Raúl Oscar Cosentino, PhD

Date of Birth:	Dec 24, 1983
Nationality:	Argentine/Spain
Professional Address:	Biomedical Center Munich LMU München – Biomedical Center, Laboratory of Experimental Parasitology, Großhaderner Str. 9 82152 Planegg-Martinsried, Germany
E-mail Address:	rulicosentino@gmail.com (Personal), raul.cosentino@lmu.de (Work)

Scientific Education and Professional Experience

2015-present **Postdoctoral Researcher**
Center for Infectious Disease Research, Würzburg University, Germany. Laboratory of Trypanosoma Gene Regulation. Since september 2017 moved to Faculty of Veterinary Medicine, Experimental Parasitology, Laboratory of Molecular Parasitology, LMU München, Germany (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.

2002 **Exchange student**
One-year long high-school exchange student experience in Kandel, Rheinland Pfalz, Germany.

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

2019 "Leading with excellence. Leading in research". Biomedical Center Munich, Germany. Organized by the LMU Center for Leadership and People Managment.

2018 "Proposal Writing". BioSysM Building, Campus Großhadern. Munich, Germany. (Hosts: Brian Cusack, Babette Regierer)
"Scientific Computing Skills Intermediate Workshop". Technical University of Munich, Germany. (Hosts: Florian Thöle and Konrad Förstner)

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, Brink BG, Siegel TN. (2021) A phased genome assembly for allele-specific analysis in *Trypanosoma brucei*. BioRxiv. doi: 10.1101/2021.04.13.439624

Kraus AJ, **Cosentino RO**. (2019) Ribosome profiling in trypanosomatids. In Joachim Clos (Ed.) Leishmania: Methods and Protocols. Humana Press. doi: 10.1007/978-1-4939-9210-2

Müller LSM*, **Cosentino RO***, Förstner KU, Guizetti J, Wedel C, Kaplan N, Janzen CJ, Arampatzi P, Vogel J, Steinbiss S, Otto TD, Saliba AE, Sebra RP, Siegel TN. (2018) Genome organization and DNA accessibility control antigenic variation in trypanosomes. Nature. doi: 10.1038/s41586-018-0619-8

Vasquez JJ*, Wedel C*, **Cosentino RO**, Siegel TN. (2018) Exploiting CRISPR-Cas9 technology to investigate individual histone modifications. NAR. doi: 10.1093/nar/gky517

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.

* indicates equal contribution

Presentation at scientific meetings

2020 XXXI Molecular Parasitology Meeting. Virtual Meeting. Poster presentation: "Allele-specific genome assembly of Trypanosoma brucei Lister 427"

2019 10th Munich Chromatin Day. Biomedical Center, Planegg, Germany. Selected oral presentation: "Assessing transcriptional bursting by single-cell RNA sequencing"

2019 VIII Kinetoplastid Molecular Cell Biology Meeting. Woods Hole, MA, USA. Selected oral presentation: "Histone variants link genome architecture and antigenic variation in *Trypanosoma brucei*"

2018 Munich Epigenetics Spotlight. Helmholtz Zentrum München, Großhaderner Campus, Munich, Germany. Selected oral presentation: "Genome organization and DNA accessibility control antigenic variation in trypanosomes"

2018 Genome informatics 2018. Welcome Genome Campus Conference Centre, Hinxton, UK. Poster presentation and teaser talk: "Assembly and phase of extreme long haploid-like subtelomeres in the parasite *Trypanosoma brucei* combining SMRT sequencing and Hi-C data"

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. Selected 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*"