

Patricia Louise Nadworny (née Taylor), PhD, PEng

pnadworny@ualberta.ca or patricia.nadworny@gmail.com

Citizenship: Canadian

EDUCATION

University of Alberta

- Nov 2011- Apr 2012** Management Essentials Program – Alberta School of Business
2005 – 2009 Ph.D. Candidate – Chemical and Materials Engineering, and Medical Sciences - Biomedical Engineering, University of Alberta (GPA 4.0/4.0)
Defended PhD on December 8, 2009 and graduated in Spring 2010
2004 – 2005 M.Sc. Candidate – Chemical and Materials Engineering, University of Alberta (GPA 4.0/4.0)
2000 – 2004 B.Sc. – Chemical Engineering, with distinction, University of Alberta (First in class of 91 students)

Bev Facey Community High School

- 1997 - 2000** Advanced Placement Program (First in class)

TEACHING EXPERIENCE

Innovotech, Inc./Innovotech Labs

- 2019-2025** Staff Training – Quality, Safety, and Protocols

University of Alberta

- Fall 2009** Sessional Instructor – Introduction to Thermodynamics (ChE 243 – Student ranking: 4.8/5.0)
Fall 2008 Sessional Instructor – ChE 243 (Student ranking: 4.7/5.0)
Winter 2007 Textbook Editor – ChE 243
Winter 2007 Head Teaching Assistant – ChE 243 (Student ranking: 4.9/5.0)
Fall 2006 Head Teaching Assistant – ChE 243 (Student ranking: 4.9/5.0)
Winter 2006 Head Teaching Assistant – ChE 243 (Student ranking: 4.7/5.0)
Fall 2005 Grader – ChE 243

INDUSTRIAL TRAINING

- January 21-23, 2026** Fierce JPM Week 2026 – Virtual
January 11-15, 2026 QNova Life Sciences Partnering Forum and various other events at J. P. Morgan Week, San Francisco, California
January, 2026 EXCPE 5465 – The Patent Pathway – From Idea to Intellectual Property Protection – University of Alberta Continuing Education
January, 2026 EXCPE 5464 – Intellectual Property Forward Mindset – Recognition and Commercialization – University of Alberta Continuing Education
October, 2025 Edmonton Startup Week
September, 2025 EXCPE 5463 - Intellectual Property Strategy and Management – University of Alberta Continuing Education
Life Sciences Week
Mar 16-21, 2024 Fundamentals of Management (Coursera)

Sept 25-27, 2023	BioInterface 2023, Surfaces in Biomaterials Foundation, San Diego, California
May 2018	CALA 2000C: Internal Auditor for ISO/IEC 17025
March 2018	Alberta Government Employment Standards webinars
2012-present	Various professional development courses to maintain professional engineering status with APEGA
2010-2025	Ongoing GLP, ISO 13485, ISO 17025/CALA, CBS, regulatory processes, lab management, lab safety (including SOPs, fire extinguisher, WHMIS, ELN, emergency response, biosafety and biosecurity), PHAC, AB OH&S, professional development training
December 2011	Strategic Business Management of IP: Balancing Scope of Protection and Available Resources, Edmonton, AB
October 2011	Principles of Laboratory Biosafety Courses 1-7, Laboratory Biosafety and Biosecurity, Public Health Agency of Canada
September 2011	Flammable and Combustible Liquid Safety, Tenaquip, Edmonton AB
August 2011	Atomic Absorption Spectroscopy, Buck Scientific and NAIT
October 2010	Science-To-Society TheCIS Workshop (Beginner Sessions), Banff, AB; MSDS Authoring – Challenges and Solutions
August 2010	AITF Research and Commercialization Summit, Banff, AB
July 2010	Center for Biofilm Engineering, Montana Biofilm Science and Technology Meeting, Bozeman, Montana

SUPERVISORY EXPERIENCE

2019-2025	Consult with and advise students and staff at various levels within Dr. Burrell's laboratory. Co-supervise PhD student C. Ward. PhD Committee Member/Candidacy Examination Committee Member: F. Osiowy, D. Stone.
2010-2025 (IOT)	Direct reports: J. Anderson (BSc), J. Romanchuk, Z. Zhang (PhD), K. Unrau (MSc), G. Prospero-Porta; V. Incani (PhD), A. Eyben (BSc), L. Miedema (BSc), K. Moghrabi (MSc); P. Arsanious (BSc); T. Castillo (BSc); F. Basler; J. Mand; P. Naghra (BSc); E. Castanares; P. Laxamana (BSc); L. Krenkel; H. Dhaliwal (PhD); A. Costin; C. Green (BSc); B. Tiruneh (BSc); H. Gill (MSc, MD); S. Xu (PhD); M. Chevalier (MSc); S. Tao; supervised projects performed by various other members of the Innovotech technical team, as well as mentoring the quality team prior to 2019, particularly J. Jean (BSc).
2004-2009 (U of A)	Supervised A. Burrell, L. Kim, T. Balasubramaniam, C. Olson, T. Nord, J. Shrum, N. Christensen, A. Olmstead, B. Landry, M. Kahera, J. Burrell, M. Adrian, M. Cavanagh, M. Lund, J. Croteau, K. Unrau, A. Chapman, M. Hlady. 80% of students produced work resulting in papers, presentations, and/or posters (students listed a total of 25 times).

