

RICARDO ANDRÉS SOTO RIFO

BIOGRAPHICAL INFORMATION

Born : April 2nd, 1981, Chile
Citizenship : Chile.
Civil Status : Married
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EDUCATION

Ph.D in Life Sciences **2006-2010**
Ecole Normale Supérieure de Lyon, Lyon, France.
M.Sc in Molecular and Cellular Biology **2005-2006**
Université Claude Bernard Lyon-1, Lyon, France.
B.Sc and Professional Title (Biochemistry) **1999-2004**
Universidad de Santiago de Chile, Santiago, Chile.
High School **1993-1998**
Centro Educacional Asunción, Rengo, Chile

RESEARCH EXPERIENCE

Associate Professor (H-index: 28, Google Scholar) **2017 to date**
Programa de Virología, Instituto de Ciencias Biomedicas (ICBM), Facultad de Medicina, Universidad de Chile.
Assistant Professor **2013-2017**
Programa de Virología, Instituto de Ciencias Biomedicas (ICBM), Facultad de Medicina, Universidad de Chile.
Postdoctoral Researcher **2010-2012**
Unité de Virologie Humaine, INSERM U758, Ecole Normale Supérieure de Lyon, Lyon, France.
Doctoral Fellow **2005-2010**
Unité de Virologie Humaine, INSERM U758, Ecole Normale Supérieure de Lyon, Lyon, France. Supervised by Dr. Théophile Ohlmann.
Undergraduate Thesis **2003-2004**
Virology Laboratory, Facultad de Química y Biología, Universidad de Santiago de Chile. Supervised by Dr. Ana María Sandino.

TRAINING & COURSES

Training to work in Biosafety Level 3 Laboratory (**BSL3**) **2006**
Unité de Virologie Humaine, INSERM U758, École Normale Supérieure de Lyon, Lyon, France.

GROUPS & ASSOCIATIONS

Director Virology Program, Biomedical Sciences Institute, Faculty of Medicine, Universidad de Chile	2021-Present
Subdirector Academic Degrees, Graduate School, Faculty of Medicine, Universidad de Chile	2022-Present
Associate Investigator Millennium Institute on Immunology and Immunotherapy	2022-Present
Investigator Transdisciplinary group on HIV/AIDS (CHAIR), Faculty of Medicine, Universidad de Chile	2017-Present
Associate Editor Frontiers in Cellular and Infection Microbiology	2018-Present
Review Editor Frontiers in Virology	2021-Present
Coordinator Academic Committee, Graduate Program in Biomedical Sciences, Faculty of Medicine, Universidad de Chile	2020-2022
Member RNA Society	2018-Present
Member Sociedad Chilena de Microbiología	2016-Present
Member Sociedad de Bioquímica y Biología Molecular de Chile	2013-Present
Member Graduate Program in Biomedical Sciences, Faculty of Medicine, Universidad de Chile	2013-Present
Member Graduate Program in Medical Sciences, Faculty of Medicine, Universidad de Chile	2019-Present
Member Graduate Program in Sciences m/Microbiology, Faculty of Sciences, Universidad of Chile.	2013-Present
Member Graduate Program in Biochemistry, Faculty of Chemical and Pharmaceutical Sciences, Universidad de Chile	2016-Present
Director Biology 3 Evaluation Group, FONDECYT	2021
Member Biology 3 Evaluation Group, FONDECYT-ANID, Chile	2016-2021

SCHOLARSHIP & AWARDS

2018	Young Scientist of the Year Award (Chilean Society of Cellular Biology and GrupoBios)
2010-2012	ANRS Postdoctoral fellowship, France
2005-2010	Conicyt-Chile and French Embassy in Chile Master and Doctoral fellowship.

EXTRAMURAL FUNDING

Ongoing research grants

2022-2032: ANID-ICM, ICN2021_045 "Millennium Institute on Immunology and Immunotherapy" (Associate Investigator)

2021-2025: Fondecyt grant 1211547 "Understanding liquid-liquid phase separation during the retroviral life cycle" (**Co-Investigator**)

2020-2024: Fondecyt grant 1201215 "Mechanisms of regulation of cancer cell metabolism counteracting oxidative stress" (**Co-Investigator**)

2019-2022: ANRS ECTZ103761 "Impact of the N6 methylation of adenosine on the switch between translation and encapsidation of HIV-1 genomic RNA" (**Co-Investigator**)

2019-2022: Fondecyt grant 1190156 "m6A switches as drivers of retroviral genomic RNA selection for packaging" (**Principal Investigator**). Ranked 1st out 24 in the Biology 3 study group

Previous research grants

2018-2020: Fondecyt grant 1180798 "RNAsis during HIV-1 replication" (**Co-Investigator**)

2016-2019: ECOS-Conicyt C15B03 "Understanding the role of the DEAD-box helicase DDX3 in viral and cellular messenger RNA metabolism" (**Principal Investigator**).

