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Professional Experience:

University of Melbourne, Faculty of Science, Chemistry, Bio21 Institute, Professor Appointed: 2005
2014, Jawaharlal Nehru University, School of Life Sciences, Visiting Professor
2010- Board, Centre for Chemistry and Biotechnology, Deakin University
2010-2015 University of Melbourne, Faculty of Science, School of Chemistry, Head
2001-2011, San Diego State University, College of Sciences, Chemistry & Biochemistry, Adjunct Professor
2009-2010, University of Melbourne, Faculty of Science, Associate Dean (International)
2008-2009, Birkbeck College, School of Crystallography, Visiting Professor
2006-2008, Deputy Head, University of Melbourne
2000-2007, Associate Senior Member, University of Oxford, St Hugh's College
2000-2002, Assistant Dean (EO), University of Melbourne, Faculty of Science
1996-2005, Associate Professor and Reader, University of Melbourne, Faculty of Science, Chemistry
1994-1995, Fogarty Fellow, National Institute of Health (NIH), National Institute on Alcohol Abuse and Alcoholism (NIAAA), Laboratory of Membrane Biochemistry and Biophysics
1993-1995, Senior Research Scientist, Commonwealth Scientific and Industrial Research Organization (CSIRO), Food Science and Technology, Synthetic Membrane Materials
1984-1993, Experimental Scientist, Commonwealth Scientific and Industrial Research Organization (CSIRO), Food Processing, Membrane Technology
1979-1983, Technical Officer, Commonwealth Scientific and Industrial Research Organization (CSIRO), Food Research, Food Structure
1972-1978, Technical Assistant, Commonwealth Scientific and Industrial Research Organization (CSIRO), Food Research, Microbiology

Education:

Biol. Tech. Cert., Sydney Technical College, Sydney Technical College, Biology, 1978
B.A., Macquarie University, Macquarie University, Mathematics and Physics, 1984
B.A. (Hons), Macquarie University, Physics, 1986
Ph.D., University of New South Wales, Physics, 1992

Honors and Awards Information:

- 2012, ISMAR Fellow, International Society for Magnetic Resonance
- 2012, Fellow of the Australian Academy of Science
- 2012, Fellow of the Biophysical Society, Biophysical Society (USA)
- 2012, European Biophysics Journal, editor
- 2011-2013, President, Australian New Zealand Society for Magnetic Resonance
- 2011, ANZMAG Medal, Australian & New Zealand Society for Magnetic Resonance
- 2009, Robertson Award, Australian Society for Biophysics

- 2009-2014, Accounts of Chemical Research Editorial Board, ACS
- 2009-2014, ISMAR Nominations Committee, International Society for Magnetic Resonance
- 2008-2010, Honorary General Treasurer, Royal Australian Chemical Institute
- 2007-2009, Council, Biophysical Society (USA), 2009-11 Program Committee
- 2006-2014, Biochimica et Biophysica Acta – Biomembranes, editor
- 2006-2007, Chair, Membrane Structure & Assembly Subgroup, Biophysical Society (USA)
- 2006-2008, Steering Committee, Asian Biophysics Association
- 2002-2005, Council, IUPAB, International Union Pure and Applied Biophysics
- 1999-2000, President, Australian Society for Biophysics
- 1999-2002, Biophysics Committee, Australian Academy of Science
- 1998-2001, International Committee, Biophysical Society (USA)
- 1996-2009, Concepts in Magnetic Resonance Editorial Board, Wiley
- 1995-2000, Director, Australian New Zealand Society for Magnetic Resonance
- 1994-1995, Fogarty Fellowship, National Institutes of Health (USA)
- 1988, Japanese Government Research Award for Foreign Specialists, Natl Chem Lab. for Industry

Membership Information:

- American Chemical Society
- Australian Society for Biophysics
- Australian and New Zealand Society for Magnetic Resonance
- Biophysical Society (USA)
- International Society for Magnetic Resonance
- Royal Australian Chemical Institute

Language Skills:

English: Reading fluent, Writing fluent, Speaking fluent

Serbo-Croatian: Reading functional, Writing functional, Speaking functional

Expertise and Research Interests:

Currently, I am a Professor of Chemistry at University of Melbourne where I was appointed as an Associate Professor and Reader in 1996. Previously, I was a Senior Research Scientist at the Food Research Laboratory, CSIRO Division of Food Science and Technology, and a member of the Cooperative Research Centre for Molecular Engineering and Technology, where I was responsible for the Intellectual Property portfolio. My primary research interest is the determination of the structure of membrane proteins and peptides *in situ*, using solid-state NMR spectroscopy. I have made a major contribution to the elucidation of the molecular structure of antibiotic peptides, ionophores and toxins within phospholipid membranes. I have a strong background in biophysics, the mathematical theory of NMR and the development of novel techniques for the study of biological membranes and membrane proteins. I play a senior role in several scientific societies, and actively promote science with a strong commitment to research and teaching.

