

PENNEY M. GILBERT

Institute of Biomaterials and Biomedical Engineering
Donnelly Centre for Cellular and Biomolecular Research
University of Toronto
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STEM CELL BIOLOGY - CELL AND MOLECULAR ENGINEERING - REGEN MED

CURRENT POSITION

09/12 — current **University of Toronto** – Institute for Biomaterials and Biomedical Engineering **Assistant Professor, tenure track**

- Muscle stem cell mechanobiology
- Cellular and molecular mechanisms of muscle stem cell quiescence and self-renewal
- 3D culture models of human skeletal muscle regeneration and disease

EDUCATION

05/07—07/12 **Stanford University (USA)**
Stanford, CA **Postdoctoral Fellow**, Advisor: Dr. Helen M. Blau

01/07—04/07 **University of California, San Francisco (USA)**
San Francisco, CA **Postdoctoral Fellow**, Advisor: Dr. Valerie M. Weaver

09/01—12/06 **University of Pennsylvania (USA)**
Philadelphia, PA **PhD**, Advisor: Dr. Valerie M. Weaver
Cell and Molecular Biology (CAMB) Graduate program
Dissertation: The role of HoxA9 in breast cancer progression

09/95—5/99 **Haverford College (USA)**
Haverford, PA **BSc**, Cellular and Developmental Biology

RESEARCH EXPERIENCE

09/12—Present **Assistant Professor** – University of Toronto
Muscle stem cell bioengineering laboratory

05/07—07/12 **Postdoctoral Fellow** – Stanford University

01/07—04/12 **Postdoctoral Fellow** – University of California, San Francisco

09/01—12/06 **PhD Student** – University of Pennsylvania

- 06/99—08/01 **Research Assistant** – University of Pennsylvania
Primary Investigator: Dr. Christopher G. Burd
- 09/98—05/99 **Senior Research Project** – Haverford College
Adviser: Dr. Karl Johnson
- 06/98—08/98 **Summer Fellowship** – Dartmouth College, HHMI undergraduate fellow
Primary Investigator: Dr. Thomas P. Jack

RECOGNITIONS

- 2016 Ontario Early Researcher Award
 2015 Dr. George Karpati Award [with Cohn, Minassian, Pearson, and Dowling groups]
 2013 Connaught New Investigator Award
 2013 University of Toronto Faculty of Medicine Dean’s New Investigator Award
 2011 Recipient of a NIH K99 Pathway to Independence Development Award
 2010 Stanford University Postdoctoral Association (SUPD) Best Postdoc’ Research Award
 2010 Gordon-Kenan Signal Transduction by Engineered Extracellular Matrices Research Symposium Best Poster Award
 2010 3rd Annual Baxter Retreat Best Talk Award
 2003 Cell and Molecular Biology graduate group retreat Best Poster Award
 1998 Howard Hughes Medical Institute Undergraduate Fellow

AFFILIATIONS & PROFESSIONAL SOCIETY MEMBERSHIPS

- 2016—present American Society for Cell Biology – Women in Cell Biology, Associate Member
- 2016—present University of Toronto, Department of Biochemistry, Cross-Appointed
- 2015—present Ontario Institute for Regenerative Medicine, Member
- 2013—2015 Toronto Western Hospital, Cross-Appointed
- 2013—2015 Stem Cell Network, Member
- 2013—2015 Toronto Musculoskeletal Centre, Grad Faculty Member
- 2012—2015 Ontario Stem Cell Initiative, Member
- 2012—present Donnelly Centre for Cellular and Biomolecular Research, Cross-Appointed
- 2011—present Biomedical Engineering Society, Member
- 2010—present International Society for Stem Cell Research, Member
- 2001—present American Society for Cell Biology, Member
- 2009—2011 American Association for Cancer Research, Member

RESEARCH PUBLICATIONS

Primary Research, Published (current and former trainees are underlined)

1. Magnusson KEG, Jalden J, Gilbert PM, and Blau HM. (2015) ‘Global linking of tracks using Viterbi algorithm’ (17 citations). *IEEE Transactions on Medical Imaging*,

