

Raúl Oscar Cosentino, PhD

Date of Birth: Dec 24, 1983
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Scientific Education and Professional Experience

- 2015-2017 **Postdoctoral Researcher**
Center for Infectious Disease Research, Würzburg University, Germany. Laboratory of Trypanosoma Gene Regulation (mentor: T. Nicolai Siegel)
Project: De novo assembly of the Trypanosoma brucei Lister 427 strain genome combining PacBio sequencing and genome-wide chromosomal contact data
Computational skills applied: Perl, Python, bash and R programming; Genome visualization software (IGV, ACT), Genome assembly improvement tools, NGS Data Analysis, Hi-C, RNA-seq, single cell RNA-seq, ChiP-seq
- 2014-2015 **Postdoctoral Researcher**
Biotechnology Research Institute, San Martín National University, Argentina
Laboratory of Genomics and Bioinformatics (mentor: Fernán Agüero)
Project: Characterization of putative sterol biosynthesis pathway genes of trypanosomatids by functional complementation of yeast mutants and inhibition assays
Experimental skills applied: Molecular cloning, yeast genetics, cell culture, *in vitro* inhibition assays
- 2009-2014 **PhD Student**
Biotechnology Research Institute, San Martín National University, Argentina
Laboratory of Genomics and Bioinformatics (mentor: Fernán Agüero)
PhD Project: Comparative genetic diversity in the sterol biosynthesis pathway of trypanosomatids, development of typing assays for *Trypanosoma cruzi* lineages, drug target discovery in trypanosomes
Computational skills applied: basic Perl scripting, PAML package usage, Unix/Linux operating system, sequence analysis tools, databases querying, basic R programming
Experimental skills applied: PCR-RFLP, molecular cloning, DNA and RNA extraction, bacteria transformation, plasmid preparation, parasite cell culture, electroporation, cell culture media preparation, cell counting, RNAi induction, qRT-PCR, western blotting, mice infection, parasitemia determination
- 2003-2009 **Bachelor in Biotechnology**
San Martín National University, San Martín, Argentina
Bachelor Thesis: Identification of polymorphisms in genes of the sterol biosynthesis pathway of *Trypanosoma cruzi*

Computational skills applied: Unix/Linux operating system, BLAST searches, polyphred software package for SNPs identification from raw sequence data, Visual Molecular Dynamics software

Languages

SPANISH Native.

ENGLISH High level. Very good conversational and writing skills.

GERMAN Medium level. Good conversational and writing skills.

Awards and Fellowships

2016 Alexander von Humboldt Foundation (Germany) Georg Forster Research Fellowship for postdoctoral researchers (24 months).

2015 CONICET (National Council of Scientific and Technical Research from Argentina) Long-Term Postdoctoral Fellowship (24 months, declined)

2014 IIB (Biotechnology Research Institute) PhD Bridge Fellowship (12 months)

2012 CONICET (National Council of Scientific and Technical Research from Argentina) PhD Ending Fellowship (24 months)

2009 CONICET (National Council of Scientific and Technical Research from Argentina) PhD Starting Fellowship (36 months)

2008 UNSAM (San Martín National University) Bachelor Research Fellowship (12 months)

Attended Workshops

2013 Computing for Data Analysis. Johns Hopkins University, USA (Host: R. Peng)

2012 Generation of Libraries for Next Generation Sequencing. Institut Pasteur, Uruguay (Host: J. Tort)
Cell Culture Techniques. Biotechnology Research Institute, Argentina.
Biology of Parasitism. São Paulo University, Brazil (Host: M. de Camargo)

2008 Molecular Biology of Lower Eukaryotes. Faculty of Natural Science, Buenos Aires University, Argentina (Host: M. Vazquez)
Bioinformatics. Biotechnology Research Institute, Argentina (Host: F. Agüero)

2006 Java Programming, Initial Level. Enter Tech, Argentina

Teaching

- 2009-2015 First category Teaching Assistant at Instituto de Investigaciones Biotecnológicas, San Martín National University. Subjects: "Introduction to Bioinformatics" and "Food and Drug Biotechnology".
- 2008-2009 *Ad honorem* second category Teaching Assistant at Instituto de Investigaciones Biotecnológicas, San Martín National University. Subject: "Introduction to Bioinformatics".

Publications

- Cosentino RO**, Agüero F. (2014) Genetic profiling of the isoprenoid and sterol biosynthesis pathway genes of *Trypanosoma cruzi*. PloS One. 9(5):e96762. doi: 10.1371/journal.pone.0096762
- Ackermann AA, Panunzi LG, **Cosentino RO**, Sánchez DO, Agüero F. (2012) A genomic scale map of genetic diversity in *Trypanosoma cruzi*. BMC Genomics. 13:736. doi: 10.1186/1471-2164-13-736
- Cosentino RO**, Agüero F. (2012) A simple strain typing assay for *Trypanosoma cruzi*: discrimination of major evolutionary lineages from a single amplification product. PloS Negl Trop Dis. 6(7):e1777. doi: 10.1371/journal.pntd.0001777.

Presentation at scientific meetings

- 2017 VII Kinetoplastid Molecular Cell Biology Meeting. Woods Hole, MA, USA. Poster presentation and teaser talk: "Puzzling together the *Trypanosoma brucei* Lister 427 genome"
- 2016 27th Annual Meeting of the German Society for Parasitology. Göttingen, Germany. Oral presentation: "De novo assembly of the *Trypanosoma brucei* Lister 427 strain genome combining PacBio sequencing and genome-wide chromosomal contact data"
- 2013 XXVI Annual Reunion of the Argentinian Protozoology Society. Rosario, Santa Fé, Argentina. Poster presentation: "Functional characterization of the zinc-finger protein TbLSD1 in *Trypanosoma brucei*" and "Genetic analysis of the isoprenoid and steroid biosynthesis pathways in *Trypanosoma cruzi*"
- 2011 IX Argentinian Conference of Protozoology and Parasitic Diseases. Mar del Plata, Buenos Aires, Argentina. Poster presentation: "Computational drug target prioritization in Trypanosomatids"
- 2008 19th Annual Molecular Parasitology Meeting, Woods Hole, MA, USA. Poster presentation: "Genome-wide identification and characterization of coding single-nucleotide polymorphisms in *Trypanosoma cruzi*"
VIII Argentinian Conference of Protozoology and Parasitic Diseases. Poster presentation: "Polymorphisms identification and characterization in genes of the sterol biosynthesis pathway in *Trypanosoma cruzi*"