

Publications, Michèle Auger

128. Gagnon, M.-C., Auger, M., Paquin, J.-F., **2018**. *Progress in the synthesis of fluorinated phosphatidylcholines for biological applications*, Org. Biomol. Chem., 16, 4925-4941.
127. Martial, B., Lefèvre, T., Auger, M., **2018**. *Understanding amyloid fibril formation using protein fragments: structural investigations via vibrational spectroscopy and solid-state NMR*, Biophys. Rev., 10, 1133-1149.
126. Potvin-Fournier, K., Valois-Paillard, G., Gagnon, M.-C., Lefèvre, T., Audet, P., Cantin, L., Paquin, J.-F., Salesse, C., Auger, M., **2018**. *Novel approaches to investigate the interaction of recoverin with membranes*, Eur. Biophys. J., 47, 679-691.
125. Le, Q.C., Lefèvre, T., C.-Gaudreault, R., Laroche, G., Auger, M., **2018**. *Transdermal diffusion, spatial distribution and physical state of a potential anticancer drug in mouse skin as studied by diffusion and spectroscopic techniques*, Biomed Spectrosc Imaging, 7, 47-61.
124. Auger, M., Lefèvre, T., Otis, F., Voyer, N., Auger, M., **2018**. *Lipid membrane interactions of a fluorinated peptide with potential ion channel-forming ability*, Peptide Sci., 10.1002/pep2.24051.
123. Gagnon, M.-C., Ouellet, P., Auger, M., Paquin, J.-F., **2018**. *Towards the use of monofluorinated dimyristoylphosphatidylcholines as ¹⁹F NMR reporters in bacterial model membranes*, J. Fluorine Chem., 206, 43-47.
122. Gagnon, M.-C., Strandberg, E., Ulrich, A.S., Paquin, J.-F., Auger, M., **2018**. *New insights into the influence of monofluorination on dimyristoylphosphatidylcholine membrane properties: A solid-state NMR study*, Biochim. Biophys. Acta, 1860, 654-663.
121. Dionne, J., Lefèvre, T., Bilodeau, P., Lamarre, M., Auger, M., **2017**. *A quantitative analysis of the supercontraction-induced molecular disorientation of major ampullate spider silk*, Phys. Chem. Chem. Phys., 19, 31487-31498.
120. Xu, L., Lefèvre, T., Orrell, K.E., Meng, Q., Auger, M., Rainey, J.K., Liu, X.-Q., **2017**. *Structural and mechanical roles for the C-terminal non-repetitive domain become apparent in recombinant spider aciniform silk*, Biomacromolecules, 18, 3678-3686.
119. Gagnon, M.-C., Dautrey, S., Bertrand, X., Auger, M., Paquin, J.-F., **2017**. *A flexible synthetic approach to phosphatidylglycerols*, Eur. J. Org. Chem., 6401-6407.
118. Potvin-Fournier, K., Valois-Paillard, G., Lefèvre, T., Cantin, L., Salesse, C., Auger, M., **2017**. *Membrane fluidity is a driving force for recoverin myristoyl immobilization in zwitterionic lipids*, Biochem. Biophys. Res. Comm., 490, 1268-1273.
117. Auger, M., **2017**. *Membrane solid-state in Canada: A historical perspective*, Biochim. Biophys. Acta, 1865, 1483-1489.
116. Gagnon, M.-C., Strandberg, E., Grau-Campistany, A., Wadhwan, P., Reichert, J.; Bürck, J., Rabanal, F., Auger, M., Paquin, J.-F., Ulrich, A.S., **2017**. *Influence of length and charge on the activity of α-helical amphipathic antimicrobial peptides*, Biochemistry, 56, 1680-1695.

- 115.** Fillion, M., Goudreault, M., Voyer, N., Bechinger, B., Auger, M., **2016.** *Amphiphilicity is a key determinant in the membrane interactions of synthetic 14-mer cationic peptide analogs*, Biochemistry, 55, 6919-6930.
- 114.** Godbout, R., Légaré, S., Auger, M., Carpentier, C., Otis, F., Auger, M., Lagüe, P., Voyer, N., **2016.** *Membrane assembly and ion transport ability of a fluorinated nanopore*, PLOS ONE, 11, E0166587.
