

Personal:

Full name: Dirk Peter Tieleman (Peter)
Date of Birth: June 10, 1972
Nationality: Dutch, Landed Immigrant Canada
Marital status: Married, two daughters (21/11/2000, 10/01/2003)

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Areas of expertise:

Biophysical chemistry, statistical mechanics, computational biophysics, membrane biophysics, structural biology

Professional experience

2007-2008 **Visiting Professor**, Department of Biochemistry and Molecular Biology, Faculty of Medicine, University of British Columbia
2005 - present **Professor (tenured)**, AHFMR Medical Senior Scholar, CIHR New Investigator, Department of Biological Sciences, University of Calgary
2001 - present **Adjunct Professor**, Department of Physiology and Biophysics, Faculty of Medicine, University of Calgary
2003 - 2005 **Associate Professor**, AHFMR Medical Scholar, Department of Biological Sciences, University of Calgary
2000 - 2003 **Assistant Professor**, AHFMR Medical Scholar, Department of Biological Sciences, University of Calgary
1999 - 2000 **EMBO Fellow**, Laboratory of Molecular Biophysics, University of Oxford
1998 - 1999 **Postdoctoral fellow**, Department of Chemistry, University of Groningen

Education:

12/1998 **PhD Biophysical Chemistry**: University of Groningen (*cum laude*)
Supervisor: Prof. Dr. H.J.C. Berendsen. Thesis: *Theoretical studies of membrane models: molecular dynamics of water, lipids and membrane proteins*
8/1995 **MSc (doctoraal) Chemistry**: University of Groningen (*cum laude*)
4/1995 **MA (doctoraal) Philosophy**: University of Groningen (*cum laude*)
1993-1994 University of Colorado at Boulder
Major subject: History of Science and Philosophy (Prof. J.D. North)
Minor subjects: Systematic Philosophy, Medieval Studies (paleography, Latin)

Honors/Awards:

2008 Rutherford Memorial Medal in Chemistry, Royal Society of Canada
2005 Alberta Heritage Foundation for Medical Research: Senior Scholar Award
2005 Canadian Institutes for Health Research: New Investigator Award (ranked 1/71)
2004 Alfred P. Sloan Foundation Research Fellow
2002 Canadian Hunter Young Innovator Award
2001-2004 Chilean Government program: Visiting Professor, Department of Chemistry, University of Chile, Santiago
2000 Alberta Heritage Foundation for Medical Research: Scholar Award
1999 European Molecular Biology Organization: EMBO long term fellowship
1999 Dutch Biophysical Society Award: Best Doctoral Thesis in Biophysics 1997-1999
1999 Dutch Royal Physics Society: Van Swinderen Award

Key research contributions:

1. Computer simulations of lipids, membrane proteins and lipid-peptide interactions, enabling a large number of subsequent studies. Our methods are widely used and cited. We wrote key

- reviews of the field in 1997 and 2004 – one of 10 most downloaded papers from *Biochim. Biophys. Acta* in 2005 -, and continue to contribute methods, parameters, and simulation files.
2. Computational modeling of ion channels. I contributed to using molecular dynamics simulations to study the properties of water in ion channels, to study the dynamics of ion channels and peptide channels, and to investigate conformational changes in ion channels. I was also first author on a key review on computational studies of ion channels in *Quarterly Reviews of Biophysics*.
 3. We were the first to separate entropy and enthalpy contributions to partitioning of small molecules into lipid membranes, with important implications for drug transport and membrane protein structure (MacCallum and Tieleman, *JACS* 2006). We have also shown how fluorescence spectroscopy, NMR and solid state NMR can be combined with simulations to understand the behavior of small solutes.
 4. I was the first to simulate in molecular details the process of pore formation in a lipid bilayer by electric fields (electroporation). A second, detailed paper on this topic was rated ‘Must Read’ by Faculty of 1000 and has been downloaded over 15,000 times since 2004 from BioMedCentral. In addition, it is also available from PubMed, on average doubling the total number of views according to the publisher. This work has been widely cited and has been followed by dozen of studies from other groups building on it. In 2006 we published two additional papers in *JACS* investigating the probability of spontaneous pore formation in bilayers, the molecular basis of passive transport of hydrophilic and charged molecules through bilayers, and the role of negatively charged lipids in electroporation.
 5. My group has been a pioneer in computational studies of ABC transporters, a large class of complicated membrane proteins that use ATP hydrolysis to power transport of a range of substrates. This work so far has led to a number of key papers, including the first simulation of BtuCD (Oloo and Tieleman, *JBC* 2004), accurate simulations of large-scale domain motions in MalK (Oloo and Tieleman, *JBC* 2006, cover story), simulations of large domain motions in maltose binding protein (Stockner et al., *Biophys. J.* 2005) and BtuF (Kandt et al., *Biochemistry* 2006), a number of ongoing collaborations with renowned experimentalists on P-glycoprotein and TAP, and a number of invitations as plenary speaker at international conferences.
 6. We calculated the distribution of small molecules mimicking amino acids in a membrane and were the first to calculate the pKa profiles of arginine, lysine, glutamic acid, and aspartic acid groups in a lipid bilayer. We were one of the key players in a high-profile discussion about the properties of these side chains in the context of membrane protein insertion and voltage-gating, including a cover story in *J. Gen. Physiol.* highlighting a number of perspectives in this area.
 7. We have been working with Prof. Siewert-Jan Marrink (Groningen) on the refinement and further development of the MARTINI coarse-grained model, most notably on the extension of MARTINI to peptides (Monticelli et al., *JCTC* 2008).
 8. We have predicted quantitatively that nano-fullerene will insert into a membrane and yield freely diffusing fullerene molecules. This work was featured as cover story in *Nature Nanotechnology* (Wong-Ekkabut et al., 2008).
 9. We have carried out the largest scale simulations of monolayers to date, mimicking the properties of lung surfactant. We have made a link between atomistic and coarse grained simulations and continuum mechanical properties of monolayers and bilayers to understand reversibility in monolayer compression and expansion (Baoukina et al., *Biophys. J.* 2007, *PNAS* 2008).

