

# Juan I. Fuxman Bass, Ph.D.

Boston University  
Department of Biology  
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(617) 353-2448

## EDUCATION

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2006-2010 Ph.D. Biology.  
University of Buenos Aires and National Academy of Medicine, Argentina.  
Advisor: Dr. Analia S. Trevani

1999-2005 Lic. in Biology (equivalent to B.S./M.S.). Summa cum laude.  
University of Buenos Aires, Argentina.  
Specialization: Molecular Biology and Biotechnology.

## POSTDOCTORAL TRAINING

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2011-2016 Postdoctoral fellow  
University of Massachusetts Medical School, Worcester, MA.  
Advisor: Dr. A.J. Marian Walhout

## APPOINTMENTS

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2019-present Director of Graduate Admissions and Associate Program Director  
Molecular Biology, Cell Biology & Biochemistry Program  
Boston University, Boston, MA.

2016-present Assistant Professor  
Biology Department  
Boston University, Boston, MA.

2003-2011 Teaching Assistant  
University of Buenos Aires, Buenos Aires, Argentina.

1999-2005 Elementary and high-school mathematics teacher  
Mary Graham, North Hills, and Pilar's Parish schools.  
Pilar and Buenos Aires, Argentina

## PROGRAMATIC APPOINTMENTS

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- 2018-present Member of the BU-BMC Cancer Center.
- 2017-present Member of the Bioinformatics Program (Boston University).
- 2017-present Member of the Genome Sciences Institute (Boston University).
- 2017-present Member of the Molecular Biology, Cell Biology and Biochemistry Program (Boston University).
- 2016-present Member of the Center for Cancer Systems Biology (Dana-Farber Cancer Institute).

## AWARDS AND HONORS

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- 2019 Milstein Young Investigator Award, International Cytokine & Interferon Society.
- 2007 “Leonardo Satz” Award, Argentine Immunology Society (award to the best oral presentation).
- 2005 Bronze Medal in the 8<sup>th</sup> Iberoamerican Mathematical Olympiad for University Students.
- 2004 National Academy of Medicine Award (best original work in immunology developed in Argentina).
- 2004 Argentine Council for the Information and Development of Biotechnology Award (best research and development project). Declared project of national interest by the Argentine Parliament.
- 2004-2006 Undergraduate Fellowship for research Initiation. School of Medicine, University of Buenos Aires, Argentina.
- 2002-2003 Undergraduate Scholarship “Paulo D. Barroso Mastronardi” in Biological Sciences. National Academy of Exact, Physics and Natural Sciences, Argentina.
- 2002 Bronze Medal in the 5<sup>th</sup> Iberoamerican Mathematical Olympiad for University Students.
- 2000 Bronze Medal in the 3<sup>rd</sup> Iberoamerican Mathematical Olympiad for University Students.
- 1999 Bronze Medal in the 2<sup>nd</sup> Iberoamerican Mathematical Olympiad for University Students.
- 1999 Silver Medal in the XI Asian Pacific Mathematics Olympiad.
- 1998-2000 Undergraduate scholarship in mathematics, Bernardo Houssay Foundation, Argentina.
- 1998 Presidential Silver Medal in mathematics.
- 1998 Silver Medal in the VII Rioplatense Mathematical Olympiad.
- 1998 Silver Medal in the 13<sup>th</sup> Iberoamerican Mathematical Olympiad.
- 1998 Bronze Medal in the 39<sup>th</sup> International Mathematical Olympiad.
- 1998 Bronze Medal in the X Asian Pacific Mathematical Olympiad.
- 1998 First place in the Buenos Aires Province Mathematical Olympiad.

- 1998 Second place in the Argentinean Mathematical Olympiad.
- 1997 Bronze Medal in the VI Rioplatense Mathematical Olympiad.
- 1997 Silver Medal in the 12<sup>th</sup> Iberoamerican Mathematical Olympiad.
- 1997 Bronze Medal in the 38<sup>th</sup> International Mathematical Olympiad
- 1997 Third place in the Argentinean Mathematical Olympiad.
- 1996 First place in the Buenos Aires Province Mathematical Olympiad.

## PRESENT FUNDING

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- 2018-2023 NIH Maximizing Investigator's Research Award (R35), R35-GM128625: *Structure and function of immune gene regulatory networks*. \$2,062,500 total cost (direct cost to my lab = \$1,250,000, indirect cost to BU = \$ 812,500). PI: **Jl Fuxman Bass**.
- 2018-2023 NIH National Cancer Institute, U01-CA232161: *Rewiring of regulatory networks in breast cancer by transcription factor isoforms*. \$3,736,932 total cost (direct cost to my lab = \$718,000, indirect cost to BU = \$ 466,700). Co-PIs: **Jl Fuxman Bass (BU)**, Marc Vidal (DFCI), Martha Bulyk (Harvard Medical School).
- 2022-2023 NIH National Cancer Institute, U01-CA232161 (supplement): *Functional roles of the intrinsically disordered regions of ESR1 on its transcriptional regulatory properties*. \$316,000 total cost (direct cost to my lab = \$53,071, indirect cost to BU = \$ 34,496). Co-PIs: **Jl Fuxman Bass (BU)**, , Martha Bulyk (Harvard Medical School), Haribabu Arthanari (DFCI).

