

# Tomás Masson

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## Current Position

Postdoctoral researcher, Jösch & Kondrashov groups

05.2021-Present

Institute of Science and Technology Austria (IST Austria)

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## Education

PhD Candidate, Biological Sciences

04.2016-05.2021

Thesis title: “Characterization of Autochthonous Baculovirus as Candidates for the Control of the Fall Armyworm (*Spodoptera frugiperda*)”

Instituto de Biotecnología y Biología Molecular (IBBM)

Universidad Nacional de La Plata

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Licentiate degree (Bachelor of Science) in Molecular Biology

03.2011-03.2016

Grading score: 9.33 over 10

Universidad Nacional de La Plata

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## Awards and Funding

- Young Investigators Travel Fellowship Program 2019  
11th International Meeting of the Global Virus Network Global Virus Network (GVN)  
Barcelona, Spain
- Short term visit at CNPEM Electron Cryomicroscopy Group 2019  
National Laboratory of Nanotechnology (LNNano)  
National Center for Energy and Materials Research (CNPEM)  
Campinas, Brazil
- PhD fellowship 2016-2021  
National Council of Scientific and Technical Research (CONICET) Argentina

- Scholarship for Undergraduate Research  
National Interuniversity Council (CIN) Argentina

2014-2016

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## Peer-Reviewed Publications

- Gisonno R<sup>#</sup>, **Masson T**<sup>#</sup>, Ramella N, Barrera EE, Romanowski V & Tricerri MA (2021). Evolutionary and Structural Constraints Influencing Apolipoprotein A-I Amyloid Behavior. Accepted for publication in Proteins. BioRxiv. [Link](#)
- **Masson T**, Fabre ML, Pidre ML, Niz JM, Berretta MF, Romanowski V, Ferrelli ML (2021). Genomic Diversity in a Population of *Spodoptera frugiperda* Nucleopolyhedrovirus. Infection, Genetics and Evolution, volume 90. [Link](#)
- Fabre ML, **Masson T**, Haase S, Ferrelli ML & Romanowski V (2020). A Simplified Strategy to Package Foreign Proteins into Baculovirus Occlusion Bodies without Engineering the Viral Genome. Journal of Biotechnology. 307, 175-181. [Link](#)
- **Masson T**, Fabre ML, Pidre ML, Ferrelli ML, Romanowski V (2019). Protein Composition of the Occlusion Bodies of *Epinotia aporema* Granulovirus. PLoS ONE 14(2): e0207735. [Link](#)
- Ferrelli ML, Pidre ML, Ghiringhelli PD, Torres S, Fabre ML, **Masson T**, Cédola MT, Sciocco-Cap A and Romanowski V (2018). Genomic Analysis of an Argentinean Isolate of *Spodoptera frugiperda* Granulovirus Reveals that Various Baculoviruses Code for Lef-7 Proteins with Three F-box Domains. PLoS ONE 13(8): e0202598. [Link](#)

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## Skills and Techniques

Languages: Spanish (native) and English (proficient)

Experimental (wet lab):

- Cell culture
- Insect *in vivo* assays
- Virus assays (amplification, purification, titration)
- Molecular cloning (cloning design, PCR, restriction/ligation, screening)
- Protein analysis (expression, purification and analysis)
- High-Throughput sequencing
- Mass spectrometry
- Transmission electron microscopy

Computational (dry lab):

- Proficient in shell scripting, Git, Python and R
- Pipeline development with Snakemake
- High-Throughput sequencing data analysis (genomics and transcriptomics)
- Mass spectrometry data analysis
- Phylogenetic reconstructions and molecular evolution studies

- Data analysis with Python (Numpy, Pandas, Scikit-Learn, Seaborn)
- Software development under FAIR principles
- Microscope image processing
- Machine learning techniques

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## References

Victor Romanowski, Ph.D.	Maria Leticia Ferrelli, Ph.D.	Maria Alejandra Tricerri, Ph.D.
Institute of Biotechnology and Molecular Biology	Institute of Biotechnology and Molecular Biology	Biochemistry Research Institute of La Plata
Faculty of Exact Sciences	Faculty of Exact Sciences	Faculty of Medical Sciences
National University of La Plata	National University of La Plata	National University of La Plata
victor@biol.unlp.edu.ar	lferrelli@biol.unlp.edu.ar	aletricerri@yahoo.com

## Scientific Meetings

- XLVIII Annual Meeting of the Argentine Society of Biophysics 2019  
National University of San Luis  
San Luis, Argentins  
Lighting Talk/Poster Presentation:  
“Structural Properties of Apolipoprotein A1 Associated with Evolutionary Constraints”  
**Masson T**, Tricerri MA, Ramella NA, Gisonno RA
- 11th International Meeting Global Virus Network (GVN) 2019  
Spanish Scociety of Virology  
Barcelona, Spain  
Poster Presentations:  
“Proteogenomic Analysis of EpapGV occlusion body”  
**Masson T**, Fabre ML, Pidre ML, Ferrelli ML, Romanowski V  
“Recombinant Polyhedron Envelope Protein Produced by a Stably Transformed Insect Cell Line  
can be Included in the Occlusion Bodies upon Infection with Alternative Baculoviruses”  
Fabre ML, **Masson T**, Ferrelli ML, Romanowski V
- XII Argentine Congress of Virology 2017  
Argentina Society of Virology  
Ciudad Autónoma de Buenos Aires, Argentina  
Poster Presentations:  
“Proteome of the Occlusion Derived Virions (ODVs) of the granulovirus of *Spodoptera frugiperda*  
(SfGV)”  
**Masson T**, Fabre ML, Ferrelli ML, Pidre ML, Romanowski V  
“Improvement of the Baculovirus of *Anticarsia gemmatilis* as a Biological Control Agent by  
Incorporating Heterologous Proteins in the Occlusion Bodies”  
Fabre ML, **Masson T**, Romanowski V

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## Academic Courses

- Computational tools for scientists 2019  
Institute of Liquids and Biological Systems, La Plata, Argentina
  - Cryo-EM and X-ray Crystallography: on the Frontier of Structural Biology 2019  
Faculty of Exact and Natural Sciences, University of Buenos Aires, Argentina
  - Computational Approaches to Study Intrinsically Disordered Proteins 2018  
National University of Quilmes, Argentina
  - Comparative Analysis of Microbial Genomes: Pangenomics and Phyloinformatics 2018  
Faculty of Exact Sciences, National University of La Plata, Argentina
  - Basic and Advanced Applications of Flow Cytometry 2017-2018  
Faculty of Exact Sciences, National University of La Plata, Argentina
  - Training in the Handling of Databases for the Study of Biomedical Sciences 2017  
Faculty of Medical Sciences, National University of Rosario, Argentina
  - Statistical Treatment of Life Sciences Data with Free Software R 2017  
Faculty of Pharmacy and Biochemistry, University of Buenos Aires, Argentina
  - Peptide and Protein Mass Spectrometry 2017  
Multidisciplinary Institute of Cell Biology (IMBICE), La Plata, Argentina
  - Molecular and Cellular Bases of Immunopathologies 2016  
Institute of Immunological and Physiopathological Studies (IIFP), La Plata, Argentina
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