RESEARCH AND MANAGEMENT EXPERIENCE

University of Alberta

Jan 2026-present Adjunct Professor
Department: Biomedical Engineering
Supervisor: Dr. Svetlana Komarova

FeynMed Solutions

Aug 2025-present Chief Scientific Officer
Department: Research and Development
Supervisor: Jason Watt (CEO)

Ureteral Stents Project (University of Alberta)

2019-2025 Consultant
Department: Biomedical Engineering
Supervisor: Dr. Robert Burrell

Innovotech, Inc./Innovotech Labs

Sept 2021–July 2025 Chief Scientific Officer
Department: Research and Development
Supervisor: Dr. James Timourian (President) then Dr. Craig Milne (CEO)

Jan 2019-Aug 2021 Quality and Safety Director
Department: Quality
Supervisor: Dr. James Timourian (President)

2012-2018 Product Development Manager
Department: Research and Development
Supervisors: Ken Boutilier (Chief Executive Officer), then Dr. Amin Omar (Chief Operating Officer)

2010-2011 Post-doctoral Fellow/r&D Associate - Research Scientist
Department: Research and Development
Supervisors: Dr. Merle Olson (Research Director), then Dr. Amin Omar (Lab Manager)

University of Alberta

Fall/Winter 2009-2010 Research Associate
Department: Biomedical Engineering
Supervisor: Dr. Robert E. Burrell

University of Alberta/National Institute for Nanotechnology (NINT)

Summer 2004 Women in Engineering and Science (WES) student
Department: Chemical and Materials Engineering
Supervisor: Dr. Robert E. Burrell

Winter 2004 Special Projects in Chemical Engineering
Department: Chemical and Materials Engineering
Supervisor: Dr. Robert E. Burrell

Summer 2003 WES student
Departments: Electrical Engineering and Medical Genetics
Supervisors: Dr. Chris Backhouse and Dr. Moira Glerum

NRC Institute for Biagnostics (IBD)

Summer 2002 WES student
Group: Spectroscopy
Supervisor: Mr. Mark Hewko

University of Alberta

Winter 2002 Dean's Research Award
Department: Chemical and Materials Engineering
Supervisor: Dr. Yadollah Maham

Summer 2001 NSERC USRA
Department: Mathematical Biology
Supervisor: Dr. Gerda DeVries

EARLY ADMINISTRATIVE EXPERIENCE

2008-2009 Building manager for LaRon Manor (23 suite apartment complex)
2005-2006 Engineering Faculty Council Graduate Student Representative

PUBLICATIONS

Patents

1. Olson ME, **Nadworny PL**, Omar AM, Cabrera YE. Family of silver(I) periodate compounds having broad microbial properties. Issued 08/08/2017. US Patent No. 9,723,843.
2. Olson ME, **Nadworny PL**, Prosperi-Porta G. Antimicrobial silver iodate. Issued 08/10/2019. US Patent No. 10,434,210.
3. Olson ME, **Nadworny PL**, Prosperi-Porta G. Antimicrobial silver iodate. Issued 14/09/21. US Patent No. 11,116,865.
4. Olson ME, Anderson JJ, Omar AM, **Nadworny PL**. Silver iodate compounds having antimicrobial properties. Issued 08/07/2020. EP 2 605 659 B1.
 - a. Countries of Validation:
 - i. Denmark.
 - ii. France.
 - iii. Germany.
 - iv. Hungary.
 - v. Ireland.
 - vi. Italy.
 - vii. Lithuania.
 - viii. Netherlands.
 - ix. Spain.
 - x. Sweden.
 - xi. United Kingdom.
5. Olson ME, **Nadworny PL**, Prosperi-Porta G. Antimicrobial silver iodate. Issued 26/09/23. US Patent No. 11,766,505.
6. Olson ME, Anderson JJ, Omar AM, **Nadworny PL**. Silver iodate compounds having antimicrobial properties. Issued 01/01/2025. EP patent 3 804 521.

- a. Countries of Validation:
 - i. Denmark.
 - ii. France.
 - iii. Germany.
 - iv. Ireland.
 - v. Spain.
 - vi. United Kingdom.
7. Olson ME, **Nadworny PL**, Prosperi-Porta G. Antimicrobial silver iodate. Issued 15/07/25. US Patent No. 12,357,723.