Other Expertise:

As a biophysical chemist, my major research technique is solid-state NMR spectroscopy and its application to biological systems. Primarily, I have been studying the structure of lipid membranes, membrane peptides and ion channels, and polymers and macromolecular systems. I have additional expertise in light scattering, X-ray and neutron diffraction, differential scanning calorimetry and solution-state NMR spectroscopy, and in areas such as colloid science and biosensor development.

Industrial Relevance:

Development of antimicrobial agents

Role of amyloid peptides in Alzheimer's disease
Drug-membrane interactions
Storage of proteins relevant to the food and pharmaceutical industry
Development of more durable surface coatings and applications for ionic liquids

Patent Information:

Research Group Leader and IP Manager: Development of Ion Channel Switch Biosensor, Australia, 1995, AMBRI

Funding Received:

Australian Research Council: Atomic details of antimicrobial peptides at work in live cells, \$377,600 from 2016 to 2018
Australian Research Council: Dynamic Nuclear Polarisation system for molecular structure determination, \$800,000 (\$1.6M) for 2016
Melbourne Research Dyason Fellowship: Structural and functional investigations of the antimicrobial peptide maculatin 1.1 via ¹⁹F NMR spectroscopy, \$5,000 for 2015
Australian Research Council: Structure and activity determination of membrane-active peptides, \$330,000, from 2014 to 2016
Australian Research Council: Biomembrane Interactions Facility, \$280,000 (\$560k), for 2014
Melbourne Research Interdisciplinary Seed Funding: Correlating membrane binding and toxicity of amyloid beta peptide from Alzheimer's disease, \$30,000 for 2014
NHMRC Project grant: Selective targeting of microbes by peptides of the innate immune system, \$606,000, 2013 to 2015
CSIRO PhD studentships: \$179,262, from 2012 to 2016
Melbourne-Vanderbilt Grant: Membrane structure and lipid interactions of the pore-forming toxin equinatoxin II, \$49,950, 2012
Australian Research Council: Advanced characterisation of materials by nuclear magnetic resonance, \$600,000 (\$1.285M), 2011 to 2012.
Australian Research Council: The mechanism of membrane disruption by antimicrobial peptides, \$310,000, 2011 to 2013.
Melbourne Research Interdisciplinary Seed Funding: \$40,000 Membrane recognition of antimicrobial Peptides, \$40,000 for 2010
Melbourne Research Grant Scheme: Amphibian peptides as new antibiotics - structural determinants of antimicrobial activity, \$35,155 for 2009
Australian Research Council: Membrane-associated Aβ peptide structure and the effect of metals, \$360,000, from 2009 to 2011
Australian Academy of Science (AAS): Scientific Visits to Europe 2009-2010, \$10,500, from 2009 to 2010
ANSTO - UM CRSS: The location of antimicrobial peptides in phospholipid membranes determined by neutron techniques, \$29,502, from 2009 to 2009
Australia Research Council: Enhanced nuclear magnetic resonance research, characterisation and analysis facility, \$600,000 (\$1.48M), from 2008 to 2009
University of Melbourne: Structural determinants of activity of antimicrobial peptides, \$10,000, from 2008 to 2009
Australian Research Council: Membrane Protein Structure and Interaction Facility, \$1,047,000 (\$2.2M), from 2006 to 2007
Australian Research Council: Structure and activity of host-defence peptides from Australian anurans: anticancer agents, neuropeptides and nNOS inhibitors, \$362,000, from 2006 to 2008
Australian Research Council: Development of reactive ionic liquids for future industrial applications in Australia, \$712,610, from 2006 to 2008

Australian Research Council: Membrane interactions and neurotoxicity of amyloid Abeta peptides from Alzheimer's disease, \$330,000, from 2006 to 2008