2017-2018: FONDEF N° ID16I10017: Development of an HTS system for the identification of specific inhibitors of HIV-1 gene expression (**Principal Investigator**)

2016-2019: Fondecyt grant 1160176 "HIV gene expression in the RNA epigenetics era" (**Principal Investigator**). Ranked 3 out 24 in the Biology 3 study group.

2016-2018: Anillo grant ACT1408 "Molecular pathogenesis of emerging viruses" (**Associate Investigator**).

2015-2018: Fondecyt grant N° 1151250 "Infectious Pancreatic Necrosis Virus: Characterization of the receptors and virus entry pathways" (Co-Investigator).

2013-2016: Conicyt USA2013-0005: "The atlas of the HIV-1 genomic messenger ribonucleoprotein (mRNP) complex" (**Principal Investigator**).

2012-2015: Fondecyt Initiation grant N° 11121339 "From the nucleus to the ribosome: deciphering the role of DDX3 in linking nuclear export and translation of the HIV-1 genomic RNA" (**Principal Investigator**). Ranked 2 out 24 in the Biology 3 group.

PUBLICATIONS (Original articles published in WoS journals)

1. Vargas L, Valdivieso N, Tempio F, Simon V, Sauma D, Valenzuela L, Beltrán C, Castillo-Delgado L, Contreras-Benavides X, Acevedo ML, Acevedo J, Gonzalez RI, Valiente-Echeverría F, **Soto-Rifo R**, Roseblatt M, Lopez M, Osorio F, Bono MR. **Serological study of CoronaVac vaccine and booster doses in Chile: immunogenicity and persistence of anti-SARS-CoV-2 spike antibodies**. BMC Med. 2022 Jun 9;20(1):216. doi: 10.1186/s12916-022-02406-0.
2. Acevedo ML, Gaete-Argel A, Alonso-Palomares L, de Oca MM, Bustamante A, Gaggero A, Paredes F, Cortes CP, Pantano S, Martínez-Valdebenito C, Angulo J, Le Corre N, Ferrés M, Navarrete MA, Valiente-Echeverría F*, **Soto-Rifo R***. **Differential neutralizing antibody responses elicited by CoronaVac and BNT162b2 against SARS-CoV-2 Lambda in Chile**. Nat Microbiol. 2022 Apr;7(4):524-529. doi: 10.1038/s41564-022-01092-1
*Corresponding authors
3. González-Maldonado P, Alvarenga N, Burgos-Edwards A, Flores-Giubi ME, Barúa JE, Romero-Rodríguez MC, Soto-Rifo R, Valiente-Echeverría F, Langjahr P, Cantero-González G, Sotelo PH. **Screening of natural products inhibitors of SARS-CoV-2 entry**. Molecules. 2022 Mar 7;27(5):1743. doi: 10.3390/molecules27051743.

