

Curriculum Vitae

Peter W. Bray, MD

1. EDUCATION

Degrees

- 1996 Jul - 1998 Jun MSc, Surgical, Institute of Medical Science, University of Toronto, Toronto, Ontario, Supervisor(s): Dr. Vaughan A. Bowen
1990 Sep - 1994 Jun MD, University of Toronto, Toronto, Ontario

Postgraduate, Research and Specialty Training

- 2002 - 2004 Completed mods: Intro to Health Informatics; A Health Informatics Perspective of the Health System, Education Program for Health Informatics Professionals, University of Waterloo, Waterloo, Ontario, Supervisor(s): Dr. Dominic Covvey
2003 Feb 28 Basics of Web Design Part I, University of Toronto, Toronto, Ontario, Supervisor(s): Resource Centre for Academic Technology
1994 Jul - 2001 Jun Plastic Surgery, University of Toronto, Toronto, Ontario

Qualifications, Certifications and Licenses

- 2001 Jul CIP (Clinician Investigator Program), Royal College of Physicians and Surgeons of Canada, Ottawa, Ontario
2001 Jun FRCS(C), Plastic Surgery, Royal College of Physicians and Surgeons of Canada, Ottawa, Ontario

2. EMPLOYMENT

Appointments

- 2006 - 2012 Director, Information Technology, Division of Plastic Surgery, Surgery, University of Toronto, Toronto, Ontario
2001 - 2012 Director, Undergraduate Medical Education, Division of Plastic Surgery, Surgery, University of Toronto, Toronto, Ontario
2001 Jul - present Assistant Professor, Surgery, University of Toronto, Toronto, Ontario
2001 Jul - present Active Staff, Division of Plastic Surgery, Surgery, University Health Network, Toronto, Ontario

3. HONOURS AND CAREER AWARDS

Distinctions and Research Awards

NATIONAL

Received

- 1996 Jul - 1998 Jun **MRC Research Fellowship Award**, Medical Research Council of Canada. (Research Award)
Total Amount: 64,000 CAD
1990 Natural Sciences and Engineering Research Council of Canada (NSERC). (Research Award)
1988 Canada Scholarship, Government of Canada. (Distinction)
Awarded by the Federal Government for studies in science and technology.

LOCAL

Received

- 1999 **Gallie-Bateman Award**, University of Toronto. (Research Award)
For Gallie Day Presentation: Allograft microvascular epiphyseal plate transplants with short-term immunosuppression.
- 1998 **Davis and Geck Award**, University of Toronto. (Research Award)
Best research paper: Allograft microvascular epiphyseal plate transplants with short-term immunosuppression (Annual Resident's Research Day, Division of Plastic Surgery).
- 1992 **Summer Research Scholarship (summer student program)**, The Hospital for Sick Children, Toronto. (Research Award)
- 1992 **Summer Research Scholarship (Department of Surgery)**, University of Toronto. (Research Award)
- 1990 **James G. Burns Scholarship**, University of Toronto. (Distinction)
- 1989 **Dr. John Benjamin Gullen Scholarship**, University of Toronto. (Distinction)
For high academic standing in Science and Mathematics in the 1988-89 academic session.
- 1988 **George H. West Residence Scholarship**, University of Toronto. (Distinction)
- 1988 **Moses Henry Aikens Admission Scholarship**, University of Toronto. (Distinction)

4. PROFESSIONAL AFFILIATIONS AND ACTIVITIES

Professional Associations

- Member**, Canadian Medical Association
- Member**, Canadian Medical Protective Association
- Member**, Canadian Society of Plastic Surgeons
- Member**, Ontario Medical Association
- Member**, Ontario Society of Plastic Surgeons

Administrative Activities

INTERNATIONAL

American Society of Plastic Surgeons

2003 - 2006 **Member**, Web Development Committee

PROVINCIAL / REGIONAL

University of Waterloo

2003 Jul - present **Research Member**, HealthDoc Project, Waterloo, Ontario.

LOCAL

University Health Network

- 2008 - 2012 **Clinical Sponsor**, SPIRES - Surgical eDocumentation Project, Toronto, Ontario.
- 2007 - 2012 **Clinical Sponsor**, Enterprise Device Encryption Project, Toronto, Ontario.
- 2006 - 2013 **Project Sponsor**, UHN Physician eLearning Project, Faculty of Medicine, Dept of Surgery, Continuing Education, Toronto, Ontario.
- 2004 - 2012 **Member**, Wightman-Berris Academy Surgical Education Directorate, Faculty of Medicine,