## PAST FUNDING

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- 2016-2018 NIH Pathway to Independence Award (K99/R00), R00-GM114296: *Delineation of a cytokine gene regulatory network and rewiring in disease*. \$505,931 total cost (direct cost = \$307,557, indirect cost = \$198,374). PI: **Jl Fuxman Bass**.
- 2015-2016 NIH Pathway to Independence Award (K99/R00), K99-GM114296: *Delineation of a cytokine gene regulatory network and rewiring in disease*. \$90,000 total cost (direct cost = \$83,333, indirect cost = \$6,667). PI: **Jl Fuxman Bass**.
- 2012-2014 Pew Latin American Postdoctoral Fellowship. \$60,000 total cost (direct cost = \$60,000, indirect cost = \$0). PI: **Jl Fuxman Bass**.
- 2006-2011 Graduate Fellowship from CONICET (National Council of Scientific and Technical Investigations, Argentina).

## PUBLICATIONS

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### Peer-reviewed publications

postdocs, graduate students, undergraduate students, and technicians mentored

### Faculty research

1. Kuniholm J, Armstrong E, Bernabe B, Coote C, Berenson A, Drinan SD, Olson A, He X, Lin N, Fuxman Bass JI, Henderson AJ. Intragenic proviral elements support transcription of defective HIV-1 proviruses. *PloS Pathogens*. 2021 Dec 28;17(12):e1009982.
2. Soto L, Li Z, Santoso CS, Berenson A, Ho I, Shen VX, Yuan S, Fuxman Bass JI. Compendium of human transcription factor effector domains. *Molecular Cell*. 2021 Nov 19:S1097-2765(21)00957-6.
3. Santoso CS, Li Z, Rottenberg JT, Liu X, Shen V, Fuxman Bass JI. Therapeutic targeting of transcription factors to control the cytokine release syndrome in COVID-19. *Frontiers in Pharmacology*. 2021 Jun 7;12:673485.
4. Rasekh ME, Hernandez Y, Drinan SD, Fuxman Bass JI, Benson G. Genome-wide characterization of human minisatellite VNTRs: population-specific alleles and gene expression differences. *Nucleic Acids Res*. 2021 May 7;49(8):4308-4324.
5. Pedro KD, Agosto LM, Sewell JA, Eberenz KA, He X, \*Fuxman Bass JI, \*Henderson AJ. An unbiased functional screen identifies transcriptional networks that regulate HIV-1 and HIV-2. *Proc Natl Acad Sci USA*. 2021 Mar 16;118(11):e2012835118. (\*co-corresponding and co-senior author).
6. Santoso CS, Li Z, Lal S, Yuan S, Gan KA, Agosto LM, Liu X, Carrasco Pro S, Sewell JA, Henderson A, Atianand MK, Fuxman Bass JI. Comprehensive mapping of the human cytokine gene regulatory network. *Nucleic Acids Research* 2020 Dec 2;48(21):12055-12073.
7. Carrasco Pro S, Bulekova K, Gregor B, Labadorf L, Fuxman Bass JI. Prediction of genome-wide effects of single nucleotide variants on transcription factor binding. *Scientific Reports*. 2020 Oct 19; 10, 1-11.
8. Liu X, Hong T, Parameswaran S, Ernst K, Marazzi I, \*Weirauch MT, \*Fuxman Bass JI. Human Virus Transcriptional Regulators. *Cell*. 2020 Jul 9;182(1):24-37. (\*co-corresponding and co-senior author)
9. Shrestha S, Sewell JA, Santoso CS, Forchielli E, Carrasco Pro S, Martinez M, Fuxman Bass JI. Discovering human transcription factor physical interactions with genetic variants, novel DNA motifs, and repetitive elements using enhanced yeast one-hybrid assays. *Genome Research*. 2019 Sep 29: 1533-1544; doi:10.1101/gr.248823.119
10. Shrestha S, Liu X, Santoso CS, Fuxman Bass JI. Enhanced yeast one-hybrid screens to identify transcription factor binding to human DNA sequences. *J Vis Exp*. 2019 Feb 11;(144). doi: 10.3791/59192
11. Carrasco Pro S, Dafonte Imedio A, Santoso CS, Gan KA, Sewell JA, Martinez M, Sereda R, Mehta S, Fuxman Bass JI. Global landscape of mouse and human cytokine transcriptional regulation. *Nucleic Acids Res*. 2018 Sep 3. doi: 10.1093/nar/gky787.
12. Demchak B, Kreisberg JF, Fuxman Bass JI. Theory and Application of Network Biology Toward Precision Medicine. *J Mol Biol*. 2018 Jul 18. pii: S0022-2836(18)30811-8.
13. Gan KA, Carrasco Pro S, Sewell JA, and Fuxman Bass JI. Identification of Single Nucleotide Non-coding Driver Mutations in Cancer. *Frontiers in Genetics*. 2018 Feb 2;9:16. doi: 10.3389/fgene.2018.00016.