Australian Research Council: Small Molecule NMR Facility for Accelerated Drug Discovery, \$907,511 total \$2.4M, from 2004 to 2005

Australian Research Council: Membrane structure and lipid interactions of the pore-forming toxin Equinatoxin II by NMR, \$285,000, from 2003 to 2005

Australian Research Council: Biologically active peptides and proteins from anurans: The relationship between structure and activity, \$345,000, from 2003 to 2005

Melbourne International Collaborative Research Grants Scheme: Fluorescence and NMR studies of membrane peptides and proteins, \$7,400, from 2003 to 2003

Melbourne Research Grant Scheme: Structure and membrane interactions of lytic peptides and pore-forming toxins, \$27,000, from 2002 to 2003

Melbourne Research Development Grant Scheme: A solid-state NMR study of protein hydration and stability, \$22,200, from 2001 to 2002

Australian Research Council RIEFG: Integrated Victorian NMR Spectroscopy Network, \$675,000, from 2001 to 2002

Melbourne Research Development Grant Scheme: Inhibitor effect on transmembrane structure of nicotinic acetylcholine receptor, \$23,000, from 2001 to 2002

Australian Research Council: Biologically active peptides from Anurans: The relationship between structure and activity, \$87,000, from 2001 to 2002

UniChe Scheme: Characterisation of wood resins by NMR spectroscopy, \$20,000, from 2001 to 2002

Australian Research Council: Structural organization of spider silk: A comparative approach, \$15,000, from 2000 to 2001

University of Melbourne Collaborative Research Program: Study of the interaction of membrane active peptides by NMR and ATR spectroscopies, \$6,000, from 2000 to 2001

University of Melbourne Research Support Fund: ¹³C and ¹H NMR spectral database, \$15,240, from 2000 to 2001

Australian Research Council: A solid-state NMR study of protein hydration and stability, \$12,000, from 1999 to 2000

Australian Research Council: Solid-state NMR Facility, \$956,900, from 1999 to 2000

Australian Research Council: NMR solution structure of a nicotinic acetylcholine receptor segment complexed with a synthetic inhibitor, \$19,085, from 1998 to 1999

Australian Research Council: 600 MHz NMR spectrometer for biochemical research, \$1,200,000, from 1997 to 1998

Australian Research Council: Structure of membrane peptides by solid-state NMR methods, \$29,900, from 1997 to 1998

Australian Research Council: The structure, dynamics and mechanisms of action of ionophoric peptides in lipid bilayers, \$144,000, from 1996 to 1998

CSIRO: NMR Spectrometer, \$228,000, from 1992 to 1993

Publications:

- Li, W., Sani, M.-A., Jamasbi, E., Otvos Jr, L., Hossain, M.A., Wade, J.D. and Separovic, F. (2016) Membrane interactions of proline-rich antimicrobial peptide, Chex1-Arg20, multimers. *Biochim. Biophys. Acta* (in press).
- Patil, N.A., Hughes, R.A., Rosengren, K.J., Kocan, M., Ang, S.Y., Tailhades, J., Separovic, F., Summers, R., Grosse, J., Wade, J.D., Bathgate, R.A.D. and Hossain, M.A. (2016) Engineering of a novel simplified human insulin-like peptide 5 agonist. *J. Med. Chem.* (in press).
- Lau, C.H., Mulet, X., Konstas, K., Doherty, C.M., Sani, M.-A., Separovic, F., Hill, M.R. and Wood, C.D. (2016) Hypercrosslinked additives for ageless gas separation membranes. *Angew. Chem. Int. Ed.* 55, 1998-2001.