Patent Applications

1. Olson ME, Allan N, Omar AM, Anderson JJ, **Nadworny PL**, Harding MW. Articles of manufacture with improved anti-microbial properties.
 - a. U.S. Ser. No. 61/346,095; filed December 14, 2009.
 - b. International Application No. PCT/CA2010/002007, filed December 14, 2010.
 - c. National stage filings:
 - (i) Europe (EP20100836895, filing date June 27, 2012).
 - (ii) Canada (CA2784612, filing date June 14, 2012).
 - (iii) United States (13/515,633, filing date August 27, 2012).
2. Olson ME, Anderson JJ, **Nadworny PL**, Omar AM. Improved process for producing silver compounds.
 - a. U.S. Ser. No. 61/422,754; filed December 14, 2010.
3. Olson ME, Anderson JJ, **Nadworny PL**, Omar AM. Silver iodate compounds having antimicrobial properties.
 - a. U.S. Ser. No. 61/375,256; filed August 20, 2010.
 - b. International Application No. PCT/CA2011/000941, filed August 22, 2011.
 - e. National stage filings:
 - (i) Australia (AU2011297395, filing date February 22, 2013).
 - (ii) Canada (2,808,930, filing date February 20, 2013).
 - (iii) Europe (EP20110817612, filing date April 19, 2013).
 - (iv) United States (13/214,286, filed August 22, 2011).
 - (v) United States (14/226,740, filed April 26, 2014 – continuation).
 - (vi) United States (15/898,491, filed Feb 17, 2018 – second continuation)
 - (vii) South Korea (number not received, filing date March 22, 2013).
 - f. European divisional: EP 20183205.2, filing date 30/06/2020.
4. Omar AM, **Nadworny PL**, Romanchuk JA, Prosperi-Porta G, Unrau KR. Polymeric coatings having antimicrobial properties.
 - a. U.S. Serial No. 61/525,918; filed August 22, 2011.
 - b. U.S. Serial No. 61/844,679; filed July 10, 2013.
 - c. International Application No. PCT/CA2014/000211, filed March 12, 2014.
 - d. National stage filing:
 - (i) Europe (EP20140762881, filing date October 12, 2015).
5. Olson ME, **Nadworny PL**, Omar AM, Cabrera YE. A family of silver(I) periodate compounds having broad antimicrobial properties.

- a. U.S. Serial No. 61/525,920; filed August 22, 2011.
 - b. International Application No. PCT/CA2012/000796, filed August 22, 2012.
 - c. National stage filing:
 - (i) Canada (2,846,278, filed February 24, 2014).
 - (ii) Europe (EP20120825144, filed March 21, 2014).
 - (iii) United States (14/240,733, filed February 24, 2014).
 - (iv) United States (15/003,753, filed January 21, 2016, continuation).
6. **Nadworny PL**, Prosperi-Porta G, Unrau KR. Method for producing silver(I) orthoperiodates.
- a. U.S. Serial No. 61/691,885; filed August 22, 2012.
 - b. International Application No. PCT/CA2013/000735, filed August 22, 2013.
7. Olson ME, **Nadworny PL**, Prosperi-Porta G. Anti-microbial gel formulations containing a silver(I) periodate.
- a. U.S. Serial No. 61/673,685; filed July 19, 2012.
 - b. International Application No. PCT/CA2013/000658, filed July 19, 2013.
 - c. National stage filings:
 - (i) Europe (EP20130819749, filed February 19, 2015).
 - (ii) United States (14/415,666, filed January 19, 2015).
 - (iii) United States (16/548,062, filed August 22, 2019, continuation).
 - (iv) United States (18/233,409, filed August 14, 2023, continuation).
8. Olson ME, **Nadworny PL**, Prosperi-Porta G. Antimicrobial silver iodate U.S. Serial No. 17/400,897; filed August 22, 2019.

Peer-Reviewed Publications

1. Erickson M, Boone TJ, **Nadworny PL**. Antiviral activity of Ag₅IO₆, a unique silver compound. *Viruses* 2024, 16(6):959. IF: 4.7.
2. **Nadworny PL**, Hickerson WL, Holley-Harrison HD, Bloom DC, Grams TR, Edwards TG, Schultz GS, Burrell RE. Treatment of infection and inflammation associated with COVID-19, multi-drug resistant pneumonia and fungal sinusitis by nebulizing a nanosilver solution. *Nanomedicine* 2023, Feb:48:102654. IF: 4.7. Cited 6 times.
3. Harding M, Marques LLR, Allan N, Olson ME, Buziak B, **Nadworny P**, Omar A, Howard RJ, Feng J. Bactericidal efficacy of oxidized silver against biofilms formed by *Curtobacterium flaccumfaciens* pv. *flaccumfaciens*. *The Plant Pathology Journal* 2022, 38(4):334-344. IF: 2.4. Cited 1 time.
4. Harding M, **Nadworny P**, Buziak B, Omar A, Daniels G, Feng J. Improved methods for treatment of phytopathogenic biofilms: Metallic compounds as anti-bacterial coatings and fungicide tank-mix partners. *Molecules* 2019, 24(2312):1-14. IF: 5.0. Cited 18 times.
5. Sweet HM, **Nadworny PL**, Fung S, Wright JB, Burrell RE. Chapter 13. Silver nanostructures in medicine: Synthesis and biological activity. In: Grumezescu AM (Ed.), *Antimicrobial nanoarchitectonics: From synthesis to applications*, 2017, Elsevier, Cambridge, MA, pp. 358-382.
6. Omar A, Wright JB, Schultz G, Burrell R, **Nadworny P**. Microbial biofilms and chronic wounds. *Microorganisms* 2017, 5(1):1-14. IF: 4.2. Cited 413 times.

