

Adriana Lucía-Sanz

Curriculum Vitae

✉ Mail: agarcia337@gatech.edu
🎓 Scholar: <https://scholar.google.com/citations?user=msppx50AAAAJ&hl=en>
🌐 Website: aluciasanz.github.io/
📄 LinkedIn: [linkedin.com/in/adriana-lucia-sanz-864bb560](https://www.linkedin.com/in/adriana-lucia-sanz-864bb560)
Update: February 21, 2023

Education & professional experience

2020 – now	Postdoctoral fellow , Department of Biological Sciences at Georgia Institute of Technology, Atlanta, GA, USA. Infectious disease dynamics and virus-host co-evolutionary dynamics. Supervised by Prof. Joshua Weitz.
2015–2020	Ph.D. in Molecular Biosciences , Department of Systems Biology at the National Centre for Biotechnology, Madrid, Spain. Computational and formal study of adaptive strategies of viral populations during evolution. Supervised by Prof. Susanna Manrubia (Mark: 10/10).
2014 – 2016	BSc in Physics , two years validated, Universidad Autónoma de Madrid, Spain.
2011–2012	MSc in Biophysics , Department of Biophysics and Systems Biology at the Nicolás Cabrera Institute (INC), Universidad Autónoma de Madrid, Spain. Study of non-linear regulation of cellular pathways and its impact on disease and treatment. Supervised by Dr. David G. Míguez. (Mark: 9.2/10).
2007–2011	BSc in Biochemistry , Department of Environmental Sciences at the Centro de Biología Molecular Severo Ochoa (CBMSO), Madrid, Spain. Development of novel strategies for the control and prevention of viral diseases. Supervised by Dr. Francisco Sobrino Castelló. (Mark: 8.3/10)

Publications

2023	Adriana Lucia-Sanz , Andreea Magalie, Rogelio Rodriguez-Gonzalez, Chung-Yin Leung, Joshua S. Weitz. Modeling shield immunity to reduce COVID-19 transmission in long-term care facilities. <i>Ann. Epidemiol.</i> , 77: 44–52, https://doi.org/10.1016/j.annepidem.2022.10.013 .
2022	Adriana Lucia-Sanz , Jacobo Aguirre, Aurora Fraile, Fernando García-Arenal, Susanna Manrubia. Defective Subviral Particles Modify Ecological Equilibria and Enhance Viral Co-existence. <i>Front. Virol.</i> , 2: 929851, https://doi.org/10.3389/fviro.2022.929851 .

- Shashwat Shivam, Guanlin Li, **Adriana Lucia-Sanz**, Joshua S. Weitz. Timescales modulate optimal lysis–lysogeny decision switches and near-term phage reproduction. *Virus Evolution*, 8(1):veac037, <https://doi.org/10.1093/ve/veac037>
- 2018 Yuri I Wolf, Darius Kazlauskas, Jaime Iranzo, **Adriana Lucía-Sanz**, Jens H Kuhn, Mart Krupovic, Valerian V Dolja, and Eugene V Koonin. Origins and evolution of the global RNA virome. *mBio*, 9(6):e02329-18, 2018.<https://journals.asm.org/doi/10.1128/mBio.02329-18>
- Adriana Lucía-Sanz**, Jacobo Aguirre, and Susanna Manrubia. Theoretical approaches to disclosing the emergence and adaptive advantages of multipartite viruses. *Curr. Op. Virol*, 33:89-95, 2018.<https://doi.org/10.1016/j.coviro.2018.07.018>
- 2017 **Adriana Lucía-Sanz** and Susanna Manrubia. Multipartite viruses: adaptive trick or evolutionary treat? *NPJ Sys. Biol. Appl.*, 2017.<https://doi.org/10.1038/s41540-017-0035-y>
- Elena Moreno, Isabel Gallego, Josep Gregori, **Adriana Lucía-Sanz**, María Eugenia Soria, Victoria Castro, et. al., Internal disequilibria and phenotypic diversification during replication of hepatitis C virus in a non-coevolving cellular environment. *J. Virol.* 91(10):e02505-16, 2017 <https://doi.org/10.1128/JVI.02505>.
- 2014 **Adriana L. Sanz** and David G Míguez. Dual R-smads interplay in the regulation of vertebrate neurogenesis. *Neurogenesis*, 1(1):e29529, 2014.

Fellowships

- 2015–2019 **Research Fellowship for Graduate Students (Severo Ochoa Excellence Program)**, Ministry of Economy and Competition of Spain (Secretaría de Estado de Investigación, Desarrollo e Innovación). Order: ECC/1402/2013, July 22nd, Reference: BOE-A-2014-9007, Ayudas para Contratos Predoctorales Severo Ochoa 2014.
- 2011 **Research Fellowship for Undergraduate Students (Cicerone Program)**, National Institute for Cardiovascular Research, CNIC-Carlos III,(Madrid, Spain). Plan de formación CNIC-Jóven
- 2010–2011 **Research Fellowship for Undergraduate Students (Collaboration Program)**. Ministry of Education of Spain. Order: EDU/580/2011, March 10th, Reference: BOE-A-2011-9657, Beca de Colaboración 2010.

