

Ana Fiszbein

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EDUCATION

- 2012 – 2016 Ph.D. in Biology.
University of Buenos Aires, Argentina
- 2006 - 2011 Lic. in Biology (equivalent to B.Sc. and M.Sc.). Summa cum laude
University of Buenos Aires, Argentina
Specialization in Molecular Biology and Biotechnology

PROFESSIONAL EXPERIENCE

- 2021 – Assistant Professor, Biology Department
Boston University, Boston, MA
- 2016 – 2020 Postdoctoral Fellow, Mentor: Christopher B. Burge
Massachusetts Institute of Technology, Cambridge, MA
Computational and System Biology
- 2012 – 2016 Ph.D. Candidate, Mentor: Alberto R. Kornblihtt
University of Buenos Aires, Argentina
Molecular Biology and Biotechnology
- 2009 – 2012 Undergraduate Researcher, Mentor: Alberto R. Kornblihtt
University of Buenos Aires, Argentina
Molecular Biology and Biotechnology
- 2007 – 2009 Undergraduate Researcher, Mentor: Matias Pandolfi
University of Buenos Aires, Argentina
Physiology and Embriology
- 2006 – 2007 Research Trainee, Mentor: Gabriel Corfas
Children's Hospital, Harvard University, Boston, MA
Neuroscience
- 2005 – 2006 Undergraduate Researcher, Mentor: Marcelo Rodriguez Fermepin
University of Buenos Aires, Argentina
Microbiology

PUBLICATIONS

Wilson C, Giono LE, Rozés-Salvador V, **Fiszbein A**, Kornblihtt AR, Cáceres A (2020) The histone methyltransferase G9a controls axonal growth by targeting the RhoA signaling pathway. **Cell Reports**, 31(6): 107639. [abstract]

Burge CB, **Fiszbein A** (2020) Splicing-dependent transcriptional gene silencing or activation. Patent App 16/530, 149

Fiszbein A, Krick KS, Begg BE, Burge CB (2019) Exon-mediated activation of transcription starts. **Cell**, 79(7):1551-1565. [abstract]

Highlighted in:

a. Hoffmann T, Valcarcel J (2019) Splicing calls back. **Cell**, 79(7):1446-1447. [abs]

- b. Willson J (2019) Exons as enhancers. **Nat Rev Genet**, 21:68-69 [abs]
c. Song Y (2020) New beginnings. **Nat Chemical Biology**, 16:106 [abs]

Berardino BG, Chertoff M, Gianatiempo O, Alberca CD, Priegue R, **Fiszbein A**, Long P, Corfas G, Cánepa ET (2019) Exposure to enriched environment rescues anxiety-like behavior and miRNA deregulated expression induced by perinatal malnutrition while altering oligodendrocyte morphology. **Neuroscience** (19)30178-2. [abstract]

Zalcman G*, Federman N*, **Fiszbein A**, de la Fuente V, Ameneiro L, Schor IE, Romano A (2019) Sustained CaMKII delta gene expression is specifically required for long-lasting memories in mice. **Mol Neurobiol** 56(2): 1437-1450. [abstract] *co-first authors

Fiszbein A & Kornblihtt AR (2017) Alternative splicing switches: Important players in cell differentiation. **BioEssays** 39: 1600157. [abstract]

Fiszbein A & Kornblihtt AR (2016) Histone methylation, alternative splicing and neuronal differentiation. **Neurogenesis** 3:2326-2133. [abstract]

Fiszbein A, Giono LE, Quaglino A, Berardino BG, Singaut L, von Bilderling C, Schor IE, Steinberg JHE, Rossi M, Pietrasanta LI, Caramelo JJ, Srebrow A, Kornblihtt AR (2016) Alternative splicing of G9a regulates neuronal differentiation. **Cell Reports** 14:2797–2808. Featured on the cover. [abstract]

Ramallo M, Morandini L, Alonso F, Birba A, Tubert C, **Fiszbein A**, Pandolfi M (2014) The endocrine regulation of cichlids social and reproductive behavior through the eyes of the chanchita, *Cichlasoma dimerus* (Percomorpha; Cichlidae). **Journal of Physiology** 4; 108:194-202. [abstract]

Schor IE* and **Fiszbein A***, Petrillo E, Kornblihtt AR (2013) Intragenic epigenetic changes modulate NCAM alternative splicing upon neuronal differentiation. **EMBO Journal** 14; 32:2264-74. [abstract] *co-first authors

Gómez Acuña LI, **Fiszbein A**, Alló M, Schor IE, Kornblihtt AR (2012) Connections between chromatin signatures and splicing. **Wiley Interdisciplinary Reviews RNA** 16; 4:77-91. [abstract]

Dujardin G, Lafaille C, Petrillo E, Buggiano V, Gómez Acuña LI, **Fiszbein A**, Godoy Herz MA, Nieto Moreno N, Muñoz MJ, Alló M, Schor IE, Kornblihtt AR (2012) Transcriptional elongation and alternative splicing. **Biochim Biophys Acta** 1829:134-40. [abstract]