14. Sewell JA, Fuxman Bass JI. Options and considerations when using a yeast one-hybrid system. *Methods Mol Biol.* 2018;1794:119-130.
15. Sewell JA, Fuxman Bass JI. Cellular network perturbations by disease-associated variants. *Curr Opin Sys Biol.* 2017 June; 3: 60–66.

## Postdoctoral research

16. Basu J, Zha J, Reis BS, Hua X, Ge L, Ferchen K, Nicolas E, Czyzewicz P, Cai KQ, Tan YF, Peri S, Fuxman Bass, JI, Walhout AJM, Grimes HL, Grivennikov SI, Mucida D, Kappes DJ. Essential role of ThPOK autoregulatory loop in maintenance of mature CD4 T cell identity and function. *Nature Immunology.* 2021 Aug;22(8):969-982.
17. Mookerjee-Basu J, Hua X, Ge L, Nicolas E, Li Q, Czyzewicz P, Zhongping D, Peri S, Fuxman Bass JI, Walhout AJM, Kappes DJ. Functional conservation of a developmental switch in mammals since the Jurassic age. *Mol Biol Evol.* 2018 Oct 8. doi: 10.1093/molbev/msy191
18. #Fuxman Bass JI, Reece-Hoyes JS, #Walhout AJ. Gene-Centered Yeast One-Hybrid Assays. *Cold Spring Harb Protoc.* 2016 Dec 1;2016(12):pdb.top077669. (#co-corresponding author).
19. #Fuxman Bass JI, Reece-Hoyes JS, #Walhout AJ. Zymolyase-Treatment and Polymerase Chain Reaction Amplification from Genomic and Plasmid Templates from Yeast. *Cold Spring Harb Protoc.* 2016 Dec 1;2016(12):pdb.prot088971. (#co-corresponding author).
20. #Fuxman Bass JI, Reece-Hoyes JS, #Walhout AJ. Colony Lift Colorimetric Assay for  $\beta$ -Galactosidase Activity. *Cold Spring Harb Protoc.* 2016 Dec 1;2016(12):pdb.prot088963. (#co-corresponding author).
21. #Fuxman Bass JI, Reece-Hoyes JS, #Walhout AJ. Performing Yeast One-Hybrid Library Screens. *Cold Spring Harb Protoc.* 2016 Dec 1;2016(12):pdb.prot088955. (#co-corresponding author).
22. #Fuxman Bass JI, Reece-Hoyes JS, #Walhout AJ. Generating Bait Strains for Yeast One-Hybrid Assays. *Cold Spring Harb Protoc.* 2016 Dec 1;2016(12):pdb.prot088948. (#co-corresponding author).
23. Fuxman Bass JI, Pons C, Kozlowski L, Reece-Hoyes JS, Shrestha S, Holdorf AD, Mori A, Myers CL, Walhout AJ. A gene-centered *C. elegans* protein-DNA interaction network provides a framework for functional predictions. *Mol Syst Biol.* 2016 Oct 24;12(10):884.
24. Fuxman Bass JI, Sahni N, Shrestha S, Garcia-Gonzalez A, Mori A, Bhat N, Yi S, Hill DE, Vidal M, Walhout AJ. Human Gene-Centered Transcription Factor Networks for Enhancers and Disease Variants. *Cell.* 2015 Apr 23;161(3):661-73.
25. \*Sahni N, \*Yi S, \*Taipale M, \*Fuxman Bass JI, \*Coulombe-Huntington J, Yang F, Peng J, Weile J, Karras GI, Wang Y, Kovács IA, Kamburov A, Krykbaeva I, Lam MH, Tucker G, Khurana V, Sharma A, Liu YY, Yachie N, Zhong Q, Shen Y, Palagi A, San-Miguel A, Fan C, Balcha D, Dricot A, Jordan DM, Walsh JM, Shah AA, Yang X, Stoyanova AK, Leighton A, Calderwood MA, Jacob Y, Cusick ME, Salehi-Ashtiani K, Whitesell LJ, Sunyaev S, Berger B, Barabási AL, Charloteaux B, Hill DE, Hao T, Roth FP, Xia Y, Walhout AJ, Lindquist S, Vidal M. Widespread Perturbation of Disease-Specific Macromolecular Interactions in Human Genetic Disorders. *Cell.* 2015 Apr 23;161(3):647-60. (\*co-first author).