4. Pereira-Montecinos C, Toro-Ascuy D, Ananías-Sáez C, Gaete-Argel A, Rojas-Fuentes C, Riquelme-Barrios S, Rojas-Araya B, García-de-Gracia F, Aguilera-Cortés P, Chnaiderman J, Acevedo ML, Valiente-Echeverría F, **Soto-Rifo R. Epitranscriptomic regulation of HIV-1 full-length RNA packaging.** *Nucleic Acids Res.* 2022 Feb 28;50(4):2302-2318. doi: 10.1093/nar/gkac062
5. Wolff MJ, Acevedo ML, Núñez MA, Lafourcade M, Gaete-Argel A, **Soto-Rifo R**, Valiente-Echeverría F. **Neutralizing antibody titers elicited by CoronaVac and BNT162b2 vaccines in health care workers with and without prior SARS-CoV-2 infection.** *J. Travel Med.* 2022. Feb 3:taac010. doi: 10.1093/jtm/taac010
6. Fuentes-Villalobos F, Garrido JL, Medina MA, Zambrano N, Ross N, Bravo F, Gaete-Argel A, Oyarzún-Arrau A, Amanat F, **Soto-Rifo R**, Valiente-Echeverría F, Ocampo R, Esveile C, Ferreira L, Cabrera J, Torres V, Rioseco ML, Riquelme R, Barría S, Alvarez R, Pinos Y, Krammer F, Calvo M, Barria MI; COVID-19 South Chile Group. **Sustained antibody-dependent NK cell functions in mild COVID-19 outpatients during convalescence.** *Front. Immunol.* 2022. Feb 7;13:796481. doi: 10.3389/fimmu.2022.796481
7. Escobar A, Reyes-López FE, Acevedo ML, Alonso-Palomares L, Valiente-Echeverría F, **Soto-Rifo R**, Portillo H, Gatica J, Flores I, Nova-Lamperti E, Barrera-Avalos C, Bono MR, Vargas L, Simon V, Leiva-Salcedo E, Vial C, Hormazabal J, Cortes LJ, Valdés D, Sandino AM, Imarai M, Acuña-Castillo C. **Evaluation of the immune response induced by CoronaVac 28-day schedule vaccination in a healthy population group.** *Front. Immunol.* 2022. Jan 31;12:766278. doi: 10.3389/fimmu.2021.766278
8. Alonso-Palomares LA, Cáceres CJ, Tapia R, Aguilera-Cortés P, Valenzuela S, Valiente-Echeverría F, **Soto-Rifo R**, Gaggero A, Barriga GP. **Surveillance of seasonal respiratory viruses among Chilean patients during the COVID-19 pandemic.** *Health Sci Rep.* 2021 Nov 23;4(4):e433. doi: 10.1002/hsr2.433. eCollection 2021 Dec
9. Figueroa F, Vega-Gibson A, Catrileo J, Gaete-Argel A, Riquelme-Barrios S, Alonso-Palomares LA, Tapia LI, Valiente-Echeverría F, **Soto-Rifo R**, Acevedo ML. **N⁶-Methyladenosine Negatively Regulates Human Respiratory Syncytial Virus Replication.** *Front Cell Dev Biol.* 2021 Oct 4;9:739445. doi: 10.3389/fcell.2021.739445
10. Rojas M, Luz-Crawford P, **Soto-Rifo R**, Reyes-Cerpa S, Toro-Ascuy D. **The Landscape of IFN/ISG Signaling in HIV-1-Infected Macrophages and Its Possible Role in the HIV-1 Latency.** *Cells.* 2021 Sep 9;10(9):2378. doi: 10.3390/cells10092378.
11. Bueno SM, Abarca K, González PA, Gálvez NMS, Soto JA, Duarte LF, Schultz BM, Pacheco GA, González LA, Vázquez Y, Ríos M, Melo-González F, Rivera-Pérez D, Iturriaga C, Urzúa M, Domínguez A, Andrade CA, Berrios RV, Canedo-Marroquín G, Covián C, Moreno-Tapia D, Saavedra F, Vallejos OP, Donato P, Espinoza P, Fuentes D, González M, Guzmán P, Muñoz-Venturelli P, Pérez CM, Potin M, Rojas Á, Fasce R, Fernández J, Mora J, Ramírez E, Gaete-Argel A, Oyarzún-Arrau A, Valiente-Echeverría F, **Soto-Rifo R**, Weiskopf D, Sette A, Zeng G, Meng W, González-Aramundiz JV, Kalergis AM; CoronaVac03CL Study Group. **Safety and**

Immunogenicity of an Inactivated SARS-CoV-2 Vaccine in a Subgroup of Healthy Adults in Chile.

Clin Infect Dis. 2021 Sep 19;ciab823. doi: 10.1093/cid/ciab823

12. Hernández-Díaz T, Valiente-Echeverría F, **Soto-Rifo R. RNA Helicase DDX3: A Double-Edged Sword for Viral Replication and Immune Signaling.** Microorganisms. 2021 Jun 3;9(6):1206. doi: 10.3390/microorganisms9061206
13. Peña M, Ampuero M, Garcés C, Gaggero A, García P, Velasquez MS, Luza R, Alvarez P, Paredes F, Acevedo J, Farfán MJ, Solari S, **Soto-Rifo R, Valiente-Echeverría F. Performance of SARS-CoV-2 rapid antigen test compared with real-time RT-PCR in asymptomatic individuals.** Int J Infect Dis. 2021 Jun;107:201-204. doi: 10.1016/j.ijid.2021.04.087.
14. Balcells ME, Rojas L, Le Corre N, Martínez-Valdebenito C, Ceballos ME, Ferrés M, Chang M, Vizcaya C, Mondaca S, Huete A, Castro R, Sarmiento M, Villarroel L, Pizarro A, Ross P, Santander J, Lara B, Ferrada M, Vargas-Salas S, Beltrán-Pavez C, **Soto-Rifo R, Valiente-Echeverría F, Caglevic C, Mahave M, Selman C, Gazitúa R, Briones JL, Villarroel-Espindola F, Balmaceda C, Espinoza MA, Pereira J, Nervi B. Early versus deferred anti-SARS-CoV-2 convalescent plasma in patients admitted for COVID-19: A randomized phase II clinical trial.** PLoS Med. 2021 Mar 3;18(3):e1003415. doi: 10.1371/journal.pmed.1003415
15. González-Stegmaier R, Cereceda K, Briones JL, Beltrán-Pavez C, Oyarzún-Arrau A, Riquelme-Barrios S, Selman C, Yarad F, Mahave M, Caglevic C, Morales R, Aguirre A, Valiente-Echeverría F, **Soto-Rifo R, Marsiglia H, Gazitua R, Villarroel-Espindola F. Seroconversion and Abundance of IgG Antibodies against S1-RBD of SARS-CoV-2 and Neutralizing Activity in the Chilean Population.** J Immunol Res. 2021 Feb 19;2021:6680337. doi: 10.1155/2021/6680337
16. Gaete-Argel A, Velásquez F, Márquez CL, Rojas-Araya B, Bueno-Nieto C, Marín-Rojas J, Cuevas-Zúñiga M, **Soto-Rifo R, Valiente-Echeverría F. Tellurite Promotes Stress Granules and Nuclear SG-Like Assembly in Response to Oxidative Stress and DNA Damage.** Front Cell Dev Biol. 2021 Feb 11;9:622057. doi: 10.3389/fcell.2021.622057.
17. Beltrán-Pavez C, Riquelme-Barrios S, Oyarzún-Arrau A, Gaete-Argel A, González-Stegmaier R, Cereceda-Solis K, Aguirre A, Travisany D, Palma-Vejares R, Barriga GP, Gaggero A, Martínez-Valdebenito C, Corre NL, Ferrés M, Balcells ME, Fernandez J, Ramírez E, Villarroel F, Valiente-Echeverría F, **Soto-Rifo R. Insights into neutralizing antibody responses in individuals exposed to SARS-CoV-2 in Chile.** Sci Adv. 2021 Feb 12;7(7):eabe6855. doi: 10.1126/sciadv.abe6855.
18. Velásquez F, Marín-Rojas J, **Soto-Rifo R, Torres A, Del Canto F, Valiente-Echeverría F. Escherichia coli HS and Enterotoxigenic Escherichia coli Hinder Stress Granule Assembly.** Microorganisms. 2020 Dec 23;9(1):17. doi: 10.3390/microorganisms9010017.
19. García-de-Gracia F, Gaete-Argel A, Riquelme-Barrios S, Pereira-Montecinos C, Rojas-Araya B, Aguilera P, Oyarzún-Arrau A, Rojas-Fuentes C, Acevedo ML, Chnaiderman J, Valiente-Echeverría F, Toro-Ascuy D, **Soto-Rifo R. CBP80/20-dependent translation initiation**

