

# CURRICULUM VITAE

## EHAB ABOUHEIF

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### PERSONAL INFORMATION:

Date & Place of Birth: 28 July 1971, Montreal, Quebec

Citizenship: Canadian

Address: Department of Biology  
McGill University  
1205 Avenue Dr. Penfield  
Montreal, Quebec  
Canada, H3A 1B1

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### APPOINTMENTS AND EDUCATION:

**Full Professor.** 2015-Present. McGill University, CA. Department of Biology

**Associate Professor.** 2010-2015. McGill University, CA. Department of Biology

**Assistant Professor.** 2004-2009. McGill University, CA. Department of Biology

**Postdoctoral Fellow.** 2002-2004. University of Chicago, USA. Department of Organismal Biology and Anatomy (2002-2003) and University of California, Berkeley, USA. Department of Integrative Biology (2003-2004).  
Advisor: Professor Nipam H. Patel

**Ph.D.** 2002. Duke University, NC, USA. Department of Biology.  
Advisor: Dr. Gregory A. Wray

**M.Sc.** 1995. Concordia University, QC, Canada. Department of Biology.  
Advisor: Dr. Daphne J. Fairbairn

**B.Sc.** 1993. Concordia University, QC, Canada. Department of Biology Honors program. Minor as member of Science College

## HONORS AND AWARDS:

**Guggenheim Fellowship** (USA, 2017). *Guggenheim Fellowships are intended for individuals who have already demonstrated exceptional capacity for productive scholarship or exceptional creative ability in the arts. Many Guggenheim Fellows have burnished the roll of Nobel laureates, Field Medal recipients, and other prestigious awards.*

**James McGill Professorship** (Canada, 2017 to present). The James McGill Professor is a named professorship that recognizes a senior scholar's status as an outstanding and original researcher of world-class caliber and an international leader in his or her field.

**Member of Royal Society of Canada's The College of New Scholars, Artists and Scientists** (Canada, 2016 to present). The College of New Scholars, Artists and Scientists is Canada's first national system of multidisciplinary recognition for the emerging generation of Canadian intellectual leadership. Members of the College, at an early stage in their career, have demonstrated a high level of achievement. The criteria for election is excellence.

**NSERC E.W.R. Steacie Memorial Fellowship** (Canada, 2014). *The Steacie award is the most prestigious award a young Canadian scientist can receive from Natural Sciences and Engineering Council of Canada. These Fellowships are awarded to enhance the career development of outstanding and highly promising university faculty who are earning a strong international reputation for original research.*

**Canada Research Chair (Tier II) in evolutionary developmental biology** (2004 to 2014). The Canada Research Chairs Program attract and retain some of the world's most accomplished and promising minds. Chairholders aim to achieve research excellence in engineering and the natural sciences, health sciences, humanities, and social sciences.

**Canadian Arab To Watch** (September 2014). Canadian Arab Institute. This honor highlights Canadian Arabs who are having a beneficial impact on society.

**Alfred P. Sloan Research Fellowship in evolutionary and computational biology** (USA, 2006). The Alfred P. Sloan Fellowship "seeks to recognize the achievements of outstanding young scholars in science, mathematics,

economics and computer science. Past recipients of Sloan Research Fellowships have gone on to win 38 Nobel prizes, 14 Fields Medals (mathematics), and 8 John Bates Clark awards (economics).”

#### INTERNATIONAL CONTRIBUTIONS TO THE FIELD OF EVO-DEVO:

**Editor-in-Chief** *Journal of Experimental Zoology, Part B: Molecular Development and Evolution* (January 2019 to present)

**Founding President** (2013 to 2015) of Pan-American Society of Evolutionary Developmental Biology

**Co-Organizer** (2015) Inaugural Meeting Pan-American Society of Evolutionary Developmental Biology

#### RESEARCH CONTRIBUTIONS:

**A. Citations:** 6655 total citations (Google Scholar Citation Indices).

**B. Peer reviewed publications** (Abouheif lab students / postdocs are underlined, I have a \* next to my name)

72. Lamouret T, Hanna L, Pocas G, Mirth CK, Moczek AP, Nijhout HF, Abouheif E\*. *Submitted–Under second round of review*. Confirming an old truth: final adult size in holometabolous insects is set by the end of larval development. **JEZ-B: Molecular and Developmental Evolution**

71. Hanna L and Abouheif E\*. *Submitted–Under second round of review*. Deep conservation and repeated co-option of programmed cell death facilitates evolution of alternative phenotypes at multiple biological levels. In: Genetic and Developmental Basis of Phenotypic Diversification, L. Nagy and J. Bowsher (eds.). **Seminars in Cell and Developmental Biology** (review)

70. Abouheif E\*. *In Press*. On Bridging Islam and Evolution through the Secret World of Ants: the Struggles of a Muslim Evolutionary Biologist. In: **Islam and Evolution**, J. Wiles (ed.) McGill-Queen’s University Press (book chapter)

69. Abouheif E\*. 2022. My road to the ants: a model clade for eco-evo-devo. In: Pioneers of Emerging Model Systems, B. Goldstein and M. Srivastava (eds.). **Current Topics in Cell and Developmental Biology**, [doi.org/10.1016/bs.ctdb.2022.01.005](https://doi.org/10.1016/bs.ctdb.2022.01.005) (review)

68. La Richelière F, Muñoz G, Guénard B, Dunn RR, Economo E, Powell S, Sanders NJ, Weiser MD, Abouheif E\* and Lessard JP. 2022. Warm and arid regions of the world are hotspots of superorganism complexity. ***Proceedings of the Royal Society B: Biological Sciences***. [doi.org/10.1098/rspb.2021.1899](https://doi.org/10.1098/rspb.2021.1899)
- Shared senior authorship
67. Muller GB and Abouheif E\*. 2021. Evolutionary Developmental Biology. In: ***Evolutionary Biology***, [doi.10.1093/obo/9780199941728-0138](https://doi.org/10.1093/obo/9780199941728-0138) (review)
66. Abouheif E\*. 2021. Ant caste evo-devo: It's not all about size. ***Trends in Ecology and Evolution*** 36: 668–670, [doi.10.1016/j.tree.2021.04.002](https://doi.org/10.1016/j.tree.2021.04.002) (letter)
65. Koch S, Tahara R, Vasquez-Correa A, Abouheif E\*. 2021. Nano-CT imaging of larvae in the ant *Pheidole hyatti* reveals coordinated growth of a rudimentary organ necessary for soldier development. ***JEZ-B: Molecular and Developmental Evolution*** 336: 1– 14. [doi.org/10.1002/jez.b.23097](https://doi.org/10.1002/jez.b.23097)
64. Hanna L and Abouheif E\*. 2021. The origin of wing polyphenism in ants. In: Evolutionary Developmental Biology, S. Gilbert (ed.). ***Current Topics in Cell and Developmental Biology*** 141: 279-336 [doi.org/10.1016/bs.ctdb.2020.12.004](https://doi.org/10.1016/bs.ctdb.2020.12.004) (review)
63. Rafiqi AM, Rajakumar A and Abouheif E\*. 2020. Origin and elaboration of a major evolutionary transition in individuality. ***Nature*** 585, 239–244. [doi.org/10.1038/s41586-020-2653-6](https://doi.org/10.1038/s41586-020-2653-6)
- Perspective article published in *Current Biology* and *Myrmecological News*
  - Media coverage (see below)
62. Ramsay C, Lasko P, and Abouheif E\*. 2020. Evo-devo lessons from the reproductive division of labor in eusocial hymenoptera. In: ***Evolutionary Developmental Biology***, L.Nuño de la Rosa, G.B. Müller (eds.), [doi.10.1007/978-3-319-33038-9\\_173-1](https://doi.org/10.1007/978-3-319-33038-9_173-1) (review)
61. Koch S and Abouheif E\*. 2020. The Coordination of Insect Imaginal Discs and the Regulation and Evolution of Complex Worker Caste Systems of Ants. In: ***Deferring Development: Setting aside cells for future use in development and evolution***, Bishop C and Hall BK (eds.) CRC Press. (review)
60. Rajakumar R, Koch S, Couture M, Fave MJ, Lilico-Ouachour A, Chen T, DeBlasis G, Rajakumar A, Ouellette D, and Abouheif E\*. 2018. Social regulation of a rudimentary organ generates complex worker caste systems in ants. ***Nature***, [doi.org/10.1038/s41586-018-0613-1](https://doi.org/10.1038/s41586-018-0613-1)

