

Curriculum Vitae

Name Isabella Cattani Pinto Cavalieri

Professional address Chapman University
Harry and Diane Rinker Health Science Campus
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Place and date of birth Rio de Janeiro, RJ, Brazil

Formal Education/Degree

October/2016 – June/August 2021 Ph.D. – double degree
Molecular Pharmacology, Groningen Research Institute of
Pharmacy, University of Groningen, the Netherlands

Morphological Sciences, Institute of Biomedical Sciences,
Federal University of Rio de Janeiro, Brazil

2015 - 2017 Master (MSc) in Experimental and Human Biology
Rio de Janeiro State University, UERJ, Brazil

2010 - 2014 Bachelor's degree in Biological Science
Veiga de Almeida University, UVA, Brazil

Postdoctoral training

July/2021 – Current School of Pharmacy, Laboratory of Dr. Rennolds Ostrom,
Chapman University, Irvine, CA, US

Awards and Grants

- October/2021 Award of the Best Thesis of 2021 of the post-graduation program in Morphological Sciences of Institute of Biomedical Sciences in Federal University of Rio de Janeiro, UFRJ, Brazil.
- January/2020 Travel Grant to 18th Lung Science Conference in Estoril, Portugal.
- April/2019 – July/2021 Scholarship Grade 10 program - Grant for the best Ph.D. students of post-graduation program in Morphological Sciences in Federal University of Rio de Janeiro, UFRJ, Brazil.
- Nov/2016 – Sep/2017 FAPERJ Grant – Grant for Ph.D. position in Federal University of Rio de Janeiro, UFRJ, Brazil. The grant was awarded by a Ph.D. position selection according to the classification of the selection.
- Sep/2017 – Jul/2018 CAPES NUFFIC Grant – Grant awarded for Ph.D. sandwich in University of Groningen, the Netherlands.
- 2015 – Nov/2016 CAPES Grant – Grant for Master student position in Rio de Janeiro State University, UERJ, Brazil. The grant was awarded by a position selection for master students according to the classification of the selection.

Professional societies

European Respiratory Society (ERS) – member since 2018

American Society for Pharmacology and Experimental Therapeutics (ASPET) – member since 2021

Publications

1. Baarsma, H. A., Van der Veen, Christina., Lobee, Danique., Mones, Nienke., Oosterhout, Emily., **Cattani-Cavaliere, Isabella.**, Schmidt, Martina. (2022). Epithelial 3D-spheroids as a tool to study air pollutant-induced lung pathology. *SLAS discovery: advancing life sciences R & D*, vol. 27, 2022.
2. Cardoso, Aline de Oliveira Pontes; Peclí E Silva Cyntia, Dos Anjos, Francisca de Fatima; Quesnot, Nicolas; Valença, Helber da Maia; **Cattani-Cavaliere, Isabella**; Brito-Gitirana, Lycia; Valença, Samuel Santos; Lanzetti, Manuella. Diallyl disulfide prevents cigarette smoke-induced emphysema in mice. *Pulmonary pharmacology & therapeutics*, v.69, 2021.
3. **Cattani-Cavaliere, Isabella**; Da Maia Valença, Helber; Moraes, João Alfredo; Brito-Gitirana, Lycia; Romana-Souza, Bruna; Schmidt, Martina; Valença, Samuel Santos. Dimethyl fumarate attenuates lung inflammation and oxidative stress induced by chronic exposure to diesel exhaust particles in mice. *International Journal of Molecular Sciences*, v. 21, p. 9658, 2020.
4. **Cattani-Cavaliere, Isabella**; Schmidt, Martina; Valença, Samuel Dos Santos. Nanodomains in cardiopulmonary disorders and the impact of air pollution. *Biochemical Society Transactions*, v. 48, p. 799-811, 2020.
5. Schmidt, Martina; **Cattani-Cavaliere, Isabella**; Nuñez, Francisco J; Ostrom, Rennolds S. Phosphodiesterase isoforms and cAMP compartments in the development of new therapies for obstructive pulmonary diseases. *Current Opinion in Pharmacology*, v. 51, p. 34-42, 2020.
6. Zuo, Haoxiao; **Cattani-Cavaliere, Isabella**; Valença, Samuel Santos; Musheshe, Nshunge; Schmidt, Martina. Function of cyclic amp scaffolds in obstructive lung disease: focus on epithelial-to-mesenchymal transition and oxidative stress. *British Journal of Pharmacology*, v. 176, p. 2402-2015, 2019.
7. Zuo, Haoxiao; **Cattani-Cavaliere, Isabella**; Musheshe, Nshunge; Nikolaev, Viacheslav O.; Schmidt, Martina. Phosphodiesterases as therapeutic targets for respiratory diseases. *Pharmacology & Therapeutics*, v. 197, p. 225-242, 2019.
8. Kennedy-Feitosa, Emanuel; **Cattani-Cavaliere, Isabella**; Barroso, Marina Valente; Romana-Souza, Bruna; Brito-Gitirana, Lycia; Valença, Samuel Santos. Eucalyptol promotes lung repair in mice following cigarette smoke-induced emphysema. *Phytomedicine*, v. 55, p. 70-79, 2019.
9. Barroso, Marina Valente; Graça-Reis, Adriane; **Cattani-Cavaliere, Isabella**; Gitirana, Lycia Brito; Valença, Samuel Santos; Lanzetti, Manuella. Mate tea reduces high fat diet-induced liver and metabolic disorders in mice. *Biomedicine & Pharmacotherapy*, v. 109, p. 1547-1555, 2019.
10. **Cattani-Cavaliere, Isabella**; Valença, Samuel Santos; Lanzetti, Manuella; Carvalho, Giovanna Marcella Cavalcante; Zin, Walter Araújo; Monte-Alto-Costa, Andréa; Porto, Luís Cristóvão; Romana-Souza, Bruna. Acute exposure to diesel-biodiesel particulate matter

promotes murine lung oxidative stress by nrf2/ho-1 and inflammation through the NF-Kb/TNF- α pathways. *Inflammation*, v. 42, p. 526-537, 2018.