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Dept of Surgery, Toronto, Ontario.
2003 - 2013 **Co-Chair**, Electronic Health Record Clinical Advisory Committee, Toronto, Ontario.
2002 - 2012 **Member**, Physician Inbox Functional User Group, Toronto, Ontario.
2001 - 2013 **Member**, eChart Clinical Advisory Committee, Toronto, Ontario.
2004 May - 2006 Oct **Member**, Medication Order Entry Benefits Realization Steering Committee, Toronto, Ontario.
2003 Jun - 2004 Jun **Member**, UHN Net Physician Portal Steering Committee, Toronto, Ontario.
2003 Jan - 2006 Feb **Member**, Medication Order Entry / Medication Administration Record Steering Committee, Toronto, Ontario.
2002 Dec - 2003 Dec **Physician Sponsor**, UHN Voice Recognition Project, Toronto, Ontario.
2001 Oct 1 - 2004 Oct 1 **Member**, Clinical Decision Support Clinical Advisory Committee, Toronto, Ontario.

Toronto Western Hospital

2002 Sep - present **Member**, Ambulatory Medical Surgical Unit and CSU Clinical Management Quality Team, Toronto, Ontario.
2002 Sep - present **Member**, Surgical Programs Management Committee, Toronto, Ontario.

University of Toronto

2001 - 2006 Coordinator, Multi-stakeholder Website for U of T Plastic Surgery

Innovations and Development in Teaching and Education

2009 - 2011 Year III Clerkship Seminar Series, Common Skin Lesions, Undergraduate MD, Faculty of Medicine, University of Toronto
Responsible for major design of course.
2007 - 2011 Year IV Clerkship Seminar Series, Facial Fractures, Undergraduate MD, Faculty of Medicine, University of Toronto
Responsible for major design of course.
2007 - 2008 UHN Physician eLearning Project, Continuing Education, Faculty of Medicine, Dept of Surgery, Plastic Surgery, University Health Network
Educational material produced: online teaching modules for training in use of UHN clinical information systems (SIMS technical staff, S. Kamala Devi, P Bray).
2003 - 2004 Microsurgical Nursing Education Module - Flaps and Grafts, Faculty of Medicine, University of Toronto
2003 - 2004 Surgical Skills Lab - Surgical biopsy and electrosurgery, Postgraduate MD, Faculty of Medicine, Dept of Surgery, University of Toronto
Responsible for major design of course.
2003 - 2004 Wound Healing - Year III Clerkship Seminar Series, Undergraduate MD, Faculty of Medicine, University of Toronto
Responsible for major design of course.
2002 - 2005 Year III Clerkship Seminar Series, Burns, Undergraduate MD, Faculty of Medicine, University of Toronto
Produced standardized presentation (Peter Bray, Joan Lipa, Division of Plastic Surgery, Toronto, Ontario); responsible for major design of course.
2002 - 2005 Year III Clerkship Seminar Series, Common Skin Lesions, Undergraduate MD, Faculty of Medicine, University of Toronto
Produced standardized presentation (Peter Bray, Joan Lipa, Division of Plastic Surgery, Toronto, Ontario); responsible for major design of course.
2002 - 2004 Year IV Clerkship Seminar Series, Facial Fractures, Undergraduate MD, Faculty of Medicine, University of Toronto

Produced standardized presentation (Peter Bray, Joan Lipa, Division of Plastic Surgery, Toronto, Ontario); responsible for major design of course.

2002 - 2003 Microsurgical Nursing Education Module - Flaps and Grafts, Faculty of Medicine, University of Toronto
Education module for nurses - presentation and course textual material. Responsible for major design of course.

C. Academic History

1. RESEARCH AWARDS

Grants, Contracts and Clinical Trials

PEER-REVIEWED GRANTS

Funded

2007 Jul - 2008 Jun Principal Investigator. Collaborative research project on the use of natural language generation techniques to produce patient education materials. Bell University Labs and NSERC. Collaborators: Co-Investigators - Dr. Joan Lipa, Dr. Dominic Covvey, Chrysanne DeMarco (University of Waterloo, Department of Computer Science). [Grants]
Renewed through the 2007-2008 academic year.