2. Cosgrove BD, **Gilbert PM[#]**, Porpiglia E, Mourkioti F, Lee SP, Corbel SY, Llewellyn ME, Delp SP and Blau HM[#] (**#Co-Corresponding Authors**; 2014). ‘Rejuvenation of the muscle stem cell population restores strength to injured aged muscles’ (140 citations). *Nature Medicine*, 20:255-64.
3. Mouw JK, Yui Y, Damiano L, O Bainer R, Lakins JN, Acerbi I, Ou G, Wijekoon AC, Levental KR, **Gilbert PM**, Hwang ES, Chen Y-Y and Weaver VM. (2014) ‘Tissue mechanics modulate microRNA-dependent PTEN expression to regulate malignant progression’ (110 citations). *Nature Medicine*, 20:360-367.
4. Sengupta D, **Gilbert PM**, Johnson KL, Blau HM and Heilshorn SC. (2012) ‘Protein-engineered biomaterials to generate human skeletal muscle mimics’ (17 citations). *Advanced Healthcare Materials*, 1(6):785-789.
5. Gibbs KD Jr., **Gilbert PM**, Blau HM, Weissman IL, Nolan GP, and Majeti R. (2011) ‘Single cell analysis of phosphor-signaling networks reveals G-SCF drives human hematopoietic stem cells into cell cycle’ (39 citations). *Blood*, 117(16):4226-33.
6. **Gilbert PM***, Havenstrite K*, Magnusson KEG, Sacco A, Leonardi N, Nguyen N, Kraft P, Thrun S, Lutolf M and Blau HM. (*Equal Contribution; 2010) ‘Substrate elasticity regulates skeletal muscle stem cell self renewal in culture’ (668 citations). *Science*, 329(5995): 1078-81.
7. **Gilbert PM***, Mouw JK*, Unger MA, Lakins JN, Gbegnon MK, Clemmer VB, Benezra M, Licht JD, Boudreau NJ, Tsai K.K.C., Welm AL, Feldman MD, Weber BL, and Weaver VM. (*Equal contribution; 2010) ‘HOXA9 regulates BRCA1 expression to modulate human breast tumor phenotype’ (64 citations). *Journal of Clinical Investigation*, 120(5):1535-50.
8. Geng J, Shin ME, **Gilbert PM**, Collins RN, and Burd CG. (2005) ‘*Saccharomyces cerevisiae* Rab-GDI displacement factor ortholog Yip3p forms distinct complexes with the Ypt1 Rab GTPase and the reticulon Rtn1p’ (30 citations). *Eukaryotic Cell*, Jul 4(7): 1166-1174.
9. Calero M, Chen CZ, Zhu W, Winand N, Havas KA, **Gilbert PM**, Burd CG, and Collins RN. (2003) ‘Dual prenylation is required for Rab protein localization and function’ (135 citations). *Molecular Biology of the Cell*, 14(5): 1852-1867.
10. Shin ME, Ogburn KD, Varban OA, **Gilbert PM**, and Burd CG. (2001) ‘FYVE domain targets Pib1 ubiquitin ligase to endosome and vacuolar membranes’ (27 citations). *Journal of Biological Chemistry*, 276(44): 41388-41393.
11. **Gilbert PM** and Burd CG. (2001) ‘GDP dissociation inhibitor domain II required for Rab GTPase recycling’ (20 citations). *Journal of Biological Chemistry*, 267(11): 8014-8020.

Invited Reviews (current and former trainees are underlined)

1. **Gilbert PM[#]** and Weaver VM. (**#corresponding author**; 2016) ‘Cellular adaptation to biomechanical stress across length scales in tissue homeostasis and disease.’ *Seminars in Cell and Developmental Biology*, doi:10.1016/j.semcdb.2016.09.004.
2. Nissar A, Martowirogo A, and **Gilbert PM[#]**. (**#Senior Author**; 2016) ‘Targeting the stem cell niche with regenerative biomaterials.’ *Current Opinion in Solid State and Materials Science*, 20(4): 180-192.
3. Morrissey-Scoot JD, Cheng R, Davoudi S, and **Gilbert PM[#]**. (**#Senior Author**; 2016) ‘Biomechanical origins of muscle stem cell signal transduction.’ (4 citations) *J. Molecular Biology*, 428(7): 1441-54.