- *Perspective published in Current Biology*
- *Media coverage (see below)*

59. Armisén D, Rajakumar R, Friedrich M, Benoit JB, Robertson HM, Panfilio KA, Ahn S-J, Poelchau MF, Chao H, Dinh H, Doddapaneni H, Dugan S, Gibbs RA, Hughes DST, Han Y, Lee SL, Murali SC, Muzny DM, Qu J, Worley KC, Munoz-Torres M, Abouheif E\*, Bonneton F, Chen T, Chiang L-M, Childers CP, Cridge AG; Crumière AJJ; Decaras A; Didion EM; Duncan E, Elpidina EN, Favé M-J, Finet C, Jacobs CGC, Jarvela A, Jennings EJ, Jones JW, Lesoway MP, Lovegrove M, Martynov A, Oppert B, Lillico-Ouachour A, Rajakumar A; Refki PN, Rosendale AJ, Santos ME, Toubiana W, van der Zee M, Vargas Jentsch IM, Vargas Lowman A, Viala S, Richards S, and Khila A. 2018. The genome of the water strider *Gerris buenoi* reveals expansions of gene repertoires associated with adaptations to life on the water. **BMC Genomics**, 19 (832): 1-16, [doi.org/10.1186/s12864-018-5163-2](https://doi.org/10.1186/s12864-018-5163-2)

- *Result of an international genome project*

58. Oettler J, Platschek T, Schmidt C, Rajakumar R, Favé MJ, Khila A, Heinze J, and Abouheif E\*. 2018. Alternative developmental routes to male and female wing polyphenism in *Cardiocondyla* ants. **JEZ-B: Molecular and Developmental Evolution**, [doi.org/10.1002/jez.b.22834](https://doi.org/10.1002/jez.b.22834)

57. Lillico-Ouachour A, Metscher B, Kaji, T and Abouheif E\*. 2018. Internal head morphology of minor workers and soldiers in the hyperdiverse ant genus *Pheidole*. **Canadian Journal of Zoology** 96: 383–392, [doi.org/10.1139/cjz-2017-0209](https://doi.org/10.1139/cjz-2017-0209)

56. Behagues J, Fisher BL, Péronnet R, Rajakumar R, Abouheif E\* and Molet M. 2018. Lack of interruption of the gene network underlying wing polyphenism in an early-branching ant genus. **JEZ-B: Molecular and Developmental Evolution**: 1-9, [doi.org/10.1002/jez.b.22794](https://doi.org/10.1002/jez.b.22794)

55. Metzl C, Wheeler DE, Abouheif E\*. 2018. Wilhelm Goetsch (1887 - 1960): pioneering studies on the development and evolution of the soldier caste in social insects. **Myrmecological News** 26: 81-96, [doi.org/10.25849/myrmecol.news\\_026:081](https://doi.org/10.25849/myrmecol.news_026:081)

54. Lillico-Ouachour A and Abouheif E\*. 2017. The regulation, development and evolution of caste ratios in the hyperdiverse ant genus *Pheidole*. **Current Opinion in Insect Science** 19: 43–51, [doi.org/10.1016/j.cois.2016.11.003](https://doi.org/10.1016/j.cois.2016.11.003)

53. Lesoway MP, Collin R., Abouheif E\*. 2017. Early activation of MAPK and apoptosis are associated with nutritive embryo development in the

calyptraeid gastropods. **JEZ-B: Molecular and Developmental Evolution** 328: 449–461, [doi.org/10.1002/jez.b.22745](https://doi.org/10.1002/jez.b.22745)

52. [Lesoway MP](#), Abouheif E\*, Collin R. 2016. Comparative transcriptomics of alternative developmental phenotypes in a marine gastropod. **JEZ-B: Molecular and Developmental Evolution** 326: 151-16, [doi.org/10.1002/jez.b.22674](https://doi.org/10.1002/jez.b.22674)
51. [Favé M-J](#), Johnson RA, Cover S, Handschuh S, Metscher B, Müller GB, [Gopalan S](#), and Abouheif E\*. 2015. Past climate change on Sky Islands drives novelty in a core developmental gene network and its phenotype. **BMC Evolutionary Biology** 15:183, [doi.org/10.1186/s12862-015-0448-4](https://doi.org/10.1186/s12862-015-0448-4)
- *Perspective published in Science*
50. Moczek AP, Sears KE, Stollewerk A, Wittkopp PJ, Diggie P, Dworkin I, Ledon-Rettig C, Matus DQ, Roth S, Abouheif E\*, Brown FD, Chiu C-H, Cohen CS, De Tomaso AW, Gilbert SF, Hall BF, Love A, Lyons DC, Sanger T, Smith J, Specht C, Vallejo-Marin M, Extavour CG. 2015. The significance and scope of evolutionary developmental biology: a vision for the 21st century. (review) **Evolution & Development** 17: 198–219, [doi.org/10.1111/ede.12125](https://doi.org/10.1111/ede.12125)
- *Result of an international workshop*
49. Alvarado S, [Rajakumar R](#), Abouheif E\*, Szyf M. 2015. Epigenetic control of *Egfr* generates quantitative variation of a complex trait in ants. **Nature Communications** 6 (6513), [doi.org/10.1038/ncomms7513](https://doi.org/10.1038/ncomms7513)
- *Shared senior authorship*
  - *Perspective published in Science*
  - *Media coverage (see below)*
48. [Lesoway MP](#), Abouheif E\*, Collin R. 2014. The development of viable and nutritive embryos in the direct developing gastropod *Crepidula navicella*. **The International Journal of Developmental Biology** 58: 601-611, [doi.org/10.1387/ijdb.140136rc](https://doi.org/10.1387/ijdb.140136rc)
47. [Khila A](#), Abouheif E\*, and Rowe L. 2014. Comparative functional analyses of *Ultrabithorax* reveal multiple paths to diversification of legs in the adaptive radiation of semi-aquatic insects. **Evolution**, [doi.org/10.1111/evo.12444](https://doi.org/10.1111/evo.12444)
46. Abouheif E\*. 2014. Phylogenies and the Evolution of Development. In: **The Tree of Life: systematics and evolution of living things**. P. Vargas and R. Zardoya (Eds.) Sinauer. Sunderland. (book chapter)