7. Omar A, **Nadworny P**. Review: Antimicrobial efficacy validation using *in vitro* and *in vivo* testing methods. *Advanced Drug Delivery Reviews* 2017, 112:61-68. IF: 16.1. Cited 17 times.
8. **Nadworny PL**, Omotoso O, Zheng Z. Comparison of oxysilver nitrate and oxysilver bisulfate, Part I: Synthesis and physicochemical properties. *Polyhedron* 2015, 99:204-215. IF: 2.6. Cited 1 time.
9. Incani V, Omar AM, Prospero-Porta G, **Nadworny PL**. The use of Ag₅IO₆ as an antimicrobial agent in wound dressing against microbial biofilms. *TechConnect Briefs 2015 – Biotech, Biomaterials, and Biomedical*, Chapter 6. *Materials for Personal/Home Care & Cosmetics*:289-292.
10. Incani V, Omar AM, Prospero-Porta G, **Nadworny PL**. Ag₅IO₆: novel antibiofilm activity of a silver compound with application to medical devices. *International Journal of Antimicrobial Agents* 2015, 45(6):586-593. IF: 4.6. Cited 19 times.
11. Cavanagh MH, Burrell RE, **Nadworny PL**. Evaluating antimicrobial efficacy of new commercially available silver dressings. *International Wound Journal* 2010, 7(5):394-405. IF: 2.5. Cited **103** times.
12. **Nadworny PL**, Landry BK, Wang JF, Tredget EE, Burrell RE. Does nanocrystalline silver have a transferable effect? *Wound Repair and Regeneration* 2010, 18:254-265. IF: 3.4. Cited 59 times.
13. **Nadworny PL**, Wang JF, Tredget EE, Burrell RE. Anti-inflammatory activity of nanocrystalline silver-derived solutions in porcine contact dermatitis. *Journal of Inflammation* 2010,7:13 (20 pages). IF: 4.1. Cited **161** times.
14. Burrell RE, **Nadworny PL**. Nanocrystalline silver: Novel structure and activity. IFMBE proceedings. In: *The Third International Conference on the Development of Biomedical Engineering in Vietnam*, January 2010, 27:6-9.
15. **Nadworny PL**. Biological activity of nanostructured silver. *Electronic Dissertations and Theses*, University of Alberta, 2009, 965 pages.
16. Landry BK, **Nadworny PL**, Omotoso O, Maham Y, Burrell JC, Burrell RE. The kinetics of thermal instability in nanocrystalline silver and the effect of heat treatment on the antibacterial activity of nanocrystalline silver dressings. *Biomaterials* 2009;30:6929-6939. IF: 12.5. Cited 20 times.
17. Chapman A, Burrell RE, **Nadworny PL**. The development of bacterial resistance to silver dressings. 2009 AIChE Meeting. November 2009.
18. **Nadworny PL**, Burrell RE. A review of assessment techniques for silver technology in wound care. Part I: *In vitro* methods for assessing antimicrobial activity. *Journal of Wound Technology* 2008;2:6-13.
19. **Nadworny PL**, Burrell RE. A review of assessment techniques for silver technology in wound care. Part II: Tissue culture and *in vivo* methods for determining antimicrobial and anti-inflammatory activity. *Journal of Wound Technology* 2008;2:14-22.
20. **Nadworny PL**, Wang JF, Tredget EE, Burrell RE. Anti-inflammatory activity of nanocrystalline silver in a porcine contact dermatitis model. *Nanomedicine: Nanotechnology, Biology, and Medicine* 2008;4:241-258. IF: 4.6. Cited **372** times.

21. **Taylor PL**, Ussher AL, Burrell RE. The impact of heat on nanocrystalline silver dressings. Part I: Chemical and biological properties. *Biomaterials* 2005;26:7221-7229. IF: 12.5. Cited **224** times.
22. **Taylor PL**, Omotoso O, Wiskel JB, Mitlin D, Burrell RE. The impact of heat on nanocrystalline silver dressings. Part II: Physical properties. *Biomaterials* 2005; 26:7230-7240. IF: 12.5. Cited 75 times.
23. **Taylor PL**, Manage DP, Helmle KE, Zheng Y, Glerum DM, Backhouse CJ. Analysis of mitochondrial DNA in microfluidic systems. *Journal of Chromatography B* 2005;822:78-84. IF: 2.8. Cited 22 times.
24. **Taylor PL**, 2001. Mathematical Modeling in Maple. Course module for Math 272, University of Alberta, Department of Mathematical Biology.

Invited Presentations/Panel Presentations/Networking Tables/Booth Events

1. Biomedical Engineering Research Day 2025 – Panelist and Networking Table – Biomedical Engineering, University of Alberta, May 9, 2025, Edmonton, AB.
2. Canadian Undergraduate Biomedical Engineering Conference (CUBEC) x Biomedical Engineering Student Society (BMESS) Career Fair, Department of Biomedical Engineering, Faculty of Engineering, University of Calgary, January 23-24, 2025, Calgary, AB (booth).
3. WiSER Annual Industry Mixer, Faculty of Engineering, University of Alberta, November 23, 2024, Edmonton, AB (booth).
4. BioInterface 2024 Workshop and Symposium, Antimicrobial/Antibiofouling Session. Surfaces In Biomaterials Foundation – October 2-4, Minneapolis, Minnesota, US.
 Incani V., Omar A., **Nadworny PL**. Sustained Anti-Adherence Activity of Unique Silver Compound Coated onto Medically Relevant Polymers (oral presentation).
5. Biomedical Engineering Research Day 2024 – Industry Session Speaker/Panelist (oral presentation/discussion) and Poster Judge, Biomedical Engineering, University of Alberta, June 26, 2024, Edmonton, AB.
6. SPP-ARCing Connections Outside Academia – Striving for Pandemic Preparedness – The Alberta Research Consortium, University of Alberta, May 6, 2024, Edmonton, AB (speed-networking table).
7. WiSER Annual Industry Mixer, Faculty of Engineering, University of Alberta, February 10, 2024, Edmonton, AB (booth).
8. BioMat Connect Guest Panel and Speed Networking Table, The Canadian Biomaterials Society – Alberta Student Chapter, University of Alberta, March 27, 2018, Edmonton, AB.
Nadworny PL. BioMat Connect Guest Panelist (oral presentation & discussion).
9. BioMat Connect Guest Panel, The Canadian Biomaterials Society – Alberta Student Chapter, University of Alberta, March 31, 2016, Edmonton, AB.
Nadworny PL. BioMat Connect Guest Panelist (oral presentation & discussion).
10. Cheryl Croucher’s Innovation Anthology, January 2012, Edmonton, AB (CKUA network)