Professional organizations:

KNCV (Royal Dutch Chemical Society) (until 2008)

NVBMB (Dutch Society for Biochemistry and Molecular Biology) (until 2008)

Biophysical Society (USA)

American Chemical Society

Canadian Society of Biochemistry and Molecular & Cellular Biology

Sigma Xi

Service:*Editorial boards*

Member editorial board, Journal of Membrane Biology (Springer) 2008 –
Member editorial board, Protein Engineering, Design and Selection (Oxford University Press) 2008 –
Associate editor, BMC Research Notes (BioMedCentral) 2008 –
Member editorial board, Channels (Landes Press) 2006 –
Member editorial board, Biochimica et Biophysica Acta (Elsevier) 2005 –
Member editorial board, Biophysical Journal (Biophysical Society) 2004 – 2007, 2007 – 2010
Associate editor, BMC Biochemistry (BioMedCentral) 2004 –
Member editorial board, Cell Biochemistry and Biophysics (Humana/Springer) 2002 – 2008

Faculty member, Faculty of 1000 (www.facultyof1000.com) 2004 –

High Performance Computing, National, Regional

Member, National Initiatives Committee (2007 –). This is the main executive committee of Compute Canada at the moment, with 8 voting members, to run the \$160 million Compute Canada project from CFI/NSERC and partners.

Chair, WestGrid Senior Planning Committee (2007 -)

Member Taskforce CyberInfrastructure, Alberta (2005-2006). This taskforce led to the creation by the Province of Alberta of the Alberta Cyberinfrastructure for Innovation organization, which runs the provincial research networks and has other high performance computing mandates.

Member Board of C3.ca (Canadian High Performance Computing Collaboratory, 2006 -)

Member Executive Committee and Co-Principal Investigator, WestGrid II (2006 -)

Member Governing Council, WestGrid (2006 -)

Member Governing Council, WestGrid (15 people, including 5 Co-PI's, the 5 Vice-Presidents Research of the participating universities and 5 elected members (2004-2006)

Member Resource Allocation Committee, WestGrid (2004-)

Conference organization

Member, Scientific Committee and Local Organizing Committee; Co-organizer Biological symposium (with Dr. S. Noskov and Dr. E. Purisima), 6th Congress International Society for Theoretical Chemical Physics, Vancouver, July 19-24th, 2008

Member, Program Committee, HPCS 2008, June 9-11th, 2008, Quebec City

Member, Program Committee, HPCS 2007, May 13-16th, Saskatoon

Co-organizer (with Prof. A. Mark, Prof. R. Lipowsky, Prof. Marrink) CECAM meeting 'Self-Organization in (Bio)Molecular Systems', Lyon, France, October 2003

Grant review

CIHR panel Biochemistry A (BMA) (2008 -)

National Cancer Institute (USA), Site Visit (April 2007) to review a large laboratory with ca. 10 PI's

NSERC Site Visit committee, Industrial Chair Program (2006)

CIHR Doctoral A, Canada Graduate Studentships (2006-)

CIHR Canada Graduate Studentships Masters (2005-)

AHFMR postdoctoral fellowship committee, Alberta Heritage Foundation for Medical Research, 2005-

Summer studentship review committee, Alberta Heritage Foundation for Medical Research, 2003-2005

AHFMR summer studentship program evaluation, Edmonton, May 3rd, 2004

External grant review: *NIH R01*, 2002; *Volkswagenstiftung*, 2002; *Canadian Institutes of Health Research*, 2003; *Wellcome Trust*, 2003; *NSERC Strategic* 2003; *Hospital for Sick Kids*, 2003; *Human Frontier Science Program*, 2003, *United States-Israel Binational Science Foundation*, 2004; *Israel*

Science Foundation, 2004; American Chemical Society PRF, 2004, 2006; NSERC (Discovery, Collaborative Health) 2004, Czech Science Foundation 2005, Research Corporation 2006, NSERC Discovery 2006, NSERC Discovery 2007 (3), Career award - Irish Academy of Science 2007, Tenure and promotion applications 2006 (3); 2007 (3), NWO (Dutch National Science Foundation) 2007, NSERC Discovery Grants 2008 (2), Singapore national grants 2008 (2), Wellcome Trust 2008, BBSRC 2008, Ireland Science Foundation 2008, NWO 2008, European Science Foundation 2008

Journal reviewer (ca. 30 manuscripts in 2003, 40 plus 20 as editor in 2004, 40 plus 30 as editor in 2005, 40 plus 30 as editor in 2006, ca. 30 plus 40 as editor in 2007, ca. 40 plus 50 as editor in 2008): *PNAS, Nature Nanotechnology, Nature Structural Biology, Biophysical Journal, Journal of the American Chemical Society, Journal of Biological Chemistry, Journal of Chemical Physics, Journal of Physical Chemistry B., Cell Biochemistry and Biophysics, Biochemistry and Cell Biology, Biochimica Biophysica Acta, Protein Science, PROTEINS, Biochemistry, Current Medicinal Chemistry, Biopolymers, European Biophysics Journal, Soft Materials, Physical Review E, Chem. Phys. Letters, Journal of Molecular Biology, ChemPhysChem, Journal of Biomolecular Structure and Dynamics, 'Protein Engineering, Design, and Selection', EMBO J., Chem. Phys. Lipids, Int. J. Parasit., Physical Biology, BMC Structural Biology, BMC Biochemistry, TIBS, Phys. Rev. Lett., Nucl. Acid. Res., Royal Soc. Proc. A., Biophys. Chem., PLOS Comp. Biol., Bioinformatics, J. Gen. Physiol.*

External examiner/reviewer

PhD external examiner, Magdalena Siwko, University of Groningen (February 2008)

PhD external examiner, Tyler Luchko, University of Alberta (April 2008)

PhD external examiner, Megan O'Mara, Australian National University, Canberra (August 2004)

PhD committee/external examiner, Dipl. Ing. Barbara Hoff, University of Karlsruhe, Germany (2005)

Ca. 10 nominations for Tenure, promotion to Associate Professor, Full Professor, or various level of senior researcher in major US, Canadian, and European universities/research hospitals (2006-2008)

University/Department committees

Numerous committees, including 3 search committees, supervisory committees or examiner for ca. 25 graduate students, IT committees, advisory panels etc.

