

Curriculum Vitae

Name: Ramon Cesar Botigelli

Birth: July 03, 1989

Email: rcbotigelli@ucdavis.edu

Orcid ID: <https://orcid.org/0000-0002-2796-6062>

Lattes ID: <http://lattes.cnpq.br/5382937104581943>

Twitter: @RBotigelli

EDUCATION

Currently:

Postdoctoral at University of California Davis (UC Davis) (2022) - Denicol Lab

PhD in Pharmacology and Biotechnology, São Paulo State University (UNESP) (2016-2021)

with collaborative period in University of California Davis (UC Davis) (2019-2020)

Thesis title: Embryonic stem cells and induced pluripotent stem cells on cattle: molecular profile and application in chimeric embryos

Master of Science in Animal Science, University of Sao Paulo (USP), Brazil (2011-2014)

Dissertation title: The nitric oxide and phosphodiesterases in bovine oocytes maturation.

Biological Science, Centro Universitário Hermínio Ometto de Araras (UNIARARAS), Brazil (2007-2010)

VISITING SCHOLAR

University of California Davis, USA

Effective date (Start): August, 2019 / Effective date (End): May, 2020

Title: "Trophectoderm Complementation Assay for pluripotent cells: a proposal for assessing pluripotency in cattle"

Supervisor: Prof Pablo J Ross

Funding: FAPESP-Brazil (19/10751-0)

<https://bv.fapesp.br/en/bolsas/186906/>

Instituto Leloir, LELOIR, Argentina.

Effective date (Start): September 4, 2017 / Effective date (End): September 17, 2017

Title: "Human induced pluripotent stem cells (hiPSCs), generation, maintenance and basic characterization"

Supervisor: Fernando Pitossi

Funding: CBAB/CABBIO

AREAS OF RESEARCH AND LAB TECHNIQUES

- Stem Cells (induced pluripotent stem cells and embryonic stem cells)

Related methods: Isolation and characterization of embryonic stem cells, generation and characterization of iPSCs, in vitro differentiation.

- Epigenetics and molecular biology

Interest: small molecules on pluripotent state of iPSCs and ESCs, oxygen tension on pluripotent state of iPSCs and ESCs.

- Bovine embryo production

Related methods: General medium production, oocyte collection and maturation, in vitro fertilization, embryo culturing.

- LAB TECHNIQUES

Immunostaining, confocal analysis, gene expression by RT-qPCR, gene knockdown by siRNA, transfection, lentivirus production, micromanipulation of zygotes and embryos, chimeric embryos.

BIBLIOGRAPHY

De Souza, Aline Fernanda; Bressan, Fabiana Fernandes; Pieri, Naira Caroline Godoy; Botigelli, Ramon Cesar; Revay, Tamas; Haddad, Simone Kashima; Covas, Dimas Tadeu; Ramos, Ester Silveira; King, Willian Allan; Meirelles, Flavio Vieira. Generation of Primordial Germ Cell-like Cells from iPSCs Derived from Turner Syndrome Patients. **Cells** (2021).

<https://doi.org/10.3390/cells10113099>

Recchia, Kaiana; Jorge, Amanda Soares; Pessôa, Laís Vicari de Figueiredo; Botigelli, Ramon Cesar; Zugaib, Vanessa Cristiane; de Souza, Aline Fernanda; Martins, Daniele dos Santos; Ambrósio, Carlos Eduardo; Bressan, Fabiana Fernandes; Pieri, Naira Caroline Godoy. Actions and roles of FSH in germinative cells. **International Journal of Molecular Sciences** (2021).

<https://doi.org/10.3390/ijms221810110>

Pieri, Naira Caroline Godoy; De Souza, Aline Fernanda; Botigelli, Ramon Cesar; Pessôa, Laís Vicari De Figueiredo; Recchia, Kaiana; Machado, Lucas Simões; Glória, Mayra Hirakawa; De Castro, Raquel Vasconcelos Guimarães; Leal, Diego Feitosa; Fantinato Neto, Paulo; Martins, Simone Maria Massami Kitamura; Dos Santos Martins, Daniele; Bressan, Fabiana Fernandes; De Andrade, André Furugen Cesar. Porcine Primordial Germ Cell-Like Cells Generated from Induced Pluripotent Stem Cells Under Different Culture Conditions. **Stem Cell Rev and Rep** (2021).

<https://doi.org/10.1007/s12015-021-10198-8>

Machado, L. S., Recchia, K., Pieri, N. C. G., Botigelli, R. C., de Castro, R. V. G., Brunhara Cruz, J., Pessôa, L. V. d. F., Bressan, F. F. Differentiation of Porcine Induced Pluripotent Stem Cells (piPSCs) into Neural Progenitor Cells (NPCs). **J. Vis. Exp.** (2021).