- factor (CTIF) inhibits HIV-1 Gag synthesis by targeting the function of the viral protein Rev.** RNA Biol. 2021 May;18(5):745-758. doi: 10.1080/15476286.2020.1832375
20. Beltrán-Pavez C, Alonso-Palomares LA, Valiente-Echeverría F, Gaggero A, **Soto-Rifo R**, Barriga GP. **Accuracy of a RT-qPCR SARS-CoV-2 detection assay without prior RNA extraction.** J. Virol Methods. 2021 Jan;287:113969. doi: 10.1016/j.jviromet.2020.113969
 21. Zhu L, Liu X, Huang H, Avellán-Llaguno RD, Lazo MML, Gaggero A, **Soto-Rifo R**, Patiño L, Valencia-Avellan M, Diringier B, Huang Q, Zhu YG. **Meteorological impact on the COVID-19 pandemic: A study across eight severely affected regions in South America.** Sci Total Environ. 2020 Jul 11;744:140881. doi: 10.1016/j.scitotenv.2020.140881
 22. Órdenes-Aenishanslins N, Anziani-Ostuni G, Monrás JP, Tello A, Bravo D, Toro-Ascuy D, **Soto-Rifo R**, Prasad PN, Pérez-Donoso JM. **Bacterial Synthesis of Ternary CdSAg Quantum Dots through Cation Exchange: Tuning the Composition and Properties of Biological Nanoparticles for Bioimaging and Photovoltaic Applications.** Microorganisms. 2020 Apr 27;8(5). pii: E631. doi: 10.3390/microorganisms8050631
 23. Oyarzún-Arrau A, Alonso-Palomares L, Valiente-Echeverría F, Osorio F, **Soto-Rifo R**. (2020) **Crosstalk between RNA Metabolism and Cellular Stress Responses during Zika Virus Replication.** Pathogens. 2020 Feb 25;9(3). pii: E158. doi: 10.3390/pathogens9030158. Review.
 24. Dubois-Camacho K, Diaz-Jimenez D, De la Fuente M, Quera R, Simian D, Martínez M, Landskron G, Olivares-Morales M, Cidlowski JA, Xu X, Gao G, Xie J, Chnaiderman J, **Soto-Rifo R**, González MJ, Calixto A, Hermoso MA. **Inhibition of miR-378a-3p by Inflammation Enhances IL-33 Levels: A Novel Mechanism of Alarmin Modulation in Ulcerative Colitis.** Front Immunol. 2019 Nov 20;10:2449. doi: 10.3389/fimmu.2019.02449. eCollection 2019.
 25. Gaete-Argel A, Márquez CL, Barriga GP, **Soto-Rifo R**, Valiente-Echeverría F. **Strategies for Success. Viral Infections and Membraneless Organelles.** Front Cell Infect Microbiol. 2019 Oct 11;9:336. doi: 10.3389/fcimb.2019.00336. eCollection 2019. Review
 26. Rojas-Celis V, Valiente-Echeverría F, **Soto-Rifo R**, Toro-Ascuy D. **New Challenges of HIV-1 Infection: How HIV-1 Attacks and Resides in the Central Nervous System.** Cells. 2019 Oct 13;8(10). pii: E1245. doi: 10.3390/cells8101245. Review
 27. Fuentes-Villalobos, Francisco; Farkas P., Carlos; Sebastian Riquelme-Barrios; Armijo, ME; **Soto-Rifo, Ricardo**; Pincheira, Roxana; Castro, Ariel F. **DISC1 promotes translation maintenance during sodium arsenite-induced oxidative stress.** Biochim Biophys Acta- Gene Regulatory Mechanisms. 2019 Jun;1862(6):657-669. doi: 10.1016/j.bbagr.2019.05.001
 28. Levicán-Asenjo J, **Soto-Rifo R**, Aguayo F, Gaggero A, Leon O. **Salmon cells SHK-1 internalize infectious pancreatic necrosis virus by macropinocytosis.** J Fish Dis. 2019 May 2
 29. Toro-Ascuy D; Rojas-Araya B; García-de-Gracia F; Rojas-Fuentes C; Pereira-Montecinos C; Gaete-Argel A; Valiente-Echeverría F; Ohlmann T, **Soto-Rifo R**. **A Rev-CBP80-eIF4AI**