- 113.** Duque, A., Gauthier, L., Simard, M., Jean, J., Gendreau, I., Morin, A., Auger, M., Soucy, J., Pouliot, R., **2016.** *A 3D-psoriatic skin model for dermatological testing: The impact of culture conditions*, Biochem. Biophys. Rep., 8, 268-276.
- 112.** Dionne, J., Lefèvre, T., Auger, M., **2016.** *Major ampullate spider silk with indistinguishable spidroin dope conformations lead to different fiber molecular structures*, Int. J. Molec. Sci., 17, E1353.
- 111.** Potvin-Fournier, K., Lefèvre, T., Picard-Lafond, A., Marcotte, C., Dufresne, C., Cantin, L., Salesse, C., Auger, M., **2016.** *Discriminating lipid- from protein-calcium binding to understand the interaction between recoverin and phosphatidylglycerol model membranes*, Biochemistry, 55, 3481-3491.
- 110.** Lefèvre, T., Auger, M., **2016.** *Spider silk as a blueprint for greener materials: a review*, Int. Mater. Rev., 61, 127-153.
- 109.** Lefèvre, T., Auger, M., **2016.** *Spider silk-inspired materials and sustainability: perspective*, Mater. Technol: Advanced Performance Materials, 31, 384-399.
- 108.** Robert, É., Lefèvre, T., Fillion, M., Martial, B., Dionne, J., Auger, M., **2015.** *Mimicking and understanding the agglutination effect of the antimicrobial peptide thanatin using model phospholipid vesicles*, Biochemistry, 54, 3932-3941.
- 107.** Tremblay, M.-L., Xu, L., Lefèvre, T., Sarker, M., Orrell, K.E., Leclerc, J., Meng, Q., Pézolet, M., Auger, M., Liu, X.-Q., Rainey, J.K., **2015.** *Spider wrapping silk fibre architecture arising from its modular soluble protein precursor*, Sci. Reports, 10.1038/srep11502.
- 106.** Leroy, M., Lefèvre, T., Pouliot, R., Auger, M., Laroche, G., **2015.** *Using infrared and Raman microspectroscopies to compare ex vivo involved psoriatic skin with normal human skin*, J. Biomed. Opt., 10.1117/1.JBO.20.6.067004.
- 105.** Rhéault, J.-F., Gagné, E., Guertin, M., Lamoureux, G., Auger, M., Lagüe, P., **2015.** *Molecular model of hemoglobin N from Mycobacterium tuberculosis bound to lipid bilayers: a combined spectroscopic and computational study*, Biochemistry, 54, 2073-2084.
- 104.** Huot, A., Lefèvre, T., Rioux-Dubé, J.-F., Nault, A.-P., Auger, M., Pézolet, M., **2015.** *Effect of mechanical deformation on the structure of regenerated B. mori silk fibroin films as revealed by Raman and infrared spectroscopy*, Applied Spectroscopy, 69, 689-698.
- 103.** Ayata, R.E., Chabaud, S., Auger, M., Pouliot, R., **2015.** *Behaviour of endothelial cells in a tridimensional in vitro environment*, BioMed Research International, 630461, 10.1155/2015/630461.
- 102.** Fillion, M., Auger, M., **2015.** *Oriented samples: a tool for determining the membrane topology and the mechanism of action of cationic antimicrobial peptides by solid-state NMR*, Biophys. Rev., 7, 311-320.

- 101.** Proulx, M., Aubin, K., Lagueux, J., Audet, P., Auger, M., Fortin, M.-A., Fradette, J., **2015**. *Magnetic resonance imaging of human tissue-engineered adipose substitutes*, *Tissue Eng. Part. C.*, 21, 693-704.
- 100.** Fillion, M., Valois-Paillard, G., Lorin, A., Noël, M., Voyer, N., Auger, M., **2015**. *Membrane interactions of synthetic peptides with antimicrobial potential: Effect of electrostatic interactions and amphiphilicity*, *Probiotics & Antimicro. Prot.*, 7, 66-74.