1. **Nadworny PL.** Innovotech 1: New silver technology kills biofilms (podcast, 01/10/2012).
2. **Nadworny PL.** Innovotech 2: Silver as alternate disease treatment for crops (radio broadcast, 01/12/2012).
3. **Nadworny PL.** Innovotech 3: Silver coating for medical devices (radio broadcast, 01/17/2012)
11. Science and Technology Career Fair, Tech Comm Club, University of Alberta, March 14, 2011, Edmonton, AB.
Nadworny PL. Introduction to Innovotech.
12. First Year Night, Chemical Engineering Student Society, University of Alberta, March 9, 2011, Edmonton, AB.
Nadworny PL. First Year Night: Working in Industry – Chemical + Biomedical Engineering (guest speaker).
13. International Conference on Nanotechnology: Fundamentals and Applications, August 4-6, 2010, Ottawa, Ontario.
Burrell RE, **Nadworny PL.** Nanotechnology: Its application to the treatment of inflammation related to disease and injury (keynote address).
14. First Annual Graduate Research Symposium, June 17, 2010, Edmonton, Alberta.
Sheremeta L, Materi W, **Nadworny PL.** Nanotechnology: Rewards, risks, and regulation (invited presentations followed by panel discussion).
15. The Third International Conference on the Development of Biomedical Engineering in Vietnam – BME 2010, January 11-14, 2010, Ho Chi Minh City, Vietnam.
Burrell RE, **Nadworny PL.** Nanocrystalline silver: Novel structure and activity (keynote speaker).

Technical Presentations

1. 2026 Symposium on Advanced Wound Care (SAWC)/Wound Healing Society (WHS) Annual Meeting, April 8-12, 2026, Charlotte, North Carolina, US.
Nadworny P, Burrell R. Impact of unique process on chemistry and antimicrobial activity of nanostructured silver (poster).
2. 2026 Symposium on Advanced Wound Care (SAWC)/Wound Healing Society (WHS) Annual Meeting, April 8-12, 2026, Charlotte, North Carolina, US.
Bradley C, Provost G, Burrell R, **Nadworny P.** Comparison of various ultra-small and nanotechnology-based products for wound care (poster).
3. BioInterface 2025 Workshop and Symposium, Medical Fabrics, Fibers, and Membranes Session. Surfaces In Biomaterials Foundation – September 30 – October 2, Tempe, Arizona, US.
Bradley C, **Nadworny P,** Pletts M, Burrell RE. The use of nanostructured materials to control infection and inflammation during wound healing (oral presentation).
4. BioInterface 2025 Workshop and Symposium, Surfaces In Biomaterials Foundation – September 30 – October 2, Tempe, Arizona, US.

- Dhaliwal HK, Li Y, Boone TJ, **Nadworny PL**. Antibiofilm development of a high throughput model of encrustation and biofilm formation on urinary catheters, and assessment of impact of a novel silver compound (poster).
5. 2025 Symposium on Advanced Wound Care (SAWC)/Wound Healing Society (WHS) Annual Meeting, April 30-May 3, 2025, Grapevine, Texas, US.
Choo-Yin Y, Li Y, Boone T, **Nadworny P**. Antibiofilm Activity of Novel Silver Complex in Dressings and Gels Against Drug Resistant Microorganisms (poster presentation).
 6. The 9th Thesinge Biofilm Meeting on Biomaterial-Associated Infections – Nano-Antimicrobials: Game Changers in Biomaterial-Associated Infection?, May 13-14, 2024, Thesinge, The Netherlands.
Nadworny PL. Unique Antibiofilm Nanostructured Silver Compound for Use in Gel and Polymer Applications (oral presentation).
 7. 2022 35th Annual Symposium on Advanced Wound Care (SAWC)/Wound Healing Society (WHS) Annual Meeting, April 6-10, 2022, Phoenix, AZ, USA.
Schultz GS, Hickerson W, Burrell R, Grams T, Edwards T, **Nadworny P**, Bloom DS. Nebulized Inhalation of a Unique Solution of Silver Atoms Generated From A Nanocrystalline Silver Wound Dressing Has Powerful Antiviral Activity and Successfully Treated Patients With MDR Pneumonia, TENS, and COVID-19 (poster presentation).
 8. 44th Annual John A. Boswick Burn and Wound Care Symposium, January 22-27, 2022, Wailea, HI, USA.
Hickerson W, Schultz G, Burrell R, Harrison D, Grams T, Edwards T, **Nadworny P**, Bloom D. Nebulized Nanocrystalline Silver as a Treatment for MDR Pneumonia, and COVID-19 (oral presentation).
 9. 2017 American Phytopathological Society Annual Meeting, August 5-9, 2017, San Antonio, Texas.
Nischwitz C, **Nadworny P**, Harding M, Petrizzo E. Blossom application of novel silver compounds for fire blight (*Erwinia amylovora*) management in apples (poster presentation).
 10. TechConnect World Innovation Conference 2015, June 14-17, 2015, Washington D.C.
Incani V, Omar AM, Prosperi-Porta G, **Nadworny PL**. The use of Ag₅IO₆ as an antimicrobial agent in wound dressing against microbial biofilms (oral presentation).
 11. ACAMP Agriculture & Forestry Seminar, June 5, 2012, Edmonton, Alberta.
Nadworny PL. Agress® - The winding road to commercialization (oral presentation).
 12. 10th Annual Alberta Biomedical Engineering (BME) Conference, October 23-25, 2009, Banff, Alberta.
Nadworny PL, Wang JF, Tredget, EE, Burrell RE. Effect of nanosilver-derived solutions on cytokines, MMPs, growth factors, and apoptosis (oral presentation).
 13. AIChE 2009 Annual Meeting, November 8-13, 2009, Nashville, TN.
Chapman A, Burrell RE, **Nadworny PL**. The development of bacterial resistance to silver dressings (oral presentation).