Highlights:

- Member Taskforce to review the UCRGC (below) for the VP(R) office (2008 – 2009).
- University of Calgary Research Grant Committee (2005 – 2006, Chair, 2006 - 2007). This committee awards startup funding, seed funding for new projects and new interdisciplinary collaborations, travel funds for graduate students and faculty, and special funds for thesis research. It is one of a handful of standing committees university-wide and an important catalyst for research at the University of Calgary.
- Department of Chemistry Headship Selection Committee (2006)

Training:

Current postdocs

- Dr. Svetlana Baoukina (Alberta Ingenuity fellowship 2005-2008, AHFMR/CIHR fellowships 2008-; 9/2005 -)
- Dr. Megan O'Mara (CIHR fellowship; 11/2005 -)
- Dr. Anirban Mudi (AHFMR fellowship; 3/2006 -)
- Dr. Nicholas Sapay (6/2006 -)
- Dr. Edit Matyus (12/2006 -)

Current graduate students (program, funding: topic)

- Walter Ash (PhD, AHFMR/NSERC Canada Graduate Studentship: ensemble dynamics; 5/2003 -)

- Marian Zlomislic (PhD: protein translocation; 8/2003 -)
- Anastassiia Moussatova (PhD, Alberta Ingenuity: the mechanism of ABC transporters; 1/2007 -)
- Drew Bennet (PhD, AHFMR, NSERC: lipid defects; 5/2007 -)
- Eoin Coll (MSc: ABC transporters; 1/2008 -)
- Cameron Laing (MSc: new biomaterials; 9/2008 -)

Current undergraduate students

Technician (system administrator)

Research assistants

Guests

- Jeff MacArthur, PhD student, Faculty of Medicine (supervisor: Prof. R. French)

Past graduate students

- Justin MacCallum (PhD, AI/NSERC Canada Graduate Studentship: the lipid bilayer as solvent; 5/2002 -12/2007). Current position: AHFMR/NSERC Postdoctoral Fellow, Ken Dill group, UCSF
- Eliud Oloo (PhD, AHFMR/CIHR: simulations of ABC transporters; 1/2002 -12/2006). Current position: scientist, Sanofi-Pasteur (Toronto)
- Jirasak Wong-Eggkabut (PhD, visitor from Mahidol University, Bangkok; 3/2006 – 12/2006). Current position: postdoc, UWO)
- Perttu Niemelä (PhD, visitor from Finland; simulations of ATP-binding domains; 11/2005 – 4/2006). Current position: postdoc Finland
- Jacob Sonne (PhD, visitor from Denmark; simulations of ABC transporters; 2/2005 – 8/2005). Current position: Industry
- Kindal Robertson: MSc, July 2004, University of Calgary. Alberta Ingenuity and NSERC studentships. Thesis title: “Computer simulations of a Kv channel”. Current position: dentist, Calgary
- Parag Mukhopadhyay: MSc, December 2nd, 2003, University of Calgary. Thesis title: “Molecular dynamics simulations of negatively charged lipid bilayers and the distribution of an environmental pollutant in lipid bilayers”. Current position: completed PhD, Duke University, Fall 2008
- Martin Ulmschneider: DPhil 2002, Oxford University, with Dr. M. Sansom. Topic: membrane protein simulations. Current position: Wellcome Fellow, Oxford
- Craig Shepherd: PhD July 2002, University of Calgary, with Dr. Hans Vogel. Topic: simulations of peptides. Current position: industry, San Diego
- Lucy R. Forrest: DPhil 2000, Oxford University, with Dr. M. Sansom. Topic: proton channels. Current position: Max Planck Institute for Biophysics, Frankfurt, as junior group leader

Past postdocs

- Dr. Luca Monticelli (AHFMR fellowship; 7/2004 – 12/2007, now Research Associate, Helsinki; INSERM Senior Researcher, Paris, 2009 -)
- Dr. Christian Kandt (AHFMR fellowship; 5/2004 – 4/2008, now Assistant Professor, Bonn University)
- Dr. Eliud Oloo (5/2007-7/2007, now Research Scientist, Sanofi-Pasteur, Toronto)
- Dr. Zhitao Xu (AHFMR fellowship; 11/2003 – 12/2006)
- Dr. Thomas Stockner (2003-2005, now Group Leader Bioinformatics, Austrian Research Centers)
- Dr. Ning Zhou (2001-2003 – with Dr. Hans Vogel, now retired)
- Dr. Harry Luo (2002-2003, now in industry)
- Dr. Marcela Aliste (2000-2003)
- Dr. Edit Matyus (Hungarian Academy of Science fellowship; 8/2004 – 12/2004;8/2005-12/2005)

Past undergraduate research students

- Eoin Coll (Summer 2006, Fall 2006, research assistant; PhD student my group)
- Drew Bennett (Summer 2006, Fall 2006, research assistant; PhD student my group)
- Megan Redstone (summer 2006)
- Ben Harland (research assistant, 2005 – 2006; now PhD student, Johns Hopkins)
- Erik Fung (2004-2005, 530 project; now Medical School, University of Alberta)
- Sohaib Syed (2004, 507 project)
- Jason Campbell (2003-2004, 528 project)
- Gerlinde Honsek (2003, 507 project; Bioinformatics MSc program, 2004)
- Kindal Robertson (2001-2002, 528 project; now dentist)
- Walter Ash (summer 2002, 528 project 2002; PhD student my group)
- Evan Kelly (summer 2002, 2003; law school)
- Kate Potter (summer 2001)
- Brian Westcot (summer 2001, 507 project 2002; opened a microbrewery)
- Tariq Rajan (summer 2001; ophthalmology)
- Justin MacCallum (summer 2001, 507 project 2001; postdoc at UCSF)

Past technicians

- Ryan Thomson (system administrator, 2003-2007, now at UBC)
- Mark Gerson (web developer, 2006)

Past guests

- Marieke Schor (University of Wageningen, 7/2006 – 12/2006)
- Werner Vos (University of Wagening, 9/2006 – 10/2006)
- Jacob Sonne (PhD student, Technical University of Denmark, February-August 2005)
- Taehoo Kim (University of Toronto, CIHR research visit, August-September 2004)
- Prof. Rudiger Ettrich (University of South Bohemia, Nove Hrad, Czech Republic, June 2004)
- Ladislav Luley (University of South Bohemia, Nove Hrad, Czech Republic, June 2004)
- Dr. J. Sachs (Yale University, Dept. of Biophysics, March 2004)
- Dr. Z. Leonenko (University of Calgary, Dept. of Chemistry, 2001- 2003)
- Dr. Michal Bacher (University of Calgary, Dept. of Chemistry, 2003)
- Dr. Kourosch Malek (Delft University, Material Science, June-August 2003, August 2004)
- Barbara Kiessling (University of Karlsruhe, September 2002)
- Santeri Puranen (ABO, Turku, Finland, November 2002)
- Laila Singh (Simon Fraser University, December 2002)
- Celine Anezo (University of Dusseldorf, January/February 2001)
- Martin Ulmschneider (Oxford University, January 2001)
- Dr. S.J. Marrink (University of Groningen, February 2001)

Teaching:

2007 – 2008	CHEM589	Multiscale Modeling (2 90-minute lectures)
2004 – 2007	BCEM 577	Computational biochemistry (full course plus lab, course coordinator)
2000 – 2006	MDSC 675	Bioinformatics resources for the biologist (2-hour lecture)
2003 – 2004	BCEM 531	Protein chemistry (13 new lectures)
2003 – 2004	BCEM 555	Biomembranes (10 new lectures)
2002 – 2003	BCEM 641	Biocomputing (new course, including lab assignments, for biology and chemistry students; sole instructor; regular course from 2004 onward)
2001 – 2002	BCEM 471	Bioenergetics (11 lectures, 4 hour tutorials)
2000 – 2001	BCEM 551	Spectroscopy (4 new lectures)
2005	Other	Workshop “Ion channel modeling”, Australian National University, Canberra, Australia
2003	Other	Summerschool “Hairy interfaces and stringy molecules”, Odense,

		Denmark
2001	Other	Workshop “Molecular modeling in undergraduate instruction”, Lethbridge

Publications:

Note: Underlined first authors are trainees in Calgary.