2006 Jul - 2007 Jun Co-Investigator. Natural language generation tools and methodologies for creation of personalized health education. Natural Sciences and Engineering Research Council of Canada (NSERC). Collaborative Research and Development Grants. Collaborators: Di Marco, C (Senior Investigator), Peter Bray, Joan Lipa, Don Cowan, Dominic Covvey. 72,000 CAD. [Grants]

NON-PEER-REVIEWED GRANTS

Funded

2011 Jul - 2012 Jun Co-Investigator. Impact of an electronic medication order entry system on clinical workflow and patient safety. University Health Network. SIMS operational budget. PI: Rossos, Peter, Dr. (Director of Informatics, UHN). Collaborators: Co-Investigators - Dr. Peter Bray, Dr. Robert Wu, Dr. Michael Carter, Mary Sanagan, Dafna Carr, Nick Zamora, Monique Pitre, Brenda Laurie-Shaw. [Grants]

2006 Jul - 2008 Jun Senior Investigator. Natural Language Generation Systems for Creation of Tailored Patient Education Materials. Bell University Laboratories. Collaborators: Chrysanne DiMarco, Peter W. Bray (Senior Investigators), Dominic Covvey, Don Cowan, Vince DiCiccio, Ed Hovy, Joan Lipa. 40,000 CAD. [Grants]
(renewal).

2006 Jul - 2007 Jun **Senior Investigator.** Natural Language Generation Systems for Creation of Tailored Patient Education Materials. Bell University Laboratories. Collaborators: Chrysanne DiMarco, **Peter W. Bray** (Senior Investigators), Dominic Covvey, Don Cowan, Vince DiCiccio, Ed Hovy, Joan Lipa. 40,000 CAD. [Grants]
(renewal).

2005 Jul - 2006 Jun **Senior Investigator.** Natural Language Generation Systems for Creation of Tailored Patient Education Materials. Bell University Laboratories. Collaborators: Chrysanne DiMarco, **Peter W. Bray** (Senior Investigators), Dominic Covvey, Don Cowan, Vince DiCiccio, Ed Hovy, Joan Lipa. 100,000 CAD. [Grants].

D. Publications

1. PEER-REVIEWED PUBLICATIONS

Journal Articles

1. C DiMarco, **P Bray**, HD Covey, DD Cowan, V DiCiccio, E Hovy, J Lipa, and C Yang. Authoring and generation of individualized patient education materials. *Journal on Information Technology in Healthcare*. 2008: 6(1): pp 63-71. **Co-Principal Author**.
2. **Bray PW**, Neligan PC, Bowen CV, Boyer MI. Survival of microvascular physeal allograft transplants following withdrawal of short-term postoperative immunosuppression. *Journal of Bone and Joint Surgery (American)*. 2004: 86-A(2): pp 281-9. **Principal Author**.
3. A Singhal, **PW Bray**, M Bernstein. Scalp ulceration from a circumferential head dressing after craniotomy: Case report of an uncommon complication due to human error. *The Canadian Journal of Plastic Surgery*. 2004: 12: pp 210-12. **Coauthor or Collaborator**.
4. **Peter W Bray**, Peter C Neligan, C Vaughan, A Bowen, Jayne S Danska, Martin I Boyer. Development and Validation of New Model for Microvascular Transplantation of Epiphyseal Plate Allografts with Minimal Adjoining Epiphyseal and Metaphyseal Bone. *Microsurgery*. 2003: 23: pp 153-63. **Principal Author**.
5. **Bray PW**, Boyer MI, Bowen CV. Complex injuries of the forearm: Coverage considerations. *Hand Clinics*. 1997: 13(2): pp 263-78. **Principal Author**.
6. **Bray PW**, Bell RS, Bowen CVA, Manktelow RT, Mahoney JL, Davis A, O'Sullivan B. Limb-salvage surgery and adjuvant radiotherapy for soft-tissue sarcomas of the forearm and hand. *Journal of Hand Surgery*. 1997: 22A: pp 495-503. **Principal Author**.
7. **Bray PW**, Mahoney JL, Anastakis D, Yao JKY. Sternotomy infections: sternal salvage and the importance of sternal stability. *Canadian Journal of Surgery*. 1996: 39: pp 297-301. **Principal Author**.
8. **Bray PW**, Mahoney JL, Campbell JP. Sensitivity and specificity of ultrasound in the diagnosis of foreign bodies in the hand. *Journal of Hand Surgery*. 1995: 20A: pp 661-666. **Principal Author**.
9. Bowen CVA, **Bray PW**, Boyer MI, Fowler D, Nolan L. Short-term response of growth plate cell populations following selective devascularization and microsurgical revascularization. *Microsurgery*. 1994: 15(8): pp 555-62. **Co-Principal Author**.
10. Boyer MI, **Bray PW**, Bowen CVA. Epiphyseal Plate Transplantation: An Historic Review. *British Journal of Plastic Surgery*. 1994: 47(8): pp 563-9. **Co-Principal Author**.