14. 3rd International Congress of NanoBiotechnology & Nanomedicine: NanoBio 2009, June 22-24, 2009, San Francisco, California.
Nadworny PL, Wang JF, Burrell RE. Anti-inflammatory/pro-healing properties of nanosilver-derived solutions (oral presentation).
15. 19th Annual Canadian Thermal Analysis Society (CTAS) Annual Workshop and Exhibition, May 12-13, 2009, Ottawa, Ontario.
Nadworny PL, Landry BK, Omotoso O, Maham Y, Burrell JC, Burrell RE. Determining critical properties for nanocrystalline silver antimicrobial activity via heat treatment: A kinetic study (oral presentation – awarded best student presentation).
16. 9th Annual Alberta Biomedical Engineering (BME) Conference, October 24-26, 2008, Banff, Alberta.
Nadworny PL, Wang JF, Tredget EE, Burrell RE. Activity of nanosilver-derived solutions varies with dissolution conditions (oral presentation).
17. 9th Annual Alberta Biomedical Engineering (BME) Conference, October 24-26, 2008, Banff, Alberta.
Landry BK, **Nadworny PL**, Wang JF, Tredget EE, Burrell RE. Is the anti-inflammatory activity of nanocrystalline silver transferable? (oral presentation).
18. 9th Annual Alberta Biomedical Engineering (BME) Conference, October 24-26, 2008, Banff, Alberta.
Adrian MD, **Nadworny PL**, Burrell RE. Effect of varied sputtering parameters on the antimicrobial activity of silver thin films (poster).
19. 9th Annual Alberta Biomedical Engineering (BME) Conference, October 24-26, 2008, Banff, Alberta.
Cavanagh MH, **Nadworny PL**, Burrell RE. Comparison of antimicrobial activity of various commercial silver-containing dressings (poster).
20. 11th Annual European Pressure Ulcer Advisory Panel Open Meeting, September 4-6, 2008, Bruges, Belgium.
Nadworny PL, Landry BK, Wang JF, Burrell RE. Silver penetration in intact and compromised skin (poster).
21. 11th Annual European Pressure Ulcer Advisory Panel Open Meeting, September 4-6, 2008, Bruges, Belgium.
Burrell RE, Goh A, **Nadworny PL**. Efficacy testing of silver dressings: A comparative analysis of published *in vitro* and *in vivo* techniques (poster).
22. 3rd Congress of the World Union of Wound Healing Societies (WUWHS), June 4-8, 2008, Toronto, Canada.
Nadworny PL, Wang JF, Tredget EE, Burrell RE. Nanocrystalline silver anti-inflammatory activity in porcine chemical burns (oral presentation).
23. 8th Annual Alberta BME Conference, October 19-21, 2007, Banff, Alberta.
Nadworny PL, Wang JF, Tredget EE, Burrell RE. Differential induction of apoptosis by various forms of silver and its implications for wound healing (oral presentation).