- 99.** Gauthier, M., Leclerc, J., Lefèvre, T., Gagné, S.M., Auger, M., **2014**. *Effect of pH on the structure of the recombinant C-terminal domain of Nephila clavipes dragline silk protein*, *Biomacromolecules*, 15, 4447–4454.
- 98.** Ayata, R.E., Bouhout, S., Auger, M., Pouliot, R., **2014**. *Study of in vitro capillary-like structures in psoriatic skin substitutes*, *BioResearch Open Access*, 3, 197-205.
- 97.** Bédard, L., Lefèvre, T., Morin-Michaud, É., Auger, M., **2014**. *Besides fibrillization: the role of the peptide fragment 71-82 on the structural and assembly behavior of α-synuclein*, *Biochemistry*, 53, 6463-6472.
- 96.** Gagnon, M.-C., Turgeon, B., Savoie, J.-D., Parent, J.-F., Auger, M., Paquin, J.-F., **2014**. *Evaluation of the effect of fluorination on the property of monofluorinated dimyristoylphosphatidylcholines*, *Org. Biomol. Chem.*, 12, 5126-5135.
- 95.** Leroy, M., Labbé, J.-F., Ouellet, M., Jean, J., Lefèvre, T., Laroche, G., Auger, M., Pouliot, R., **2014**. *A comparative study between human skin substitutes and normal human skin using Raman microspectroscopy*, *Acta Biomater.*, 10, 2703-2711.
- 94.** Fillion, M., Noël, M., Lorin, A., Voyer, N., Auger, M., **2014**. *Investigation of the mechanism of action of novel amphipatic peptides: Insights from solid-state NMR studies of oriented lipid bilayers*, *Biochim. Biophys. Acta*, published online, DOI: 10.1016/j.bbamem.2014.01.029.
- 93.** Potvin-Fournier, K., Lefèvre, T., Picard-Lafond, A., Valois-Paillard, G., Cantin, L., Salesse, C., Auger, M., **2014**. *The thermal stability of recoverin depends on calcium binding and its myristoyl moiety as revealed by infrared spectroscopy*, *Biochemistry*, 53, 48-56.
- 92.** Leroy, M., Lafleur, M., Auger, M., Laroche, G., Pouliot, R., **2013**. *Characterization of the structure of human skin substitutes by infrared microspectroscopy*, *Anal. Bioanal. Chem.*, 405, 8709-8718.
- 91.** Leclerc, J., Lefèvre, T., Gauthier, M., Gagné, S., Auger, M., **2013**. *Hydrodynamical properties of recombinant spider silk proteins: Effects of pH, salts and shear, and implications for the spinning process*, *Biopolymers*, 99, 582-593.
- 90.** Otis, F., Auger, M., Voyer, M., **2013**. *Exploiting peptide nanostructures to construct functional artificial ion channels*, *Acc. Chem. Res.*, 46, 2934-2943.
- 89.** Labbé, J.-F., Lefèvre, T., Guay-Bégin, A.-A., Auger, M., **2013**. *Structure and membrane interactions of the β-amylod fragment 25-35 as viewed by spectroscopic approaches*, *Phys. Chem. Chem. Phys.*, 15, 7228-7239.
- 88.** Paquet-Mercier, F., Lefèvre, T., Auger, M., Pézolet, M., **2013**. *Evidences by infrared spectroscopy of the presence of two types of β-sheets in major ampullate spider silk and silkworm silk*, *Soft Matter*, 9, 208-215.

- 87.** Lorin, A., Noël, M., Provencher, M.-E., Turcotte, V., Cardinal, S., Lagüe, P., Voyer, N., Auger, M., **2012.** *Determining the mode of action involved in the antimicrobial activity of synthetic peptides from FTIR and solid-state NMR experiments*, Biophys. J., 103, 1470-1479.
- 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, 97, 337-346.
- 85.** Guimond-Tremblay, J., Turcotte, V., Gagnon, M.-C., Auger, M., Paquin, J.-F., **2012.** *Synthetics and properties of monofluorinated dimyristoylphosphatidylcholine derivatives: Potential fluorinated probes for the study of membrane topology*, Org. Biomol. Chem., 10, 1145-1148
- 84.** Lorin, A., Noël, M., Provencher, M.-E., Turcotte, V., Masson, C., Cardinal, S., Lagüe, P., Voyer, N., Auger, M., **2011.** *Revisiting peptide amphiphilicity for membrane pore formation*, Biochemistry, 50, 9409-9420 (this manuscript has been highlighted by the journal).