4. Bakooshli MA and **Gilbert PM[#]**. (#Senior Author; 2015) ‘Muscling in on the third dimension’. *eLIFE*, DOI: 10.7554/eLife.06430
5. **Gilbert PM**, Corbel S, Doyonnas R, Havenstrite K, Magnusson K.E.G. and Blau HM. (2012) ‘A single cell bioengineering approach to elucidate mechanisms of adult stem cell self-renewal’. (11 citations) *Integrative Biology* (IF=4.45), 360-367.
6. **Gilbert PM** and Blau HM. (2011) ‘Engineering a stem cell house into a home’ (37 citations). *Stem cell research and therapy*.
7. Lutolf M, **Gilbert PM** and Blau HM. (2009) ‘Designing biomaterials to direct stem cell fate’ (768 citations). *Nature*, 462: 433-441.
8. Cosgrove BD, Sacco A, **Gilbert PM**, Blau HM. (2009) ‘A home away from home: Challenges and opportunities in engineering in vitro muscle satellite cell niches’ (82 citations). *Differentiation*, 78(203): 185-94.
9. Weaver VM and **Gilbert P**. (2004) ‘Watch thy neighbor: cancer is a communal affair’ (77 citations). *Journal of Cell Science*, 117(Pt8): 1287-1290.

Invited Book Chapters

2. Davoudi S and **Gilbert PM**. (2015) ‘Optimization of satellite cell culture through biomaterials’. *Methods in Molecular Biology*, E. Perdiguero and D. Cornelison (ed.), New York, NY: Springer
3. Blau HM, Sacco A., and **Gilbert PM**. (2009) ‘Muscle stem cells’. *Essentials of Stem Cell Biology*. Elsevier Publishing.
4. Blau HM, Sacco A., and **Gilbert PM**. (2008) ‘Stem cell self-renewal’. *Stem Cell Encyclopedia*. SAGE Publishing.

INVITED LECTURES

i. International and national presentations (2012 – present)

1. ‘Spatio-temporal control of skeletal muscle endogenous repair’ University of Kentucky, **Invited speaker**. Lexington, USA November 2016
2. ‘Spatio-temporal control of skeletal muscle stem cell self-renewal’ 2016 Gordon Research Conference – Signal transduction from engineered ECMs, **Invited speaker**. Biddeford, USA June 2016
3. ‘Transient niche stiffening synergizes with a non-canonical Wnt ligand to induce satellite cell self-renewal divisions.’ 2015 American Society for Cell Biology Meeting, **Oral Presentation, selected from abstracts**. San Diego, USA December 2015
4. ‘Molecular consequences of biophysical changes in the muscle stem cell niche.’ University of Pennsylvania – Advances in Regeneration Seminar Series, **Invited speaker**. Philadelphia, USA December 2015
5. ‘Molecular consequences of biophysical changes in the muscle stem cell niche.’ Washington University, **Invited speaker**. St. Louis, USA November 2015
6. ‘Molecular outcomes of biophysical alterations in the muscle stem cell niche.’ 2015 Biomedical Engineering Conference, **Oral Presentation, selected from abstracts**. Tampa, USA October 2015
7. ‘Molecular consequences of biophysical changes in the muscle stem cell niche.’ Gordon Research Conference – Tissue repair and regeneration, **Invited speaker**. New Hampshire, USA June 2015