26. Narasimhan K, Lambert SA, Yang AW, Riddell J, Mnaimneh S, Zheng H, Albu M, Najafabadi HS, Reece-Hoyes JS, **Fuxman Bass JI**, Walhout AJ, Weirauch MT, Hughes TR. Mapping and analysis of *Caenorhabditis elegans* transcription factor sequence specificities. *Elife*. 2015 Apr 23;4.
27. **#Fuxman Bass JI**, Diallo A, Nelson J, Soto JM, Myers CL, **#Walhout AJ**. Using networks to measure similarity between genes: association index selection. *Nature Methods*. 2013 Dec. 10(12):1169-76. (\*co-corresponding author).
28. **Fuxman Bass JI**, Tamburino AM, Mori A, **Beittel N**, Weirauch MT, Reece-Hoyes JS, Walhout AJ. Transcription factor binding to *Caenorhabditis elegans* first introns reveals lack of redundancy with gene promoters. *Nucleic Acids Res*. 2014 Jan;42(1):153-62.
29. Ritter AD, Shen Y, **Fuxman Bass J**, Jeyaraj S, Deplancke B, Mukhopadhyay A, Xu J, Driscoll M, Tissenbaum HA, Walhout AJ. Complex expression dynamics and robustness in *C. elegans* insulin networks. *Genome Research*. 2013 Jun;23(6):954-65.

### Graduate and undergraduate research

30. Gabelloni ML, Sabbione F, Jancic C, **Fuxman Bass JI**, Keitelman I, Iula L, Oleastro M, Geffner JR, Trevani AS. NADPH oxidase derived reactive oxygen species are involved in human neutrophil IL-1 $\beta$  secretion but not in inflammasome activation. *Eur J Immunol*. 2013 Dec;43(12):3324-35.
31. Traglia GM, Sala CD, **Fuxman Bass JI**, Soler-Bistué AJ, Zorreguieta A, Ramírez MS, Tolmasky ME. *Internalization of Locked Nucleic Acids/DNA Hybrid Oligomers into Escherichia coli*. *Biores Open Access*. 2012 Oct;1(5):260-3.
32. Nahmod K, Walther T, Cambados N, Fernandez N, Meiss R, Tappenbeck N, Wang Y, Raffo D, Simian M, Schwiebs A, Pozner R, **Fuxman Bass J**, Geffner J, Kordon E, Schere Levy C. AT1 receptor blockade delays post-lactational mammary gland involution: a novel role for the renin angiotensin system. *FASEB J*. 2012 May;26(5):1982-94.
33. **Fuxman Bass J**, Russo D, Gabelloni M, Geffner J, Giordano M, Catalano M, Zorreguieta A, Trevani A. Extracellular DNA: A Major Proinflammatory Component of *P. aeruginosa* Biofilms. *J Immunol*. 2010 Jun 1;184(11):6386-95.
34. Salamone G, Petracca Y, **Fuxman Bass J**, Rumbo M, Geffner J, Trevani A. Flagellin delays spontaneous human neutrophil apoptosis. *Lab Invest*. 2010 Jul;90(7):1049-59.
35. **Fuxman Bass J**, Alvarez M, Gabelloni M, Geffner J, Vermeulen M, Amaral M, Trevani A. GM-CSF enhances a CpG-independent pathway of neutrophil activation triggered by bacterial DNA. *Mol Immunol*. 2008 Nov;46(1):37-44.
36. **Fuxman Bass J**, Gabelloni M, Alvarez M, Vermeulen M, Russo D, Zorreguieta A, Geffner J, Trevani A. Characterization of bacterial DNA binding to human neutrophil surface. *Lab Invest*. 2008 Sep;88(9):926-37.
37. Alvarez M, **Fuxman Bass J**, Geffner J, Fernández Calotti P, Costas M, Coso O, Gamberale R, Vermeulen M, Salamone G, Tanos T, Trevani A. Neutrophil signaling pathways activated by bacterial DNA stimulation. *J Immunol*. 2006 Sep 15;177(6):4037-46.

## Preprints and manuscripts in revision

38. [Soto LF](#), Pérez Timaná L, \*Requena D, \***Fuxman Bass JI**. Epitope Analyzer: an interactive Shiny app to evaluate and filter predicted T-cell epitopes. (in revision at Bioinformatics) (\*co-corresponding author)
39. [Berenson A](#), **Fuxman Bass JI**. Enhanced yeast one-hybrid assays to study protein-DNA interactions. (in revision at Methods in Molecular Biology)

## Books

1. **Fuxman Bass JI**. *Solving math problems*. Buenos Aires: Red Olímpica (2010). 252 pages. ISBN 978-987-9072-66-0.

