

GUSTAVO SCHETTINI

175 West Campus Drive, 24061, Blacksburg, VA,
United States

gschettini@vt.edu ♦ gschettini.github.io

EDUCATION

Virginia Polytechnic Institute and State University, Virginia Tech
Ph.D. in progress in Animal Sciences

2022 - Present
Blacksburg-VA, USA

Sao Paulo State University, UNESP
M.Sc. in Genetics and Animal Breeding

2019 - 2021
Jaboticabal-SP, Brazil

Federal University of Bahia, UFBA
B.S. in Veterinary Medicine

2013 - 2018
Salvador-BA, Brazil

COMPLEMENTARY EDUCATION

Graduate Teaching Assistant Workshop, Virginia Polytechnic Institute and State University.
2022.

Credit Hours: –

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

Credit Hours: 40h

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

Credit Hours: 24h

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

Credit Hours: 24h

Introduction to Using Software R, Federal University of Bahia (UFBA).
2015.

Credit Hours: 20h

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

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 thoracis* in Nelore 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 Nelore 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