

# ARTHUR LELOUP

## Researcher & Data Scientist

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Antwerp

arthur-arthur.github.io

arthur-arthur

## EDUCATION

MSc in Statistical Data Analysis (Computational Statistics)

**Ghent University**

Sept 2019 – June 2020

*Magna Cum Laude*

MSc in Molecular & Cellular Gene Biotechnology

**University of Antwerp**

Sept 2011 – June 2013

*Magna Cum Laude*

BSc in Biochemistry & Biotechnology

**University of Antwerp**

Sept 2007 – June 2011

Rudolf Steinerschool

**MSV De Es**

Sept 2001 – June 2007

## EXPERIENCE

PhD Researcher

**University of Antwerp**

Oct 2013 – Sep 2019

Antwerp, Belgium

- Scientific research on the active (i.e. smooth muscle tone-dependent) regulation of aortic biomechanics.
- Supervision of master students
- Teaching assistant for "Statistics and Data Analysis" and "Physiology and Pathophysiology" (1st Bachelor of Pharmaceutical Sciences)

Research fellow

**Macquarie University**

Oct 2017 – April 2018

Sydney, Australia

- Research stay in the Vascular Biomechanics lab (Prof. Dr. A. Avolio & Dr. M. Butlin)
- Investigated the role of basal NO production on aortic biomechanics in anesthetized rats

Research fellow

**Institute of Clinical Physiology**

March 2015

Pisa, Italy

- Research stay in the lab of Prof. Dr. F. Fajta (Ultrasound Image Processing)
- Learned novel techniques based on state-of-the-art high-frequency ultrasound imaging to noninvasively assess biomechanical properties of the large arteries

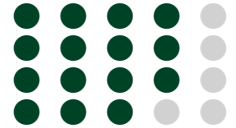
## PROGRAMMING

R

Python

SAS

SQL



## STRENGTHS

Creative

Versatile

Quick learner

Hard-working

Problem solver

Frequentist & Bayesian statistics

Sensor data & Predictive analytics

Machine learning

Natural language processing

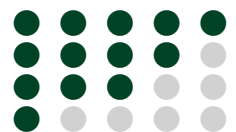
## LANGUAGES

Dutch

English

French

Italian



# PUBLICATIONS

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## Journal Articles

- De Munck, Dorien G. et al. (June 2020). "Defective Autophagy in Vascular Smooth Muscle Cells Increases Passive Stiffness of the Mouse Aortic Vessel Wall". In: *Pflügers Archiv - European Journal of Physiology* 472, pp. 1031–1040. ISSN: 1432-2013. DOI: 10.1007/s00424-020-02408-y.
- Leloup, Arthur J. A., Cor E. Van Hove, Sofie De Moudt, et al. (Jan. 2020). "Ex Vivo Aortic Stiffness in Mice with Different eNOS Activity". In: *American Journal of Physiology. Heart and Circulatory Physiology* 318.5, H1233–H1244. ISSN: 1522-1539. DOI: 10.1152/ajpheart.00737.2019.
- Leloup, Arthur J. A., Cor E. Van Hove, et al. (2019). "Vascular Smooth Muscle Cell Contraction and Relaxation in the Isolated Aorta: A Critical Regulator of Large Artery Compliance". In: *Physiological Reports* 7.4, e13934. ISSN: 2051-817X. DOI: 10.14814/phy2.13934.
- Di Lascio, N. et al. (Mar. 2018). "Longitudinal Micro-Ultrasound Assessment of the Ob/Ob Mouse Model: Evaluation of Cardiovascular, Renal and Hepatic Parameters". In: *International Journal of Obesity* 42.3, pp. 518–524. ISSN: 1476-5497. DOI: 10.1038/ijo.2017.219.
- Leloup, Arthur J. A., Sofie De Moudt, et al. (2018). "Short-Term Angiotensin II Treatment Affects Large Artery Biomechanics and Function in the Absence of Small Artery Alterations in Mice". In: *Frontiers in Physiology* 9. ISSN: 1664-042X. DOI: 10.3389/fphys.2018.00582.
- De Moudt, Sofie et al. (2017). "Isometric Stretch Alters Vascular Reactivity of Mouse Aortic Segments". In: *Frontiers in Physiology* 8. ISSN: 1664-042X. DOI: 10.3389/fphys.2017.00157.
- Gevaert Andreas B. et al. (June 2017). "Endothelial Senescence Contributes to Heart Failure With Preserved Ejection Fraction in an Aging Mouse Model". In: *Circulation: Heart Failure* 10.6, e003806. DOI: 10.1161/CIRCHEARTFAILURE.116.003806.
- Leloup, Arthur, Sofie De Moudt, et al. (2017). "Cyclic Stretch Alters Vascular Reactivity of Mouse Aortic Segments". In: *Frontiers in Physiology* 8. ISSN: 1664-042X. DOI: 10.3389/fphys.2017.00858.
- Fransen, Paul, Cor E. Van Hove, et al. (Feb. 2016). "Effect of Angiotensin II-Induced Arterial Hypertension on the Voltage-Dependent Contractions of Mouse Arteries". In: *Pflügers Archiv - European Journal of Physiology* 468.2, pp. 257–267. ISSN: 1432-2013. DOI: 10.1007/s00424-015-1737-x.
- Kurdi, Ammar et al. (2016). "Continuous Administration of the mTORC1 Inhibitor Everolimus Induces Tolerance and Decreases Autophagy in Mice". In: *British Journal of Pharmacology* 173.23, pp. 3359–3371. ISSN: 1476-5381. DOI: 10.1111/bph.13626.
- Leloup, Arthur, Cor E. Van Hove, et al. (2016). "A Novel Set-up for the Ex Vivo Analysis of Mechanical Properties of Mouse Aortic Segments Stretched at Physiological Pressure and Frequency". In: *The Journal of Physiology* 594.21, pp. 6105–6115. ISSN: 1469-7793. DOI: 10.1113/JP272623.
- Fransen, Paul, Cor E. Van Hove, et al. (Mar. 2015). "Dissecting out the Complex Ca<sup>2+</sup>-Mediated Phenylephrine-Induced Contractions of Mouse Aortic Segments". In: *PLOS ONE* 10.3, e0121634. ISSN: 1932-6203. DOI: 10.1371/journal.pone.0121634.
- Leloup, Arthur J. A., Cor E. Van Hove, Annick Heykers, et al. (2015). "Elastic and Muscular Arteries Differ in Structure, Basal NO Production and Voltage-Gated Ca<sup>2+</sup>-Channels". In: *Frontiers in Physiology* 6. ISSN: 1664-042X. DOI: 10.3389/fphys.2015.00375.
- Leloup, Arthur J. et al. (Aug. 2015). "Basal Activity of Voltage-Gated Ca<sup>2+</sup> Channels Controls the IP<sub>3</sub>-Mediated Contraction by A<sub>1</sub>-Adrenoceptor Stimulation of Mouse Aorta Segments". In: *European Journal of Pharmacology* 760, pp. 163–171. ISSN: 0014-2999. DOI: 10.1016/j.ejphar.2015.04.011.
- Leloup, Arthur et al. (July 2014). "Applanation Tonometry in Mice: A Novel Noninvasive Technique to Assess Pulse Wave Velocity and Arterial Stiffness". In: *Hypertension* 64.1, pp. 195–200. DOI: 10.1161/HYPERTENSIONAHA.114.03312.