- Patil, N.A., Bathgate, R.A.D., Kocan, M., Ang, S.Y., Tailhades, J., Separovic, F., Summers, R., Grosse, J., Hughes, R.A., Wade, J.D. and Hossain, M.A. (2015) The C-terminus of the B-chain of human insulin-like peptide 5 is critical for cognate RXFP4 receptor activity. *Amino Acids*, (in press).
- Jamasbi, E., Mularski, A. and Separovic, F. (2016) Model membrane and cell studies of antimicrobial activity of melittin analogues. *Curr. Top. Med. Chem.* 16, 40-45.
- Garcia, A., Eljack, N.D., Sani, M.-A., Separovic, F., Rasmussen, H.H., Khandelia, H., Cornelius, F. and Clarke, R.J. (2015) Membrane accessibility of glutathione. *Biochim. Biophys. Acta* 1848, 2430-2436.
- Li, W., O'Brien-Simpson, N.M., Tailhades, J., Pantarat, N., Dawson, R.M., Otvos, L., Reynolds, E.C., Separovic, F., Hossain, M.A., and Wade, J.D. (2015) Multimerization of a designed proline-rich antimicrobial peptide, Chex-Arg20, alters the mechanism of its interaction with the *Escherichia coli* cell membrane. *Chem. Biol.* 22, 1520-1528.
- Henriques, S.T., Huang, Y.-H., Chaousis, S., Sani, M.-A., Poth, A.G., Separovic, F. and Craik, D.J. (2015) The prototypic cyclotide kalata B1 has a unique mechanism of entering cells. *Chem. Biol.* 22, 1087-1097.
- Sani, M.-A., Henriques, S.T., Weber D. and Separovic, F. (2015) Bacteria may cope differently from similar membrane damage caused by the Australian tree frog antimicrobial peptide maculatin 1.1. *J. Biol. Chem.* 290, 19853-19862.
- Sani, M.-A., Lee, T.-H., Aguilar, M.-I. and Separovic, F. (2015) Proline-15 creates an amphipathic wedge in maculatin 1.1 peptides that drives lipid membrane disruption. *Biochim. Biophys. Acta* 1848, 2277-2289.
- Jamasbi, E., Ciccotosto, G.D., Tailhades, J., Robins-Browne, R.M., Ugalde, C.L., Sharples, R.A., Patil, N., Wade, J.D., Hossain, M.A. and Separovic, F. (2015) Site of fluorescent label modifies interaction of melittin with live cells and model membranes. *Biochim. Biophys. Acta* 1848, 2031-2039.
- Li, W., Tailhades, J., Hossain, M.A., O'Brien-Simpson, N.M., Reynolds, E.C., Otvos Jr, L., Separovic, F. and Wade, J.D. (2015) C-terminal modifications broaden activity of the proline-rich antimicrobial peptide, Chex1-Arg20. *Aust. J. Chem.* 68, 1373-1378.
- Mularski, A., Wilksch, J.J., Wang, H., Hossain, M.A., Wade, J.D., Separovic, F., Strugnelli, R.A. and Gee, M.L. (2015) Atomic force microscopy reveals the mechanobiology of lytic peptide action on bacteria. *Langmuir* 31, 6164-6171.
- Weber, D.K., Yao, S., Rojko, N., Anderluh, G., Lybrand, T.P., Downton, M.T., Wagner, J. and Separovic, F. (2015) Characterization of lipid-binding site of equinatoxin II by NMR and molecular dynamics simulation. *Biophys. J.* 108, 1987-1996.
- Sani, M.-A. and Separovic, F. (2015) Progression of NMR studies of membrane-active peptides from lipid bilayers to live cells. *J. Magn. Reson.* 253, 138-142.
- Praporski, S., Mechler, A., Separovic, F. and Martin, L.L. (2015) Subtle differences in initial membrane interactions underpin selectivity of small antimicrobial peptides. *ChemPlusChem* 80, 91-96.
- Nair, V.B., Bathgate, R.A.D., Separovic, F., Samuel, C.S., Hossain, M.A. and Wade, J.D. (2015) Synthetic covalently linked dimeric form of H2 relaxin retains native RXFP1 activity and has improved in vitro serum stability. *BioMed Res. Int.* 2015, article ID 731852, 9 pages.
- Patil, N., Tailhades, J., Separovic, F., Hughes, R.A., Wade, J.D. and Hossain, M.A. (2015) Cellular disulfide bond formation in bioactive peptides and proteins. *Int. J. Mol. Sci.* 16, 1791-1805.
- Jamasbi, E., Batinovic, S., Sharples, R.A., Sani, M.-A., Robins-Browne, R.M., Wade, J.D., Separovic, F. and Hossain, M.A. (2014) Melittin peptides exhibit different activity on different cells and model membranes. *Amino Acids* 46, 2759-2766.
- Li, W., Tailhades, J., O'Brien-Simpson, N.M., Hossain, M.A., Separovic, F. and Wade, J.D. (2014)

Proline-rich antimicrobial peptides: multiple potential therapeutics against antibiotic resistant bacteria. *Amino Acids* 46, 2287-2294.