45. Abouheif E\*, Favé MJ, Ibarrarán-Viniegra AS, Lesoway M, Rafiqi AM, and Rajakumar R. 2014. Eco-Evo-Devo: the time has come. Pgs 107-125 in C.R. Landry and N. Aubin-Horth (eds.), ***Ecological Genomics: Ecology and the Evolution of Genes and Genomes***, Advances in Experimental Medicine and Biology 781, [doi.org/10.1007/978-94-007-7347-9](https://doi.org/10.1007/978-94-007-7347-9) 6. Springer (book chapter)
44. Shbailat SJ and Abouheif E\*. 2013. The wing-patterning network in the wingless castes of myrmicine and formicine ant species is a mix of evolutionarily labile and non-labile genes. ***JEZ-B: Molecular and Developmental Evolution*** 9999B: 1–10, [doi.org/10.1002/jez.b.22482](https://doi.org/10.1002/jez.b.22482)
43. Rajendhran R, San Mauro D, Dijkstra M, Wang M, Wheeler DW, Hiou-Tim F, Khila A, Courneyea M, Abouheif E\*. 2012. Ancestral developmental potential facilitates parallel evolution in ants. ***Science*** 335: 79-82, [doi.10.1126/science.1211451](https://doi.org/10.1126/science.1211451)
- *Perspective articles published in Current Biology and Genome Biology*
  - *Media coverage (see below)*
42. Khila A, Abouheif E\*, and Rowe L. 2012. Function, developmental genetics, and fitness consequences of a sexually antagonistic trait. ***Science*** 336: 585-589, [doi.10.1126/science.1217258](https://doi.org/10.1126/science.1217258)
- *Shared senior authorship*
  - *Media coverage (see below)*
41. Smith CD, Zimin A, Holt C, Abouheif E\*, Benton R, Cash E, Croset V, Currie CR, Elhaik E, Elsik CG, Favé M-J, Fernandes V, Gadau J, Gibson JD, Graur D, Grubbs KJ, Hagen DE, Helmkampf M, Holley J, Huc H, Ibarraran Viniegra AS, Johnson BR, Johnson RM, Khila A, Kim JW, Laird J, Mathis KA, Moeller JA, Muñoz-Torres MC, Murphy MC, Nakamura R, Nigam S, Overson RP, Placek JE, Rajakumar R, Reese JT, Robertson HM, Smith CR, Suarez AV, Suen G, Suhr EL, Tao S, Torres CW, van Wilgenburg E, Viljakainen L, Walden KKO, Wild AL, Yandell M, Yorker JA, and Tsutsui ND. 2011. Draft genome of the globally widespread and invasive Argentine ant (*Linepithema humile*). ***Proceedings of the National Academy of Sciences, USA*** 108: 5673–5678, [doi.org/10.1073/pnas.1008617108](https://doi.org/10.1073/pnas.1008617108)
- *Result of an international genome project*
  - *Perspective published in Science, Nature Genetics, Trends in Genetics*
  - *Media coverage (see below)*
40. Smith CR, Smith CD, Robertson HM, Helmkampf M, Zimin A, Yandell M, Holt C, Hu H, Abouheif E\*, Benton R, Cash E, Croset V, Currie CR, Elhaik E, Elsik CG, Favé M-J, Fernandes V, Gibson JD, Graur D, Gronenberg W, Grubb KJ, Hagen DE,

Ibarraran Viniegra AS, Johnson BR, Johnson RM, Khila A, Kim JW, Mathis KA, Munoz-Torres MC, Murphy MC, Mustard JA, Nakamura R, Niehuis O, Nigam S, Overson RP, Placek JE, Rajakumar R, Reese JT, Suen G, Tao S, Torres CW, Tsutsui ND, Viljakainen L, Wolschin F, and Gadau J. 2011. Draft genome of the red harvester ant *Pogonomyrmex barbatus*. **Proceedings of the National Academy of Sciences, USA** 108: 5667–5672, [doi.org/10.1073/pnas.1007901108](https://doi.org/10.1073/pnas.1007901108)

- *Result of an international genome project*
- *Perspective published in Science, Nature Genetics, Trends in Genetics*
- *Media coverage (see below)*

39. Suen G, Teiling C, Li Lewyn, Holt C, Abouheif E\*, Bornberg-Bauer E, Bouffard P, Caldera EJ, Cash E, Cavanaugh A, Denas O, Elhaik E, Favé M-J, Gadau J, Gibson JD, Graur D, Grubbs KJ, Hagen DE, Harkins TT, Helmkampf M, Hu H, Johnson BR, Kim J, Marsh SE, Moeller JA, Munoz-Torres MC, Murphy MC, Naughton MC, Nigam S, Overson R, Rajakumar R, Reese JT, Scott JJ, Smith CR, Tao S, Tsutsui ND, Viljakainen L, Wissler L, Yandell MD, Zimmer F, Taylor J, Slater SC, Clifton SW, Warren WC, Elsik CG, Smith CD, Weinstock GM, Gerardo NM, Currie CR. 2011. The genome sequence of the leaf-cutter ant *Atta cephalotes* reveals insights into its obligate symbiotic lifestyle. **PLoS Genetics** 7, [doi.org/10.1371/journal.pgen.1002007](https://doi.org/10.1371/journal.pgen.1002007)

- *Result of an international genome project*
- *Perspectives published in Science, Nature Genetics, Trends in Genetics*
- *Media coverage (see below)*

38. Lynch J, Özüak O, Khila A, Abouheif E\*, Desplan C, Roth S. 2011. The phylogenetic origin of *oskar* coincided with the origin of maternally provisioned germ plasm and pole cells at the base of the Holometabola. **PLoS Genetics** 7, [doi.org/10.1371/journal.pgen.1002029](https://doi.org/10.1371/journal.pgen.1002029)

- *Perspective article published in PLoS Genetics*

37. Moczek AP, Sultan S, Foster S, Ledón-Rettig C, Dworkin I, Nijhout HF, Abouheif E\*, Pfennig DW. 2011. The role of developmental plasticity in evolutionary innovation. **Proceedings of the Royal Society B** 278: 2705-2713, [doi.org/10.1098/rspb.2011.0971](https://doi.org/10.1098/rspb.2011.0971) (review)

36. Yang A and Abouheif E\*. 2011. Gynandromorphs as indicators of modularity and evolvability in ants. **JEZ-B: Molecular Developmental Evolution** 314B: 1-6, [doi.org/10.1002/jez.b.21407](https://doi.org/10.1002/jez.b.21407)