- complex drives Gag synthesis from the HIV-1 unspliced mRNA.** Nucleic Acids Res. 2018 Nov 30;46(21):11539-11552.
30. Acevedo ML, García-de Gracia F, Miranda-Cárdenas C, **Soto-Rifo R**, Aguayo F, León O. **Differences in the internalization of self-inactivating VSVG-pseudotyped murine leukemia virus-based vectors in human and murine cells.** J Virol Methods. 2018 May;255:14-22
 31. Riquelme-Barrios S, Pereira-Montecinos C, Valiente-Echeverría F, **Soto-Rifo R**. **Emerging Roles of N6-Methyladenosine on HIV-1 RNA Metabolism and Viral Replication.** Front Microbiol. 2018 Mar 28;9:576
 32. Levican J, Miranda-Cárdenas C, **Soto-Rifo R**, Aguayo F, Gaggero A, León O. **Infectious pancreatic necrosis virus enters CHSE-214 cells via macropinocytosis.** Sci Rep. 2017 Jun 8;7(1):3068
 33. Pereira-Montecinos C, Valiente-Echeverría F, **Soto-Rifo R**. **Epitranscriptomic regulation of viral replication.** Biochim Biophys Acta-Genet Regulatory Mechanisms. 2017 Apr;1860(4):460-471.
 34. Mengardi C, Limousin T, Ricci EP, **Soto-Rifo R**, Decimo D, Ohlmann T. **microRNAs stimulate translation initiation mediated by HCV-like IRESes.** Nucleic Acids Res. 2017 May 5;45(8):4810-4824.
 35. Toro-Ascuy D, Rojas-Araya B, Valiente-Echeverría F, **Soto-Rifo R**. **Interactions between the HIV-1 Unspliced mRNA and Host mRNA Decay Machineries.** Viruses. 2016. Nov 23;8(11). pii: E320. Review.
 36. Poblete-Durán N, Prades-Pérez Y, Vera-Otarola J, **Soto-Rifo R**, Valiente-Echeverría F. **Who Regulates Whom? An Overview of RNA Granules and Viral Infections.** Viruses. 2016. Jun 8(7), pii: E180
 37. Fröhlich A, Rojas-Araya B, Pereira-Montecinos C, Dellarossa A, Toro-Ascuy D, Prades-Pérez Y, García-de-Gracia F, Garcés-Alday A, Rubilar PS, Valiente-Echeverría F, Ohlmann T and **Soto-Rifo R**. **DEAD-box RNA helicase DDX3 connects CRM1-dependent nuclear export and translation of the HIV-1 unspliced mRNA through its N-terminal domain.** Biochimica et Biophysica Acta-Genet Regulatory Mechanisms. 2016. Mar 21;1859(5):719-730.
 38. Ajamian L, Abel K, Rao S, Vyboh K, García-de-Gracia F, **Soto-Rifo R**, Kulozik A, Gehring N, Moulard AJ. **HIV-1 Recruits UPF1 but Excludes UPF2 to Promote Nucleocytoplasmic Export of the Genomic RNA.** Biomolecules. 2015. 5:2808-2839.
 39. Rojas-Araya B, Ohlmann T* and **Soto-Rifo R***. **Translational control of the HIV-1 unspliced genomic mRNA.** Viruses. 2015. Aug 4;7(8):4326-51. *Corresponding author
 40. Valiente-Echeverría F*, Hermoso MA, **Soto-Rifo R***. **RNA helicase DDX3: at the crossroad of viral replication and antiviral immunity.** Reviews in Medical Virology. 2015. Sep; 25(5): 286-99. *Corresponding author