- Sani, M.-A., Gagne, E., Gehman, J.D., Whitwell, T.C. and Separovic, F. (2014) Dye-release assay for investigation of antimicrobial peptide activity in a competitive lipid environment. *Eur. Biophys. J.* 43, 445-450.
- Karas, J.A., Scanlon, D.B., Forbes, B.E., Vetter, I., Lewis, R.J., Gardiner, J., Separovic, F., Wade, J.D. and Hossain, M.A. (2014) 2-Nitroveratryl as a photocleavable thiol protecting group for directed disulfide bond formation in the chemical synthesis of insulin. *Chem. Eur. J.* 20, 9949-9952.
- Yao, S., Weber, D.K., Separovic, F. and Keizer, D.W. (2014) Measuring translational diffusion coefficients of peptides and proteins by PFG-NMR using band-selective RF pulses. *Eur. Biophys. J.* 43, 331-339.
- Lee, T.-H., Heng, C., Separovic, F. and Aguilar, M.-I. (2014) Comparison of reversible membrane destabilisation induced by antimicrobial peptides derived from Australian frogs. *Biochim. Biophys. Acta* 1838, 2205-2215.
- Luna-Ramírez, K., Sani, M.-A., Silva-Sanchez, J., Jiménez-Vargas, J.M., Reyna-Flores, F., Winkel, K.D., Wright, C.E., Possani, L.D. and Separovic, F. (2014) Membrane interactions and biological activity of antimicrobial peptides from Australian scorpion. *Biochim. Biophys. Acta* 1838, 2140-2148.
- Sherman, P.J., Separovic, F. and Bowie, J.H. (2014) The investigation of membrane binding by amphibian peptide agonists of CCK2R using ^{31}P and ^2H solid-state NMR. *Peptides* 55, 98-102.
- Sani, M.-A. and Separovic, F. (2014) Solid-state NMR studies of antimicrobial peptide interactions with specific lipid environments. in *Advances in Biological Solid-State NMR: Proteins and Membrane-Active Peptides*, eds. F. Separovic and A. Naito, RSC Books, London, U.K., Chapter 15, pp287-303.
- Separovic, F. and Naito, A (2014) Preface, in *Advances in Biological Solid-State NMR: Proteins and Membrane-Active Peptides*, eds. F. Separovic and A. Naito, RSC Books, London, U.K., P005-P006.
- Separovic, F. and Naito, A. eds. (2014) *Advances in Biological Solid-State NMR: Proteins and Membrane-Active Peptides*, RSC Books, London, U.K. pp 608.
- Ali, M., Amon, M., Bender, V., Bolte, A., Separovic, F., Benson, H. and Manolios, N. (2014) Cyclization enhances function of linear anti-arthritis peptides. *Clin. Immunol.* 150, 121-133.
- Chan, L.J., Smith, C.M., Chua, B.E., Lin, F., Bathgate, R.A.D., Separovic, F., Gundlach, A.L., Hossain, M.A. and Wade, J.D. (2013) Synthesis of fluorescent analogues of relaxin family peptides and their preliminary *in vitro* and *in vivo* characterization. *Frontiers Chem.* 1, article 30, 9 pages.
- Karas, J., Shabanpoor, F. Hossain, M.A., Gardiner, J., Separovic, F., Wade, J.D. and Scanlon, D.B. (2013) Total chemical synthesis of a heterodimeric interchain bis-lactam-linked peptide: application to an analogue of human insulin-like peptide 3. *Int. J. Peptides* 2013, article ID 504260, 8 pages.
- Chan, L.J., Samuel, C.S., Separovic, F., Hossain, M.A. and Wade, J.D. (2013) Relaxin and its role in fibrotic diseases. *Amino Acids, Pept. Proteins*, 38, 60-78.
- Fraser, S.J., Mulet, X., Hawley, A., Separovic, F. and Polyzos, A. (2013) Controlling nanostructure and lattice parameter of the inverse bicontinuous cubic phases in functionalised phytantriol dispersions. *J. Colloid Interface Sci.* 408, 117-124.
- Sani, M.-A., Whitwell, T.C., Gehman, J.D., Robins-Browne, R.M., Pantarat, N., Attard, T.J., Reynolds E.C., O'Brien-Simpson, N.M. and Separovic, F. (2013) Maculatin 1.1 disrupts *S. aureus* lipid membranes via a pore mechanism. *Antimicrob. Agents Chemother.* 57, 3593-3600.
- Fernandez, D.I., Sani, M.-A., Miles, A.J., Wallace, B.A. and Separovic, F. (2013) Membrane defects enhance the interaction of antimicrobial peptides, aurein 1.2 versus caerin 1.1. *Biochim.*

Biophys. Acta 1828, 1863-1872.