35. Shbailat SJ, Khila A, Abouheif E\*. 2010. Correlations between spatiotemporal changes in gene expression and apoptosis underlie wing polyphenism in the



ant *Pheidole morrisi*. ***Evolution & Development*** 12: 580-581,  
[doi.org/10.1111/j.1525-142X.2010.00443.x](https://doi.org/10.1111/j.1525-142X.2010.00443.x)

34. Khila A and Abouheif E\*. 2010. Evaluating the role of reproductive constraints in ant social evolution. ***Philosophical Transactions of the Royal Society of London Series B*** 365: 617-630, [doi.org/10.1098/rstb.2009.0257](https://doi.org/10.1098/rstb.2009.0257)
33. Kilfoil M, Lasko P, and Abouheif E\*. 2009. Stochastic variation: from single cells to superorganisms. ***HFSP Journal*** (1), [doi.org/10.2976/1.3223356](https://doi.org/10.2976/1.3223356) (review)
32. Khila A, Abouheif E\*, and Rowe L. 2009. Evolution of a novel appendage ground plan in water striders is driven by changes in the *Hox* gene *Ultrabithorax*. ***PLoS Genetics*** 5, [doi.org/10.1371/journal.pgen.1000583](https://doi.org/10.1371/journal.pgen.1000583)
- Shared senior authorship
  - Media coverage (see below)
31. Khila A and Abouheif E\*. 2008. Reproductive constraint is a developmental mechanism that maintains social harmony in ants. ***Proceedings of the National Academy of Sciences, USA*** 105:17884-17889, [doi.org/10.1073/pnas.0807351105](https://doi.org/10.1073/pnas.0807351105)
- Media coverage (see below)
30. Nahmad M, Glass L, and Abouheif E\*. 2008. The dynamics of developmental system drift in the gene network underlying wing polyphenism in ants: a mathematical model. ***Evolution & Development*** 10: 360-374, [doi.org/10.1111/j.1525-142X.2008.00244.x](https://doi.org/10.1111/j.1525-142X.2008.00244.x)
- Highlighted by Faculty of 1000
29. Abouheif E\*. 2008. Parallelism as the pattern and process of mesoevolution. ***Evolution & Development*** 10: 3-5, [doi.org/10.1111/j.1525-142X.2007.00208.x](https://doi.org/10.1111/j.1525-142X.2007.00208.x)
28. Bowsher J, Wray G.A., and Abouheif E\*. 2007. Growth and patterning are evolutionarily dissociated in the vestigial wing discs in workers of the red imported fire ant, *Solenopsis invicta*. ***JEZ-B: Molecular Developmental Evolution*** 308B: 769-776, [doi.org/10.1002/jez.b.21200](https://doi.org/10.1002/jez.b.21200)
27. Oakley TH, Zhenglong G., Abouheif E\*., Patel N.H., Li W-H. 2005. Comparative methods for the analysis of gene expression evolution: an example using functional genomic data. ***Molecular Biology and Evolution*** 22: 40-50, [doi.org/10.1093/molbev/msh257](https://doi.org/10.1093/molbev/msh257)

26. Rheindt FE, Grafe TU, Abouheif E\*. 2004. Rapidly evolving traits and the comparative method: how important is testing for phylogenetic independence? ***Evolutionary Ecology Research*** 6: 377-396, [doi.org/10.1111/j.1525-142X.2007.00208.x](https://doi.org/10.1111/j.1525-142X.2007.00208.x)
25. Wray GA, Hahn MW, Abouheif E\*, Balhoff JP, Pizer M, Rockman MV, Romano L. 2003. The evolution of transcriptional regulation in eukaryotes. ***Molecular Biology and Evolution*** 20: 1377-1419, [doi.org/10.1093/molbev/msg140](https://doi.org/10.1093/molbev/msg140)
- Cited 1277 times
24. Abouheif E\* and Wray GA. 2002. Evolution of the gene network underlying wing polyphenism in ants. ***Science*** 297: 249-252, [doi.10.1126/science.1071468](https://doi.org/10.1126/science.1071468)
- Appeared in general biology textbooks
  - Highlighted by Faculty of 1000
  - Cited 423 times
23. Abouheif E\*. 2003. A framework for studying the evolution of gene networks underlying polyphenism: insights from winged and wingless ant castes. In ***Environment, Development, and Evolution: Towards a Synthesis***. Hall Bk, Pearson R, and Muller G, eds. **MIT Press** (book chapter)
22. Abouheif E\* and Wray GA. 2001. Evolution of development, version 1.0. In: ***Encyclopedia of Life Sciences***. London: **Nature Publishing Group** (review)
21. Abouheif E\*. 1999. Establishing homology criteria for regulatory gene networks: prospects and challenges. In ***Homology***. Wiley, Chichester. **Novartis Foundation Symposium** 222: 207-225 (book chapter)
20. Wray GA and Abouheif E\*. 1998. When homology is not homology. ***Current Opinions in Genetics and Development*** 8: 675-680, [doi.org/10.1016/S0959-437X\(98\)80036-1](https://doi.org/10.1016/S0959-437X(98)80036-1) (review)
19. Abouheif E\*, Zardoya R, and Meyer A. 1998. Limitations of metazoan 18S rRNA sequence data: implications for reconstructing a phylogeny for the animal kingdom, and inferring the existence of the Cambrian explosion. ***Journal of Molecular Evolution*** 47: 394-405, [doi.org/10.1007/PL00006397](https://doi.org/10.1007/PL00006397)
- Cited 181 times
18. Abouheif E\*. 1998. Random trees and the comparative method: a cautionary tale. ***Evolution*** 52: 1197-1204, [doi.org/10.1111/j.1558-5646.1998.tb01845.x](https://doi.org/10.1111/j.1558-5646.1998.tb01845.x)

17. Abouheif E\*, Akam M, Dickinson WJ, Holland PWH, Meyer A, Patel NH, Raff RA, Roth VL, and Wray GA. 1997. Homology and developmental genes. ***Trends In Genetics*** 13:432-433, [doi.org/10.1016/S0168-9525\(97\)01271-7](https://doi.org/10.1016/S0168-9525(97)01271-7) (review)
- Cited 213 times
16. Abouheif E\*. 1997. Developmental genetics and homology: a hierarchical approach. ***Trends In Ecology and Evolution*** 12: 405-408, [doi.org/10.1016/S0169-5347\(97\)01125-7](https://doi.org/10.1016/S0169-5347(97)01125-7) (review)
- Cited 183 times
15. Abouheif E\* and Fairbairn DJ. 1997. A comparative analysis of allometry for sexual size dimorphism. ***American Naturalist*** 149: 540-562, [doi.org/10.1086/286004](https://doi.org/10.1086/286004)
- Cited 449 times
14. Zardoya R, Abouheif E\* and Meyer A. 1996a. Evolutionary analyses of hedgehog and Hoxd-10 genes in fish species closely related to the zebrafish. ***Proceedings of the National Academy of Sciences USA*** 93: 13036-13041, [doi.org/10.1073/pnas.93.23.13036](https://doi.org/10.1073/pnas.93.23.13036)
13. Zardoya R, Abouheif E\*, and Meyer A. 1996b. Evolution and orthology of hedgehog genes. ***Trends In Genetics*** 12: 489-536, [doi.org/10.1016/S0168-9525\(96\)20014-9](https://doi.org/10.1016/S0168-9525(96)20014-9) (review)