2. NON-PEER-REVIEWED PUBLICATIONS

Journal and Magazine Articles

1. Male Cosmetic Enhancement: Dawn of a new age LUSH Luxury Fall 2014 pp 56
2. The Pursuit of Beauty: Were the Good-Old-Days Really All That Good? LUSH Luxury Winter 2013 pp 72
3. The Jolie Factor: Did the celebrity actress open up more eyes about breast restoration surgery? LUSH Luxury Summer 2013 pp 50
4. **Peter Bray**. How Much is Too Much? *Revive Magazine*. 2011: pp 52-55. **Principal Author**.
5. **Peter Bray**. BodyTite: The Latest Chapter in Liposuction. *Revive Magazine*. 2010: pp 127-29. **Principal Author**.
6. **Peter Bray**. Plastic Surgery Safety. *Revive Magazine*. 2010: pp 76-78. **Principal Author**.

7. **Peter Bray**. Cosmetic Surgery in Men. Revive Magazine. 2010: pp 62-64. **Principal Author**.
8. **Peter Bray**. Legs - Surgical Options. Revive Magazine. 2010: pp 67-68. **Principal Author**.
9. **Peter Bray**. Surgical Options for Arms. Revive Magazine. 2010: pp 72-74. **Principal Author**.
10. Eskander, Antoine; Ghazarian, Danny; Bray, Peter; Dawson, Laura; Goldstein, David. Squamous cell carcinoma arising in a proliferating pilar (trichilemmal) cyst with nodal and distant metastases. Journal of Otolaryngology. 2009. In Press. Coauthor or Collaborator.
11. Winer D, Alsaad KO, Bray P, Smith R, Ghazarian D. Early onset cutaneous squamous cell carcinoma associated with neurofibromatosis type 2 (NF2). European Journal of Dermatology. 16(4):448-9, 2006 Jul-Aug. [Case Reports. Letter]. Coauthor or Collaborator.
12. P Rossos, H Abrams, R Wu, **P Bray**. Active Physician Participation Key to Smooth MOE/MAR Rollout. Healthcare Quarterly. 2006: 10: pp 58-64. **Co-Principal Author**.
13. Winer D, Alsaad KO, Bray P, Smith R, Ghazarian D. Early onset cutaneous squamous cell carcinoma associated with neurofibromatosis type 2 (NF2). European Journal of Dermatology. 2006: 16(4): pp 448-9. [Case Reports. Letter]. Coauthor or Collaborator.
14. **Peter W Bray**. Corridor Consultations - Emergency Medicine: Debriding second degree burns. Patient Care Canada. 2002: 13 (11): pp 11-12. (Invited Review). **Principal Author**.

Abstracts

1. **Peter W Bray**. Use of Academic Courseware Web-Based Application for Distribution of Plastic Surgery Educational Materials. The Canadian Journal of Plastic Surgery. 2003: 11(2): pp 110. **Principal Author**.
2. **Bray PW**, Levine R, Evans G. Effect of a commercial smoke evacuator on levels of aerosolized particulates from electrocautery smoke during bilateral reduction mammoplasty. Canadian Journal of Plastic Surgery. 2001: 9(3): pp 106. **Principal Author**.
3. **Bray PW**, Bowen CVA, Danska JS, Boyer MI. Development and validation of a small microvascular epiphyseal-plate transfer. Journal of Reconstructive Microsurgery. 1999: 15(5): pp 396. **Principal Author**.
4. **Bray PW**, Bell RS, Bowen CVA, Manktelow RT, Mahoney JL, Davis A, O'Sullivan B. Limb-salvage surgery and adjuvant radiotherapy for soft-tissue sarcomas of the forearm and hand. Canadian Journal of Surgery. 1992: 35(4): pp 453. **Principal Author**.
5. Bowen CVA, **Bray PW**, Boyer MI, Fowler D, Nolan L. Short-term response of growth plate cell populations following selective devascularization and microsurgical revascularization. Orthopaedic Transactions. 1992. **Co-Principal Author**.