8. 'Molecular consequences of biophysical changes in the muscle stem cell niche.' Università degli studi di Padova, **Invited speaker**. Padova, Italy June 2015
9. 'Tensional homeostasis and the aging muscle stem cell niche.' McMaster Natural Sciences and Engineering Research Council (NSERC) Collaborative Research and Training Experience (CREATE) Integrated Development of Extracellular Matrices (IDEM) Annual General Meeting, **Keynote speaker**. Hamilton, ON June 2015
10. 'Molecular consequences of biophysical changes in the muscle stem cell niche.' Gordon Research Conference – ECM adhesion signaling in context, **Invited speaker**. Il Ciocco, Italy May 2015
11. 'Molecular consequences of age-associated biophysical alterations in the muscle stem cell niche.' University of Calgary, **Invited speaker**. Calgary, AB March 2015
11. 'The aging muscle stem cell and its niche.' University of California, San Francisco: Stem cell niche meeting, **Invited speaker**. San Francisco, USA October 2014
12. 'Biophysical changes in the aging muscle stem cell niche.' World Congress on Biomechanics, **Invited speaker**. Boston, USA July 2014
13. 'The aging muscle stem cell niche as a therapeutic target.' Experimental Biology/AAA Conference: Signaling from synthetic and natural ECMs, **Invited speaker**. San Diego, USA April 2014
14. 'A synergistic biomaterial/pharmacologic approach to rejuvenate the aged muscle stem cell population.' 4th Annual International Conference for Stem Cell Engineering (ICSCE), **Invited speaker and Session Chair**. San Diego, USA March 2014
15. 'Bioengineering strategies to maintain skeletal muscle health throughout life.' UTHealth-Houston IBP Seminar Series, **Invited speaker**. Houston, USA January 2014
16. 'Engineering principles to restore aged muscle stem cell regenerative potential'. Canadian Institutes of Health Research (CIHR), Institute of Genetics Young Investigators Forum, **Invited speaker**. Mont-Gabriel, QC November 2013
17. 'A combined biomaterial/pharmacologic approach to restore regenerative potential to aged muscle stem cells.' Till and McCulloch Annual Meeting, **Invited speaker**. Banff, AB October 2013
18. 'Biomaterial-based strategies to restore aged stem cell function.' Beyond Borders: Lyon Sachs Symposium on Biomaterials and Tissue Engineering. **Invited speaker**. Technion Institute. Haifa, Israel May 2013
19. 'A combined biomaterial/pharmacologic ex vivo strategy to restore regenerative potential to aged muscle stem cells.' Ottawa Hospital Research Institute, **Invited speaker**. Ottawa, ON April 2013
20. 'Ex vivo rejuvenation and expansion of aged stem cells in young biomimetic niches.' Lady Davis Institute Seminar Series, **Invited speaker**. Montreal, QC January 2013
21. 'Ex vivo rejuvenation and expansion of aged muscle stem cells in young biomimetic niches'. Biomedical Engineering Society (BMES) – Cell and Molecular Bioengineering (CMBE) Special Interest Group (SIG) Conference, **Invited speaker**. Hawaii, USA January 2013
22. 'Therapeutic ex-vivo rejuvenation of muscle stem cells restores strength in aged mice.' Gordon Research Conference – Signal transduction by engineered extracellular matrices, **Oral 'Poster Blitz'**. Biddeford, USA July 2012.

ii. Local presentations (2012 – present)

23. 'Bioengineering strategies to maintain skeletal muscle health throughout life.' University of Toronto 'Science Literacy' event, **Invited speaker**. Toronto, ON September 2015
24. 'Molecular consequences of age-associated biophysical alterations in the muscle stem cell niche.' The Hospital for Sick Children Cell Biology Seminar Series, **Invited speaker**. Toronto, ON January 2015
25. 'Its juuust right!: Biomaterials strategies to support muscle stem cell regenerative medicine.' Let's Talk Science / Stem Cell Network (SCN) – Stem Cell Talks High School outreach event, **Keynote speaker**. Calgary, AB March 2015
26. 'Tissue biophysical cues and muscle stem cell fate.' Institute of Biomaterials and Biomedical Engineering Faculty Retreat, **Invited speaker**. Toronto, ON June 2014
27. 'Bioengineering strategies to maintain skeletal muscle health throughout life.' Muscle health awareness day (MDAD5) at York University, **Invited speaker**. Toronto, ON May 2014
28. 'The aging muscle stem cell and its niche.' Toronto Musculoskeletal Centre Seminar Series, **Invited speaker**. Toronto, ON May 2014
29. 'Stem cells 101.' Let's Talk Science / Stem Cell Network (SCN) – Stem Cell Talks High School outreach event, **Invited speaker**. Toronto, ON March 2014
30. 'Synergistic biophysical and biochemical cues to expand aged stem cells with restorative function for aged injured muscles.' Matrix Dynamics Group Seminar Series, **Invited speaker**. Toronto, ON April 2013
31. 'Ex vivo rejuvenation and expansion of aged stem cells in young biomimetic niches.' Donnelly Centre for Cellular and Biomolecular Research (CCBR) faculty retreat, **Invited speaker**. Toronto, ON March 2013
32. 'Stem cells 101.' Let's Talk Science / Stem Cell Network (SCN) – Stem Cell Talks High School outreach event, **Invited speaker**. Toronto, ON March 2013
33. 'Skeletal muscle in a dish: bioengineering strategies to direct stem cell fate.' Biosciences Education Canada (BEC) High School outreach event, **Invited speaker**. Hamilton, ON February 2013
34. 'Skeletal muscle in a dish: bioengineering strategies to direct stem cell fate.' T.O.P.S. at Bloor High School Science Fair, **Keynote speaker**. Toronto, ON February 2013
35. '2D and 3D culture models of skeletal muscle tissue.' Toronto Western Hospital Orthopaedic Surgery Rounds, **Invited speaker**. Toronto, ON November 2012.
36. 'Skeletal muscle in a dish: bioengineering strategies to direct stem cell fate.' Biosciences Education Canada (BEC) High School outreach event, **Invited speaker**. Toronto, ON October 2012
37. 'Bioengineering strategies to rejuvenate aged muscle stem cells ex vivo.' Centre for Cellular and Biomolecular Research Annual Postdoctoral Symposium, **Keynote speaker**. Toronto, ON November 2012
38. 'Therapeutic rejuvenation of muscle stem cells ex vivo restores strength in aged mice.' Ontario Stem Cell Initiative (OSCI) – Stem cell rounds, **Invited speaker**. Toronto, ON September 2012