### C. Development of new methodologies (peer reviewed):

12. Abouheif E\*. 1999. A method for testing the assumption of phylogenetic independence in comparative data. ***Evolutionary Ecology Research*** 1: 895-909
- This method is now called the "Abouheif test"
  - Led to a general statistical matrix called the "Abouheif proximity"
  - Cited 462 times

### D. Editorials, Perspectives Articles, and Book Reviews (non-peer reviewed):

11. Abouheif E\*\_ 2019. JEZ-B and the future of developmental evolution. ***JEZ-B: Molecular and Developmental Evolution*** 1: 2, [doi.10.1002/jez.b.22844](https://doi.org/10.1002/jez.b.22844), [doi.org/10.1002/jez.b.22844](https://doi.org/10.1002/jez.b.22844) (editorial)
10. Doebeli M. and Abouheif E\*. 2015. Modeling evolutionary transitions in social insects. ***eLife*** 5: e12721, [doi.10.7554/eLife.12721](https://doi.org/10.7554/eLife.12721) (perspective)

9. Abouheif E\* and Sears K. 2015. It's time to get together: Announcing the new society for evolutionary developmental biology in the Americas. ***Evolution & Development*** 17 (1): 1, [doi.10.1111/ede.12114](https://doi.org/10.1111/ede.12114) (editorial)
8. Abouheif E\* and Rafiqi AM. 2014. Sex combs find middle ground in evolution debate. ***Proceedings of the National Academy of Sciences, USA***, [doi.org/10.1073/pnas.1415189111](https://doi.org/10.1073/pnas.1415189111) (perspective)
7. Abouheif E\*. 2013. Evolution: *oskar* reveals missing link in co-optive evolution. ***Current Biology*** 23 (1): R24-R25, [doi.org/10.1016/j.cub.2012.11.028](https://doi.org/10.1016/j.cub.2012.11.028) (perspective)
6. Abouheif E\* and Larsson H. 2009. Synthesis Version 4.1beta. ***Evolution & Development*** 11: 456–457 (book review)
5. Abouheif E\*. 2004. Comprehensive reference for Evo-Devo or collective challenge to neo-Darwinism? ***Evolution*** 58: 2837-2839. (book review)

#### **E. Smart Phone Apps, Computer Programs and Protocols (non-peer reviewed):**

4. [Rudski B](#) and Abouheif E\*. 2020. AntNupTracker: a mobile app for tracking ant nuptial flights to fight climate change. Version 1.0. (smart phone app)
3. [Rajakumar R](#) and Abouheif E\*. 2013. **Ancestral developmental potential: a new tool for animal breeding?** In N. O'Sullivan, M. Cooper, & F. Siewerdt (Eds.), Proceeding of the 62nd Annual National Breeders Roundtable. Paper presented at The 2013 National Breeders Roundtable, St. Louis, Missouri, 2-3 May (pp. 5-18). Tucker, GA: US Poultry & Egg (protocol)
2. [Khila A](#) and Abouheif E\*. 2009. In situ hybridization on ant ovaries and embryos. ***CSH Protocols***, 4(7), [doi.10.1101/pdb.prot5250](https://doi.org/10.1101/pdb.prot5250) (protocol)
1. Reeve J and Abouheif E\*. 2003. Phylogenetic Independence. Version 2.0. (computer program)

#### **MEDIA AND OUTREACH**

- **TV coverage:** *Global National News, Discovery Channel (Daily Planet), TV documentary show Le Code Chastenay on TV5 and Tele Quebec*
- **Radio coverage:** *CNN Radio, CBC Radio (Canada: Quirks & Quarks, As it Happens, Home Run, CBC International), Radio Canada (French Canada),*

*John Gormley Show (Canada), NPR (USA, Academic Minute), National Radio of Ireland (RTE Radio 1).*

- **Print news coverage:** *The Montreal Gazette, Washington Post, Toronto Star, La Presse (Montreal, French), National Post, Huffington Post, The Ottawa Citizen, The Winnipeg Free Press, The Vancouver Sun, and The Calgary Herald, London Times, Guardian, The Economist magazine, Forbes magazine, USA today, Quebec Science, Nature, Forbes*
- **Online news coverage:** *Over 2.5 million hits on Google Chinese & over half million hits on Google English, including Nature news, BBC news, CBC news, PBS, MSNBC, Discover, Scientific American, Der Speigel, Le Monde, Quanta Magazine, Nature, Science,*

#### INVITED TALKS, WORKSHOPS AND PUBLIC LECTURES:

2022. Public Lecture (online) Cutting Edge Lecture Series, McGill University, Canada  
 2022. Invited Talk (online): Dept. Seminar, Swarthmore College, USA  
 2021. Invited Talk (online): Dept. Seminar, University of Gottingen, Germany  
 2021. Invited Talk (online): Public Outreach, Ontario Entomologists, Canada  
 2021. Invited Talk (online): Dept. Seminar, University of Alberta, Canada  
 2021. Invited Talk (online): Lecture, University of Isfahan, Iran  
 2021. Invited Talk (online): Lecture, SciLifeLab Svedberg Lecture Series, Sweden  
 2021. Invited Talk (online): Dept. Seminar, Northwestern University, Chicago USA  
 2021. Invited Talk (online): Conference, Canadian Society of Zoology  
 2021. Invited Talk (online): Dept. Seminar, University of Bath, UK  
 2021. Invited Talk (online): Dept. Seminar, University Mainz & Max Planck Inst., Germany  
 2021. Invited Talk (online): Dept. Seminar, University of Madison, Wisconsin, USA  
 2021. Invited Talk (online): Conference, Socio-Genomics, Cold Spring Harbour Labs  
 2021. Invited Talk (online): Lecture. Euro Evo Devo Lecture Series  
 2021. Invited Talk (online): Distinguished Lecture at Duke University, Durham, USA  
 2020. Invited Talk (online): Lecture, Pakistan National STEM School (High School Students)  
 2020. Invited Talk (online): Dept. Seminar, University of Texas A&M, USA  
 2020. Invited Talk (online): Dept. Seminar, UC Merced, California, USA  
 2020. Invited Talk (online): Dept. Seminar, University of Copenhagen, Denmark  
 2020. Invited Talk (online): Dept. Seminar, University of Miami, USA  
 2020. Keynote Address (online): Conference, Society of Developmental Biology  
 2020. Keynote Address (online): Conference, Entomological Society of America  
 2020. Invited Talk (online): Dept. Seminar, McGill University Health Centre, Canada  
 2020. Invited Talk (online): Dept. Seminar, Punjabi University, India  
 2020. Invited Talk: Dept. Seminar, Michigan State University, Lansing, USA  
 2019. Public Lecture: Qatar National Library, Doha, Qatar  
 2019. Public Lecture: Rare Books Library, McGill University, Canada  
 2019. Keynote Address: Graduate Student Symposium, Queens University, Kingston, CA