Note: A large number of journals are relevant in the general areas of biophysical chemistry/biochemistry/structural biology. Most of our publications are in journals that are published by professional societies, both for philosophical reasons and the generally high quality of these journals. *J. Am. Chem. Soc.* is the top general chemistry journal, published by the American Chemical Society. *Biochemistry*, *J. Phys. Chem A/B*, and *Langmuir* are top specialist journals published by the ACS, *J. Chem. Phys.* is similar to *J. Phys. Chem.* but published by the American Institute of Physics. *J. Biol. Chem.* is a top biochemistry journal (with a very theory/computation unfriendly editorial policy), published by the American Society for Biochemistry and Molecular Biology. *Biophys. J.* is the top general biophysics journal, published by the Biophysical Society. *Eur. Biophys. J.* is its European sibling. *FEBS Letters* is a general biochemistry/molecular biology/biophysics rapid publication journal published by the Federation of European Biochemical Societies. *Quarterly Reviews of Biophysics* is a top biophysics review journal published by the International Union of Pure and Applied Biophysics. Occasionally we publish in commercial journals. Some examples: *Biochimica Biophysica Acta* is a broad journal published by Elsevier, primarily of interest for its Reviews in Biomembranes. *PROTEINS* has a good reputation in the field of structural biology/bioinformatics. *J. Comp. Chem.* is a widely-read specialist journal focused on methods in computational chemistry. BMC journals are open-access journals with full text available through, among others, PubMed, a universally used database of biomedical references maintained by the US National Library of Medicine. In addition to these journals, others are appropriate at times, including additional molecular biology and structural biology journals, bioinformatics journals, the European chemistry journals similar to the ACS ones, or other physics journals.

Submitted

1. Z. Xu, A. Van Duijn, W.F. Goddard, **D.P. Tieleman**. 2008. Reaction mechanism of ATP hydrolysis in aqueous solution - associative or dissociative? A DFT study based on a neutral methyl-triphosphate model, *J. Phys. Chem. B*, submitted [CIHR]
2. W.F.D. Bennett, J.L. MacCallum, **D.P. Tieleman**. 2008. The effect of cholesterol on DPPC flip-flop and desorption, *Biophys. J.*, submitted [NSERC]
3. E. Procko, M.L. O’Mara, W.F.D. Bennett, **D.P. Tieleman**, R. Gaudet. 2008. The mechanism of ABC transporters: general lessons from structural and functional studies of an antigenic peptide transporter, *FASEB J.*, submitted [CIHR]

Refereed research papers

1. D.I. Chan, T. Stockner, **D.P. Tieleman**, H.J. Vogel. 2008. Molecular dynamics simulations of the apo, holo-, and acyl- forms of *Escherichia coli* acyl carrier protein, *J. Biol. Chem.*, in press [CIHR]
2. S. Baoukina, L. Monticelli, J. Risselada, S.J. Marrink, **D.P. Tieleman**. 2008. The molecular mechanism of lipid monolayer collapse, *Proc. Natl. Acad. Sci.* 105, pp. 10803-10808 [NSERC]
3. J. Wong-ekkabut, S. Baoukina, W. Triampo, I-M. Tang, **D.P. Tieleman**, L. Monticelli, Interaction of fullerene aggregates with lipid bilayers: a molecular dynamics study, *Nature Nanotechnology* 3, pp. 363 - 368 (cover story) [NSERC]
4. L. Monticelli, S.K. Kandasamy, X. Periole, R.G. Larson, **D.P. Tieleman**, S.-J. Marrink. 2008. The MARTINI coarse grained force field: extension to proteins, *J. Chem. Theo. Comp.* 4, pp. 819 - 834 (cover story) [NSERC]
5. J. Storm, S. Modok, M.L. O’Mara, **D.P. Tieleman**, I.D. Kerr, R. Callaghan. 2008. The cytosolic region of TM6 in P-glycoprotein: topographical analysis and functional perturbation by site directed labelling, *Biochem.* 47, pp. 3615-3624 [CIHR]
6. L. Monticelli, E.J. Sorin, **D.P. Tieleman**, V.S. Pande, G. Colombo. 2008. Molecular simulation of multistate peptide dynamics: comparison between ensemble dynamics and microsecond timescale sampling, *J. Comp. Chem.* 29, pp. 1740–1752
7. E. Mátyus, K. Blaskó, F. Fidy, **D.P. Tieleman**. 2008. Structure and dynamics of the antifungal molecules syringotoxin-B and syringopeptin-25A from molecular dynamics simulation, *Eur. Biophys. J.*