## INVITED LECTURES AND PRESENTATIONS

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| 2021 | Center for Autoimmune Genomics and Etiology, Cincinnati Children's Hospital, Cincinnati, OH.   |
| 2021 | Department of Systems Biology, UMass Chan Medical School, Worcester, MA.   |
| 2021 | Cell and Experimental Biology Conference, Houston, TX.   |
| 2021 | BIRS meeting: Rules of protein-DNA recognition: computational and experimental advances. Oaxaca, Mexico. (cancelled because of COVID-19) |
| 2021 | Developmental Biology Center Andalucia, Pablo de Olavide University, Seville, Spain.   |
| 2020 | Cell and Experimental Biology Conference, Boston, MA.  |
| 2019 | Biology Department, University at Albany, Albany, NY.  |
| 2019 | International Cytokine & Interferon Society, Vienna, Austria.  |
| 2019 | Center for Cancer Systems Biology annual retreat, Gloucester, MA.  |
| 2019 | Center for Autoimmune Genomics & Etiology, Cincinnati Children's Hospital, Cincinnati, OH.   |
| 2019 | Tertulia, Boston University, Boston, MA.   |
| 2018 | Genome Science Institute, Boston University, Boston, MA.   |
| 2018 | Center for Cancer Systems Biology annual retreat, Gloucester, MA.  |
| 2018 | BIRS meeting: Rules of protein-DNA recognition: computational and experimental advances. Oaxaca, Mexico.                                 |
| 2017 | Center for Cancer Systems Biology annual retreat, Gloucester, MA.  |
| 2017 | Cold Spring Harbor Laboratory meeting "Systems Biology: Networks", Huntington, NY.   |
| 2017 | Microbiology Department, Boston University School of Medicine, Boston, MA.   |

- 2016 Worcester Area Worm Meeting, Worcester, MA.
- 2016 Program in Systems Biology, UMass Medical School, Worcester, MA.
- 2016 BioFrontiers Institute, Colorado University, Boulder, CO.
- 2016 Bioengineering Department, University of Washington, Seattle, WA.
- 2016 Molecular, Cell and Developmental Biology Department, University of California, Santa Cruz, CA.
- 2016 Biochemistry Department, Boston University School of Medicine, Boston, MA.
- 2016 Biology Department, Boston University, Boston, MA.
- 2015 Center of Cancer Systems Biology meeting, Rockport, MA.
- 2015 Microbiology and Physiological Systems Department, UMass Medical School, Worcester, MA.
- 2015 Molecular, Cell and Cancer Biology Department, UMass Medical School, Worcester, MA.
- 2015 20<sup>th</sup> International *C. elegans* Meeting, Genetics Society of America, Los Angeles, CA.
- 2015 Leloir Foundation Institute, Buenos Aires, Argentina.
- 2014 Center of Cancer Systems Biology meeting, Rockport, MA.
- 2014 Systems Biology: Global Regulation of Gene Expression Meeting, Cold Spring Harbor Laboratory, Cold Spring Harbor, NY.
- 2014 Pew Annual Meeting. Costa Rica.
- 2014 National Academy of Medicine, Buenos Aires, Argentina.
- 2014 Lewis-Sigler Institute of Integrative Genomics, Princeton University, Princeton, NJ.
- 2014 Program in Bioinformatics and Integrative Biology, UMass Medical School, Worcester, MA.
- 2012 Center of Cancer Systems Biology meeting, Rockport, MA
- 2007 Argentinean Immunology Society meeting, Mar del Plata, Argentina.
- 2006 Argentinean Immunology Society meeting, Mar del Plata, Argentina.

## STUDENT PRESENTATIONS

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### Poster presentations

postdocs, graduate students, undergraduate students, technicians mentored  
 Underlined name indicates poster presenter

- 2021 Mar Comprehensive Mapping of the Human Cytokine Gene Regulatory Network.