- 83.** Cloutier, I., Leclerc, J., Pézolet, M., and Auger, M., **2011.** *Solid-state NMR spectroscopy reveals distinctive protein dynamics in closely-related spider silks*, Can. J. Chem., 89, 1047-1054.
- 82.** Thibeault, D., Auger, M., and Morin, J.-F., **2010.** Synthesis of fluorine-containing molecular rotors and their assembly on gold nanoparticles, Eur. J. Org. Chem., 3049-3067.
- 81.** 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.
- 80.** 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.
- 79.** Giguère, J.-B., Thibeault, D., Cronier, F., Marois, J.-S., Auger, M., 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., 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., 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., Tancrede, 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., 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., Buffeteau, T., Paquin, M.-C., Rousseau, M.-E., Cloutier, I., Auger, M., Gagné, S.M., Boudreault, S., Cloutier, C., Pézolet, 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., 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., 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., 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.
- 70.** Paradis-Bleau, C., Cloutier, I., Sanschagrin, F., Lemieux, L., Laroche, J., Otis, F., Auger, M., Garnier, A., Levesque, R.C., **2007**. *Autotranslocation and lysis mechanism of the Pseudomonas aeruginosa bacteriophage φKZ endolysin*, FEMS Microbiology Letters, 266, 201-209.
- 69.** Ouellet, M., Otis, F., Voyer, N., Auger, M., **2006**. *Biophysical studies of the interactions between 14-mer and 21-mer model amphipathic peptides and membranes: insights on their modes of action*, Biochimi. Biophys. Acta, 1758, 1235-1244.
- 68.** Ouellet, M., Bernard, G., Voyer, N., Auger, M., **2006**. *Insights on the interactions of synthetic amphipathic peptides with model membranes as revealed by ³¹P and ²H solid-state NMR and infrared spectroscopies*, Biophys. J., 90, 4071-4084.
- 67.** Marcotte, I., Bélanger, A., Auger, M., **2006**. *The orientation effect of gramicidin A on bicelles and Eu³⁺-doped bicelles as studied by solid-state NMR and FTIR spectroscopy*, Chem. Phys. Lipids, 139, 137-149.
- 66.** Epand, R.F., Schmitt, M.A., Gellman, S.H., Sen, A., Auger, M., Hughes, D.W. et Epand, R.M., **2005**. *Bacterial species selective toxicity of two isomeric alpha/beta peptides: role of membrane lipids*, Molec. Membrane Biol., 22, 457-469.
- 65.** Marcotte, I., Auger, M., **2005**. *Bicelles as model membranes for solid- and solution-state NMR studies of membrane peptides and proteins*, Concepts Magn. Reson., 24A, 17-37.
- 64.** Arnold, A., Cloutier, I., Ritcey, A.M., Auger, M., **2005**. *Temperature and pressure dependent growth and morphology of DMPC/DSPC domains studied by Brewster Angle Microscopy*, Chem. Phys. Lipids, 133, 165-179.
- 63.** Richard, J.-A., Kelly, I., Marion, D., Auger, M., Pézolet, M., **2005**. *The structure of β-purothionin in membranes: A two-dimensional infrared correlation spectroscopy study*, Biochemistry, 44, 52-61.
- 62.** Wattrait, O., Arnold, A., Auger, M., Bourdillon, C., Sazarin, C., **2005**. *Lipid bilayer tethered inside a nanoporous support: A solid-state NMR investigation*, Anal. Biochem., 336, 253-261.
- 61.** Arnold, A., Paris, M., Auger, M., **2004**. *Anomalous diffusion in a gel-fluid lipid environment: a combined solid-state NMR and obstructed random-walk perspective*, Biophys. J., 87, 2456-2469.

- 60.** Marcotte, I., Ouellet, M., Auger, M., **2004**. *Insights on the interaction of Met-enkephalin with negatively charged membranes - An infrared and solid-state NMR spectroscopic study*, Chem. Phys. Lipids, 127, 175-187.