2019. Invited Talk: Dept. Seminar, University of Copenhagen, Denmark  
2019. Invited Talk: Dept. Seminar, University of California San Diego, USA  
2019. Invited Talk: Conference, Gordon Research Conference Developmental Biology, USA  
2019. Invited Talk: Symposium, Istituto Veneto di Scienze, Lettere ed Arti, Venice, Italy  
2019. Invited Talk: Dept. Seminar, Instituto Politécnico Nacional, Mexico  
2019. Invited Talk: Workshop, Bellairs Research Station, Barbados  
2019. Invited Talk: Dept. Seminar, Wayne State University, Detroit, USA  
2019. Invited Talk: Dept. Seminar, University of Vermont, USA  
2019. Invited Talk: Dept. Seminar, McGill University, Redpath Museum, Canada  
2019. Keynote Address: Symposium, Molecular Cell Group, McGill, Canada  
2018. Invited Talk: Dept. Seminar, Stowers Institute, Kansas, USA  
2018. Invited Talk: Dept. Seminar, Institute of Science and Technology, Austria  
2018. Invited Talk: Dept. Seminar, Museum of Natural History, Madrid, Spain  
2018. Invited Talk: Dept. Seminar, American University of Cairo, Cairo, Egypt  
2018. Invited Talk: Dept. Seminar, Universite de Lyon (IGFL) Lyon, France  
2018. Invited Talk: Workshop, University of Vienna, Vienna, Austria  
2018. Invited Talk: Dept. Seminar, Konrad Lorenz Institute, Klosterneuberg, Austria  
2018. Invited Talk (Skype): Summer School, Sharif University of Technology, Iran.  
2018. Public Lecture. Islam and Evolution. McGill Alumni in Abu Dhabi, Abu Dhabi, UAE  
2017. Invited Talk: Mustafa Prize Nomination, Tehran, Iran  
2017. Invited Talk: Dept. Seminar, McGill University, QC, CA  
2017. Invited Talk: Dept. Seminar, Arizona State University, AZ, USA  
2017. Invited Talk: Dept. Seminar, New York University, Abu Dhabi, UAE  
2017. Public Lecture: New York University, Abu Dhabi, UAE  
2017. Invited Talk: Conference, Pan-American Society for EvoDevo, Calgary, CA  
2017. Invited Talk: Conference, ICCE18, Lake Louise, CA  
2017. Invited Talk: Workshop, University of Muenster, Germany  
2017. Keynote Address: University of Massachusetts, Amherst, MA, USA  
2017. Invited Talk: Dept. Seminar, Wesleyan University, CT, USA  
2017. Keynote Address: Stony Brook University, USA  
2016. Invited Talk: Symposium, RIKEN Institute, Kobe, Japan,  
2016. Keynote Address, Conference, EuroEvoDevo, Uppsala, Sweden  
2016. Invited Talk: Dept. Seminar, STRI, Panama City, Panama  
2015. Invited Talk: Conference, ISHPSSB, Montreal, CA  
2015. Invited Talk: Conference, ISNA, Chicago, USA  
2015. Invited Talk: Dept. Seminar, University of Illinois, Chicago, USA  
2015. Public Lecture: Hampshire College, MA, USA  
2015. Invited Talk: Symposium, University of Florida, FL, USA  
2015. Invited Talk: Dept. Seminar, Western University, Ontario, CA  
2015. Invited Talk: Conference, Cold Spring Harbor, NY, USA  
2015. Invited Talk: Dept. Seminar, University of Illinois at Chicago, USA  
2015. Invited Talk: Dept. Seminar, University of Oklahoma, Ok, USA  
2014. Public Lecture: RSC Cutting Edge Lecture, McGill University, Montreal, Quebec, CA  
2014. Invited Talk: Dept. Seminar, University of Pittsburgh, PA, USA

2014. Invited Talk: Dept. Seminar, University of Dayton, Ohio, USA  
2014. Invited Talk: Dept. Seminar, Arizona State University, Tempe, Arizona, USA  
2014. Invited Talk: Dept. Seminar, University of Jordan, Amman, Jordan  
2014. Invited Talk: Dept. Seminar, Washington University, St. Louis, Missouri, USA  
2014. Invited Talk: Dept. Seminar, University of Alberta, Edmonton, Canada  
2013. Invited Talk: Dept. Seminar, Rockefeller University, NY, USA  
2013. Invited Talk: Dept. Seminar, Max Planck Institute, Tubigen, Germany  
2013. Invited Talk: Dept. Seminar, Harvard University, USA  
2013. Invited Talk: Conference, Gordon Research Conference, Texas, USA  
2013. Televised Public Debate: Islam and Evolution. Deen Institute. London, UK  
2013. Invited Talk: Conference, National Breeders Roundtable, St. Louis, USA  
2013. Invited Talk: Dept. Seminar, New York University, Abu Dhabi, UAE  
2013. Invited Talk: Dept. Seminar, Univ. Colorado, Boulder, Denver, USA  
2013. Invited Workshop Participant: Concordia University, Montreal, QC, CA  
2013. Televised lecture: McGill Mini Science, Montreal, QC, CA  
2013. Invited Talk: Dept. Seminar, McGill, Macdonald Campus, QC, CA  
2013. Public outreach lecture at Marionopolis College, QC, CA  
2012. Invited Talk: Dept. Seminar, New York University, NY, USA  
2012. Invited Talk: Dept. Seminar, Botanical Gardens, University of Montreal, CA  
2012. Invited Talk: Public outreach, Webcast Public lecture, McGill Univ., Montreal, CA  
2012. Invited Talk: Conference, European Society of EvoDevo, Lisbon, Portugal  
2012. Invited Talk: Public outreach, DNA day, Vanier College, Montreal, CA  
2012. Invited Talk: Dept. Seminar, Michigan State University, Michigan, USA  
2012. Invited Talk: Dept. Seminar, Arizona State University, SIRG, USA  
2012. Invited Talk: Dept. Seminar, Univ. of Manitoba, Dept. of Biol, Winnipeg, CA  
2011. Invited Talk: Dept. Seminar, McGill Univ., Dept of Physiology, Quebec, CA  
2011. Invited Talk: Conference, Society for Developmental Biology, Chicago, USA  
2011. Invited Talk: Dept. Seminar, Gulbankien Institute, Carcavelos, Portugal  
2011. Invited Talk: Dept. Seminar, Univ. of Vienna, Dept Theoretical Biol, Austria  
2011. Invited Talk: Dept. Seminar, Univ. of Jordan, Dept Biology, Amman, Jordan  
2011. Invited Talk: Dept. Seminar Konrad Lorenz Institute, Altenberg, Austria  
2011. Invited Talk: Conference, Keynote Speaker at IUSSI, Banuyls-Sur-Mer, France  
2011. Invited Talk: Dept. Seminar, University of Vienna, Dept of Biology, Austria  
2010. Invited Talk: Conference, Canadian Soc. for Dev. Biol., Mt Tremblant, CA  
2010. Invited Workshop Participant: WissenschaftKolleg. Berlin, Germany  
2010. Invited Talk: Dept. Seminar, University of Guelph, Dept. Integ. Biology, CA  
2010. Invited Talk: Dept. Seminar, York University, Dept. of Biology, CA  
2010. Invited Talk: Dept. Seminar, UQAM, Dept. Biology, Montreal, Quebec, CA  
2010. Invited Talk: Dept. Seminar, Vanderbilt University, Dept. Biol, Tennessee, USA  
2009. Invited Public Lecture-Debate: Islam & Evolution, Hampshire College, USA  
2009. Invited Workshop Participant: Organized by NESCent, Durham, NC, USA  
2009. Invited Talk: Darwin Lecture Series: University of Calgary, Dept. Biology, CA  
2009. Invited Public Lecture: Darwin Lecture, Lake Head Univ., Thunderbay, CA  
2009. Invited Public Lecture: Conference on Islam & Evolution, McGill Univ., CA