41. Peña N, Carrillo D, Muñoz JP, Chnaiderman J, Urzúa U, León O, Tornesello ML, Corvalán AH, **Soto-Rifo R**, Aguayo F. **Tobacco Smoke Activates Human Papillomavirus 16 p97 Promoter and Cooperates with High-Risk E6/E7 for Oxidative DNA Damage in Lung Cells.** Plos One. 2015. Apr; 1;10(4):e0123029
42. **Soto-Rifo R***, Valiente-Echeverria F, Rubilar PS, García-de-Gracia F, Ricci EP, Limousin T, Décimo D, Ohlmann T*. **HIV-2 genomic RNA accumulates in stress granules in the absence of active translation.** Nucleic Acids Research. 2014. Nov;42(20):12861-75. *Corresponding author
43. **Soto-Rifo R***, Paulina S. Rubilar, Théophile Ohlmann*. **The DEAD-box helicase DDX3 substitutes for the cap-binding protein eIF4E to promote compartmentalized translation initiation of the HIV-1 genomic RNA.** Nucleic Acids Research. 2013. Jul;41(12):6286-99. *Corresponding authors
44. **Soto-Rifo R*** and Théophile Ohlmann. **The roles of DDX3 in mRNA metabolism.** Wiley Interdiscip Rev RNA. 2013 Jul-Aug;4(4):369-85. *Corresponding author
45. de Breyne S, **Soto-Rifo R**, Lopez-Lastra M, Ohlmann T. **Translation initiation is driven by different mechanisms on the HIV-1 and HIV-2 genomic RNAs.** Virus Research. 2013 Feb;171(2):366-81.
46. Ricci EP*, Limousin T*, **Soto-Rifo R***, Decimo D, Ohlmann T. **miRNA repression of translation *in vitro* takes place during 43S ribosomal scanning.** Nucleic Acids Research. 2013. Jan 7;41(1):586-98. *Joint first authors, equal contribution.
47. **Soto-Rifo R**, Limousin T, Rubilar PS, de Breyne S, Décimo D, Ohlmann T. **DEAD-box protein DDX3 associates with eIF4F to promote translation of selected mRNAs.** EMBO J. 2012. Aug 7;31(18):3745-56.
48. Vera-Otarola J, Solis L, **Soto-Rifo R**, Ricci EP, Pino K, Tischler N, Ohlmann T, Darlix JL, Lopez-Lastra M. **The Andes Hantavirus NSs protein is expressed from the viral Small mRNA by a leaky scanning mechanism.** J Virol. 2012. Feb;86(4):2176-87.
49. **Soto-Rifo R**, Limousin T, Rubilar PS, Ricci EP, Décimo D, Moncorgé O, Trabaud MA, André P, Cimarelli A, Ohlmann T. **Different effects of the TAR structure on HIV-1 and HIV-2 genomic RNA translation.** Nucleic Acids Res. 2012. Mar;40(6):2653-67.
50. Alais S, **Soto-Rifo R**, Balter V, Gruffat H, Manet E, Schaeffer L, Darlix JL, Cimarelli A, Raposo G, Ohlmann T, Leblanc P. **Functional mechanisms of the cellular prion protein (PrPC) associated anti-HIV-1 properties.** Cell. Mol. Life Sci. 2011. Apr;69(8):1331-52.
51. Ricci EP, Limousin T, **Soto-Rifo R**, Alisson R, Poÿry T, Decimo D, Jackson RJ, Ohlmann T. **Activation of a microRNA response in *trans* reveals a new role for the poly(A) tail in translational repression.** Nucleic Acids Res. 2011. Jul;39(12):5215-31.
52. Vera-Otarola J, **Soto-Rifo R**, Ricci EP, Ohlmann T, Darlix JL, López-Lastra M. **The 3'Untranslated Region of the ANDES Hantavirus Small mRNA synergically**

- stimulates cap-dependent translation initiation from the viral mRNA.** J Virol. 2010. Oct;84(19):10420-4.
53. Charnay N, Ivanyi-Nagy R, **Soto-Rifo R**, Ohlmann T, López-Lastra M, Darlix JL. **Mechanism of HIV-1 Tat RNA translation and its activation by the Tat protein.** Retrovirology. 2009. Aug 11;6:74. doi: 10.1186/1742-4690-6-74
 54. Balvay L, **Soto-Rifo R**, Ricci E.P, Decimo D and T Ohlmann. **Functional diversity of viral IRESes.** Biochim Biophys Acta-Gene Regulatory Mechanisms. 2009. Sep-Oct;1789(9-10):542-57.
 55. Ricci EP, **Soto Rifo R**, Herbreteau CH, Decimo D, Ohlmann T. **Lentiviral RNAs can use different mechanisms for translation initiation.** Biochem Soc Trans. 2008. Aug;36(Pt 4):690-3.
 56. **Soto Rifo R**, Ricci EP, Décimo D, Moncorgé O, Ohlmann T. **Back to basics: the untreated rabbit reticulocyte lysate as a competitive system to recapitulate cap/poly(A) synergy and the selective advantage of IRES-driven translation.** Nucleic Acids Res. 2007. 35(18):e121.
 57. Dieterich K, **Soto Rifo R**, Faure AK, Hennebicq S, Ben Amar B, Zahi M, Perrin J, Martinez D, Sèle B, Jouk PS, Ohlmann T, Rousseaux S, Lunardi J, Ray PF. **Homozygous mutation of AURKC yields large-headed polyploid spermatozoa and causes male infertility.** Nat Genet. 2007. May;39(5):661-5.