- 59.** Marcotte, I., Separovic, F., Auger, M., Gagné, S.M., **2004**. *A multidimensional ¹H NMR study to investigate the effect of membrane composition on enkephalin conformation*, Biophys. J., 86, 1587-1600.
- 58.** Marcotte, I., Dufourc, E.J., Ouellet, M., Auger, M., **2003**. *Study of the interaction of the neuropeptide Met-enkephalin with modified bicelles by ³¹P and ²H solid-state NMR spectroscopy*, Biophys. J., 85, 328-339.
- 57.** Marcotte, I., Wegener, K., Lam, Y. H., Chia, B., de Planque, M.R.R., Bowie, J.H., Auger, M., Separovic, F., **2003**. *Interaction of antimicrobial peptides from Australian amphibians with lipid membranes*, Chem. Phys. Lipids, 122, 107-120.
- 56.** Auger, M., **2002**. *Biological and pharmaceutical applications of solid-state NMR spectroscopy*, Can. J. Analyt. Sci. Spectrosc., 47, 184-189.
- 55.** Richard, J.-A., Kelly, I., Marion, D., Pézolet, M., Auger, M., **2002**. *Interaction between β -purothionin and dimyristoylphosphatidylglycerol: A ³¹P NMR and infrared spectroscopic study*, Biophys. J., 83, 2074-2083.
- 54.** Paquet, M.-J., Fournier, I., Barwicz, J., Tancrède, P., Auger M., **2002**. *The effects of amphotericin B on pure and ergosterol- or cholesterol-containing dipalmitoylphosphatidylcholine bilayers as viewed by ²H NMR*, Chem. Phys. Lipids, 119, 1-11.
- 53.** Pouliot, R., Saint-Laurent, A., Chypre, C., Audet, R., Vitté-Mony, I., C.-Gaudreault, R., Auger, M., **2002**. *Spectroscopic characterization of nanoErythrosomes in the absence and presence of conjugated polyethyleneglycols: a FTIR and 31P NMR study*, Biochim. Biophys. Acta, 1564, 317-324.
- 52.** Paquet, M.-J., Fournier, I., Barwicz, J., Tancrède, P., Auger M., **2002**. *The effects of amphotericin B on pure and ergosterol- or cholesterol-containing dipalmitoylphosphatidylcholine bilayers as viewed by ²H NMR*, Chem. Phys. Lipids, 6, 182-187.
- 51.** Saint-Laurent, A., Boudreau, N., Larivière, D., Legault, J., C.-Gaudreault, R., Auger, M., **2001**. *Membrane interactions of a new class of anticancer agents derived from arylchloroethylurea: A FTIR spectroscopic study*, Chem. Phys. Lipids, 111, 163-175.
- 50.** Paquet, M.-J., Laviolette, M., Pézolet, M., Auger, M., **2001**. *1D and 2D FTIR study of the aggregation of cytochrome c in the presence of dimyristoylphosphatidylglycerol*, Biophys. J., 91, 305-312.
- 49.** Biron, E., Voyer, N., Meillon, J.-C., Cormier, M.E., Auger, M., **2000**. *Conformational and orientational studies of artificial ion channels incorporated into lipid bilayers*, Biopolymers, 55, 364-372.
- 48.** Auger, M., **2000**. *Biological membrane structure by solid-state NMR*, Curr. Issues Mol. Biol., 2, 119-124.

- 47.** Picard, F., Pézolet, M., Bougis, P.E., Auger, M., **2000**. *Hydrophobic and electrostatic cardiotoxin-phospholipid interactions as seen by solid-state ^{31}P NMR spectroscopy*, Can. J. Analyt. Sci. Spectrosc., 45, 72-83.
- 46.** Nabet, A., Auger, M., Pézolet, M., **2000**. *Investigation of the temperature behavior of the methylene stretching bands of phospholipid acyl chains by two-dimensional infrared correlation spectroscopy*, Appl. Spectrosc., 54, 948-955.