2009. Invited Workshop Participant: Arizona State University, Arizona, USA  
 2009. Invited Workshop Participant: NESCent, NC, USA  
 2008. Invited Talk: Conference, Konstanz University, Konstanz, Germany  
 2008. Invited Talk: Conference, European EvoDevo Society, Gent, Belgium  
 2008. Invited Talk: Conference, Animal Behaviour Society, Salt Lake City, UT, USA  
 2007. Invited Talk: Conference, Canadian Society of Zoologists, Montreal, Canada  
 2007. Keynote Address: Conference, Canadian Society Ecology & Evolution, Canada  
 2007. Invited Talk: Conference, Society of Molecular Biology and Evolution, Halifax.  
 2007. Invited Talk: Dept. Seminar, Arizona State University, SIRG, AZ, USA  
 2007. Invited Talk: Dept. Seminar, University of Iowa, Iowa, USA  
 2007. Invited Talk: Dept. Seminar, University of Ottawa, Ottawa, Canada  
 2007. Invited Talk: Dept. Seminar, Universite de Laval, Quebec City, Canada  
 2006. Invited Talk: Dept. Seminar, Cornell University, NY, USA  
 2006. Invited Talk & Workshop Participant: Organized by CIHR, held in Ontario, CA  
 2006. Invited Talk: Conference, Canadian Society Zoologists, CMD section, CA  
 2006. Invited Workshop Participant: Arizona State University, USA  
 2006. Invited Workshop Participant: NESCent, Florida Keys, USA  
 2005. Invited Talk: Dept. Seminar, Syracuse University, Dept of Biol., NY, USA  
 2005. Invited Talk: Dept. Seminar, University of Indiana, Dept. of Biol., USA  
 2005. Invited Talk: Conference, Phenotypic Diversity and Evolution, Sweden.  
 2005. Invited Talk: Dept. Seminar, Univ. of Copenhagen, Dept. Pop. Biol, Denmark  
 2005. Invited Talk: Dept. Seminar, Arizona State University, USA  
 2005. Invited Talk: Dept. Seminar, Museum of Natural History, Madrid, Spain  
 2004. Invited Talk: Dept. Seminar, McGill Centre for Non-Linear Dynamics, CA  
 2004. Invited Talk: Dept. Seminar, Biotechnology Research Institute, Govt. of Canada  
 2004. Invited Talk: Dept. Seminar, University of Toronto, Dept. Zoology, CA  
 2004. Invited Talk: Dept. Seminar, Univ. Cal, Berkeley, Dept. Mol. Cell Biol., USA  
 2003. Invited Talk: Dept. Seminar, Harvard University, Department of OEB, USA  
 2003. Invited Talk: Dept. Seminar, UC Riverside, Dept. Ecol & Evol, USA  
 2003. Invited Talk: Dept. Seminar, University of Chicago, Dept. Geophysical Sciences,  
 2002. Invited Talk: Dept. Seminar, McGill Dept. of Biology, Canada  
 2002. Invited Talk: Dept. Seminar, Concordia University, Dept. of Biology, Canada  
 2002. Invited Talk: Conference, Society of Integ. & Comparative Biol, Anaheim, USA  
 2001. Invited Talk: Dept. Seminar, Konrad Lorenz Institute, Altenberg, Austria  
 2000. Invited Talk: Conference, North East Regional Dev. Biol., Woods Hole, USA  
 1999. Invited Talk: Conference, Dev. Basis Evolutionary Change, Chicago, USA  
 1998. Invited Talk: Conference, Novartis Foundation Symposium, London, UK

## GRANTS:

**NSERC (Discovery Grant; 2020-2025; \$95 000/year CDN); *Eco-Evo-Devo* and the origins of novel phenotypes in complex biological systems**



**NSERC (Discovery Accelerator Supplement; 2016-2018; \$40 000/year CDN);** The evolutionary and developmental genetic basis underling caste polyphenism in ants

**NSERC (Discovery Grant; 2015-2020; \$52 000/year CDN);** *Eco-Evo-Devo* and the origins of novelty in complex biological systems

**McGill University (Tomlinson Science Award; 2014-2017; \$16 666/year CDN);** The role of epigenetics in the regulation and evolution of social organization in ants

**NSERC (Research Tools and Instruments Grant; 2014-2016; \$132 000 CDN);** *Eco-Evo-Devo* and the origin of novelty in complex biological systems

**NSERC (Steacie Award; 2014-2016; \$125 000/year CDN);** *Eco-Evo-Devo* and the origin of novelty in complex biological systems

**NSERC (Discovery Grant; 2010-2015; \$46 000/year CDN);** The evolutionary and developmental genetic basis underling caste polyphenism in ants

**FQRNT (Team Grant; 2010-2013; \$198 000 CDN);** Microfluidic innovation platform for studying gene-environment interactions in fruit flies

**FQRNT (Nouveau Chercheurs grant; 2006-2008; \$20 000/year CDN);** The ecological basis of developmental change in the gene network underlying wing polyphenism in ants

**NSERC (Discovery Grant; 2005-2010; \$32 000/year CDN);** The evolutionary and developmental genetic basis underling wing polyphenism in ants

**Canadian Foundation for Innovation (equipment and infrastructure grant; 2004; \$685 452 CDN);** The evolutionary and developmental genetic basis underling wing polyphenism in ants

## OTHER EVIDENCE OF IMPACT AND CONTRIBUTIONS:

### **A. Co-founder and Co-Director of Centre of Islam and Science, McGill University (2015 to 2022):**

This Centre represented one of the first attempts to bring together experts from modern science, Islamic studies, and science education, as well as policy makers, to enhance understanding of the conflict and harmony between science, Islam, and society. The Centre was based on a tripartite structure consisting of inter-related research, teaching, and outreach components: (1) Science Policy in Islamic countries:

instituting pathways to innovation; (2) The Rational Sciences in Islam: historical perspectives; (3) Scientific Literacy in Muslim Societies. By allowing modern scientists, policy makers, educators, and Islamic Studies specialists to interact, the Centre provided opportunities for new and creative approaches to the vexing problems facing the development of science in modern Islamic societies. Key Centre activities included: sponsoring postdoctoral researchers and doctoral students, organizing local reading groups, developing an interdisciplinary graduate seminar, inviting scholars and policy makers to speak at McGill and organizing an international conference that brings together an interdisciplinary panel of scholars and policy makers.