- 37, pp. 495-502 [NSERC]
8. J.L. MacCallum, W.F.D. Bennett, **D.P. Tieleman**. 2008. Distribution of amino acids in a lipid bilayer from computer simulations, *Biophys. J.* 94, pp. 3393-3404 [NSERC]
 9. S. Baoukina, L. Monticelli, S.J. Marrink, **D.P. Tieleman**. 2007. The pressure-area isotherm of a lipid monolayer from molecular dynamics simulations, *Langmuir* 23, pp. 12617-12623
 10. J. Wong-Ekkabut, Z. Xu, W. Triampo, I.M. Tang, **D.P. Tieleman**, L. Monticelli. 2007. Effect of lipid peroxidation on the properties of lipid bilayers: a molecular dynamics study, *Biophys. J.* 93, pp. 4225-4236
 11. G. Choudhary*, M.P. Aliste*, **D.P. Tieleman**, R.J. French, S.C. Dudley, Jr. 2007. Docking orientation of μ -conotoxin GIIIA in the sodium channel outer vestibule, *Channels* 1, pp. 344-352 (* equal contribution)(cover story)
 12. M.L. O'Mara, **D.P. Tieleman**. 2007. P-glycoprotein models of apo and ATP-bound states based on homology with Sav1866 and MalK, *FEBS Letts.* 581, pp. 4217-4222 [CIHR]
 13. J. Storm, M.L. O'Mara, E. Crowley, J. Peall, **D.P. Tieleman**, I.R. Kerr, R. Callaghan. 2007. Residue G346 in transmembrane segment six is involved in inter-domain communication in P-glycoprotein, *Biochem.* 46, pp. 9899-9910 [CIHR]
 14. S. Baoukina, L. Monticelli, M. Amrein, **D.P. Tieleman**. 2007. Monolayer-bilayer transformations of lung surfactant from molecular dynamics simulations, *Biophys. J.*, 93, pp. 3775-3782 [NSERC] (cover image)
 15. E.P. Coll, C. Kandt, D. Bird, A.L. Samuels, **D.P. Tieleman**. 2007. Distribution and conformation of long-chain plant wax components in a lipid bilayer, *J.Chem. Phys. B.* 111, pp. 8702-8704 [CIHR]
 16. J.L. MacCallum, W.F.D. Bennett, **D.P. Tieleman**. 2007. Partitioning of amino acid side chains into lipid bilayers: results from computer simulation and comparison to experiment, *J. Gen. Physiol.* 129, pp. 371-377 (cover image) [NSERC]
 17. S.J. Marrink, H.J. Risselada, S. Yefimov, **D.P. Tieleman**, A.H. de Vries. 2007. The MARTINI forcefield: coarse grained model for biomolecular simulations, *J. Phys. Chem. B* 111, pp. 7812-7824 [NSERC]
 18. C. Chan, M.R. Zlomislíc, **D.P. Tieleman**, R.J. Turner. 2007. The TatA subunit of *Escherichia coli* twin-arginine translocase has an N-in topology, *Biochem.* 46, pp. 7396-7404 [CIHR]
 19. J.L. MacCallum, M. Sabaya Moghaddam, H.S. Chan, **D.P. Tieleman**. 2007. Hydrophobic association of alpha-helices: steric de-wetting and enthalpic barriers to protein folding, *PNAS* 104, pp. 6206-62010 [CIHR]
 20. E.E. Kooijman, **D.P. Tieleman**, C. Testerink, T. Munnik, D.T.S. Rijkers, K.N.J. Burger, B. De Kruijff. 2007. An electrostatic/hydrogen-bond switch as basis for the specific interaction of phosphatidic acid with proteins, *J. Biol. Chem.* 282, pp. 11356-11364 [NSERC]
 21. C. Kandt, W.L. Ash, **D.P. Tieleman**. 2007. Setting up and running membrane protein simulations, *Methods* 41, pp. 475-488 [NSERC, CIHR]
 22. J. Sonne, C. Kandt, G.H. Peters, F.Y. Hansen, M.Ø. Jensen, **D.P. Tieleman**. 2007. Simulated nucleotide binding and release shows coupling between nucleotide binding domains and transmembrane domains in the ABC transporter BtuCD, *Biophys. J.* 92, pp. 2727-2734 [CIHR]
 23. Z. Xu, H. Luo, **D.P. Tieleman**. 2007. Improving hydration free energies for OPLS-AA amino acid side chains: new atomic charges and an off-plane charge model for aromatic residues, *J. Comp. Chem.* 28, pp. 689-697 [NSERC]
 24. P.T. Vernier, M.J. Ziegler, Y. Sun, M.A. Gundersen, **D.P. Tieleman**. 2006. Nanopore-facilitated, voltage-driven phosphatidylserine translocation in lipid bilayers – in cells and in silico, *Phys. Biol.* 3, pp. 233-247 [NSERC]
 25. E.O. Oloo, E.Y. Fung, **D.P. Tieleman**. 2006. The effect of regulatory domains and MgATP on the conformation of dimeric MalK, the energy-transducing subunit of the maltose ABC transporter, *J. Biol. Chem.* 281, pp. 28397-28407 (cover image) [CIHR]
 26. **D.P. Tieleman**, S.J. Marrink. 2006. Lipids out of equilibrium: energetics of desorption and pore mediated flip-flop, *J. Am. Chem. Soc.* 128, pp. 12462 - 12467 [NSERC]
 27. C. Kandt, Z. Xu, **D.P. Tieleman**. 2006. Opening and closing motions in the periplasmic vitamin B12 binding protein BtuF, *Biochemistry* 45, pp. 13284-13292 [CIHR]
 28. J.L. MacCallum, **D.P. Tieleman**. 2006. Computer simulation of the distribution of hexane in a lipid bilayer: spatially resolved free energy, entropy, and enthalpy profiles, *J. Am. Chem. Soc.* 128, pp. 125-130 [NSERC]
 29. E. Mátyus, L. Monticelli, K. E. Kövér, Z. Xu, K. Blaskó, J. Fidy, **D. P. Tieleman**. 2006. Structural

- investigation of syringomycin-E using molecular dynamics simulation and NMR, *Eur. Biophys. J.* 35, pp. 459 – 467
30. **D. P. Tieleman**, J.L. MacCallum, W.L. Ash, C. Kandt, Z. Xu, L. Monticelli. 2006. Membrane protein simulations with a united atom lipid and all atom protein model: side chain transfer free energies and model proteins, *J. Phys. Cond. Matt.* 18, pp. S1221-S1234 [NSERC, CIHR]
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81. **D.P. Tieleman**, C.T. Choma, H.J.C. Berendsen. 1999. The use of molecular dynamics in De Novo design: application to a transmembrane four-helix coiled coil, *Biophys. J.* 76, p. a426
82. **D.P. Tieleman**. 1998. Theoretical studies of membrane models: molecular dynamics of water, lipids and membrane proteins. PhD thesis, University of Groningen, ISBN: 90 367 0997 0

83. **D.P. Tieleman** and H.J.C. Berendsen. 1998. A molecular dynamics study of the pores formed by *E.coli* OmpF porin in a fully hydrated POPE bilayer, *Biophys. J.* 74, p. a392
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85. **D.P. Tieleman**, J.J. Lopez Cascalez, H.J.C. Berendsen. 1996. Molecular Dynamics Studies of Lipids and Proteins of the *E. coli* Outer Membrane: POPE and OmpF, in Progress in Biophysics and Molecular Biology 65, supplement XIIth International Biophysics Congress, 11-16 August 1996, Amsterdam