11. Melo, Adriana Correa; **Cattani-Cavaliere, Isabella**; Barroso, Marina Valente; Quesnot, Nicolas; Gitirana, Lycia Brito; Lanzetti, Manuella; Valença, Samuel Santos. Atorvastatin dose-dependently promotes mouse lung repair after emphysema induced by elastase. *Biomedicine & Pharmacotherapy*, v. 102, p. 160-168, 2018.
12. **Cattani-Cavaliere, Isabella**; Reis, Adriane Graça; Kennedy-Feitosa, Emanuel; Pinho-Ribeiro, Vanessa; Lanzetti, Manuella; Gitirana, Lycia Brito; Romana-Souza, Bruna; Porto, Luis Cristóvão; Valença, Samuel Santos. Pulmonary emphysema cross-linking with pulmonary fibrosis and vice versa: a non-usual experimental intervention with elastase and bleomycin. *Inflammation*, v. 40, p. 1487-1496, 2017.
13. Valente Barroso, Marina; **Cattani-Cavaliere, Isabella**; De Brito-Gitirana, Lycia; Fautrel, Alain; Lagente, Vincent; Schmidt, Martina; Cristóvão Porto, Luís; Romana-Souza, Bruna; Santos Valença, Samuel; Lanzetti, Manuella. Propolis reversed cigarette smoke-induced emphysema through macrophage alternative activation independent of Nrf2. *Bioorganic & Medicinal Chemistry*, v. 25, p. 5557-5568, 2017.
14. Pinho-Ribeiro, Vanessa; Melo, Adriana Correa; Kennedy-Feitosa, Emanuel; Graca-Reis, Adriane; Barroso, Marina Valente; **Cattani-Cavaliere, Isabella**; Carvalho, Giovanna Marcella Cavalcante; Zin, Walter Araújo; Porto, Luis Cristóvão; Gitirana, Lycia Brito; Lanzetti, Manuella; Valença, Samuel Santos. Atorvastatin and simvastatin promoted mouse lung repair after cigarette smoke-induced emphysema. *Inflammation*, v. 40, p. 965-979, 2017.

Abstracts/ Meeting presentations

Cattani-Cavaliere, Isabella; Houke. A. Baarsma; Oun, Asmaa; M. Van Der Veen; Dolga, Amalia; Ostrom, Rennolds; Valença, Samuel Santos; Schmidt, Martina. Diesel exhaust particles alter mitochondrial bioenergetics in human bronchial epithelial cells. In: *Experimental Biology*, 2021, Philadelphia, 2021. (Poster presentation)

Cattani-Cavaliere, Isabella; Houke. A. Baarsma; Oun, Asmaa; M. Van Der Veen; Dolga, Amalia; Valença, Samuel Santos; Schmidt, Martina. Diesel exhaust particles alter mitochondrial bioenergetics in human bronchial epithelial cells. In: *ERS 18th Lung Science Conference*, 2020, Estoril. ERS 18th Lung Science Conference, 2020. (Poster presentation)

Cattani-Cavaliere, Isabella; Zuo, Haoxiao; Valença, Samuel Santos; Schmidt, Martina. Epithelial dysfunction, inflammation and oxidative stress induced by diesel exhaust particles. In: *British Pharmacology Society Meeting*, 2018, London. (Poster presentation)

Cattani-Cavaliere, I.; Kennedy-Feitosa, E.; Romana-Souza, B.; Gitirana, L. B.; Valença, S. S. Effects of eucalyptol on mouse lung repair after cigarette smoke-induced emphysema. In: *ERS 16th Lung Science Conference*, 2018, Estoril. ERS 16th Lung Science Conference, 2018. (Poster presentation)

Cattani-Cavaliere, I.; Carvalho, G. M. C.; Manuella Lanzetti,; Porto, L. C.; Monte-Alto-Costa, A.; Zin, W. A.; Valenca, S. S.; Romana-Souza, B. The instillation of biodiesel/diesel particles increases the inflammatory response of mice lung in an acute model. XVIII Congress of the Brazilian Society for Cell Biology, 2016, São Paulo. XVIII Congress of the Brazilian Society for Cell Biology, 2016. (Poster presentation)

Cavaliere, I. C. P.; Graca-Reis, A.; Xavier, J.; Kennedy-Feitosa, E.; Manuella Lanzetti,; Souza, B. R.; Brito-Gitirana, L.; Porto, L. C.; Valenca, S. S. Terapia fibrótica para enfisema e preteolítica para fibrose - Novas abordagens terapêuticas nas doenças intersticiais pulmonares. XXIX Reunião Anual da Federação de Sociedades de Biologia Experimental – FeSBE. 2014. **(Oral presentation)**

Cavaliere, I. C.; Kennedy-Feitosa, E.; Graca-Reis, A.; Xavier, J.; Porto, L. C.; Valenca, S. S. Estudo redox através do uso de elastase ou bleomicina para camundongos com fibrose ou enfisema. XXVIII Reunião Anual da Federação de Sociedades de Biologia Experimental – FeSBE. 2013. (Poster presentation)