PRESENTATIONS (Oral presentations as invited speaker)

2021: Capsula para Semana de la Ciencia Facultad de Medicina de la Universidad de Chile

Variantes de preocupación de SARS-CoV-2 y su impacto en la pandemia

2021: Charla para Jornadas Científicas del Hospital Clínico de la Universidad de Chile

Variantes de preocupación de SARS-CoV-2 y su impacto en la pandemia

2021: Congreso de la Asociación Latinoamericana de Microbiología (ALAM)

Targeting the HIV-1 full-length RNA

2021: Charla para Clínica Las Condes

Variantes de preocupación de SARS-CoV-2 y su impacto en la pandemia

2021: Charla en Jornadas de Dialisis, Sociedad de Nefrología de Chile

Variantes de preocupación de SARS-CoV-2 y su impacto en la pandemia

2021: Charla para la Universidad de Santiago de Chile

Variantes de preocupación de SARS-CoV-2 y su impacto en la pandemia

2021: Charla para la Sociedad Chilena de Periodoncia

Variantes de preocupación de SARS-CoV-2 y su impacto en la pandemia

2021: Charla para Departamento de Dermatología del Hospital Clínico de la Universidad de Chile

Variantes de preocupación de SARS-CoV-2 y su impacto en la pandemia

2021: Charla para Facultad de Odontología Universidad de Chile

Variantes de preocupación de SARS-CoV-2 y su impacto en la pandemia

2021: Charla para el Colegio Médico de Santiago

Variantes de preocupación de SARS-CoV-2 y su impacto en la pandemia

2020: XXXVII Congreso Asociación Nacional de Estudiantes de Bioquímica

¿Qué sabemos del SARS-CoV-2?**2020:** Webinars de la Asociación Chilena de Inmunología**Desarrollo de un pseudotipo de SARS-CoV-2 para la identificación de anticuerpos neutralizantes****2019:** XXXIII Annual Meeting Chilean Society for Cell Biology**Plenary lecture: "The complex life of the HIV-1 genomic RNA"****2019:** Seminarios del Instituto de Ciencias Biomédicas, Facultad de Medicina, Universidad Andrés Bello**Epitranscriptomic Regulation of HIV-1 replication****2019:** Seminarios del Instituto de Ciencias Biomédicas, Facultad de Medicina, Universidad de Chile**The complex life of the HIV-1 genomic RNA****2019:** Curso Nacional de VIH-Sociedad Chilena de Infectología**Investigación básica y aplicada en VIH****2018:** XLI Reunión Anual de la Sociedad Chilena de Bioquímica y Biología Molecular**Epitranscriptomic Regulation of HIV-1 genomic RNA packaging****2018:** XXXV Congreso Asociación Nacional de Estudiantes de Bioquímica**Epitranscriptomic Regulation of HIV-1 replication****2016:** Congreso Chileno de Microbiología**Regulation of HIV gene expression through RNA Epigenetics****2016:** International Colloquium in Emerging Viruses, Pontificia Universidad Católica de Chile**Regulation of HIV gene expression through RNA Epigenetics****2016:** Coloquios en Microbiología, organized by the Chilean Society of Microbiology.**Control post-transcripcional en VIH-1****2016:** International Symposium in Virology, Universidad Andrés Bello.**"DEAD-box RNA helicase eIF4AIII promotes gene expression from the HIV-1 unspliced mRNA"****2015:** Symposium Virus, Inmunidad e Inflamación en Enfermedades Humanas de Alto Impacto, LVII Reunión Anual de la Sociedad de Biología de Chile, Puerto Varas, Chile.**Post-transcriptional control of the HIV-1 unspliced mRNA****2015:** Symposium "Getting the message: the complex life of Eukaryotic mRNAs" XXXVIII Reunión Anual de la Sociedad de Bioquímica y Biología Molecular, Puerto Varas, Chile.**From the nucleus to the ribosome: understanding the mechanisms controlling gene expression from the HIV-1 unspliced mRNA****2015:** Charlas en Genética, Facultad de Medicina, Universidad de Chile, Santiago, Chile**Post-transcriptional control in HIV-1****2015:** Seminarios Instituto Milenio de Inmunología e Inmunoterapia, Santiago, Chile**From the nucleus to the ribosome: understanding the mechanisms controlling gene expression from the HIV-1 unspliced mRNA****2015:** Seminarios Anillo NEMESIS, Facultad de Medicina, Universidad de Chile, Santiago, Chile**From the nucleus to the ribosome: understanding the mechanisms controlling gene expression from the HIV-1 unspliced mRNA****2014:** International Symposium in Virology, Universidad Andrés Bello, Santiago, Chile**Coupling nuclear export and translation of the HIV-1 unspliced mRNA****2014:** XXXVII Reunión Anual de la Sociedad de Bioquímica y Biología Molecular de Chile, Puerto Varas, Chile**Coupling nuclear export and translation of the HIV full-length unspliced mRNA****2014:** Molecular Biology of Complex Retroviruses Symposium, XXXVI Congreso Chileno de Microbiología, La Serena, Chile**Post-transcriptional control of HIV gene expression**

