




## Julia Abitbol

Postdoctoral Scholar, Otolaryngology - Head & Neck Surgery

 NIH Biosketch available Online

 Curriculum Vitae available Online

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### Bio

#### BIO

Dr. Julia Abitbol received her B.Sc with Honour's specialization in Biology and Medical Cell Biology at the University of Western Ontario, London, Ontario, Canada. She then received her PhD in Anatomy and Cell Biology at the University of Western Ontario. During her PhD she studied the role of large-pore channel proteins, connexins and pannexins, in the auditory system.

#### INSTITUTE AFFILIATIONS

- Member, Maternal & Child Health Research Institute (MCHRI)

#### HONORS AND AWARDS

- Suzanne M. Bernier publication Award 2019, The University of Western Ontario (06/2019)
- Marine Biology Laboratory Travel Award to attend "The Biology of the Inner Ear" workshop, Marine Biology Laboratory (05/2019)
- Selected Cover Image for Journal of Molecular Medicine, May cover, Journal of Molecular Medicine (05/2019)
- Feature Platform Presentation Winner, London Health Research Day 2019, London Health Research Day Committee (04/2019)
- Selected Cover Image Journal of Cell Science, Volume 131, Issue 9, Journal of Cell Science (05/2018)
- First Author Interview Feature in the Journal of Cell Science, Journal of Cell Science (04/2018)
- Best Poster Presentation Award, Anatomy and Cell Biology Research Day, Anatomy and Cell Biology Research Day Committee (10/2017)
- Best Poster Presentation Award, International Gap Junction Meeting, International Gap Junction Meeting Committee (07/2017)
- Travel Scholarship, International Gap Junction Meeting, International Gap Junction Meeting Organizing Committee (07/2017)
- Natural Sciences and Engineering Research Council (NSERC) CGS Doctoral Scholarship, Natural Sciences and Engineering Research Council (09/2017-11/2019)
- Ontario Graduate Scholarship (Declined), The University of Western Ontario (09/2017-08/2018)
- Ontario Graduate Scholarship, The University of Western Ontario (09/2016-04/2017)
- JAX Lab Mouse Research Travel Scholarship, JAX Lab, Bar Harbour, Maine (09/2016)
- Anatomy and Cell Biology Travel Award, The Department of Anatomy and Cell Biology, The University of Western Ontario (04/2016)
- Western Graduate Research Scholarship, The University of Western Ontario (09/2014-08/2019)

#### PROFESSIONAL EDUCATION

- Bachelor of Science, Unlisted School (2014)
- Doctor of Philosophy, Unlisted School (2019)
- Bachelor of Science, The University of Western Ontario , Honors Specialization in Biology and Medical Cell Biology (2014)
- Doctor of Philosophy, The University of Western Ontario , Anatomy and Cell Biology (2019)

## STANFORD ADVISORS

- Alan Cheng, Postdoctoral Faculty Sponsor

## Research & Scholarship

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### CURRENT RESEARCH AND SCHOLARLY INTERESTS

Hearing loss is one of the most common sensory deficits and is permanent. We have known for quite some time that avian species retain the ability to spontaneously regenerate hair cells when they are damaged, however, this does not occur in the adult mammalian cochlea. My research interests are to enhance the proliferative regeneration capacity of the mammalian cochlea by findings genes that may up-regulate this process. Further, my goal is to track the dynamics of proliferating cochlear cells after damage in the cochlear. The ultimate goal is to identify genes that may enhance spontaneous regeneration of cochlear cells upon damage to treat patients with hearing loss.

## Publications

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### PUBLICATIONS

- **Hair Cell Regeneration: From Animals to Humans.** *Clinical and experimental otorhinolaryngology*  
Choi, S. W., Abitbol, J., Cheng, A.  
2024
- **Selection of viral capsids and promoters affects the efficacy of rescue of Tmprss3-deficient cochlea.** *Molecular therapy. Methods & clinical development*  
Aaron, K. A., Pekrun, K., Atkinson, P. J., Billings, S. E., Abitbol, J. M., Lee, I. A., Eltawil, Y., Chen, Y. S., Dong, W., Nelson, R. F., Kay, M. A., Cheng, A. G.  
2023; 30: 413-428
- **Lineage-tracing and translomic analysis of damage-inducible mitotic cochlear progenitors identifies candidate genes regulating regeneration.** *PLoS biology*  
Udagawa, T., Atkinson, P. J., Milon, B., Abitbol, J. M., Song, Y., Sperber, M., Huarcaya Najarro, E., Scheibinger, M., Elkon, R., Hertzano, R., Cheng, A. G.  
2021; 19 (11): e3001445
- **GJB2 mutations linked to hearing loss exhibit differential trafficking and functional defects as revealed in cochlear-relevant cells** *Frontiers in Cell and Development Biology*  
Beach, R., Abitbol, J. M., Allman, B. L., Esseltine, J. L., Shao, Q., Laird, D. W.  
2020; 8 (215)
- **Cisplatin-induced ototoxicity occurs independent of gap junctional intercellular communication, in press** *Cell Death and Differentiation*  
Abitbol, J. M., Beach, R., Esseltine, J. L., Barr, K., Allman, B. L., Laird, D. W.  
2020
- **The connexin 30 A88V mutant reduces cochlear gap junction expression and confers long-term protection against hearing loss** *The Journal of Cell Science*  
Kelly, J. J., Abitbol, J. M., Hulme, S., Pree, E. R., Laird, D. W., Allman, B. L.  
2019; 132 (2)
- **Double deletion of Panx1 and Panx3 affects skin and bone but not hearing** *Journal of Molecular Medicine*  
Abitbol, J. M., O'Donnell, B. L., Wakefield, B. C., Jewel, E., Kelly, J. J., Barr, K. J., Willmore, K. E., Penuela, S.  
2019; 97 (5): 723-736
- **Mice harbouring an oculodentodigital dysplasia-linked Cx43 G60S mutation have severe hearing loss.** *The Journal of Cell Science*  
Abitbol, J. M., Kelly, J. J., Barr, K. J., Allman, B. L., Laird, D. W.  
2018; 131
- **Differential effects of pannexins on noise-induced hearing loss** *Biochemical Journal*  
Abitbol, J. M., Kelly, J. J., Barr, K., Schormans, A. L., Laird, D. W., Allman, B. L.  
2016; 473 (24): 4665-4680

## PRESENTATIONS

- The role of gap junctional intercellular communication in cisplatin-induced ototoxicity as revealed in organotypic cochlear cultures - London Health Research Day (4/2019)
- The role of gap junctional intercellular communication in cisplatin-induced ototoxicity as revealed in organotypic cochlear cultures - Nexin Research Day (3/2019)
- Bridging gaps between connexins, pannexins, and hearing loss - Department of Anatomy and Cell Biology (4/2018)
- Severe loss-of-function Cx43 leads to hearing loss in a mouse model of oculodentodigital dysplasia - Nexin Research Day (5/2017)
- Large-pore channels in hearing and noise-induced hearing loss - Association for Research in Otolaryngology Conference (2/2017)
- Utilizing genetically modified mice to investigate large-pore channels in hearing - Department of Anatomy and Cell Biology (10/2016)
- The role of Pannexin3 in the auditory system and its contributions to noise-induced hearing damage - Nexin Research Day (2/2016)