- Santoso CS, Li Z, Lal S, Yuan S, Gan KA, Agosto LM, Liu X, Carrasco Pro S, Sewell JA, Henderson A, Atianand MK, **Fuxman Bass JI**.  
CSHL meeting - Systems biology: networks, Huntington, NY
- 2020 Nov Human Virus Transcriptional Regulators  
[Liu X](#), Hong T, Parameswaran S, Ernst K, Marazzi I, Weirauch MT, **Fuxman Bass JI**.  
EMBL Conference: From Functional Genomics to Systems Biology, Heidelberg, Germany
- 2020 Nov Comprehensive Mapping of the Human Cytokine Gene Regulatory Network.  
[Santoso CS](#), [Li Z](#), Lal S, [Yuan S](#), [Gan KA](#), Agosto LM, [Liu X](#), [Carrasco Pro S](#), [Sewell JA](#), Henderson A, Atianand MK, **Fuxman Bass JI**.  
EMBL Conference: From Functional Genomics to Systems Biology, Heidelberg, Germany
- 2019 Nov Rewiring of regulatory networks in breast cancer by transcription factor isoforms  
Lambourne L, [Santoso CS](#), Sheynkman G, Inukai S, Bhattacharjee A, Mattioli K, [Berenson A](#), Calderwood MA, Hill DE, Salomonis N, Bulyk ML, Vidal M, **Fuxman Bass JI**.  
Systems Approaches in Cancer Biology, Woodhole, MA
- 2019 Oct Modulation of IL10 Production by Targeting Synergistic Transcription Factor Combinations.  
[Yuan S](#), [Santoso CS](#), **Fuxman Bass JI**.  
UROOP 22nd annual undergraduate research symposium, Boston, MA
- 2019 Sep Rewiring of regulatory networks in breast cancer by transcription factor isoforms  
Sheynkman G, Inukai S, [Santoso CS](#), Phanor S, Calderwood MA, Hill DE, Salomonis N, Bulyk ML, Vidal M, **Fuxman Bass JI**.  
Cancer Systems Biology Consortium meeting, Irvine, CA
- 2019 Apr The Role of ZF-DHHC Proteins in ALU Element Regulation  
[Lobos G](#), [Forchielli E](#), [Shretha S](#), [Thapa B](#), [Liu X](#), **Fuxman Bass JI**.  
Showcase of Undergraduate Research Excellence, Orlando, FL
- 2019 Mar Comprehensive Mapping of the Human Cytokine Gene Regulatory Network.  
[Santoso CS](#), [Carrasco Pro S](#), [Dafonte Imedio A](#), [Gan KA](#), [Sewell J](#), [Martinez M](#), [Sereda R](#), [Mehta S](#), [Liu X](#), [Bloom J](#), Agosto L, Henderson A, **Fuxman Bass JI**.  
CSHL meeting: Systems Immunology, Huntington, NY
- 2018 Oct Comprehensive Mapping of the Human Cytokine Gene Regulatory Network.  
[Santoso CS](#), [Gan KA](#), [Carrasco Pro S](#), [Bloom J](#), Agosto LM, Henderson AJ, and **Fuxman Bass JI**.  
6<sup>th</sup> Annual Meeting of the International Cytokine and Interferon Society, Boston, MA
- 2018 Oct Global Landscape of Mouse and Human Cytokine Transcriptional Regulation.  
[Carrasco Pro S](#), [Dafonte Imedio A](#), [Santoso CS](#), [Gan KA](#), [Sewell JA](#), [Martinez M](#), [Sereda R](#), [Mehta S](#), and **Fuxman Bass JI**.  
6<sup>th</sup> Annual Meeting of the International Cytokine and Interferon Society, Boston, MA
- 2018 Oct The Role of ZF-DHHC Proteins in ALU Element Regulation  
[Lobos G](#), [Forchielli E](#), [Shretha S](#), [Thapa B](#), [Liu X](#), **Fuxman Bass JI**.  
UROOP 21st annual undergraduate research symposium, Boston, MA
- 2018 Sep Rewiring of regulatory networks in breast cancer by transcription factor isoforms  
Sheynkman G, Inukai S, Calderwood MA, Hill DE, Salomonis N, **Fuxman Bass JI**, Bulyk ML, Vidal M.  
Cancer Systems Biology Consortium meeting, Bethesda, MD

2017 Mar Delineation of a cytokine protein-DNA interaction network  
[Sewell J](#), [Rodriguez-Sastre N](#), [Forchielli E](#), [Carrasco Pro S](#), [Gan KA](#), [Fuxman Bass JI](#).  
CSHL meeting - Systems biology: networks, Huntington, NY

## Oral presentations

2020 Nov Rewiring of Gene Regulatory Networks by Transcription Factor Isoforms  
8th Annual Biology Graduate Student Symposium, Boston, MA  
Presenter: Clarissa Santoso (Ph.D. graduate student)  
Award: best oral presentation

2019 Aug Uncovering the Combinatorial Transcriptional Regulation of IL10.  
New England Biolabs invited talk, Ipswich, MA  
Presenter: Samson Yuan (undergraduate student)

2019 Sep Rewiring of Gene Regulatory Networks by Transcription Factor Isoforms  
Annual Program in Systems Biology Retreat, Gloucester, MA  
Presenter: Clarissa Santoso (Ph.D. graduate student)