24. 8th Annual Alberta BME Conference, October 19-21, 2007, Banff, Alberta.
Landry BK, Burrell JC, **Nadworny PL**, and Burrell RE. Effect of heat treatment on physicochemical and biological properties of nanocrystalline silver dressings: A kinetic study (oral presentation).
25. 28th Annual John A. Boswick, M.D. Burn and Wound Care Conference, February 19-23, 2007, Maui, Hawaii.
Nadworny PL, Wang JF, Burrell RE. The biological activity of silver used in wound care (oral presentation).
26. 7th Annual Alberta BME Conference, October 20-22, 2006, Banff, Alberta.
Nadworny PL, Wang JF, Burrell RE. Anti-inflammatory activity of nanocrystalline silver in porcine contact dermatitis (oral presentation).
27. 6th Annual Alberta BME Conference, October 21-23, 2005, Banff, Alberta.
Nadworny PL, Shrum J, Christensen N, McCaffrey WC, Burrell RE. Antimicrobial activity of nanocrystalline silver: The role of grain boundaries (oral presentation).
28. The 2005 International Conference on MEMS, NANO, and Smart Systems (ICMENS), July 24 - 27, 2005, Banff, Alberta.
Shrum J, **Taylor PL**, Christensen N, McCaffrey WC, Balasubramaniam T, and Burrell RE. Towards a mechanism for nanocrystalline silver efficacy in the wound environment: Structure versus size (oral presentation).
29. The 2005 International Conference on MEMS, NANO, and Smart Systems (ICMENS), July 24 - 27, 2005, Banff, Alberta.
Olson CR, Balasubramaniam T, Shrum J, Nord T, **Taylor PL** and Burrell, RE. Novel antimicrobial activity of nanocrystalline silver dressings (oral presentation).
30. Nanoforum Canada 2005, June 15-17, 2005, Montreal, Quebec.
Taylor PL, Shrum J, Christensen N, McCaffrey WC, and Burrell RE. Biological activity of nanostructured silver: The role of defect structures (poster).
31. Nanoforum Canada 2005, June 15-17, 2005, Montreal, Quebec.
Balasubramaniam T, Olson CR, Shrum J, Nord T, **Taylor PL** and Burrell RE. Nanocrystalline silver dressings: A technology to control and prevent the development of silver resistant bacteria (oral presentation).
32. 1st Chemical and Materials Engineering Graduate Research Symposium, University of Alberta, June 2, 2005, Edmonton, Alberta.
Taylor PL, Omotoso O, Wiskel JB, Mitlin D, and Burrell RE. Physical and chemical analyses of heat-treated nanocrystalline silver dressings (poster).
33. 5th Alberta BME Conference, October 22 - 24, 2004, Banff, Alberta.
Taylor PL, Mitlin D, Wiskel JB, Omotoso O, and Burrell RE. Physical analyses of heat-treated nanocrystalline silver wound dressings (oral presentation).
34. 5th Alberta BME Conference, October 22 - 24, 2004, Banff, Alberta.
Taylor PL, Wiskel JB, Ussher A, Omotoso O, and Burrell RE. The impact of heat on chemical and biological properties of nanocrystalline silver dressings (poster).

35. ICMENS 2004, August 25-27, 2004, Banff, Alberta.
Taylor PL, Mitlin D, Wiskel JB, Omotoso O, and Burrell RE. Physical Analyses of Heat-Treated Nanocrystalline Silver Dressings (poster – awarded best poster).
36. 2nd Congress of the WUWHS, July 8-13, 2004, Paris, France.
 Burrell RE, **Taylor PL**, Ussher, AL, McCaffrey, WC. Silver release in simulated wound fluids from silver containing dressings (oral presentation).
37. Nanoforum Canada 2004, June 16-18, 2004, Edmonton, AB.
Taylor PL, Wiskel JB, Ussher AL, Omotoso O, and Burrell RE. The impact of heat on the physical and biological properties of nanocrystalline silver dressings (poster).
38. ICMENS 2003, July 20-23, 2003, Banff, Alberta.
Taylor PL, Helmle K, Zheng Y, Glerum M and Backhouse C. Controlling DNA self-assembly in microfluidic systems (poster).
39. National Institute of Nanotechnology (NINT), Edmonton, AB, September 18, 2003.
Taylor PL. On-chip detection of mutations in human mitochondrial DNA (seminar).
40. Department of Electrical Engineering, Backhouse Lab Group, University of Alberta Edmonton, AB, August 21, 2003.
Taylor PL. Detecting mutations in human mitochondrial DNA on-chip (oral presentation).
41. Institute for Biodiagnostics (IBD), Winnipeg, MN, August 16, 2002.
Taylor PL. Scattering light through skin tissue model with an absorber (oral presentation).
42. Dean's Research Award Committee, University of Alberta, Edmonton, AB, April 2002.
Taylor PL. Excess properties of ethylmorpholine.

AWARDS

2009 CTAS

- Best Student Presentation Award

2004

University of Alberta

- Gerald Maier / NOVA Chemicals Corporation Graduate Recruitment Award

NAIT Academic Staff Association (NASA)

- Family Member Award

ICMENS

- Best Poster Award

Society of Chemical Industry (SCI) Prize

- Merit Award

2003

Alberta Ingenuity Fund (AIF)

- Alberta Biomedical Engineering Conference Undergraduate Competition Winner

University of Alberta

- Canadian Society for Chemical Engineering Prize in Chemical Engineering (silver medal)
- DB Robinson Prize in Thermodynamics

2002

University of Alberta

- Dean's Research Award

2001

NSERC

- NSERC Undergraduate Student Research Award

2000

Government of Alberta

- Rutherford Scholar
- Governor General's Academic Medal

Advanced Placement Program College Board

- AP Scholar With Distinction
- AP Canadian National Scholar

Scholarships/Grants

**IRAP Youth Employment Program – Project Number 1041112 - Preparation for Commercialization of Nanocrystalline Silver Dressings
2026-2027**

- FeynMed Solutions grant for \$30,000 (50% of \$60,000 project).