Fiszbein A, Cánepa M, Vázquez GR, Maggese C, Pandolfi M (2010) Photoperiodic modulation of reproductive physiology and behavior in the cichlid fish *Cichlasoma dimerus*. **Physiology and Behaviour** 30; 99:425-32. [abstract]

BOOKS AND SCIENCE COMMUNICATION

Fiszbein A, Gomez Acuña LI, Godoy Herz MA, Kornblihtt AR (2016) Interplay between chromatin and splicing. Chapter from the book *Chromatin Regulation and Dynamics*. Elsevier Science & Technology

Fiszbein A, Schor IE, Kornblihtt AR (2015) Fundamentals of NCAM expression, function and regulation of alternative splicing in neuronal differentiation. Chapter from the book *Neural surface antigens - from basic biology toward biomedical applications*. Elsevier Science & Technology ISBN: 0128011262

Fiszbein A (2015) Verdades y mentiras del sistema científico universal. Exactamente.

INVITED TALKS

- 2021 System Biology Seminar Series, Boston University
- 2020 Genome Science Institute (GSI) symposium, Boston University
- 2020 Molecular biology and genetics seminars, Brandeis University
- 2020 iRNA-COSI, ISCB and the RNA Society (webinar series)
- 2020 GEARS series
- 2020 Department of Biochemistry and Molecular Biology, University of British Columbia, Canada
- 2020 Physiology Department and Green Center for Reproductive Biology Sciences, UT Southwestern
- 2020 Remix Therapeutics, Atlas Venture
- 2020 Biology Department, Boston University
- 2019 Eukaryotic mRNA processing Meeting, Cold Spring Harbor Laboratory, NY
- 2019 Neuroscience Institute at FLENI, Argentina
- 2018 Work in Progress Seminar, MIT, Biology Department
- 2018 Post-transcriptional Gene Regulation, Gordon Conference, ME
- 2018 Post-transcriptional RNA processing: Surveys, mechanism and disease, Gordon Research Seminar, ME
- 2018 MIT Retreat, Biology Department, Falmouth MA
- 2018 Biological and Biomedical Sciences, Yale University
- 2017 Institute of Molecular and Cellular Biology, Argentina
- 2015 Eukaryotic mRNA processing Meeting, Cold Spring Harbor Laboratory, NY

TEACHING EXPERIENCE

- Spring 2019 Instructor in Advanced Undergraduate Seminar 7.341 DNA's sister does all the work: The central roles of RNA in gene expression. MIT
- 2015 - 2016 Senior teaching Assistant (by contest) in Molecular and Cellular Biology and Genetic engineering. University of Buenos Aires
- 2010 - 2014 Teaching Assistant (by contest) in Molecular and Cellular Biology, Immunochemistry, Microbiology. Development and Differentiation, Genetic Engineering and Molecular Physiology. University of Buenos Aires

MENTORING AND TRAINEES SUPERVICED

- 2019 Mentor in Mentorship Table on Graduate Programs in the Life Science of the eight annual National Collegiate Research Conference (NCRC), Harvard University

Undergraduate students at BU

- 2020 – Helen Feng

2020 – Megan Costa
2020 – Kaveri Bhargava
2020 – Meredith Kaplan
Fall 2020 Jessica Riley

MD students and Technicians in the Burge Lab, MIT

2019 - 2020 Jowa Shi (MD student in the Harvard-MIT HST Program)
2017 - 2020 Keegan S. Krick and Christine Minor
Sequence preferences of human RNA binding proteins (ENCODE)

Undergraduate students in the Kornblihtt Lab, UBA

2014 - 2015 Lara Mariel Chirich

PROFESSIONAL SERVICE

2019 – 2022 Co-chair of the Post-transcriptional Gene Regulation Gordon Research Seminar, ME, USA
2020 – Guest editor, Genes
2020 Grant reviewer panelist for NSF and MRC (UK Medical Research Council)
2020 – Reviewer for Nature Communications, Cell Reports, RNA, eLife
2017 – 2020 Co-chair of the MIT B68 Postdoc Association. Organizer of MIT Biology Colloquiums

ACADEMIC SERVICE

2021 – Faculty member, RISE Summer Internship Program, Boston University
2021 – Faculty member, NSF Bioinformatics Research and Interdisciplinary Training Experience (RISE), Boston University
2021 – Ph.D. committee member for 4 Ph.D. students at Boston University
2021 – Ad-hoc Committee Member, MCBB Graduate Committee, Department of Biology, Boston University

AWARDS AND HONORS

2017 – 2020 PEW Latin American Postdoctoral Fellowship (\$160,000) * Featured in MIT news (06/20/2017)
2016 Postdoctoral Fellowship from CONICET - declined
2012 – 2016 Graduate Fellowship form CONICET (National Council of Scientific and Technical Investigations, Argentina)
2005 Early scientist award, University of Buenos Aires

PATENT APPLICATIONS

U.S. 62/740,881. International Patent Application PCT/US2019/044936. MIT 20890, "Splicing-Dependent Transcriptional Gene Silencing or Activation", by Christopher B. Burge and Ana Fiszbein.