- 45.** Darmstadt, H., Roy, C., Kaliaguine, S., Xu, G., Auger, M., Tuel, A., Ramaswamy, W., **2000**. *Solid state ^{13}C -NMR spectroscopy and XRD studies of commercial and pyrolytic carbon blacks*, Carbon, 38, 1279-1287.
- 44.** Grohens, Y., Auger, M., Prud'homme, R.E., Schultz, J., **1999**. *Adsorption of stereoregular poly(methyl methacrylates) on γ -alumina: Spectroscopic analysis*, J. Polym. Sci. Polym. Phys., 37, 2985-2995.
- 43.** Picard, F., Paquet, M.J., Lévesque, J., Bélanger, A., Auger, M., **1999**. *^{31}P NMR first spectral moment study of the partial magnetic orientation of phospholipid membranes*, Biophys. J., 77, 888-902.
- 42.** Couture, M.M.J., Auger M., Rosell, F., Mauk, A.G., Boubour, E., Lennox, R.B., Eltis, L.D., **1999**. *Investigation of the role of a surface patch in the self-assocation of Chromatium vinosum high potential iron-sulfur protein*, Biochim. Biophys. Acta, 1433, 159-169.
- 41.** Davis, J.H., Auger, M., **1999**. *Static and magic angle spinning NMR of membrane peptides and proteins*, Prog. NMR Spectrosc., 35, 1-84.
- 40.** Marsolais, F., Laviolette, M., Kakuta, Y., Negishi, M., Pedersen, L.C., Auger, M., Varin, L., **1999**. *3'-phosphoadenosine 5'-phosphosulfate binding site of flavonol 3-sulfotransferase studied by affinity chromatography and ^{31}P NMR*, Biochemistry, 38, 4066-4071.
- 39.** Laviolette, M., Auger, M., Désilets, S., **1999**. *Monitoring the aging dynamics of glycidyl azide polyurethane by NMR relaxation times*, Macromolecules, 32, 1602-1610.
- 38.** Picard, F., Buffeteau, T., Desbat, B., Auger, M., Pézolet, M., **1999**. *Quantitative orientation measurements in thin lipid films by ATR infrared spectroscopy*, Biophys. J., 76, 539-551.
- 37.** Bouchard, M., Le Guernevé, C., Auger, M., **1998**. *Comparison between the dynamics of lipid/gramicidin A systems in the lamellar and hexagonal phases: A solid-state NMR spectroscopy study*, Biochim. Biophys. Acta, 1415, 182-192.
- 36.** Saint-Laurent, A., Boudreau, N., C.-Gaudreault, R., Poyet, P., Auger, M., **1998**. *Interaction between lipid bilayers and a new class of antineoplastic agents derived from arylchloroethylurea: A 2H solid-state NMR study*, Biochem. Cell Biol., 76, 465-471.
- 35.** Bouchard, M., Paré, C., Dutasta, J.-P., Chauvet, J.-P., Gicquaud, C., Auger, M., **1998**. *Interaction between G-actin and various types of liposomes: A ^{19}F , ^{31}P and 2H nuclear magnetic resonance study*, Biochemistry, 37, 3149-3155.
- 34.** Picard, F., Paquet, M.-J., Dufourc, E.J., Auger, M., **1998**. *Measurement of the lateral diffusion of DPPC adsorbed on silica beads in the absence and presence of melittin: A ^{31}P 2D exchange solid-state NMR study*, Biophys. J., 74, 857-868.

- 33.** Auger, M., **1997.** *Membrane structure and dynamics as viewed by solid-state NMR spectroscopy*, Biophys. Chem., 68, 233-241.
- 32.** Désilets, S., Villeneuve, S., Laviolette, M., Auger, M., **1997.** *¹³C-NMR spectroscopy study of polyurethane obtained from azide hydroxyl terminated polymer cured with isophorone diisocyanate (IPDI)*, J Polym. Sci. Part A: Polym. Chem., 35, 2991-2998.
- 31.** Picard, F., Alikacem, N., Guidoin, R., Auger, M., **1997.** *M multinuclear solid-state NMR spectroscopy of envelopes from virgin and explanted silicone breast prostheses: an exploratory study*, Magn. Reson. Med., 37, 11-17.
