

# JUAN SEBASTIÁN IGNACIO CONTRERAS RIQUELME

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Bioinformatic engineer and Biotechnology Ph. D student interested in biological networks and data science for genomic/epigenomic data.

## ACADEMIC DETAILS

2016 – 2022

PhD Student at Universidad Andres Bello, Chile

2008 – 2014

Bioinformatic Engineer at Universidad de Talca, Chile.

## EXPERIENCE DETAILS

03/2015 – 12/2017

Fundación Ciencia & Vida. Computational Biology Lab (Dlab). As Research assistant in project FONDECYT INICIO 11140342, granted by FONDECYT.

01/2018 – 04/2022

Universidad Mayor, Centro de Genómica y Bioinformática. As Research assistant in project FONDECYT REGULAR 1181089, granted by FONDECYT.

04/2022 - Present

Universidad Andres Bello, Centro de Biotecnología Vegetal. Postdoctoral research in project FONDECYT postdoctoral 3220673, granted by FONDECYT.

## Bibliography

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**Homology-based reconstruction of regulatory networks for bacterial and archaeal genomes.**

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Contreras-Riquelme S, Garate JA, Perez-Acle T, Martin AJ. (2018) doi: 10.7717/peerj.5998

**Transcriptional profiling of embryos lacking the lipoprotein receptor SR-B1 reveals a regulatory circuit governing a neurodevelopmental or metabolic decision during neural tube closure**

Santander N, Lizama C, Murgas L, Contreras S, Martin AJ, Molina P, Quiroz A, Rivera K, Salas-Pérez F, Godoy A, Rigotti A, Busso D. (2018). doi:10.1186/s12864-018-5110-2

**LoTo: a graphlet based method for the comparison of local topology between gene regulatory networks**

Martin AJ, Contreras-Riquelme S, Dominguez C, Perez-Acle T. (2017). doi: 10.7717/peerj.3052

**Graphlet Based Metrics for the Comparison of Gene Regulatory Networks**

Martin AJM, Dominguez C, Contreras-Riquelme S, Holmes DS, Perez-Acle T (2016). doi:10.1371/journal.pone.0163497

**Similarities between the Binding Sites of SB-206553 at Serotonin Type 2 and Alpha7 Acetylcholine Nicotinic Receptors: Rationale for Its Polypharmacological Profile.**

Möller-Acuña P, Contreras-Riquelme JS, Rojas-Fuentes C, Nuñez-Vivanco G, Alzate-Morales J, Iturriaga-Vásquez P, . (2015). doi:10.1371/journal.pone.0134444

## **SEMINARS AND CONGRESS**

**Integrating Histone Marks, DNA accessibility, and Motif data to predict regulatory maps in *Arabidopsis thaliana***

Contreras-Riquelme JS, Alvarez JM.

XV REUNIÓN DE BIOLOGÍA VEGETAL. Dec 2022, Coquimbo, Chile

**Automated generation of condition specific Gene Regulatory Networks from epigenetic and genomic data integration**

Murgas L, Contreras-Riquelme S, Martin AJ.

Latin American Student Council Symposium 2018, Viña del Mar, Chile

**A network based method to analyze non-covalent interactions in proteins**

J. Sebastián Contreras-Riquelme, A.J.M. Martin, J.A. Garate, I. Fuenzalida Tomas Perez-Acle

IV MEETING MILLENNIUM INSTITUTE CINV “Neuroscience make sense”, Jul. 2015.

Valparaíso – Chile. doi: 10.7490/f1000research.1110200.

**Polypharmacology of CNS drugs and binding site similarities: a computational study of drugs acting simultaneously at serotonergic and nicotinic acetylcholine receptors.**

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X Reunión Anual Sociedad Chilena de Neurociencia. Oct. 2014 Valdivia, Chile

**Determination of putative binding sites on human  $\alpha 7$  nicotinic acetylcholine receptor to positive allosteric modulators type I and II through computational studies.**

Contreras J, Möller P, Reyes M, Rojas C, Alzate J

XII PABMB Congress together with the XLIX Annual Meeting of Sociedad Argentina de Investigación Bioquímica y Biología Molecular (SAIB), the XXXVI Annual Meeting of Sociedad de Bioquímica y Biología Molecular de Chile (SBBM), the 4th Meeting of the Latin-American Protein Society and the LVI Annual Meeting of Sociedad de Biología de Chile. Nov. 2013. Puerto Varas - Chile.

**Binding Modes of SB-206553, a 5HT 2B/2C antagonist and a positive allosteric modulator of  $\alpha 7$  nicotinic acetylcholine receptors.**

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Presented at:

- Congreso Iberoamericano de Biofísica – IX Reunión Anual Sociedad Chilena de Neurociencia. Oct. 2013. Valparaíso - Chile.
- XXXV Reunión Anual de la Sociedad de Farmacología de Chile. Nov. 2013. Valdivia - Chile.