<https://dx.doi.org/10.3791/62209>

Bessi, B.W.; Botigelli, R.C.; Pieri, N.C.G.; Machado, L.S.; Cruz, J.B.; de Moraes, P.; de Souza, A.F.; Recchia, K.; Barbosa, G.; de Castro, R.V.G.; Nogueira, M.F.G.; Bressan, F.F. Cattle In Vitro Induced Pluripotent Stem Cells Generated and Maintained in 5 or 20% Oxygen and Different Supplementation. **Cells** (2021).

<https://doi.org/10.3390/cells10061531>

Oliveira Júnior, Gerson A.; Pinheiro, Vinícius G.; Fonseca, Pablo A.S.; Costa, Camila B.; Pioltine, Elisa M.; Botigelli, Ramon C.; Razza, Eduardo M.; Ereno, Ronaldo L.; Ferraz, José B.S.; Seneda, Marcelo M.; Nogueira, Marcelo F.G.. Genomic and phenotypic analyses of antral follicle count in Aberdeen Angus cows. **Livestock Science** (2021).

<https://doi.org/10.1016/j.livsci.2021.104534>

Schefer, Letícia; Schwarz, Kátia Regina Lancelloti; Paschoal, Daniela Martins; Castro, Fernanda Cavallari De; Fernandes, Hugo; Botigelli, Ramon César; Leal, Cláudia Lima Verde. Effects of different stimulators of cGMP synthesis on lipid content in bovine oocytes matured in vitro. **Animal Reproduction** (2021).

<https://doi.org/10.1590/1984-3143-AR2021-0072>

de Lima, Marina Amaro; Morotti, Fábio; Bayeux, Bernardo Marcozzi; de Rezende, Rômulo Germano; Botigelli, Ramon Cesar; De Bem, Tiago Henrique Camara; Fontes, Patrícia Kubo; Nogueira, Marcelo Fábio Gouveia; Meirelles, Flávio Vieira; Baruselli, Pietro Sampaio;. Ovarian follicular dynamics, progesterone

concentrations, pregnancy rates and transcriptional patterns in *Bos indicus* females with a high or low antral follicle count. **Scientific reports** (2020).

<https://doi.org/10.1038/s41598-020-76601-5>

Machado, Lucas Simões; Pieri, Naira Caroline Godoy; Botigelli, Ramon Cesar; de Castro, Raquel Vasconcelos Guimarães; de Souza, Aline Fernanda; Bridi, Alessandra; Lima, Marina Amaro; Fantinato Neto, Paulo; de Figueiredo Pessôa, Laís Vicari; Martins, Simone Maria Massami Kitamura;. Generation of neural progenitor cells (NPC) from porcine induced pluripotent stem cells (piPSC). **Journal of Tissue Engineering and Regenerative Medicine** (2020).

<https://doi.org/10.1002/term.3143>

Pioltine, Elisa M; Machado, Mariana F; da Silveira, Juliano C; Fontes, Patrícia K; Botigelli, Ramon C; Quaglio, Ana Elisa V; Costa, Camila B; Nogueira, Marcelo FG;. Can extracellular vesicles from bovine ovarian follicular fluid modulate the in-vitro oocyte meiosis progression similarly to the CNP-NPR2 system?. **Theriogenology** (2020).

<https://doi.org/10.1016/j.theriogenology.2020.06.031>

Pieri, Naira Caroline Godoy; de Souza, Aline Fernanda; Botigelli, Ramon Cesar; Machado, Lucas Simões; Ambrosio, Carlos Eduardo; dos Santos Martins, Daniele; de Andrade, André Furugen Cesar; Meirelles, Flavio Vieira; Hyttel, Poul; Bressan, Fabiana Fernandes. Stem cells on regenerative and reproductive science in domestic animals. **Veterinary research communications** (2019).

<https://doi.org/10.1007/s11259-019-9744-6>

Botigelli, Ramon Cesar; Razza, Eduardo Montanari; Pioltine, Elisa Mariano; Fontes, Patricia Kubo; Schwarz, Kátia Regina Lancellotti; Leal, Cláudia Lima Verde; Nogueira, Marcelo Fábio Gouveia;. Supplementing in vitro embryo production media by NPPC and sildenafil affect the cytoplasmic lipid content and gene expression of bovine cumulus-oocyte complexes and embryos. **Reproductive Biology** (2018).