- 30.** Bouchard, M., Boudreau, N., Auger, M., **1996.** *Membrane fluidity response to odorants as seen by ²H NMR and infrared spectroscopy*, Biochim. Biophys. Acta, 1282, 233-239.
- 29.** Picard, F., Pézolet, M., Bougis, P.E., Auger, M., **1996.** *Model of interaction between a cardiotoxin and dimyristoylphosphatidic acid bilayers determined by solid-state ³¹P NMR spectroscopy*, Biophys. J., 70, 1737-1744.
- 28.** Gicquaud, C., Auger, M., Wong, P.T.T., Poyet, P., Boudreau, N., Gaudreault, R.C., **1996.** *Interaction of 4-ter-butyl[(2-chloroethyl)ureido]benzene with phosphatidylcholine bilayers: A differential scanning calorimetry and infrared spectroscopy study*, Arch. Biochem. Biophys., 334, 193-199.
- 27.** Bennettt, A.E., Rienstra, C.M., Auger, M., Lakshmi, K.V., Griffin, R.G., **1995.** *Heteronuclear decoupling in rotating solids*, J. Chem. Phys., 103, 6951-6958.
- 26.** Lansbury, P.T., Costa, P.R., Griffiths, J.M., Simon, E.J., Auger, M., Halverson, K.J., Kocisko, D.A., Hendsch, Z.S., Ashburn, T.T., Spencer, R.G.S., Tidor, B., Griffin, R.G., **1995.** *Structural model for the β -amyloid fibril based on interstrand alignment of an antiparallel-sheet comprising a C-terminal peptide*, Nature Struct. Biology, 2, 990-998.
- 25.** Auger, M., **1995.** *Solid state NMR study of protein structure: Methods based on the measurement of internuclear distances*, J. Chim. Phys., 92, 1751-1760.
- 24.** Davis, J.H., Auger, M. Hodges, R.S., **1995.** *High resolution ¹H NMR of a transmembrane peptide*, Biophys. J., 69, 1917-1932.
- 23.** Bouchard, M., Davis, J.H., Auger, M., **1995.** *High-speed MAS solid-state ¹H NMR study of the conformation of gramicidin A in lipid bilayers*, Biophys. J., 69, 1933-1938.
- 22.** Dorne, L., Alikacem, N., Guidoin, R., Auger, M., **1995.** *High resolution solid-state ²⁹Si NMR spectroscopy of silicone gels used to fill breast prostheses*, Mag. Reson. Med., 34, 548-554.
- 21.** Liu, J., Gagnon, Y., Furenlid, L., Gauthier, J., L'Heureux, P.J., Auger, M., Nureki, O., Yokoyama, S., Lapointe, J., **1995.** *The zinc binding site of Escherichia coli glutamyl-tRNA synthetase is located in the acceptor binding domain. Studies by EXAFS, molecular modeling and site-directed mutagenesis*, J. Biol. Chem., 270, 15162-15169.
- 20.** Le Guernevé, C., Auger, M., **1995.** *New approach to study fast and slow motions in lipid bilayers: Application to DMPC-cholesterol interactions*, Biophys. J., 68, 1952-1959.
- 19.** Griffiths, J.M., Ashburn, T.T., Auger, M., Costa, P.R., Griffin, R.G., Lansbury Jr., P.T., **1995.** *Rotational resonance solid-state NMR elucidates a structural model of pancreatic amyloid.*, J. Am. Chem. Soc., 117, 3539-3546.

18. Dorne, L., Stroman, P., Rolland, C., Auger, M., Alikacem, N., Bronskill, M., Grondin, P., King, M.W., Guidoin, R., **1994**. *Magnetic resonance study of virgin and explanted silicone breast prostheses: Can proton relaxation times be used to monitor their biostability*, ASAIO J., 40, M625-631.
17. Bouchard, M., Auger, M., **1993**. *Solvent history dependence of gramicidin-lipid interactions: A Raman and FTIR spectroscopic study*, Biophysical Journal, 65, 2484-2492.