2013: XXX Congreso Nacional de Estudiantes de Bioquímica, Santiago, Chile
Compartimentalización del inicio de la traducción del ARN genómico del Virus de la Inmunodeficiencia humana de tipo-1 (VIH-1) mediante el reclutamiento de DDX3

TEACHING

POSTDOCTORAL TRAINEES

- Dr. Andrés Bustamante** **2020-2023**
 Fondecyt post-doctoral grant N° 3200460 "Mecano-química de transcripción reversa de VIH-1, una molécula a la vez "
- Dr. Luis Alonso** **2019-2021**
 Postdoctoral fellowship N° SECTEI/138/2019 from Mexico City "Impacto de la metilación del RNA de VIH-1 en la activación de macrófagos y microglías"
- Dr. Daniela Toro Ascuy** **2015-2018**
 Fondecyt post-doctoral grant N° 3160091 "A landscape of the HIV-1 full-length unspliced mRNA nuclear export and translation initiation complexes"

GRADUATE STUDENTS

- Catarina Ananías Saez** **2020-present**
 Graduate Program in Biomedical Sciences, Faculty of Medicine, Universidad de Chile
- Tomás Hernandez** **2020-present**
 Graduate Program in Biomedical Sciences, Faculty of Medicine, Universidad de Chile
- Daniela Jara** **2020-present**
 Graduate Program in Biomedical Sciences, Faculty of Medicine, Universidad de Chile
- Gabriel Castillo Rozas** **2020-present**
 Graduate Program in Medical Sciences, Faculty of Medicine, Universidad de Chile
- Aarón Oyarzún** **2019-present**
 Graduate Program in Microbiology, Faculty of Chemistry and Biology, Universidad de Santiago de Chile
- Vicente Saavedra** **2020-present**
 Master Program in Biochemistry, Faculty of Chemical and Pharmaceutical Sciences, Universidad de Chile
- Bárbara Rojas** **2017-present**
 Graduate Program in Biochemistry, Faculty of Chemical and Pharmaceutical Sciences, Universidad de Chile
- Paulina Aguilera** **2017-2022**
 Graduate Program in Microbiology, Faculty of Sciences, Universidad de Chile
- Camila Pereira Montecinos** **2017-2020**
 Graduate Program in Biomedical Sciences, Faculty of Medicine, Universidad de Chile
- Sebastian Riquelme** **2017-2020**
 Graduate Program in Microbiology, Faculty of Sciences, Universidad de Chile
- Felipe León** **2018-2020**
 Master Program in Biochemistry, Faculty of Chemical and Pharmaceutical Sciences, Universidad de Chile
- Francisco Garcia** **2014-2019**
 Graduate Program in Sciences m/Microbiology, Faculty of Sciences, Universidad de Chile
- Paulina Rubilar Guzmán** **2010-2011**

Master Research in Molecular and Cellular Biology, Université Claude Bernard Lyon-1, France.

UNDERGRADUATE STUDENTS

Eduardo Isla Biochemistry, Universidad de Santiago de Chile.	2018-2019
Fabián Figueroa Biotechnology Enginner, Universidad de Chile.	2017-2019
Alvaro Thadani Biotechnology Enginner, Universidad de Chile.	2016-2018
Alejandra Leyva Biotechnology Enginner, Universidad de Chile.	2016-2018
Barbara Rojas Biotechnology, Universidad Santo Tomás. Awarded	2014-2016
Alvaro Frohlich Biochemistry, Pontificia Universidad Católica de Valparaiso. Awarded	2014-2015

COURSES

2013-present

Coordinator and professor in several courses for graduate and undergraduate students at Faculty of Medicine, Faculty of Sciences and Faculty of Chemical and Pharmaceutical Sciences, Universidad de Chile.

Invited professor in courses for graduate students at Universidad de Santiago de Chile, Pontificia Universidad Católica de Chile, Universidad de Concepción, Universidad de los Andes and Universidad Andrés Bello.