

Brian J. Beliveau

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Education

- **Ph.D. Genetics (2015)**
Harvard Medical School, Boston, MA
- **M.S. Cellular and Molecular Biology (2008)**
Johns Hopkins University, Baltimore, MD
- **B.S. Cellular and Molecular Biology (2007)**
Johns Hopkins University, Baltimore, MD

Research Experience

Damon Runyon HHMI Fellow , Wyss Institute for Biologically Inspired Engineering (Advisor: Dr. Peng Yin)	<i>01/2015-present</i>
Doctoral Student , Harvard Medical School (Advisor: Dr. Ting Wu)	<i>03/2010-12/2014</i>
Post-graduate Research Assistant , Johns Hopkins University (Advisor: Dr. Brendan Cormack)	<i>05/2007-07/2008</i>
Undergraduate Research Assistant , Johns Hopkins University (Advisor: Dr. Brendan Cormack)	<i>07/2006-05/2007</i>

Professional Experience

Talks:

- 2015** Northeast Regional Chromosome Pairing Conference (Harvard Medical School, Boston, MA)
- 2014** Northeast Regional Chromosome Pairing Conference (Harvard Medical School, Boston, MA)
- 2013** Northeast Regional Chromosome Pairing Conference (Dartmouth College, Hanover, NH)
- 2012** Northeast Regional Chromosome Pairing Conference (Dartmouth College, Hanover, NH)

Posters:

- 2015** HMS Epigenetics Symposium (Harvard Medical School, Boston, MA)
- 2015** Abcam Chromatin Snapshot: All About Polycomb (Harvard Medical School, Boston, MA)
- 2015** Chromosome Dynamics Gordon Research Conference (Waterville Valley, NH)
- 2014** Long-Range Genome Organization and Transcription Dynamics (Janelia Farm, Ashburn, VA)
- 2013** Epigenetics Gordon Research Conference (Bryant University, Smithfield, RI)
- 2013** Epigenetics & Chromatin: Interactions and Processes (Harvard Medical School, Boston, MA)
- 2012** SEAS Bio-Inspired Engineering International Symposium (Cambridge, MA)
- 2012** MIT Sloan BioInnovations Conference (Cambridge, MA) [4th place in Best Poster competition]
- 2011** Epigenetics and the Inheritance of Acquired States Cell Symposia (Boston, MA)
- 2011** Chromosome Dynamics Gordon Research Conference (West Dover, VT)

Patent Applications:

- 2012** High-Throughput In Situ Hybridization (US2012-0295801 A1)
- 2013** Oligonucleotide Trapping (US2013-0143208 A1)
- 2014** Methods of Making Oligonucleotide Probes (US2014-0113839 A1)
- 2014** Methods for Diagnosing and Treating Diseases Caused by Genetic Copy Number Variants of Ultra-Conserved Elements (WO2014150312 A2)
- 2014** Methods of Identifying Homologous Genes Using FISH (US20140272960 A1)

Awards:

Damon Runyon Postdoctoral Fellowship Award (Jan. 2016 -)

Ad hoc Reviewer:

Nature Methods, Genetics

Students Supervised:

Feyza Yilmaz (Northeastern Bioinformatics), Ben Vincent (Harvard BBS), Chamith Fonseka (Harvard BBS), Caroline Kim (Harvard BBS), Roxana Tarnita (Harvard Virology)

Teaching Experience:

T.A., General Biology I & II, Johns Hopkins University 2007-2008
T.A., General Biology Lab I & II, Johns Hopkins University 2007-2008
T.A., Molecular Biology, Harvard Medical School 2009

Memberships:

Harvard BBS Retreat Planning Committee 2009-2011
Harvard BBS Admissions Committee 2009-2013
Science in the News 'Flash' Editorial Board 2010-2012
Harvard Genetics Retreat Planning Committee 2009-2014

Research Articles (in chronological order)

Beliveau B.J.*, Joyce E.F.*, Apostolopoulos N., Yilmaz F., Fonseka C.Y., McCole R.B., Chang Y., Li J.B., Senaratne T.N., Williams B.R., Rouillard J.M., Wu C-T. Versatile design and synthesis platform for visualizing genomes with Oligopaint FISH probes. *Proc. Natl. Acad. Sci. USA* **109**, 21301-06 (2012)
[*Co-first authors]

Joyce E.F., Apostolopoulos N., **Beliveau B.J.**, Wu C-T. Germline progenitors escape the widespread phenomenon of homolog pairing during *Drosophila* development. *PLoS Genetics* **9**, e1004013 (2013)

Beliveau, B.J., Apostolopoulos, N.A., Wu C-T. Visualizing genomes with Oligopaint FISH probes. *Curr Protoc Mol Biol.* **105 Unit 14, 23** (2014)

Zordan, R.E., **Beliveau, B.J.**, Trow, J.A., Craig, N.L., Cormack, B.P. Avoiding the Ends: Internal Epitope Tagging of Proteins Using Transposon Tn7. *Genetics* **200**, 47-58 (2015).

Murgha, Y., **Beliveau, B.**, Semrau, K., Schwartz, D., Wu, C-T., Gulari, E., Rouillard, J.M. Combined in vitro transcription and reverse transcription to amplify and label complex synthetic oligonucleotide probe libraries. *Biotechniques* **58**, 301-7 (2015)

Pinter, S.F., Colognori, D., **Beliveau, B.J.**, Sadreyev, R.I., Payer, B., Yildirim, E., Wu, C-T., Lee, J.T. Allelic imbalance is a prevalent and tissue-specific feature of the mouse transcriptome. *Genetics* **200**, 537-49 (2015)

Beliveau B.J., Boettiger A.B., Avendaño, M.S., Jungmann R., McCole R.B., Joyce E.F., Kim-Kiselak C., Bantignies F., Fonseka C.Y., Erceg J., Hannan M.A., Hoang, H.G., Colognori D., Lee J.T., Shih W.M., Yin P., Zhuang X., Wu C-T. Single-molecule super-resolution imaging of chromosomes and in situ haplotype visualization using Oligopaint FISH probes. *Nat. Commun.* **6**, 8147 (2015)

Schmidt, T.L., **Beliveau, B.J.**, Uca, Y.O., Theilmann, M., Da Cruz, F., Wu, C-T., Shih, W.M. Scalable amplification of single-stranded oligonucleotides from chip-synthesized oligonucleotide libraries. *Nature Commun.* **6**, 9634 (2015).

Boettiger, A.N., Bintu, B., Moffitt, J.R., Wang, S., **Beliveau, B.J.**, Fudenberg, G., Imakaev, M., Mirny, L.A., Wu, C-T., Zhuang, X. Super-resolution imaging reveals distinct chromatin folding for different epigenetic states. *Nature* **529**, 418-22 (2016).