iii. International, national, and local presentations (2010 – 2012)

39. 'Biophysical regulation of adult stem cell fate.' EMBO 'Advances in Stem Cell Research', **Invited speaker**. Paris, France May 2011

40. 'Biophysical regulation of adult stem cell fate.' 2nd annual Institute for Stem Cell Biology and Regenerative Medicine Retreat, **Invited speaker**. Stanford, USA January 2011
41. 'Biophysical cues to direct stem cell fate.' NHLBI Progenitor Cell Consortium, **Invited speaker**. Stanford, USA October 2011
42. 'Engineering a stem cell house into a home.' Stanford Regenerative Medicine Seminar Series (ReMS), **Invited speaker**. Stanford, USA December 2010
43. 'Let's get biophysical: biomimetic substrates for adult stem cell self-renewal in culture.' 1st annual Stanford University Postdoctoral Association (SUPD) Research Symposium, **Invited speaker**. Stanford, USA November 2010
44. 'Matrix elasticity regulates muscle stem cell self-renewal in culture.' Gordan-Kenan Research Symposium – Signal transduction by engineered extracellular matrices, **Invited speaker**. Biddeford, USA June 2010
45. 'The stem cell niche as a therapeutic target.' 5th Helsinki Biomedical Graduate School Student Council Symposium, **Invited speaker**. Helsinki, Finland May 2010
46. 'Substrate elasticity regulates muscle stem cell self-renewal.' 3rd Annual Baxter Laboratory in Stem Cell Biology Retreat, **Invited speaker**. Stanford, USA April 2010
47. 'The stem cell niche as a therapeutic target.' 1st International Conference of Regenerative Surgery. **Invited speaker**. Rome, Italy 2009
48. 'The breast tumor modulator HoxA9 regulates BRCA1 and biophysical-mediated adhesion.' 100th Annual AACR Meeting. **Oral presentation, selected from abstracts**. Denver, USA 2009
49. 'HoxA9 modulates the breast tumor phenotype through BRCA1 regulation.' Annual Cell and Molecular Biology Graduate Group symposium. **Invited speaker**. Philadelphia, USA 2006
50. Three-dimensional microenvironment and breast cancer progression. In Vitro Biology Meeting. **Invited speaker**. Minneapolis, USA 2006
51. 'HoxA9 as a putative cell adhesion tumor suppressor (CATS) gene.' ASCB 42nd annual meeting. **Oral presentation, selected from abstracts**. San Francisco, USA 2002

PATENTS FILED

1. Methods and compositions for rejuvenation and expansion of stem cells. PCT/US2012/032336. Filed 2012-04-05, United States.
2. Elastic substrates and methods of use in cell manipulation and culture. PCT/US2011/044259. Filed 2011-07-15, United States.