Book Chapters

1. C DiMarco, D Cowan, **P Bray**, D Covvey, V Di Ciccio, E Hovy, J Lipa, D Mulholland. A Physician's Authoring Tool for Generation of Personalized Health Education in Reconstructive Surgery. In: The American Association for Artificial Intelligence 2006 Spring Symposium Series: Argumentation for Consumers in Healthcare. (T. Bickmore, N. Green: eds.) AAAI Press, Menlo Park, 2006. **Co-Principal Author**.
2. Bray PW. Descending Genicular Artery Perforator Flap. In: Perforator Flaps: Anatomy, Technique & Clinical Applications. (Blondeel PH, Morris S, Hallock GG, Neligan PC: eds.) Quality Medical Publishing, Inc., St. Louis, MO, 2005. In Press. **Principal Author**.
3. Bowen CVA, **Bray PW**, Boyer MI. Vascularised epiphyseal plate transplantation. In: Surgery of the Growth Plate. (Julio de Pablos: ed.) Ediciones Ergon SA, Madrid, 1998: pp 117-25. **Co-Principal Author**.

E. Presentations and Special Lectures

1. INTERNATIONAL

Abstracts and Other Papers

- 2007 Aug The development of a natural language generation system for personalized e-health information. Medinfo, 12th International Health (Medical) Informatics Congress. Brisbane, Australia. C. DiMarco, H. Dominic Covvey, **P. Bray**, D. Cowan, V. DiCiccio, E. Hovy, J. Lipa, D. Mulholland. (Poster presentation).
- 2007 The development of a natural language generation system for personalized e-health information. 12th World Congress on Health (Medical) Informatics. Proceedings of the 12th World Congress on Health (Medical) Informatics: 2007: 129: pp 1572. C DiMarco, HD Covvey, **P Bray**, DD Cowan, V DiCiccio, E Hovy, J Lipa, and D Mulholland. (Collaborator).
- 2006 Nov 12 Authoring and Generation of Individualized Patient Education Materials. American Medical Informatics Association. Washington, DC. C. DiMarco, **P. Bray**, H. Covvey, D. Cowan, V. DiCiccio, E. Hovy, J. Lipa, C. Yang. (Peer reviewed paper).
- 2006 Mar A physician's authoring tool for generation of personalized health education in reconstructive surgery. American Association for Artificial Intelligence (AAAI), Spring Symposium on Argumentation for Consumers of Healthcare, Stanford University. Palo Alto, California. Chrysanne DiMarco; **Peter Bray**; Dominic Covvey; Don Cowan; Vic DiCiccio; Eduard Hovy; Joan Lipa; and Doug Mulholland. (Peer reviewed paper).
- 2005 Jul 29 Authoring and generation of tailored preoperative patient education materials. 10th International Conference on User Modeling. Edinburgh, Scotland. **Peter Bray**, Chrysanne DiMarco, Dominic Covvey, Don Cowan, Vic Di Ciccio, Eduard Hovy, Joan Lipa, Cathy Yang. (Peer reviewed paper).
- 1999 Jun 12 Allograft microvascular epiphyseal plate transplants with short-term immunosuppression. International Society for Reconstructive Microsurgery. Los Angeles, California. **Bray PW**, Bowen CVA, Danska JS, Neligan P. (Peer reviewed paper).
- 1999 May 20 Allograft microvascular epiphyseal plate transplants with short-term immunosuppression. Plastic Surgery Research Council, PSRC Annual Meeting. Pittsburgh, Pennsylvania. **Bray PW**, Bowen CVA, Danska JS, Neligan P. (Poster).
- 1999 Jan 18 Development and validation of a model for a small, vascularized epiphyseal plate transplant. American Society for Reconstructive Microsurgery. Waikoloa, Hawaii. **Bray PW**, Bowen CVA, Danska JS, Boyer MI. (Peer reviewed paper).
- 1996 Sep 29 Limb-salvage surgery and adjuvant radiotherapy for soft-tissue sarcomas of the forearm and hand. American Society for Surgery of the Hand. Nashville, Tennessee. **Bray PW**, Bell RS, Bowen CVA, Davis A. (Peer reviewed paper).
- 1996 Amputation of the thumb. 1st International Conference of Emergency Surgery. Belgrade. Proceedings of 1st International Conference of Emergency Surgery. Bowen CVA, **Bray PW**. (Co-Principal Author).
- 1994 Oct 20 Sensitivity and specificity of ultrasound in the diagnosis of foreign bodies in the hand. American Society for Surgery of the Hand. Cincinnati, Ohio. **Bray PW**, Mahoney JL, Campbell JP. (Peer reviewed paper).
- 1993 Feb Short-term response of growth plate cell populations following selective devascularization and microsurgical revascularization. SIROT. Seoul, Korea, Republic Of. Bowen CVA, **Bray PW**, Boyer MI, Fowler D, Nolan L. (Poster).
- 1993 Jan Short-term response of growth plate cell populations following selective devascularization and microsurgical revascularization. American Society for Reconstructive Microsurgery. Kansas City, Missouri. Bowen CVA, **Bray PW**, Boyer MI, Fowler D, Nolan L. (Poster).