Presentations

Key lectures

- Chair and speaker, 'Modeling the membrane', workshop at the joint 2008 Biophysical Society Annual Meeting and IUPAB International Biophysics Congress. This is a combination of the two top biophysics conferences in the world, with a projected attendance of ca. 8000. I also gave invited talks at both the Membrane Structure and Assembly Subgroup and the Permeation Subgroup.
- Plenary speaker, 48th International Conference on the Bioscience of Lipids, Turku, Finland, September 2007. This is the top conference in the large field of lipids.
- Plenary speaker, FEBS-ABC2006, Innsbruck, March 2006. The key conference in the rapidly growing field of ABC-transporter research, with ca. 300 participants including practically all leading groups in the world.
- Invited speaker, 49th Annual Meeting CSBMCB, Niagara, June 2006. A key conference on membrane protein structure and function, with many world leaders in this large field speaking.
- Invited speaker/session chair, Am. Chemical Society National Meeting, Atlanta, March 2006. The most comprehensive symposium on lipid-protein interactions in years, with a 5-day program.
- Plenary speaker, joint annual meeting of the Australian Biophysical and Physiological Society, Canberra, September 26-30th, 2005. I gave the 1-hour plenary lecture for the Biophysical Society, which has subsequently been published. Plenary lecturers for the Physiological Society were Prof. Nigel Unwin and Prof. Francesco Bezanilla.
- Invited speaker, Biophysical Society meeting, Long Beach, February 12-16th, 2005. The Biophysical Society meeting is the premier meeting in the broader field of biophysics with ca. 5000-6000 participants. This talk was one of a few dozen listed on the conference poster.
- Invited speaker Annual meeting of the Biophysical Society (USA), San Francisco, February 2002

Conferences

1. Headline Invited speaker, Faraday Discussion of the Royal Society of Chemistry: Multiscale modelling of polymers, colloids, mesophases and membranes, Groningen, July 20-22nd 2009
2. Invited speaker, Keystone Symposium, June 2009
3. Plenary speaker, Membrane Protein Symposium, Edmonton, June 4-5th, 2009
4. Invited speaker, Nordita, Stockholm, March 2009
5. Plenary speaker, Biomolecular Simulation 2009, January 6-8th, York, United Kingdom
6. Invited speaker, Frontiers in macromolecular simulation, Birmingham (Al.), October 2008
7. Invited speaker, session chair, 6th congress International Society for Theoretical Chemical Physics, Vancouver, July 2008
8. Invited speaker, International Symposium on Computational Science, Tokyo, June 3-7th, 2008
9. Invited speaker, Telluride Workshop, Theory and Computation, Telluride, March 2008
10. Invited speaker, Biomembrane Frontiers, University of California, Davis, March 2008
11. Invited speaker, Gordon Research Conference 'Ligand recognition and molecular gating', Ventura, California, March 2008
12. Invited speaker, Membrane Structure and Assembly Subgroup, joint 2008 Biophysical Society Annual Meeting and IUPAB International Biophysics Congress, Long Beach, February 2008
13. Invited speaker, Permeation Subgroup, joint 2008 Biophysical Society Annual Meeting and IUPAB International Biophysics Congress, Long Beach, February 2008
14. Invited speaker and chair, workshop 'Modeling the membrane', joint 2008 Biophysical Society Annual Meeting and IUPAB International Biophysics Congress, Long Beach, February 2008
15. Invited speaker, Frontiers in Macromolecular simulations, Georgia Tech, Atlanta, November 2007
16. Invited speaker, CECAM workshop 'Modeling of ion channels', September 2007 (declined, time conflict)

17. Invited speaker, Broken Arrow Meeting, Canadian Cystic Fibrosis Foundation, Quebec, September 2007 (declined, time conflict)
18. Plenary speaker, International Conference on the Bioscience of Lipids, Turku, Finland, September 2007
19. Plenary speaker and session chair, Computational Modeling of Carbohydrates and Proteins in Lipid Membranes, Helsinki, Finland, September 2007
20. Invited speaker, Biological Ion Channels symposium, ACS National Meeting, Boston, August 2007
21. Invited speaker, Biological Membranes and Membrane Proteins: Challenges for Theory and Experiment, Park City, Utah, June 2007
22. Invited speaker, 90th Canadian Chemistry Conference, Winnipeg, May 2007
23. Speaker, Session Chair, High Performance Computing Symposium 2007, Saskatoon, May 2007
24. Keynote speaker, Netera Days, Calgary, October 2006
25. Invited speaker, CECAM meeting, Lyon, October 2006
26. Invited speaker/discussion leader, Gordon Conference *Bioelectrochemistry*, Ausois (France), September 2006
27. Plenary speaker, Canadian Computational Chemistry Conference 6, Vancouver, July 2006
28. Invited lecturer, Canadian Bioinformatics Workshop on Proteomics, Calgary, June 2006
29. Invited speaker, 49th Annual Meeting CSBMCB “Membrane proteins in health and disease”, Niagara, June 2006
30. Plenary speaker, FEBS-ABC2006, Innsbruck, March 2006
31. Invited speaker/session chair, American Chemical Society National Meeting, Atlanta, March 2006
32. Invited speaker, Frontiers in Macromolecular simulations, Birmingham, Georgia, April 2006
33. Lecturer, workshop ion channel modeling, Canberra, September 2005
34. Invited speaker, MITACS Workshop on Growth and Control of Tumors, Banff, October 16-19th, 2005
35. Invited speaker, MITACS Biomedical workshop, Montreal, January 18-19th, 2005 (declined)
36. Invited speaker, Biophysical Society meeting, Long Beach, February 12-16th, 2005
37. Invited speaker, NRC Computational Biology, Montreal, March 19-20th, 2005
38. Invited speaker, CECAM meeting *Biomembrane organization and protein function – from computation to experiment*, Lyon, April 3-6th, 2005
39. Invited participant, CIHR Institute of Infection and Immunity New Investigator Forum, King City ON, April 15-17th, 2005 (declined)
40. Invited speaker, Western Grid Summit, Banff, April 18-20th, 2005
41. Invited speaker, *Frontiers in Macromolecular Simulations*, Atlanta, April 28-30th, 2005
42. Invited speaker, NRC workshop structural biology of membrane proteins, May 2005
43. Invited speaker, Canada Chemical Society 88th annual meeting, Saskatoon, May 28-June 1st, 2005
44. Session chair, Theoretical and computational chemistry, Canada Chemical Society 88th annual meeting, Saskatoon, May 28-June 1st 2005
45. Invited speaker, MITACS workshop, Edmonton, June 16th, 2005
46. Invited speaker, 30th FEBS/IUBMB conference, Budapest, July 2-7th, 2005 (cancelled)
47. Invited plenary speaker, CCP5 Summerschool, Wales-UK, July 2005 (declined)
48. Invited speaker, *Lipids, Liposomes and Biomembranes: New Technologies 2005*, Vancouver, July 26-30th, 2005
49. Plenary speaker, joint annual meeting of the Australian Biophysical and Physiological Society, Canberra, September 26-30th, 2005
50. Invited speaker Sanibel Symposium, St. Augustine, Florida, February 28th - March 5th, 2004
51. Invited speaker 2nd International *E.coli* Alliance Conference on Systems Biology, Banff, June 18-20, 2004
52. Invited speaker *Biological Membranes: Emerging Challenges at the Interface between Theory, Computer Simulation, and Experiment*, Sun Valley, Idaho, June 20-25, 2004
53. Invited speaker, Max Planck Institute for Biophysics symposium *Computational approaches for molecular biophysics*, Frankfurt, July 1-2, 2004
54. Invited speaker, Canadian Bioinformatics Workshop, Calgary, July 19-24, 2004
55. Invited speaker Gordon conference *Bioelectrochemistry*, New London, July 25-30, 2004
56. PENCE Bioinformatics meeting, Edmonton, September 26-27, 2003
57. Invited speaker/co-organizer, CECAM meeting *Self-Organization in (Bio)Molecular Systems*, Lyon, France, October 2003
58. Invited speaker *2nd Conference on Structure, Dynamics and Function of Proteins in Biological Membranes*, Switzerland, October 5-10, 2003