16. Lakshmi, K.V., Auger, M., Raap, J., Lugtenburg, J., Griffin, R.G., Herzfeld, J., **1993**. *Internuclear distance measurement in a reaction intermediate: Solid-state ¹³C NMR rotational resonance determination of the Schiff base configuration in the M photointermediate of bacteriorhodopsin*, J. Am. Chem. Soc., 115, 8515-8516.
15. Auger, M., McDermott, A.E., Robinson, V., Castelhano, A.L., Billedeau, R., Pliura, D.H., Krantz, A., Griffin, R.G., **1993**. *Solid state ¹³C NMR study of a transglutaminase-inhibitor adduct*, Biochemistry, 32, 3930-3934.
14. Ashburn, T.T., Auger, M., Lansbury Jr, P.T., **1992**. *The structural basis of pancreatic amyloid formation: Isotope-edited spectroscopy in the solid-state*, J. Am. Chem. Soc., 114, 790-791.
13. Spencer, R.G.S., Halverson, K.J., Auger, M., McDermott, A.E., Griffin, R.G., Lansbury Jr., P.T., **1991**. *An unusual peptide conformation may precipitate amyloid formation in Alzheimer's disease: Application of solid-state NMR to the determination of protein secondary structure*, Biochemistry, 30, 10382-10387.
12. Auger, M., Smith, I.C.P., Jarrell, H.C., **1991**. *Slow motions in lipid bilayers: Direct detection by two-dimensional solid-state deuterium NMR*, Biophysical J., 59, 31-38.
11. Smith, I.C.P., Auger, M., Jarrell, H.C., **1991**. *Molecular details of anesthetic-lipid interaction*, Ann. NY Acad. Sci., 625, 668-684.
10. Auger, M., Van Calsteren, M.-R., Smith, I.C.P., Jarrell, H.C., **1990**. *Glycerolipids: Common features of molecular motion in bilayers*, Biochemistry, 29, 5815-5821.
9. Auger, M., Smith, I.C.P., Mantsch, H.H., Wong, P.T.T., **1990**. *High-pressure infrared study of phosphatidylserine bilayers and their interactions with the local anesthetic tetracaine*, Biochemistry, 29, 2008-2015.
8. Auger, M., Jarrell, H.C., **1990**. *Elucidation of slow motions in glycoglycerolipid bilayers by solid-state two-dimensional deuteron NMR*, Chem. Phys. Letters, 165, 162-167.
7. Auger, M., Carrier, D., Smith, I.C.P., Jarrell, H.C., **1990**. *Elucidation of motional modes in glycoglycerolipid bilayers- A ²H NMR lineshape and relaxation study*, J. Am. Chem. Soc., 112, 1373-1381.
6. Smith, I.C.P., Auger, M., and Jarrell, H.C., **1989**. *Structure and dynamics of the glycolipid components of membrane receptors: ²H NMR provides a route to In Vivo observation*, Ann. NY Acad. Sci., 568, 44-51.
5. Auger, M., Smith, I.C.P., Jarrell, H.C., **1989**. *Interactions of the local anesthetic tetracaine with glyceroglycolipid bilayers: A ²H NMR study*, Biochim. Biophys. Acta, 981, 251-257.
4. Auger, M., Jarrell, H.C., Smith, I.C.P., Siminovitch, D.J., Mantsch, H.H., Wong, P.T.T., **1988**. *Effects of the local anesthetic tetracaine on the structural and dynamic properties of lipids in*

model membranes: A high-pressure Fourier transform infrared study, Biochemistry, 27, 6086-6093.

3. Auger, M., Jarrell, H.C., Smith, I.C.P., **1988**. *Interactions of the local anesthetic tetracaine with membranes containing phosphatidylcholine and cholesterol: A ²H NMR study*, Biochemistry, 27, 4660-4667.
2. Auger, M., Salesse, C., Tancrède, P., **1988**. *The effects of pH on the interactions in mixed monolayers between phosphatidylserine and all-trans retinal*, J. Colloid Interface Sc., 123, 1-7.
1. Auger, M., Jarrell, H.C., Smith, I.C.P., Wong, P.T.T., Siminovitch, D.J., Mantsch, H.H., **1987**. *Pressure-induced exclusion of a local anesthetic from model and nerve membranes*, Biochemistry, 26, 8513-8516.