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- 1992 Oct Limb-salvage surgery and adjuvant radiotherapy for soft-tissue sarcomas of the forearm and hand. American Society for Surgery of the Hand. Phoenix, Arizona. **Bray PW**, Bell RS, Bowen CVA, Manktelow RT, Mahoney JL, Davis A, O'Sullivan B. (Poster).
- 1992 Short-term response of growth plate cell populations following selective devascularization and microsurgical revascularization. Orthopedic Research Society. Bowen CVA, **Bray PW**, Boyer MI, Fowler D, Nolan L. (Co-Principal Author).

Other Lectures or Papers Given

- 1996 Oct 6 Malignant Hand Tumors. American Society for Surgery of the Hand Regional Review Course. Toronto, Ontario.

2. NATIONAL

Abstracts and Other Papers

- 2008 Jun Authoring and Generation of Tailored Preoperative Patient Education Materials. Canadian Society of Plastic Surgeons. St. John's, Newfoundland and Labrador. **PW Bray**, C. DiMarco, H. Covvey, D. Cowan, V. DiCiccio, E. Hovy, J. Lipa. (Peer reviewed paper).
- 2003 Jun 28 Web-based Academic Courseware Application for Administration of Plastic Surgery Education Materials. Canadian Society of Plastic Surgeons. Whistler, British Columbia. (Peer reviewed paper).
- 2003 Use of Academic Courseware Web-Based Application for Distribution of Plastic Surgery Educational Materials. Canadian Society of Plastic Surgeons. Oakville, Ontario. (Principal author).
- 2001 Jun 8 Effect of a commercial smoke evacuator on levels of aerosolized particulates from electrocautery smoke during bilateral reduction mammoplasty. Canadian Society of Plastic Surgery, 55th Annual Meeting. Jasper, Alberta. **Bray PW**, Levine R, Evans G. (Peer reviewed paper).
- 1994 May 8 Sensitivity and specificity of ultrasound in the diagnosis of foreign bodies in the hand. Canadian Society for Surgery of the Hand. Ottawa, Ontario. **Bray PW**, Mahoney JL, Campbell JP. (Peer reviewed paper).
- 1993 Mar Short-term response of growth plate cell populations following selective devascularization and microsurgical revascularization. Canadian Orthopaedic Research Society. Montreal, Quebec. Bowen CVA, **Bray PW**, Boyer MI, Fowler D, Nolan L. (Poster).
- 1992 May 12 Limb-salvage surgery and adjuvant radiotherapy for soft-tissue sarcomas of the forearm and hand. Canadian Society for Surgery of the Hand. London, Ontario. **Bray PW**, Bell RS, Bowen CVA, Manktelow RT, Mahoney JL, Davis A, O'Sullivan B. (Peer reviewed paper).
- 1992 Short-term response of growth plate cell populations following selective devascularization and microsurgical revascularization. Canadian Orthopedic Research Society. Orthopedic Proceedings 1992. Bowen CVA, Bray PW, Boyer MI, Fowler D, Nolan L. (Co-Principal Author).