2018 Sep Gene Regulatory Network Wiring and Re-wiring in Disease  
Annual Program in Systems Biology Retreat, Gloucester, MA  
Presenter: Clarissa Santoso (Ph.D. graduate student)

2018 Nov Comprehensive Mapping of the Human Cytokine Gene Regulatory Network  
10th Annual Genome Science Institute Research Symposium, Boston, MA  
Presenter: Clarissa Santoso (Ph.D. graduate student)

## TEACHING

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2021 Biology Department, Boston University  
*Course: BI 565 (Functional Genomics).*  
*Students: 25 (graduate and undergraduate)*

2020 Biology Department, Boston University  
*Course: BI 565 (Functional Genomics).*  
*Students: 25 (graduate and undergraduate)*

2019 Biology Department, Boston University  
*Course: BI 565 (Functional Genomics).*

- Students: 13 (graduate and undergraduate)*
- 2018 Biology Department, Boston University  
*Course: BI 594 (Topics in Biology).*  
*Students: 17 (graduate and undergraduate)*
- 2017 Biology Department, Boston University  
*Course: BI 553 (Molecular Biology II).*  
*Students: 24 (graduate and undergraduate)*
- 2014 Guest lecturer, Lewis-Sigler Institute of Integrative Genomics.  
Princeton University.  
*Course: Introduction to Genomics and Computational Biology.*
- 2010 Organizer and lecturer of the “Solving math problems” course for High School teachers organized by the Argentine Mathematics Olympiad, Mar del Plata, Argentina.
- 2005-2011 Teaching assistant, Department of Physiology, Molecular and Cell Biology.  
School of Exact and Natural Sciences, University of Buenos Aires, Argentina.  
*Courses: Introduction to Molecular and Cell Biology, Genetics, Cell Biology, Biological Chemistry IIA.*  
*Students: 30-50 in each course (undergraduate)*
- 2004-2006 Teaching assistant, Department of Microbiology, Parasitology and Immunology.  
School of Medicine, University of Buenos Aires.  
*Course: Immunology.*  
*Students: ~200 (undergraduate)*
- 2004-2005 Teaching assistant, Department of Immunology.  
National Academy of Medicine, Argentina.  
*Course: Update in the acute inflammatory response.*  
*Students: ~30 (graduate)*
- 2003-2004 Teaching assistant, Department of Biochemistry.  
School of Exact and Natural Sciences, University of Buenos Aires, Argentina.  
*Course: Biochemistry.*  
*Students: ~40 (undergraduate)*
- 1999-2005 Mathematics Olympiad instructor in Elementary and High School. Mary Graham School, North Hills School and Pilar’s Parish Institute, Argentina.

## MENTORING EXPERIENCE

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### Postdoctoral Fellows

2018-present Dr. Xing Liu

2016-2017 Dr. Jared Sewell. Now Principal Scientist – Catamaran Bio, Cambridge, MA.

### Graduate students

2021-present Isabelle Guelin Biology MA student)

2021-present Zhaorong Li (Bioinformatics PhD student)

2020-present Devlin Moyer (Bioinformatics PhD student)  
2020-present Jaice Rottenberg (Biology PhD student)  
2019-present Samantha Drinan (MCBB PhD student)  
2019-present Anna Berenson (MCBB PhD student)  
2018-2021 Clarissa Santoso (MCBB PhD). Now scientist at Bristol Myers Squibb.  
2017-2020 Sebastian Carrasco-Pro (Bioinformatics PhD). Now scientist at nference.

### **Undergraduate students**

2021 Sakshi Shah (UROP student)  
2021 Vikram Srinath (Biology student)  
2021 Ryan Lane (UROP student)  
2021 Kimberly Tran (UROP student)  
2020-present Zachary Nelson (UROP student)  
2020-present Vivian Shen (UROP student)  
2020-present Yilin Chen (Nutritional sciences student)  
2020 Fernanda De la Rosa (work study student)  
2019-present Isabella Ho (UROP student)  
2019-present Cheng-Che Lee (UROP student)  
2019 Xeila Cendan (work study student)  
2019 Andrew Munoz (NSF-REU student)  
2019 Mary Gao (work study student)  
2019 Mano Harada (work study student)  
2018-present Samson Yuan (UROP student). Now MS in Genetic Counseling at Columbia University.  
2018-2020 Amisha Gandhi (BME student). Now quality and Regulatory Affairs Specialist at Relay Response Inc.  
2018-2019 Nicholas Hahn (work study student). Now laboratory assistant at BU.  
2018 Luiza Damotta (work study student)  
2018 Mary Rolfes (work study student)  
2018 Heejoo Kang (work study student)  
2018 Giuliano Lobos (NSF-REU undergraduate student). Now Research assistant at Kindbody.  
2017-2018 Alvaro Dafonte Imedio. Now PhD candidate at Boston College.  
2017 Melissa Martinez (NSF-REU undergraduate student). Now Pharmacy school student at University of Southern California.  
2016-2017 Rebecca Sereda. Now PhD candidate at Albert Einstein College of Medicine.  
2016-2017 Shivani Mehta (BMB student). Clinical Research Coordinator at Beth Israel Deaconess Medical Center