Teaching experience

- 2021–2022 **Instructor of record** of Foundations in Quantitative Biosciences (BIOL 6750/PHYS 6750), Quantitative Biosciences graduate program at Georgia Institute of Technology.
- 2022 **Instructor of record** Quantitative foundations of biological concepts, Serrapilheira/ICTP-SAI FR Training Program in Quantitative Biology and Ecology, Sao Paulo, Brazil. Organization: Serrapilheira/ICTP-SAI FR.
- 2021 **Graduate teaching assistant**, Fifth Annual Quantitative Biosciences Hands-on Workshop, Quantitative Biosciences graduate program at Georgia Institute of Technology.
- 2017–2018 **Graduate teaching assistant**, Department of Molecular Biology department at the Universidad Autónoma de Madrid.

Academic services and scientific organization

2022–2023	Research Faculty Advisory Council Representative of Research Faculty of Biology in the College of Sciences at Georgia Institute of Technology.
2016–2018	Graduate Students Council Representative of graduate students of the department of Systems Biology at the National Center for Biotechnology.
2017 – 2018	Organizing committee Junior Seminar Series at the National Centre for Biotechnology. Keynote speakers: Jaime Irazo, NCBI/NIH, Bethesda MD, US, The cancer mutation network and the number and specificity of driver mutations. Jan O. Harter, University of Copenhagen, Denmark. Title: DNA methylation in human epigenomes dependent on local topology of CpG sites.

Scientific Outreach

2022	Modeling shield immunity to reduce COVID-19 transmission in long-term care facilities , Evolution and Ecology of Infectious Disease 2022. Organization: Emory University. Poster presentation.
2022	Stochasticity in gene expression , Sixth Annual Quantitative Biosciences Hands-on modeling workshop. Organization: Quantitative Biosciences graduate program, Georgia Tech. Opening lecture.
2021	Modeling shield immunity to reduce COVID-19 transmission in long-term care facilities , CMDI - CDC Meeting on Infectious Disease Dynamics. Organization: Center of Microbial Dynamics and Infection - Center for Disease control and prevention, virtual. Oral Presentation.
2019	Gene sharing network of plant viruses Complex Networks in Life Sciences. Organization: Dr Jacobo Aguirre and Dr Saúl Ares, National. Center for Biotechnology, Alcalá de Henares, Spain. Oral Presentation.
2019	Perspectives of multipartitism under virus evolution , 10th Workshop in Virus Evolution. Organization: Prof. Marylin J Roossinck, Penn State University, State College PN, US. Oral Presentation.
2018	VI Congress of Spanish Evolutionary Biology Society . Organization: Dr Cori Ramon Juanpere, Universitat de les Illes Balears, Palma. Oral Presentation.
2017	Virus-satellite associations in viral competitions , EMBO conference: Quantitative Principles in Biology. Organization: Dr. Alexander Aulehla, Dr. Jordi García-Ojalvo, Dr. Rob Philips, EMBL Advanced Training Centre Heidelberg, Germany. Poster Presentation.
2017	Colloquium of the Systems & Synthetic Biology Program: Multi-scale Biological Design . Organization: Prof. Victor de Lorenzo, National Centre for Biotechnology, Madrid.
2017	XIV GISC Workshop . Organization: Dr. Inma Leyva, Universidad Rey Juan Carlos, Móstoles, Spain.
2016	17th International Conference on Systems Biology . Organization: Dr. James Sharpe, Center for Genomic Regulation, Dr. Jordi García Ojalvo, Pompeu Fabra University and Dr. Luis Serrano, Center for Genomic Regulation, Barcelona. Poster presentation.
2016	The evolutionary strategy of genome fragmentation , Summer Solstice 2016 8th International Conference on Discrete Models of Complex Systems. Organization: Dr. Jose Fernando Mendes, University of Aveiro. Poster presentation.

- 2016 **Hands-on Winter workshop on complex systems 2016.** Organization: Dr. Alberto Antonioni, University Carlos III of Madrid, Dr. Massimo Stella, Institute for Complex Systems Simulation (ICSS) at the University of Southampton. fast project development.
- 2014 **Drug treatment efficiency is governed by non-linear interactions in cellular signaling pathways,** 1st BCAM Workshop on nonlinear dynamics in Biological Systems. Organization: Dr. Bruno Escibano, Basque Center for Applied Mathematics, Bilbao, Spain. Poster presentation
- 2012 **XV Work session for young researchers.** Organization: Nicolás Cabrera Institute, Instituto Universitario de ciencia de materiales Nicolás Cabrera (INC). Poster presentation.