GUSTAVO SCHETTINI

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EDUCATION

Virginia Polytechnic Institute and State University, Virginia Tech 2022 - Present
Ph.D. in progress in Animal Sciences Blacksburg-VA, USA

Sao Paulo State University, UNESP 2019 - 2021
M.Sc. in Genetics and Animal Breeding Jaboticabal-SP, Brazil

Federal University of Bahia, UFBA 2013 - 2018
B.S. in Veterinary Medicine Salvador-BA, Brazil

COMPLEMENTARY EDUCATION

Graduate Teaching Assistant Workshop, Virginia Polytechnic Institute and State University. Credit Hours: –
2022.

Systems Biology and Gene Networks Inference: Application to Livestock Breeding and Genetics, Sao Paulo University (ESALQ-USP). Credit Hours: 40h
2019.

Special Topics: Data Analysis in R Software, Sao Paulo State University (UNESP). Credit Hours: 24h
2019.

Special Topics in Applied Genomic Selection in Livestock: Methods and Tools, Sao Paulo State University (UNESP). Credit Hours: 24h
2019.

Introduction to Using Software R, Federal University of Bahia (UFBA). Credit Hours: 20h
2015.

TEACHING EXPERIENCE

Teaching Assistant. Course: Genomics (APSC 4054). Virginia Polytechnic Institute and State University. Instructor: Fernando Biase *Fall 2024*

Teaching Assistant. Course: Genomics (APSC 4054). Virginia Polytechnic Institute and State University. Instructor: Fernando Biase *Fall 2023*

Teaching Assistant. Course: Animal Breeding and Genetics (ALS 3104). Virginia *Spring 2023*

Polytechnic Institute and State University. Instructor: Gota Morota

Teaching Assistant. Course: Special Topics in Biotechnology in Animal Production (MEVB10). Federal University of Bahia (UFBA). Instructor: Barbara M. P. da Silva Souza *Fall 2020*

- Biotechnologies applied to animal breeding I: Principles of DNA sequencing and DNA polymorphisms' identification.
- Biotechnologies applied to animal breeding II: Principles of RNA sequencing and Gene (Co-) expression analyses overview.

RESEARCH EXPERIENCE

Graduate Research Assistant, Virginia Polytechnic Institute and State University *2022- Present*
Graduate Research Assistant, Sao Paulo State University (UNESP) *2019-2021*
Undergraduate Research Internship, Sao Paulo State University (UNESP) *2018-2018*
Undergraduate Research Internship, Federal University of Bahia (UFBA) *2018-2018*
Rural Extension Projects Internship, Federal University of Bahia (UFBA) *2018-2018*
Technological Development and Innovation Internship, Federal University of Bahia (UFBA) *2017-2018*
Scientific Research Initiation, Federal University of Bahia (UFBA) *2015-2017*

RESEARCH SUPPORT

1. Graduate Research Development Program (GRDP).
$1000
Transcriptome profile of in vitro-produced bovine blastocyst associated with hatching rate.
PI: Schettini, G.P. 09/30/2022–10/01/2023

2. AG2PI support to develop genomic workflows.
$8000
Integrating Illumina and ONT sequence workflow.
PI: Schettini, G.P. 09/30/2023–05/31/2024

3. Graduate Research Development Program (GRDP).
$1000
Integrating Illumina and ONT sequence workflow.
PI: Schettini, G.P. 09/13/2024–01/31/2025

PEER-REVIEWED JOURNAL PAPERS

1. **Schettini G. P.;** Morozyuk, M.; Biase, F.H. **Identification of novel cattle (*Bos taurus*) genes and biological insights of their function in pre-implantation embryo development.** BMC Genomics, v. 25, 775, 2024. DOI
2. Kalbfleisch, T.S., McKay, S.D., Murdoch, B.M. ***et al.* The Ruminant Telomere-to-Telomere (RT2T) Consortium.** Nature Genetics, v. 56, 1566–1573, 2024. DOI