### **Research technicians and associates**

- 2020-present Luis Soto (bioinformatics research assistant).
- 2019-2020 Zhaorong Li (bioinformatics research assistant). Now PhD student at BU.
- 2018-2020 Dr. Meimei Yin (Lab manager). Now research scientist at BU.
- 2017-2018 Shaleen Shrestha (Senior research technician). Now Molecular Biologist at Isolere Bio.

## PROFESSIONAL SERVICE

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### External service

- 2021 Organizer of the BIRS meeting “Rules of protein-DNA recognition: computational and experimental advances.” Oaxaca, Mexico. (cancelled due to COVID-19)
- 2021 Reviewer for K99 (special emphasis panel) NIH panel.
- 2021 Reviewer for Genomics, Computational Biology and Technology NIH study section.
- 2021 Reviewer for NIH special emphasis panel study section.
- 2021 Thesis Defense Committee member for Dr. Kian Hong Kock, Harvard Medical School.
- 2020 European Research Council (ERC) grant reviewer.
- 2019 External examiner for Dr. Kelly Biette graduate thesis dissertation, Harvard Medical School.
- 2018 Thesis Defense Committee member for Dr. Alexandre Palagi, University of Nice Sophia Antipolis (France) and Harvard Medical School.
- 2017-present Associate Editor, *Systems Biology* section (*Frontiers* journals)
- 2017-2018 Guest Editor, *The Journal of Molecular Biology*. Special issue on “Theory and Application of Network Biology Toward Precision Medicine.”
- 2017-2018 NSF ad hoc reviewer.
- 2017 External examiner for Dr. Benjamin Vincent graduate thesis dissertation, Harvard Medical School.
- 2017 Thesis Defense Committee member for Dr. Xu Yang, University of Massachusetts Medical School.
- 2015-2021 Member, Advisory Editorial Board of *Genomics*.
- 2014-present Reviewer for *Cell Systems*, *Nature Communications*, *Nucleic Acids Research*, *G3 (Genes, Genomes, Genetics)*, *BMC Biology*, *Current Opinions in Systems Biology*, *Journal of Visualized Experiments*, *Scientific Reports*, *Genome Research*; *Nature Microbiology*; *Frontiers in Immunology*; *Nature Methods*.

### University service

- 2021 Thesis Defense Committee member for Dr. Marzieh Rasekh, Boston University
- 2020 Thesis Defense Committee member for Dr. David Bray, Boston University
- 2020 Member of the Tertulia Organization Committee.
- 2019-present Director of Graduate Admissions of the MCBB Program.
- 2017-present MCBB Program committee member.

- 2017 Thesis Defense Committee member for Dr. Pengying Hao, Boston University.
- 2017 Responsible Conduct of Research training mentor.
- 2016-present MCBB graduate student selection committee.
- 2016-2019 Poster judge at the Genome Science Institute Symposium.
- 2017-present Thesis committee member: Jessica Keenan (Bioinformatics), David Bray (Bioinformatics), Marzieh Rasekh (Bioinformatics), Aaron Chevalier (Bioinformatics), Boting Ning (Bioinformatics), Xingyi Shi (Bioinformatics), Meghan Bragdon (MCBB), Binita Basukala (MCBB), Patrick Lally (BME).

### **Biology Department service**

- 2021 Thesis Defense Committee member for Dr. Natalie Vaisman, Boston University
- 2021 Advisory committee to select Biology Department Chair.
- 2020 BI 583 (Friday seminar series) organizer.
- 2019-2020 Biology Department faculty search committee member.
- 2019 Thesis Defense Committee member for Dr. Bryan Matthews, Boston University.
- 2017-present Thesis committee member: Kellan Andrienas, Christopher Thomas, Christopher DiRusso, Natalie Vaisman, Heather Hook, Alexandra Lion.
- 2018-2019 Biology Department annual retreat committee.
- 2018 Biology Department representative to the SACNAS conference, San Antonio, TX.
- 2016-present Cell and Molecular Biology graduate student selection committee.
- 2017-present Biology Department Seminar Series (co-organizer).

### **PATENTS**

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Title: ASSAYS USEFUL FOR DETECTION AND TREATMENT OF CANCER

U.S. Provisional Application No.: 63/057,429

Filed: July 28, 2020

Inventor(s): Juan Ignacio FUXMAN BASS, Sebastian Carrasco Pro, Trevor Siggers

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