Fábio Cassarotti Parronchi Navarro

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Education

- **Universidade de São Paulo**
  Ph.D. in sciences (biochemistry) (2011-current)
  Advisor: Anamaria A. Camargo, Ph.D.
  Co-advisor: Pedro A. F. Galante, Ph.D.
- **Universidade Federal de São Carlos**
  Computer Engineering (2004-2009)

Honours and Awards

- Best poster award - X-meeting 2012 (Genomics).
- Prêmio Viagem (2013/1) - Biochemistry Program.
- Best poster award - X-meeting 2013 (Genomics).
- AWS in Education Research Grant (2014).
- EMBO Conference Travel Grant (2014).

Research Interest

- Retroduplication on primates, human populations and cancer genomes.
- Large-scale analysis of structural variations.
- Pseudogene neofunctionalization.

Research Experience

- **Yale University**
  Post-doc - Gerstein Lab. (2014-current)
- **Hospital Sírio-Libanês**
  Bioinformatics Lab. (http://www.bioinfo.mochsl.org.br) (2011-2014)
- **Ludwig Institute of Cancer Research**
  Compbio Lab. Technician (2009-2010)
- **Embrapa - CNPDIA**
  Developer (2005-2007)

Teaching and Review Experience

- **Reviewer at Scientific Journals**
  - Bioinformatics; BMC Genomics; FEBS Letters; Genomics
- **Yale Institute for Biospheric Studies**
  - Small Grant Program – Reviewer and Panelist (2017)
- **Universidade de São Paulo**
  - Molecular Biology for Medicine (2012)
    Teaching assistant
  - Computational Molecular Biology for Chemistry (2011)
    Teaching assistant

Computational Biology Experience

- **Developing computational pipelines**
  - Programming proficiency: Python, Perl*, C++ and Java
- **Second Generation Sequencing**
  - SNP/SNV calling
  - Structural variation calling*
  - RNA-seq analysis
    - Differential expression and Pathway enrichment
  - 1KGP - DBvar
- **Comparative genomics**
  - Primate/Murine orthology
  - Repetitive elements
  - Purifying selection
- **Web development and Lab. Infrastructure**
  - Basic CakePHP and MySQL
  - Design and architecture of Multiple User Equipament cluster

Peer-reviewed Publications

- Diverse human extracellular RNAs are widely detected in human plasma.
  Jane E Freedman, Mark Gerstein, Eric Mick, Joel Rozowsky, Daniel Levy, Robert Kitchen, Saumya Das, Ravi Shah, Kirsty Danielson, Lea Beaulieu, **Fabio CP Navarro**, Yaoyu Wang, Timur R Galeev, Alex Holman, Raymond Y Kwong, Venkatesh Murthy, Selim E Tanriverdi, Milka Koupenova-Zamor, Ekaterina Mikhalev, Kahraman Tanriverdi. Nature Communications, 2016.

- The psychencode project
  PsychENCODE consortium. Nature neuroscience, 2015.

- A genome-wide landscape of retrocopied protein-coding genes in primates genomes.
  Navarro FCP, Galante PAF. Genome biology and evolution, 2015.

- Gene Copy-Number Polymorphism Caused by Retrotransposition in Humans.
  Schrider DR*, **Navarro FCP***, et al. Plos Genetics, 2013.

- RCPedia: a database of retrocopied genes.
  Navarro FCP, Galante PAF, Bioinformatics, 2013.

- SPLOOCE: a new portal for the analysis of human splicing variants.
  Kroll JE, Galante PAF, Ohara DT, **Navarro FCP**, et al., RNA Biology, 2012

- Distinct patterns of somatic alterations in a lymphoblastoid and a tumor genome derived from the same individual.
  Galante PAF, Parmigiani RB, Zhao Q, Caballero OL, Souza JE, **Navarro FCP**, et al., Nucleic Acid Research, 2011.

Work in progress

- Multi-platform discovery of haplotype-resolved structural variation in human genomes
  1000Genomes SV Consortium
- Pan-cancer analysis of whole genomes reveals driver rearrangements promoted by LINE-1 retrotransposition in human tumours
  PCAWG Structural Variation Working Group
- Repeat associated mechanisms of genome evolution and function revealed by the Mus caroli and Mus pahari genomes
  Thubert D, Roller M, **Navarro FCP**, ... Flicek P
- Comprehensive survey of LINE-1 transcriptional activity in human cell lines, healthy somatic tissue, and tumors.
  Navarro FCP, Hoops J, ..., Lee Charles, Gerstein MB.