3. Biase F. H.; **Schettini G. P. Protocol for the electroporation of CRISPR-Cas for DNA and RNA targeting in Bos taurus zygotes.** STAR Protocols, v. 5, 2024. DOI
4. Nix, J. L.; **Schettini, G. P.;** Speckhart S. L.; Ealy, A. D.; Biase, F. H. **Ablation of OCT4 function in cattle embryos by double electroporation of CRISPR-Cas for DNA and RNA targeting (CRISPR-DART).** PNAS Nexus, pgad343, 2023. DOI
5. Nix, J. L.; **Schettini, G. P.**; Biase, F. H. **Sexing of cattle embryos using RNA-sequencing data or polymerase chain reaction based on a complete sequence of cattle chromosome Y.** Frontiers in Genetics, v. 14, 2023. DOI
6. Toro-Ospina, A.; Herrera Rios, A. C.; dos Santos, W. B.; **Schettini, G. P.**; Vallejo Aristizabal, V. H.; Tovar Claros, G.; Ortiz Morea, E. G. **Genetic Architecture and Signatures of Selection in the Caqueteño Creole (Colombian Native Cattle)**. Diversity, v. 14, 828, 2022. DOI
7. Toro-Ospina, A.; Herrera Rios, A. C.; **Schettini, G. P.**; Vallejo Aristizabal, V. H.; dos Santos, W. B.; Zapata, C. A.; Ortiz Morea, E. G. **Identification of Runs of Homozygosity Islands and Genomic Estimated Inbreeding Values in Caqueteño Creole Cattle (Colombia)**. Genes, v. 7, 1232, 2022. DOI
8. **Schettini, G. P.**; Peripolli, E.; Alexandre, P. A.; Dos Santos, W. B.; Pereira, A. S. C.; De Albuquerque, L. G.; Baldi, F.; Curi, R. A. **Transcriptome Profile Reveals Genetic and Metabolic Mechanisms Related to Essential Fatty Acid Content of Intramuscular *Longissimus tho- racis* in Nellore Cattle**. Metabolites, v. 12, 471, 2022. DOI
9. **Schettini, G. P.**; Peripolli, E.; Alexandre, P. A.; Dos Santos, W. B.; da Silva Neto, J. B.; Pereira, A. S. C.; De Albuquerque, L. G.; Curi, R. A.; Baldi, F. **Transcriptomic profile of longissimus thoracis associated with fatty acid content in Nellore beef cattle**. Animal Genetics, v. 53, p. 264-280, 2022. DOI
10. Dos Santos, W. B.; **Schettini, G. P.**; Maiorano, A. M.; Bussiman, F. O.; Balieiro, J. C. C.; Ferraz, G. C.; Pereira, G. L.; Baldassini, W. A.; Neto, O. R. M.; Neto, H. N. O.; Curi, R. A. **Genome-wide scans for signatures of selection in Mangalarga Marchador horses using high-throughput SNP genotyping**. BMC genomics, v. 22, p. 737-754, 2021. DOI
11. **Schettini, G. P.**, Lambert, S. M.; Da Silva Souza, B. M. P.; Costa, R. B.; De Camargo, G. M. F. **Genetic potential of Sindhi cattle for A2 milk production**. Animal Production Science, v. 60, p. 893-895, 2020. DOI
12. Dos Santos, W. B.; **Schettini, G. P.**; Fonseca, M. G.; Pereira, G. L.; Chardulo, L. A. L.; Neto, O.; Baldassini, W. A.; Oliveira, H. N.; Curi, R. A. **Fine-scale estimation of inbreeding rates, runs of homozygosity and genome-wide heterozygosity levels in the Mangalarga Marchador horse breed**. Journal of Animal Breeding and Genetics, v. 00, p. jbg.12508, 2020. DOI
13. Da Silva Neto, J. B.; Peripolli, E.; Da Costa e Silva, E. V.; Espigolan, R.; Neira, J. D. R.; **Schettini, G. P.**; Da Costa Filho, L. C. C.; Barbosa, F. B.; Macedo, G. G.; Costa-Brunes, L.; Lobo, R. B.; Pereira, A. S. C.; Baldi, F. **Genetic correlation estimates between age at puberty and growth, reproductive, and carcass traits in young Nelore bulls**. Livestock Science, v. 241, p.104266, 2020. DOI

SKILLS

1. Laboratory-related techniques
   - DNA and RNA extraction
   - Library construction for Next Generation Sequencing
   - Oxford Nanopore Technologies Sequencing
   - *In vitro* embryo production (bovine)
2. Programming
   - Unix/Linux
   - Bash
   - awk
   - R
   - Markdown
   - Docker/Conda
   - Git

LANGUAGES

1. English – Full professional proficiency
2. Spanish – Professional working proficiency
3. Portuguese – Native

REFERENCES

1. Prof. Dr. Fernando Biase – Associate Professor at Virginia Tech – fbiase@vt.edu
2. Prof. Dr. –
3. Prof. Dr. Fernando Baldi Rey – Associate Professor at Sao Paulo State University – fernandobaldiuy@gmail.com