

# GUSTAVO SCHETTINI

Blacksburg, VA, United States of America

✉ [gschettini@vt.edu](mailto:gschettini@vt.edu)

in [Gustavo Schettini](#)

🔗 [gschettini](#)

🌐 [website](#)

## 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 Polytechnic Institute and State University. Instructor: Gota Morota

*Spring 2023*

**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

---

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

## AWARDS

---

1. AG2PI Student Conference Travel Award (\$1500)	2023
---	------

## RESEARCH SUPPORT

---

1. Graduate Research Development Program (\$1000) Integrating Illumina and ONT sequence workflow. <b>PI: Schettini, G.P.</b>	09/13/2024–01/31/2025
2. AG2PI support to develop genomic workflows (\$8000) Integrating Illumina and ONT sequence workflow. <b>PI: Schettini, G.P.</b>	09/30/2023–05/31/2024
3. Graduate Research Development Program (\$1000) Transcriptome profile of <i>in vitro</i> -produced bovine blastocyst associated with hatching rate. <b>PI: Schettini, G.P.</b>	09/30/2022–10/01/2023

## 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

## **REFERENCES**

---

1. Prof. Dr. Fernando Biase – Associate Professor at Virginia Tech – [fbiase@vt.edu](mailto:fbiase@vt.edu)
2. Prof. Dr. Fernando Baldi Rey – Associate Professor at Sao Paulo State University – [fernandobaldiuy@gmail.com](mailto:fernandobaldiuy@gmail.com)