ADMINISTRATIVE DUTIES

DEPARTMENTAL

2016	Collaborative Program in Cell & Developmental Biology (CPDB) Steering Committee, Committee Member
2015—present	IBBME Distinguished Seminar Series, Committee Chair
2014—2015	IBBME Distinguished Seminar Series, Committee Member
2014	IBBME Undergraduate Summer Research Program, Co-Coordinator
2013—2014	IBBME Progress Through the Ranks, Committee Member

2013—2014 **BME510** – Regenerative Medicine for Undergraduate Students (25 enrollees), **Course Co-Coordinator**

2013—present **BME510** – Regenerative Medicine for Undergraduate Students (25 enrollees), **Guest Lecturer**

2013—present **BME205** – Introduction to Biological Systems for Engineering Science Undergraduates (215 enrollees), **Course Coordinator and Lecturer**

2013—present **BME1454** – Regenerative Medicine for IBBME Graduate Students (15 enrollees), **Course Coordinator and Lecturer**

2013—present **BME1450** – Biomedical Engineering Science for IBBME Graduate Students (75enrollees), **Guest Lecturer**

2013—present **MIE439** – Introduction to Biomechanics (100 enrollees), **Guest Lecturer**

2013—present **MSC3001H** – Foundations in Musculoskeletal Science (20 enrollees), **Guest Lecturer**

2016 **LMP1017H** – Tissue Injury, Repair, and Regeneration, **Guest Lecturer**

2012—present MAsc (3 total) and PhD (9 total) thesis committee, **Member**

2012—present MAsc (4 total) and PhD (9 total) thesis defense, **External Examiner**

2012—present PhD thesis defense (3 total), **Chair**

2012—present PhD qualifying exam (6 total), **Member**

2012—present MAsc to PhD bypass exam (3 total), **Member**

FACULTY

2014—present University of Toronto Faculty of Medicine and Pharmacy Animal Care Committee, **Member**

2013—present Undergraduate Engineering Research Day, **Oral presentation judge**

ONTARIO

2016—present Ontario Institute for Regenerative Medicine, **Director of Outreach and Education**

2014—present Ontario Institute for Regenerative Medicine, **Council Member**

2014—present Ontario Institute for Regenerative Medicine, **Outreach & Education Committee member**

INTERNATIONAL

2016 American Society for Cell Biology, Women in Cell Biology, **Associate Member**

2015 Till and McCulloch Meeting, Banff, Canada, **Oral Presentation Judge**

2015 Biomedical Engineering Society ‘Directing Stem Cell Differentiation I’, Florida, USA, **Session Chair**

2015 Gordon Research Conference ‘ECM adhesion signaling in context’, Il Ciocco, Italy, **Poster Judge**

2014 Till and McCulloch Meeting, Banff, Canada, **Poster Judge**

2014 International Conference for Stem Cell Engineering, ‘Stem Cell Engineering and Morphogenesis’, San diego, USA, **Session Chair**

- 2013—present **Conference abstract adjudication** (International Society for Stem Cell Research, World Biomaterials Conference, Tissue Engineering and Regenerative Medicine, and Biomedical Engineering Society)
- 2012—present **Grant adjudication** (Canadian Institutes for Health Research, AFM-Telethon, VENI, Stem Cell Network, Natural Sciences and Engineering Research Council, and Ontario Institute for Regenerative Medicine)
- 2012—present **Journal manuscript review** (*Nature Communications, Journal of Cell Science, Cell Reports, Experimental Cell Research, Regenerative Medicine, Scientific Reports, Science Translational Medicine, Biotechnology and Bioengineering, Cell Biochemistry and Biophysics, Plos One, Nature Biotechnology, eLIFE, Journal of Controlled Release, Tissue Engineering and Regenerative Medicine, ACS Biomaterial & Biomedical Engineering, ACS Nano, and Nature Materials, Frontiers, Development, and Connective Tissue Research*)
- 2011—2013 Didimi, Incorporated, Menlo Park, USA, **Consultant**

MENTORING WORKSHOPS

- 2016 ‘Entrepreneurship Workshop’, Co-sponsored by CCRM, OIRM, SCN, H2i, NSERC-CREATE (TOeP), and McMaster, **Co-Organizer**
- 2016 Engineering Science Undergraduates ‘How to attain a summer research position’, **Invited Speaker**
- 2014 Biomedical Engineering Student Association (BESA) Career Panel, **Panel Member**
- 2013—2014 Prospective Engineering Professors, **Panel Member**
- 2012 Donnelly Centre Postdoc Conference, **Keynote speaker**
- 2012 Biomedical Engineering Student Association (BESA) Academic Career Seminar, **Invited speaker**