<https://doi.org/10.1016/j.repbio.2018.01.004>

Schwarz, Kátia RL; de Castro, Fernanda C; Schefer, Letícia; Botigelli, Ramon C; Paschoal, Daniela M; Fernandes, Hugo; Leal, Cláudia LV;. The role of cGMP as a mediator of lipolysis in bovine oocytes and its effects on embryo development and cryopreservation. **PLoS ONE** (2018).

<https://doi.org/10.1371/journal.pone.0196268>

Schwarz, Kátia RL; Botigelli, Ramon Cesar; Del Collado, Maite; de Castro, Fernanda Cavallari; Fernandes, Hugo; Paschoal, Daniela M; Leal, Cláudia Lima Verde. Effects of fetal calf serum on cGMP pathway and oocyte lipid metabolism in vitro. **Reproduction, Fertility and Development** (2016).

<https://doi.org/10.1071/RD15512>

Botigelli, Ramon Cesar; Schwarz, Katia Lancellotti; Zaffalon, Fabiane Gilli; Del Collado, Maite; Castro, Fernanda Cavallari; Fernandes, Hugo; Leal, Claudia Lima Verde; Influence of nitric oxide and phosphodiesterases during in vitro maturation of bovine oocytes on meiotic resumption and embryo production. **Zygote** (2017).

<https://doi.org/10.1017/S096719941700017X>

Botigelli, Ramon Cesar; Razza, Eduardo Montanari; Pioltine, Elisa Mariano; Nogueira, Marcelo Fábio Gouveia. New approaches regarding the in vitro maturation of oocytes: Manipulating cyclic nucleotides and their partners in crime. **Jornal Brasileiro de Reproducao Assistida** (2017).

CONFERENCE ABSTRACTS POSTERS:

R Botigelli, N Pieri, B Bessi, R de Castro, K Recchia, A de Souza, G Barbosa, F Meirelles, F Bressan, M Nogueira. Different pluripotency maintenance supplements affect the reprogramming process and pluripotency state of bovine-induced pluripotent stem cells. **IETS** New York, 46th Annual Conference 2020.

BOTIGELLI, RC; PIERI, NCG; MACHADO, LS; CASTRO, R; SOUZA, AF; MEIRELLES, FV; BRESSAN, FF; NOGUEIRA, MFG. Cellular reprogramming by defined factors of GFP expressing fetal fibroblasts in cattle: preliminary results on culture optimization. **SBTE** Florianópolis – Santa Catarina/BR, 2018.

BOTIGELLI, RC; RAZZA, EM; PIOLTINE, EM; FONTES, PK; SCHWARZ, KRL; LEAL, CLV; NOGUEIRA, MFG. Cyclic GMP modulators (NPPC and Sildenafil) effects during in vitro maturation on cytoplasmic lipid content and transcripts abundance in bovine cumulus-oocyte complexes and embryos. **SBTE** Cabo de Santo Agostinho – Pernambuco/BR, 2017.

BOTIGELLI, RC; SCHWARZ, KRL; DEL COLLADO, M; CASTRO, FC; FERNANDES, H; LEAL, CLV. Effects of Snap and/or cilostamide supplementation during bovine oocyte in vitro maturation on maturation kinetics and embryo production. **SBTE** Foz do Iguaçu – Parana/BR, 2016.

BOTIGELLI, RC; MACHADO, MF; FONTES, PK; RAZZA, EM; PIOLTINE, EM; LEAL, CLV; BARROS, CM; NOGUEIRA, MFG. Expression of Lh receptor in bovine cumulus oophorus cells is modulated by follicular diameter and the gonadotropins stimulus. **SBTE** Gramado – Rio Grande do Sul/BR, 2015.

RC Botigelli, KRL Schwarz, FG Zaffalon, CLV Leal. INFLUENCE OF NITRIC OXIDE AND PHOSPHODIESTERASE INHIBITORS ON CYCLIC NUCLEOTIDES AND MEIOSIS RESUMPTION IN BOVINE OOCYTES IN VITRO MATURED. **IETS** Versailles, 41th Annual Conference 2015.

BOTIGELLI, RC; SCHWARZ, KRL; ZAFFALON, FG; CASTRO, FC; CUNHA, MCRV; FERNANDES, H; GARCIA, LM; CRUZ, MHC; LEAL, CLV. Influence of nitric oxide in the levels of cyclic nucleotides and the resumption of meiosis during in vitro maturation of bovine oocytes. **SBTE** Praia do Forte – Bahia/BR, 2013.

AWARD:

2015 - 2^o Students competition of SBTE meeting. Is the NPPC/NPR2 system, described for murine model, applied to bovine antral follicles?