#### **B. Editorial duties:**

**Editor-in-Chief**, *Journal of Experimental Zoology, Part B: Molecular Development and Evolution* (January 2019 to present)

**Guest Editor**, *Proceedings National Academy of Sciences, USA* (May 2019)

**Associate Editor and Editorial Board Member**, *Journal of Experimental Zoology, Part B: Molecular Development and Evolution* (January 2012 to 2018)

**Associate Editor**, *BMC Evolutionary Biology* (2016 to 2017)

**Associate Editor**, *BMC Developmental Biology* (2011 to 2017)

**Associate Editor**, *Evolution* (2011 to 2014)

#### **C. Contributions to scientific societies:**

**Past President** (2015 to present) of the newly established Pan-American Society of Evolutionary Developmental Biology

**Founding President** (2013 to 2015) of the newly established Pan-American Society of Evolutionary Developmental Biology

**Co-Organizer** (2015) Inaugural Meeting Pan-American Society of Evolutionary Developmental Biology, UC Berkeley, USA.

**Organizer of Symposia** (May 2 to 5, 2015) during Cold Spring Harbor meeting on Biology & Genomics of Social Insects.

**Chair** (2009-2010) Comparative Morphology & Development section, Canadian Society of Zoology

**Vice Chair** (2008-2009) Comparative Morphology & Development section, Canadian Society of Zoology

**Organizer** (2010) "Importance of Parallelism to Evolutionary Theory" symposium, Canadian Society of Zoology

**Organizer** (2006) "Molecular Approaches to EvoDevo" symposium, Canadian Society of Zoology

#### **D. International workshops and working groups:**

Co-organized (2019) "Epigenetics, Development, & Evolution" Bellairs, Barbados

Participated (2010) "Ant Genomics" Arizona State University, AZ, USA

Participated (2009-2011) "Developmental plasticity" Duke University, NC, USA

Participated (2011) "Functional RNAi" Pennsylvania State University, PA, USA

#### **E. Service as a Reviewer:**

##### **Journals:**

Nature; Science; eLife; PLoS Biology; PLoS Genetics; PLoS One; American Naturalist; American Zoologist; BioEssays; Bioinformatics; Frontiers in Zoology; Development Genes and Evolution; Evolution; Evolution and Development; Insect Molecular Biology; Journal of Evolutionary Biology; Journal of Molecular Evolution; McGill University; Molecular Phylogenetics and Evolution; Systematic Biology; Trends In Genetics; National Science Foundation; Proceedings of the Royal Society, Series B; Zoological Studies; Journal of Insect Science; Insect Biochemistry and Molecular Biology; Biological Reviews.

##### **Granting Agencies:**

Research Council for Biosciences and Environment of the Academy of Finland (2008); NSERC, Canada (2006-2013); Natural Environment Research Council, UK (2006); National Science Foundation, USA (2002-2012); Canadian Space Agency, Canada (2005); Konrad Lorenz Institute, Austria (2004, 2012).

#### **F. Teaching Awards:**

**BGSA/MBSU Biology Department Teaching Award** (2013). This teaching award is particularly meaningful because it comes directly from graduate (BGSA: Biology Graduate Student Association) and undergraduate (MBSU: McGill Biology Students Union) students.

### CONTRIBUTIONS TO THE TRAINING OF HIGHLY QUALIFIED PERSONNEL:

#### **A. Training ongoing:**

*Jamie Musgrove, PhD* (2021-present)

*Mariam Anwar, PhD* (2021-present, Co-supervised with Paul Lasko, McGill University)

*Lisa Hanna, PhD* (2019-present)

*Yasmine Haddad, PhD* (2017-present, Co-supervised with Eran Tal, Philosophy Dept., McGill University)

*Angelly Vasquez Correa, PhD* (2017-present)

*Travis Chen, PhD* (2015-present).

*Arjuna Rajakumar, PhD* (2014-present).

*Erik Plante MSc* (2020-present, Co-supervised with JP Lessard, Concordia University)

*Claire Ramsay PhD* (2020-present, Co-supervised with Paul Lasko, McGill University)

**B. Training Completed:**

*Giovanna De Blassis, MSc* (2017-2020)

- Currently Junior Research Scientist at Protix, Netherlands

*Sophie Koch, MSc* (2016-2019).

- Currently a Research Technician in Marc Johnston's lab at University of Toronto.

*Frédérique Larichelière, MSc* (2016-2018)

- Currently BSc in Actuarial Mathematics

*Angelica Lillico-Ouachour, MSc* (2014-2017).

- Currently an Instructor at Langara College, Canada

*Abdul-Matteen Rafiqi, Postdoc* (2011-2016)

- Currently a Professor at Beykoz Institute of Life Sciences and Biotechnology, Turkey.

*Melanie Couture, Research Technician* (2014-2016).

- Currently a field Assistant at Rockefeller University, USA

*Maryna Lesoway, PhD* (2009-2015, co-supervised Rachel Collin at STRI).

- Currently a Postdoc at the University of California, San Diego, USA

*Ana Sofia Ibararran, PhD* (2008-2014).

- Currently Director Center for Chemical Currencies of a Microbial Planet at Woods Hole Oceanographic Institution, USA

*Rajendhran Rajakumar, PhD* (2006-2013). Doctoral fellowship from FQRNT.

- Currently an Assistant Professor at the University of Ottawa

*Marie-Julie Fave, PhD* (2007-2012).

- Currently a Research Associate at Université de Montréal (St. Justine Hospital), Canada

*Abderrahman Khila. Postdoc* (2006 - 2011).

- Currently a Professor and CNRS Group Leader at the University of Lyon, France.

*Seba Shbailat. PhD (2005 - 2010).*

- Currently an Associate Professor at the Hashemite University, Jordan.

*Mikhiel Dijkstra. Postdoc (2006 - 2007).*

- Currently an Editor at *Frontiers* journals (*Nature* publishing group), Switzerland

*Francois Hioutim. Technician (2006-2008).*

- Currently a Bioinformatician at McGill University.

*Marcos Nahmad. MSc (2003-2005)*

- Currently a Professor at the National Polytechnic Institute IPN, Mexico

### **C. Undergraduates:**

- I have trained more than 30 Summer NSERC, Honor's Thesis, and Independent Studies students.
  - Many of these students have continued into graduate school and are/will be included on Abouheif Lab publications. Here are some highlights:
    - Shyamlika Gopalan (Independent Studies students 2010-2011) is doing her PhD University of California, Davis USA
    - TingJia Loregiano (Summer NSERC 2012, Independent Studies 2012), is Resident at Johns Hopkins Medical School, USA
    - Jane Ding (Summer NSERC 2018) is a Medical Student at the University of Ottawa, Canada
    - Kevin Wei (Summer NSERC, 2008, 2009) Professor at the University of Calgary
-