COMMUNITY OUTREACH

- 2016—present IBBME Biomedical Engineering and Me (iBEAM) – An activity-based program Dr. Gilbert developed to expose 7th & 8th grade at-risk youth to biomedical engineering careers, **Director**
- 2014—present Take Your Child to Work Day, **Host**
- 2014—2016 Girl’s E-Mentorship Innovation (GEM), **Curriculum Committee & E-Mentor**
- 2014 York University ‘Living and learning in retirement’ course, **Invited Speaker**
- 2013—present Let’s Talk Science – Stem Cell Talks, **Invited speaker**
- 2013 T.O.P.S. at Bloor High School Science Fair, **Keynote Speaker**
- 2012—2014 Biosciences Education Canada, **Invited Speaker**

BROADCAST INTERVIEWS

- 2016 Research2Reality [<http://research2reality.com/videos/giving-your-cells-superpowers/>]

- 2016 Donnelly Centre for Cellular and Biomolecular Research (CCBR), CCBP promotional video [https://www.youtube.com/watch?v=1w2zY_1hqBo]
- 2016 Girl's E-mentorship Innovation, Video Vignette [<https://www.youtube.com/watch?v=cdSpSt31S8s>]
- 2013 University of Toronto Faculty of Applied Science and Engineering website, Gilbert laboratory research mission and goals statement [<http://player.vimeo.com/video51702731?title=0&>]

TEXT INTERVIEWS AND RESEARCH HIGHLIGHTS (2010 – 2016)

- 2016 iBEAM Outreach Program Highlight, **Institute of Biomaterials and Biomedical Engineering Website** (<http://www.ibbme.utoronto.ca/news/famed-biohacker-andrew-pelling-encourages-budding-engineers-watch-sci-fi-just-ask-questions/>)
- 2016 Career Award Highlight, **Institute of Biomaterials and Biomedical Engineering Website** (<http://www.ibbme.utoronto.ca/news/penney-gilbert-receives-ontario-early-researcher-award/>)
- 2016 University of Toronto, **Faculty of Medicine Magazine (Summer Issue)**, Medical Mysteries
- 2015 University of Toronto, **Faculty of Medicine Magazine (Fall Issue)**, Donnelly Centre for Cellular and Biomolecular Research 10th Anniversary
- 2015 University of Toronto, Faculty of Applied Science and Engineering, **Skulematters alumni magazine**, 'Rising Star' profile
- 2014 Girl's E-mentorship Innovation **Blog Interview** (<http://girlsementorship.com/career-inspiration/a-conversation-with-professor-gilbert>)
- 2014 University of Toronto, **Edge Magazine** Connaught Issue, 16(2):4.
- 2014 Research Highlight: Bentzinger CF and Rudnicki MA (2014) Rejuvenating aged muscle stem cells. *Nature Medicine* 20(3):234-5.
- 2014 Research Highlight: Sachlos E and Kerstetter-Fogle A (2014) Highlights from the latest articles in regenerative medicine. *Regenerative Medicine* 9(4):423-5.
- 2014 Research Highlight: Hines P (2014) Counteracting muscle aging *Science* 343(6174): 950
- 2014 Research Highlight: Lokody I (2014) Microenvironment: Tumour-promoting tissue mechanics. *Nature Reviews Cancer* 14(5):296.
- 2014 Research Press Release, *Nature Medicine* 'breast cancer' article (2014), **IBBME website** (<http://news.utoronto.ca/stiffness-a-new-piece-to-the-breast-cancer-puzzle/>)
- 2014 Research Press Release, *Nature Medicine* 'aged muscle stem cell rejuvenation' article (2014), **IBBME website** (<http://news.utoronto.ca/turning-back-the-clock-on-aging-muscles-new-study-supports-the-possibility-of-localized-rejuvenation/>)
- 2010 Research Highlight: Bhatia M (2010) Developmental biology. Microenvironmental mimicry *Science* 329(5996): 1024-5.

- 2010 Research Highlight: Schaffer DV (2010) Microarraying for
mechanosensitivity *Cell Stem Cell* 7(3): 273-4.
- 2010 Research Highlight: McCarthy N (2010) Tumour suppression: Double act
Nature Reviews Cancer 10(6): 382.

CREATIVE OUTPUT

- 2012 – present Laboratory Website: www.gilbert-lab.com
- 2012 – present Laboratory Twitter Account: @gilbert-lab (>400 followers)