59. Invited speaker *From Structure to Function: Frontiers of Biological Ion Channels*, Pittsburgh Supercomputing Center (PSC) and the University of Pittsburgh's Faculty of Arts and Sciences and Medical School, May 21-23rd, 2003
60. Invited speaker 19th International Congress of Biochemistry and Molecular Biology, Toronto, July 2003 (cancelled due to SARS outbreak)
61. Invited speaker Canadian Computational Chemistry Conference 4, Toronto, July 2003
62. Invited speaker/lecturer, Summer School and Workshop *Hairy Interfaces and Stringy Molecules*, Denmark, August 2003
63. Invited speaker International Congress on Stress Response in Biology and Medicine, Quebec City, Quebec, Canada, September 10-14, 2003 (declined)
64. Invited participant, annual general meeting Protein Engineering Network of Centres of Excellence, Edmonton, May 2002
65. Invited speaker CECAM workshop *Ion Channels: from Biology to Physics*, Lyon, July 2002
66. Invited speaker 3rd conference *Unsolved problems of noise and fluctuations*, NIH, Bethesda, September 2-6th, 2002
67. Invited speaker Symposium *Lipids and Biomembranes: New Technologies*, Davos, Switzerland, October 2-5th, 2002
68. Visiting Professor, National University of Chile, Santiago, Chile, January 2002
69. Invited speaker Annual meeting of the Biophysical Society (USA), San Francisco, February 2002
70. Invited speaker Zerner conference ISQPB, New Orleans, August 2000
71. Oral presentation ACS National Meeting, San Diego, April 2001
72. Invited speaker Workshop on Molecular Modeling in Undergraduate Instruction, Lethbridge, April 2001
73. Invited speaker joint Pharmacology meeting *Beyond Proteomics*, Kananaskis, May 14-15 2001
74. Invited participant Novartis Symposium: *Ion channels - from atomic resolution physiology to functional genomics*, London, June 11-16 2001
75. Invited discussant Novartis Discussion on Ionic Channels, London, April 2000
76. GBB Symposium, Haren (the Netherlands), September 22, 1999
77. Invited speaker NIH workshop "Electrostatics in Ion Channels", Bethesda, October 1999
78. Thesis award lecture Dutch Biophysical Society, Amsterdam, October 15, 1999
79. Invited speaker CECAM meeting "Molecular dynamics simulations of lipid membranes and membrane associated proteins", Lyon, July 1999
80. Invited speaker Dutch Royal Chemical Society Fall meeting, October 1998, Nijmegen
81. SON Annual meeting (proteins), December 1998, Lunteren, the Netherlands

Seminars

82. Invited speaker, University of Alberta, April 2008
83. Invited speaker, Biophysics Program, Simon Fraser University, Burnaby, January 2008
84. IBI Lecture, University of Calgary, Calgary, November 2007
85. Invited speaker, Biological Physics, Arizona State University, Tempe, Arizona, November 2007
86. Center for Blood Research, University of British Columbia, Vancouver, September 2007
87. AHFMR Visiting Lecturer, University of Alberta, Edmonton, March 2007
88. George Connel Lecture, University of Toronto, Toronto, February 2007
89. Departmental seminar, University of Calgary, Dept. Biological Sciences, February 2007
90. Invited seminar, Carnegie Mellon University, Dept. of Chemistry, December 2006
91. Invited seminar, University of Groningen, October 2006
92. Invited speaker, Brockhouse Institute for Materials Research, McMaster University, Hamilton, June 2006
93. Departmental speaker, Washington University St. Louis, February 2006
94. Colloquium Brandeis University, Waltham MA, October 4th, 2004, department of Chemistry/Biophysics
95. Seminar, Massachusetts Institute of Technology, Cambridge MA, Harvard-MIT Health Science and Technology, October 5th, 2004
96. Seminar Stanford University, October 18th, 2004, department of Chemistry
97. Biomolecular Structure/PENCE seminar, University of Toronto, November 18th, 2004
98. PENCE seminar, University of Alberta, January 19th, 2004
99. Seminar, Johns Hopkins University, Baltimore, February 18th, 2004

100. Seminar Sembiosys, Calgary, April 2003
101. Colloquium, department of Physics, Simon Fraser University, November 1st 2002
102. Seminar MITACS network of centres of excellence, Dept. of Physics, University of Alberta, 19-4-2002
103. Seminar IPSB/CNRS University of Toulouse, Toulouse, July 2002
104. Seminar University of Groningen, Dept. of Chemistry, June 2001
105. Seminar Cornell Medical School, New York, August 2000
106. Seminar National Institute for Medical Research, London, August 2000
107. Seminar University of Karlsruhe, Engineering, September 2000
108. Seminar University of Birmingham, September 2000
109. Seminar Faculty of Medicine, University of Calgary, Neuroscience series, November 2000
110. Seminar Mt. Sinai Medical School, New York, August 2000
111. Seminar Cambridge University, Dept. of Biochemistry, March 28 2000
112. Seminar University of Toronto, Dept. of Chemistry, July 1999
113. Seminar University of Calgary, Dept. of Biological Sciences, July 1999
114. C4 Seminar ETH Zurich, May 1999
115. Seminar Biozentrum Basel, May 1999
116. Seminar University of Oxford, Laboratory of Molecular Biophysics, January 1999
117. IB Seminar University of Utrecht, Membrane biochemistry, March 1999
118. Seminar Rush Medical College, Chicago, August 1998
119. Seminar University of Pennsylvania, Dept. of Biochemistry, Pennsylvania, August 1998
120. Seminar Lab. de Cuernavaca, IFUNAM, Cuernavaca, Mexico, February 1998