- Sani, M.-A., Weber, D.K., Delaglio, F., Separovic, F. and Gehman, J.D. (2013) A practical implementation of de-Pake-ing via weighted Fourier transformation. PeerJ 1:e30 <http://dx.doi.org/10.7717/peerj.30>
- Fernandez, D.I., Lee, T.-H., Sani, M.-A., Aguilar, M.-I. and Separovic, F. (2013) Proline facilitates the membrane insertion of the antimicrobial peptide maculatin 1.1 via surface indentation and subsequent lipid disordering. Biophys. J. 104, 1495-1507.
- Chan, L.J., Wade, J.D., Separovic, F., Bathgate, R.A.D. and Hossain, M.A. (2013) The importance of tryptophan B28 in H2 relaxin for RXPF2 binding and activation. Int. J. Pept. Res. Ther. 19, 55-60.
- Fernandez, D.I., Le Brun, A.P., Lee, T.-Z., Bansal, P., Aguilar, M.-I., James, M. and Separovic, F. (2013) Structural effects of the antimicrobial peptide maculatin 1.1 on supported lipid bilayers. Eur. Biophys. J. 42, 47-59.
- Fernandez, D.I., Le Brun, A.P., Whitwell, T.C., Sani, M.-A., James, M. and Separovic, F. (2012) The antimicrobial peptide aurein 1.2 disrupts model membranes via the carpet mechanism. Phys. Chem. Chem. Phys. 14, 15739-15751.
- Chan, L.J., Rosengren, K.J., Layfield, S.L., Bathgate, R.A.D., Separovic, F., Samuel, C.S., Hossain, M.A. and Wade, J.D. (2012) Identification of key residues essential for the structural fold and receptor selectivity within the A-chain of H2 relaxin. J. Biol. Chem. 287, 41152-41164.
- Nair, V.B., Samuel, C.S., Separovic, F., Hossain, M.A. and Wade, J.D. (2012) Human relaxin-2: historical perspectives and role in cancer biology. Amino Acids 43, 1131-1140.
- Lu, X., Burrell, G., Separovic, F. and Zhao, C. (2012) Electrochemistry of room temperature protic ionic liquids: a critical assessment for use as electrolytes in electrochemical applications. J. Phys. Chem. B 116, 9160-9170.
- Bowie, J.H., Separovic, F. and Tyler, M.J. (2012) Host-defense peptides of Australian anurans. Part 2. Structure, mechanism of action, and evolutionary significance. Peptides 37, 174-188.
- Sani, M.-A., Separovic, F. and Gehman, J.D. (2012) The lipid network. Biophysical Rev. 4, 283-290.
- Weber, D.K., Gehman, J.D., Separovic, F. and Sani, M.-A. (2012) Copper modulation of amyloid beta 42 interactions with model membranes. Aust. J. Chem. 65, 472-479.
- Shabanpoor, F., Hossain, M.A., Ryan, P.J., Belgi, A., Layfield, S., Kocan, M., Zhang, S., Samuel, C.S., Gundlach, A.L., Bathgate, R.A.D., Separovic, F. and Wade, J.D. (2012). Minimization of relaxin-3 leading to high affinity analogues with increased selectivity for relaxin-family peptide 3 receptor RXFP3 over RXFP1. J. Med. Chem. 55, 1671-1681.
- Fraser, S.J., Mulet, X., Martin, L., Praporski, S., Mechler, A., Hartley, P.G., Polyzos, A. and Separovic, F. (2012) Surface immobilization of bio-functionalized cubosomes: sensing of proteins by quartz crystal microbalance. Langmuir 28, 620-627.
- Sani, M.-A., Whitwell, T.C. and Separovic, F. (2012) Lipid composition regulates the conformation and insertion of the antimicrobial peptide maculatin 1.1. Biochim. Biophys. Acta 1818, 205-211.
- Allen, T.W. and Separovic, F. (2012) Membrane protein structure and function. (preface) Biochim. Biophys. Acta 1818, 125.
- Gehman, J.D. and Separovic, F. (2011) Solid-state NMR of amyloid membrane interactions. in Protein Folding, Misfolding, and Disease, eds. A.F Hill, R. Cappai, K. Barnham and S.P. Bottomley, Humana Press, New York, USA, Chapter 11, pp 165-177; Methods Mol. Biol. 752, 165-77.
- Fraser, S.J., Rose, R., Hattarki, M.K., Hartley, P.G., Dolezal, O., Dawson, R.M., Separovic, F. and Polyzos, A. (2011) Preparation and biological evaluation of self-assembled cubic phases for the polyvalent inhibition of cholera toxin. Soft Matter 7, 6125-6134.

