

BRANDON FINDLAY

ASSOCIATE PROFESSOR

CHEMISTRY AND BIOCHEMISTRY

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EDUCATION

University of Alberta, Edmonton, AB May 2013 – Jul. 2015
AIHS Postdoctoral Fellow

University of Manitoba, Winnipeg, MB Jan. 2009 – Apr. 2013
Ph.D. Organic Chemistry

Simon Fraser University, Burnaby, BC Sep. 2004 – Dec. 2008
B.Sc. (Hon) Molecular Biology and Biochemistry; Chemistry minor.

CURRENT APPOINTMENTS/AFFILIATIONS

Associate Professor, Department of Chemistry (Concordia). 2020– Present.
Associate Editor, Scientific Reports. 2019 – Present.
Membre du Réseau Québécois de recherche sur les médicaments. 2016 – Present.
Member of the Centre for Structural and Functional Genomics. 2015 – Present.
Cross-Appointed to the Department of Biology (Concordia). 2015 – Present.
Assistant Professor, Department of Chemistry (Concordia). 2015 – 2020.

PUBLICATIONS (INDEPENDENT RESEARCH)

Ghaddar, N., Hashemidahaj, M., **Findlay, B.** (2018) Access to high-impact mutations constrains the evolution of antibiotic resistance in soft agar. *Sci. Rep.* 8: 17023.
Findlay, B. (2016) The Chemical Ecology of Predatory Soil Bacteria. *ACS Chem. Biol.* 11: 1502-10.

PATENT APPLICATIONS (INDEPENDENT RESEARCH)

Findlay, B. Systems and Methods for Assessing the Evolution of Motile Microorganisms Under Selective Pressure. U.S. Provisional Pat. Ser. No. 62/407,132. Filed Oct. 12, 2016.

ORAL CONFERENCE PRESENTATIONS (INDEPENDENT RESEARCH)

Findlay, B. (2020) Stress tested: Induction of natural product biosynthesis by microbial predators. 103rd Canadian Chemistry Conference and Exhibition. Winnipeg, Canada. *Accepted but not presented, due to COVID-19.

Findlay, B. (2018) What determines the rate of antibiotic resistance evolution? Canadian Society of Microbiologists 2018 Conference. Winnipeg, Canada.

Findlay, B. (2018) Induction of Natural Product Biosynthesis in Gram-negative Bacteria. 101st Canadian Chemistry Conference and Exhibition. Edmonton, Canada.

Findlay, B. (2017) Rapid Experimental Evolution of Antibiotic Resistance. Canadian Society of Microbiologists 2017 Conference. Waterloo, Canada.

Findlay, B. (2016) Evolution and Natural Products. Interdisciplinary Biology Conference. Vendée, Canada.

Findlay, B. (2016) Exploring Natural Product Biosynthesis in Gram-negative Bacteria. 99th Canadian Chemistry Conference and Exhibition. Halifax, Canada.

DEPARTMENTAL SEMINARS (INDEPENDENT RESEARCH)

Findlay, B. (2019) Unearthing the Natural Products of Gram-Negative Bacteria. Department of Chemistry, Ryerson University, Canada.

Findlay, B. (2018) Unearthing the Natural Products of Gram-Negative Bacteria. Department of Chemistry, St. Mary's University, Canada.

Findlay, B. (2017) Rapid Experimental Evolution of Antibiotic Resistance. Department of Biology, Dalhousie University, Canada.

Findlay, B. (2017) Bioprospecting and Natural Product Biosynthesis in Gram-negative Bacteria. Département de biochimie, Université de Montréal. Montréal, Canada.

Findlay, B. (2017) Natural Product Biosynthesis in Gram-negative Bacteria. Department of Chemistry, University of Manitoba. Winnipeg, Canada.

PRESS

Tower, T. (2019) Antibiotics and *E. coli*: Concordians publish research with major implications for public health. Concordia University News.

PUBLICATIONS AS A TRAINEE

Domalaon, R., Brizuela, M., Eisner, B., **Findlay, B.**, Zhanel, G.G., Schweizer, F. (2018) Dilipid ultrashort cationic lipopeptides as adjuvants for chloramphenicol and other conventional antibiotics against Gram-negative bacteria. *Amino Acids*. <https://doi.org/10.1007/s00726-018-2673-9>.