Research support:

Current

NSERC - Operating grant: \$30,000 per year (2001-2003), \$39,300 per year (2003-2005)

Title: Computer simulations of interactions between lipids, small molecules and peptides

NSERC - Operating grant: \$57,000 per year (2005-2010)

Title: Computer simulation studies of lipids

PI: Tieleman (no co-PI)

Canadian Foundation for Innovation

New Opportunities \$250,000 (2002-2004)

Equipment maintenance \$75,000 (2003-2008)

PI: Tieleman (no co-PI)

Innovation program: *CyberCell* ca. \$11 million (one of 10 principal applicants, one of two applicants from Calgary; \$4.2 million for Biochemistry in Calgary, including ca. \$650,000 for high performance computing)

PI's: Ellison, Weiner (U. Alberta). PI's Calgary: Vogel, Tieleman

CIHR

Operating grant \$69,540 (2002-2003)

Operating grant \$61,420 per year (2003-2006)

Operating grant \$100,819 per year (2006-2011), ranked 2/47

Title: Computer modeling of helix-helix interactions in membrane proteins

PI: Tieleman (no co-PI)

Operating grant \$95,325 per year (2005-2010), ranked 5/51

Title: Computer simulations of ABC transporters

PI: Tieleman (no co-PI)

CIHR New Investigator \$50,000 per year (2005-2010, salary support), ranked 1/71

WestGRID

Competitive application for computer time (2004-2005 145 processors on glacier.westgrid.ca; 2005-2006 64 processors on matrix.westgrid.ca, 2006-2007 60 processors on matrix.westgrid.ca, 30 TB storage)

Alfred P. Sloan Foundation Fellowship: US \$40,000 total, 2004-2008

Alberta Heritage Foundation for Medical Research

Computational studies of biological membranes (salary, benefits 2005-2010)
 Research allowance, incentive award CIHR: \$21,000 (2005-2010)
 PI: Tieleman (no co-PI)

Past*Alberta Heritage Foundation for Medical Research*

Title: Computational studies of biological membranes

PI: Tieleman (no co-PIs)
 Establishment grant: \$150,000 (2000-2002)
 Major equipment grant: \$300,000
 Renovation (with Science): \$80,000

University of Calgary - UCRG: \$10,000 (2001-2002)

Protein Engineering Network of Centers of Excellence

Network grant \$37,000 per year (2002-2005)
 Title: Protein folding: new solutions to an old problem
 PIs: Wishart, Chan, Tieleman (network grant)

CIHR - Innovation grant \$38,750 per year (2003-2005)

Title: Computer modeling of ABC transporter domains
 PI: Tieleman (no co-PIs)

Canadian Hunter/University of Calgary

Young Innovator Award \$20,000 (2002-2003)
 Title: Computer modeling of ABC transporters
 PI: Tieleman (no co-PIs)

C3.Ca Association

Canadian Internetworked Scientific Supercomputer, projects 2, 3. Competitive award of a major amount of CPU time on all Canadian high performance computing facilities in C3 at once, for 2 weeks. Approximate value: \$40,000

Alberta Synchrotron Institute \$305,000 (2003-2005)

Shared with Dr. F. Jalilehvand (Chemistry) and Dr. H. Vogel (PI, Biological Sciences)
 Title: BioSAXS and BioEXAFS

Pending**Training grants (incomplete)**

NSERC summer studentships: Walter Ash, Evan Kelly 2002; Eric Fung, 2005; Drew Bennet, 2006
AHFMR summer studentships: Walter Ash, 2002
AHFMR postdoctoral recruitment fellowships: Dr. Thomas Stockner, 2002; Assaf Zemel, Christian Kandt, 2004; Ting Wang, 2005; Nicholas Sapay, 2006

AHFMR graduate studentship: Eliud Oloo, 2002-2007; Walter Ash, 2004-2008; Drew Bennett, 2008-
AHFMR postdoctoral fellowship: Dr. Luca Monticelli, Dr. Zhitao Xu, 2004; Dr. Christian Kandt, 2006;
Dr. Anirban Mudi, 2007; Dr. Svetlana Baoukina, 2008
NSERC graduate studentship: Justin MacCallum, 2003; Kindal Robertson, 2004; Drew Bennet, 2008-
Canada Graduate Studentship: Justin MacCallum, Walter Ash, 2005
Alberta Ingenuity studentship: Justin MacCallum, 2003; Kindal Robertson, 2004; Anastassia
Moussatova, 2007
CIHR studentship: Eliud Oloo, 2004
CIHR postdoctoral fellowship: Dr. Megan O'Mara, 2005-2008; Dr. Svetlana Baoukina, 2008-2010

News items

Press release Royal Society of Canada announcing their awards, including the Rutherford Memorial Medal in Chemistry in September 2008, featured on the University of Calgary www home page.
Large number of online news items based on interviews and the University of Calgary press release related to our Nature Nanotechnology paper in July 2008, featured on the UofC home page
University of Calgary OnCampus, March 12th 2004. "*Building blocks*" study leads to award
Newsletter Biophysical Society, July/August 2004, Sloan Foundation fellowships.
Editor's choice, BioMedCentral newsletter, August 10th 2004: Basis of electroporation
Faculty of 1000 Hidden Jewel, week of August 9th: The molecular basis of electroporation
University of Calgary OnCampus/Infoserve, September 18th 2004. Peter Tieleman, "BioMedCentral and faculty of 1000: new approaches to scientific literature"
Edmonton Journal, Sept. 17th 2004, *Supercomputer seeks BSE answers*
National Post, Sept. 17th 2004, *Supercomputer puzzles over BSE*
The Globe and Mail, Sept. 17th 2004, *Computers link to examine mad-cow disease*
PhysOrg.com, Sept. 20th 2004, *Canada's biggest calculator*
Science Daily (online), Sept. 23th, 2004, *Canada's biggest calculator*
WestGrid: The unfolding of a great resource, annual report 2003-2004 featuring a story about our research.
University of Calgary Gazette, January, 2002 Canadian Hunter Young Innovator Award
Calgary Herald, January 12, 2002. *Young U of C profs get \$20,000 boost.*
AHFMR Research News, Fall 2002. *Biocomputing: pictures worth many thousands of words*