- Fernandez, D.I., Sani, M.-A. and Separovic, F. (2011) Interactions of the antimicrobial peptide maculatin 1.1 and analogues with phospholipid bilayers. *Aust. J. Chem.* 64, 798-805.
- Separovic, F., Killian, J.A., Cotton, M., Busath, D.D. and Cross, T.A. (2011) Modeling the membrane environment for membrane proteins. *Biophys. J.* 100, 2073-2074.
- Sani, M.-A., Separovic, F. and Gehman, J.D. (2011) Disentanglement of heterogeneous dynamics in mixed lipid systems. *Biophys. J.* 100, L40-L42.
- Fernandez, D.I., Sani, M.-A., Gehman, J.D, Hahm, K.-S. and Separovic, F. (2011) Interactions of a synthetic Leu-Lys rich antimicrobial peptide with phospholipid bilayers. *Eur. Biophys. J.* 40, 471-480.
- McCubbin, G.A., Praporski, S., Piantavigna, S., Knappe, D., Hoffman, R., Bowie, J.H., Separovic, F. and Martin, L.L. (2011) QCM-D fingerprinting of membrane-active peptides. *Eur. Biophys. J.* 40, 437-446.
- Afonin, S., Juretic, D., Separovic, F. and Ulrich, A. (2011) Special Issue on Membrane Active Peptides. (preface) *Eur. Biophys. J.* 40, 437-438.
- Chan, L.J., Hossain, M.A., Samuel, C.S., Separovic, F. and Wade, J.D. (2011) The relaxin peptide family – structure, function and clinical applications. *Protein and Peptide Letters* 18, 220-229.
- Sani, M.-A., Gehman, J.D. and Separovic, F. (2011) Lipid matrix plays a role in Aβ fibril kinetics and morphology. *FEBS Lett.* 585, 749-754.
- Shabanpoor, F., Separovic, F. and Wade, J.D. (2011) General method for selective labelling of double-chain cysteine-rich peptides with a lanthanide chelate via solid-phase synthesis. *J. Pept. Sci.* 17, 169-173.
- Shabanpoor, F., Zhang, S., Hughes, R.A., Hossain, M.A., Layfield, S., Ferraro, T., Bathgate, R.A.D., Separovic, F. and Wade, J.D. (2011) Design and development of analogues of dimers of insulin-like peptide 3 (INSL3)B-chain as high affinity antagonists of RXFP2. *Biopolymers Peptide Science* 96, 81-87.
- Gehman, J.D., Sani, M.-A. and Separovic, F. (2011) Solid-state NMR of membrane-acting antimicrobial peptides, in *Biomolecular NMR Spectroscopy*, eds. A. Dingley and S. Pascal, IOS Press, Amsterdam, The Netherlands, Chapter 8, pp 137-161.
- Fraser, S.J., Dawson, R.M., Waddington, L.J., Muir, B.W., Mulet, X., Hartley, P.G., Separovic, F. and Polyzos, A. (2011) Development of cubosomes as a cell-free biosensing platform. *Aust. J. Chem.* 64, 46-53.
- Ciccotosto, G.D., Tew, D.J., Drew, S.C., Smith, D.G., Johanssen, T., Lal, V., Lau, T.-L., Perez, K., Curtain, C., Wade, J.D., Separovic, F., Masters, C.L., Smith, J.P., Barnham, K.J. and Cappai, R. (2011) Stereospecific interactions are necessary for Alzheimer disease amyloid-β toxicity. *Neurobiology of Aging* 32, 235-248.
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