

Tomás Masson

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National University of La Plata, Faculty of Exact Sciences

Department of Biological Sciences

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Current Position

PhD Candidate, Biological Sciences

2016-Present

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

Education

Licentiate degree (equivalent to a Master’s degree) in Biotechnology and Molecular Biology 2011-2016

Grading score: 9.33 over 10

La Plata National University

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 2014-2016
National Interuniversity Council (CIN) Argentina
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Peer-Reviewed Publications

- **Masson T**, Fabre ML, Pidre ML, Niz JM, Berretta MF, Romanowski V, Ferrelli ML (2020). Genomic Diversity in a Population of *Spodoptera frugiperda* Nucleopolyhedrovirus. *BioRxiv* (accepted for publication by *Infection, Genetics and Evolution*). [Link](#)
- Gisonno R[#], **Masson T[#]**, Ramella N, Barrera EE, Romanowski V & Tricerri MA (2020). Evolutionary and Structural Constraints Influencing Apolipoprotein A-I Amyloid Behavior. *BioRxiv*. [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.
Institute of Biotechnology and
Molecular Biology
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Maria Leticia Ferrelli, Ph.D.
Institute of Biotechnology and
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Maria Alejandra Tricerri, Ph.D.
Biochemistry Research Institute
of La Plata
Faculty of Medical Sciences
National University of La Plata
aletricerri@yahoo.com

Scientific Meetings

- XLVIII Annual Meeting of the Argentine Society of Biophysics
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

2019
 - 11th International Meeting Global Virus Network (GVN)
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

2019
 - XII Argentine Congress of Virology
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 gemmatalis* as a Biological Control Agent by Incorporating Heterologous Proteins in the Occlusion Bodies”
Fabre ML, **Masson T**, Romanowski V

2017
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Academic Courses

- Computational tools for scientists
Institute of Liquids and Biological Systems, La Plata, Argentina

2019
- Cryo-EM and X-ray Crystallography: on the Frontier of Structural Biology
Faculty of Exact and Natural Sciences, University of Buenos Aires, Argentina

2019
- Computational Approaches to Study Intrinsically Disordered Proteins
National University of Quilmes, Argentina

2018
- Comparative Analysis of Microbial Genomes: Pangenomics and Phyloinformatics
Faculty of Exact Sciences, National University of La Plata, Argentina

2018
- Basic and Advanced Applications of Flow Cytometry
Faculty of Exact Sciences, National University of La Plata, Argentina

2017-2018
- Training in the Handling of Databases for the Study of Biomedical Sciences
Faculty of Medical Sciences, National University of Rosario, Argentina

2017
- Statistical Treatment of Life Sciences Data with Free Software R
Faculty of Pharmacy and Biochemistry, University of Buenos Aires, Argentina

2017
- Peptide and Protein Mass Spectrometry
Multidisciplinary Institute of Cell Biology (IMBICE), La Plata, Argentina

2017

- Molecular and Cellular Bases of Immunopathologies 2016
Institute of Immunological and Physiopathological Studies (IIFP), La Plata, Argentina
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