**Alberta Innovates AICE Validates Grant – Agreement Number 252607896 - Commercialization of Nanocrystalline Silver Therapeutics for Infection and Inflammation Management
2026-2028**

- FeynMed Solutions grant for \$300,000 (75% of \$400,000 project).

**IRAP Youth Employment Program – Project Number PN1029193 – Development of Soluble Antibiofilm High Oxidation State Silvers
2025-2026**

- Innovotech grant for \$30,000 (50% of \$60,000 project).

**IRAP Grant – Project Number PN1029885 – Expansion of Contract Research – Certika and Explant Models
2025-2026**

- Innovotech grant for \$150,000 (80% of \$187,500 project).

**IRAP ARP Grant – Project Number PN1014200
2024-2025**

- Innovotech grant for \$75,000 (80% of \$93,750 project).

**Alberta Innovates AICE Validates Grant – Agreement Number 232403038
2023-2025**

- Innovotech grant for \$300,000 (75% of \$400,000 project).

NRC-IRAP Project Number 831804

2013-2014

- Innovotech grant for \$120,000 (80% of \$150,000 project).

BioAlberta Medical Product Development Program

2012-2013

- Innovotech grant for \$56,250 (75% of \$75,000 project).

Alberta Innovates Technology Futures (AITF)

2011

- R&D Associate (renewal)

2010

- R&D Associate

2008

Alberta Ingenuity Fund (AIF)

- Alberta Ingenuity Graduate Scholarship in Nanotechnology (first renewal)

2007

University of Alberta

- Captain Thomas Farrell Greenhalgh Memorial Graduate Scholarship
- Honorary Walter H. Johns Graduate Fellowship

Natural Sciences and Engineering Research Council (NSERC)

- NSERC Canada Graduate Scholarship (CGS)-D2 (first renewal)

Alberta Ingenuity Fund (AIF)

- Alberta Ingenuity Graduate Scholarship in Nanotechnology

2006

University of Alberta

- Captain Thomas Farrell Greenhalgh Memorial Graduate Scholarship
- Honorary Walter H. Johns Graduate Fellowship
- Honorary Izaak Walton Killam Memorial Scholarship

Natural Sciences and Engineering Research Council (NSERC)

- NSERC CGS-D2

Alberta Ingenuity Fund (AIF)

- Alberta Ingenuity Studentship (second renewal)

2005

University of Alberta

- Captain Thomas Farrell Greenhalgh Memorial Graduate Scholarship
- Walter H. Johns Graduate Fellowship

NSERC

- NSERC CGS-M (first renewal)

AIF

- Alberta Ingenuity Studentship (first renewal)

2004

University of Alberta

- Captain Thomas Farrell Greenhalgh Memorial Graduate Scholarship
- Walter H. Johns Graduate Fellowship

Alberta Ingenuity Fund (AIF)

- Alberta Ingenuity Studentship

NSERC

- NSERC CGS-M

National Research Council (NRC)

- Women in Science and Engineering Scholarship (second renewal)

2003

University of Alberta

- Captain Thomas Farrell Greenhalgh Memorial Scholarship in Chemical Engineering
- Chancellor's Citation (third renewal)

National Research Council (NRC)

- Women in Science and Engineering Scholarship (first renewal)

Government of Alberta

- Jason Lang Scholarship

2002

University of Alberta

- Captain Thomas Farrell Greenhalgh Memorial Scholarship in Chemical Engineering
- Chancellor's Citation (second renewal)

National Research Council (NRC)

- Women in Science and Engineering Scholarship

2001

University of Alberta

- Prairie Mines and Royalty Ltd. Engineering Scholarship
- Canadian Association of Petroleum Producers Scholarship in Engineering
- Chancellor's Citation (first renewal)

2000

University of Alberta

- Faculty of Engineering Entrance Scholarship
- Henry Kreisel Memorial Academic Excellence Scholarship
- Chancellor's Citation
- Advanced Placement Scholarship

Government of Alberta

- Alexander Rutherford Scholarship

COMMUNITY SERVICE

- 2026** Committee member, abstract judge, poster judge – Biomedical Engineering Research Day 2026 – Faculty of Engineering, Department of Biomedical Engineering, University of Alberta
- 2024-present** Experiential Learning and Work Integrated Learning (WIL) Advisory Council member – Faculty of Engineering, University of Alberta
- 2022-present** Life Group leader/administrator – Heartland Alliance Church

- 2019-present** Sunday School parent volunteer, Volunteer CapitalCare Strathcona Outreach Coordinator/Leader – Heartland Alliance Church
- 2007-2018** Sunday School Coordinator, teacher (ages 1-12), society member, deacon, worship leader – Agricola Community Church (ACC)
- 2006-present** Compassion Canada Volunteer – found sponsors for >40 children, sponsored 8 children, volunteer writer to 9 additional children
- 2005-2007** Nursery worker, worship team member (bass guitar and lead vocals), choir member – Capilano Christian Assembly (CCA)
- 1997-2002** Sunday School teacher, worship team member (bass) – CCA

HOBBIES

Playing bass guitar (28 years in various groups) and piano (obtained Grade 8 practical and Grade 2 theory, taught for one year), singing, reading, cooking/baking, cross-stitch, drawing, painting, biking, hiking, camping.

REFERENCES AVAILABLE UPON REQUEST