770**, 1317-1323.
72. Ouellet, M., Doucet, J.-D., Voyer, N., and Auger, M., **2007**. *Membrane topology of a 14-mer model amphipathic peptide: A solid-state NMR spectroscopy study*, *Biochemistry*, **46**, 6597-6606.
71. Cronier, F., Patenaude, A., C.-Gaudreault, R., and Auger, M., **2007**. *Membrane composition modulates the interaction between a new class of antineoplastic agents derived from chloroethylurea and lipid bilayers: A solid-state NMR and FTIR spectroscopic study*, *Chem. Phys. Lipids*, **146**, 125-135.

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70. Paradis-Bleau, C., Cloutier, I., Sanschagrin, F., Lemieux, L., Laroche, J., Otis, F., Auger, M., Garnier, A., and Levesque, R.C., **2007**. *Autotranslocation and lysis mechanism of the Pseudomonas aeruginosa bacteriophage ϕ KZ endolysin*, FEMS Microbiology Letters, 266, 201-209.
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