Domalaon, R., **Findlay, B.**, Ogunsina, M., Arthur, G., Schweizer, F. (2016) Ultrashort cationic lipopeptides and lipopeptoids: Evaluation and mechanistic insights against epithelial cancer cells. *Pept.* 84:58-67.

Cochrane, S.,* **Findlay, B.**,* Bakhtiary, A., Rodriguez-Lopez, E., Vederas, J. (2016) The Antimicrobial Lipopeptide Tridecaptin A₁ Selectively Binds to Gram-Negative Lipid II. *Proc. Natl. Acad. Sci.* 113: 11561-6.

Guchhait, G., Altieri, A., Gorityala, B., Yang, X., **Findlay, B.**, Zhanel, G., Mookherjee, N., Schweizer, F. (2015) Amphiphilic Tobramycins with Immunomodulatory Properties. *Angew. Chem. Int. Ed. Eng.* 54: 6278-82.

Li, J., Chaytor, J., **Findlay, B.**, McMullen, L., Vederas, J. (2015) Identification of Didecyltrimethylammonium Salts and Salicylic Acid as Antimicrobial Compounds in Commercial Fermented Radish Kimchi. *J. Agric. Food Chem.* 63: 3053-8.

Bai, Y., **Findlay, B.**, Sanchez-Maldonado, A., Schieber, A., Vederas, J., Gänzle, M. (2014) Novel pyranoanthocyanidins and vinylphenol adducts of deoxyanthocyanidins in sorghum sourdough. *J. Agric. Food Chem.* DOI: 10.1021/jf503330b.

Cochrane, S., **Findlay, B.**, Vederas, J., Ratemi, E. (2014) Residues in Octyltridecaptin A1 Analogs Linked to Stable Secondary Structure in the Membrane. *ChemBioChem.* 15:1295-9.

Findlay, B., Mookherjee, N., Schweizer F. (2013) Ultrashort Cationic Lipopeptides and Lipopeptoids Selectively Induce Cytokine Production in Macrophages. *PLOS ONE.* 8: e54280.

Findlay, B., Szelemej, P., Zhanel, G.G., Schweizer F. (2012) Guanidinylation and Tail Effects in Cationic Antimicrobial Lipopeptoids. *PLOS ONE.* 7: e41141.

Bera, S., Dhondikubeer, R., **Findlay, B.**, Zhanel, G.G., Schweizer F. (2012) Synthesis and Antibacterial Activities of Amphiphilic Neomycin B-based Bilipid Conjugates and Fluorinated Neomycin B-based Lipids. *Molecules.* 17: 9129-9141.

Findlay, B., Zhanel, G.G., Schweizer F. (2012) Investigating the Hydrophobic Antimicrobial Peptide “Window of Activity” using Cationic Lipopeptides with Hydrocarbon and Fluorocarbon Tails. *Int. J. Antimicrob. Agents.* 40: 36-42.

Findlay, B., Zhanel, G.G., Schweizer F. (2012) Neomycin-phenolic conjugates: Polycationic amphiphiles with broad-spectrum antibacterial activity, low hemolytic activity and weak serum protein binding. *Bioorg. Med. Chem. Lett.* 22:1499-1503.

Zhanel, G.G., Lawson, C., Zelenitsky, S., **Findlay, B.**, Schweizer, F., Adam, H., Walkty, A., Rubinstein, E., Hoban, D., Lynch, J., Karlowsky, J. (2012) Comparison of the Next Generation Aminoglycoside Plazomicin (ACHN-490) to Gentamicin, Tobramycin, and Amikacin. *Expert Rev. Anti. Infect. Ther.* 10: 459-73.

Findlay, B., Zhanel, G.G., Schweizer, F. (2010) Cationic amphiphiles: A new generation of antimicrobials inspired by the natural antimicrobial peptide scaffold. *Antimicrob. Agents Chemother.* 54:4049-4058.

*Equal contribution.

NON-PEER REVIEWED PUBLICATIONS AS A TRAINEE

Findlay, B. (2015) Blogroll: Those who left. *Nat. Chem.* 7: 466.

Findlay, B., Johns, M. (2014) The International Chemical Biology Society's Global Mission Crystallizes in Kyoto. *ACS Chem. Biol.* 9: 21–27.

Findlay, B. (2013) Blogroll: Digital discourse. *Nat. Chem.* 5: 551.