

Marek Sawczuk, PhD

Associate Professor

Date of birth: 28.10.1977

Place of birth: Szczecin, Poland

e-mail: marek.sawczuk@awf.gda.pl

ORCID: 0000-0002-5730-5249



Education

- 2015 - habilitation in Physical Culture Science – University of Physical Education and Sport in Gdansk, Poland, Subject of habilitation thesis: Relationship between polymorphisms of *ADRA2A*, *ADRB1*, *ADRB2*, *BDKRB2*, *GNB3*, *MCT1* candidate genes and phenotype of Polish elite athletes
- 2004 - PhD in Biological Sciences – University of Szczecin, Poland, Dissertation: Identification and differentiation of *Babesia microti* and *Babesia divergens* DNA isolated from *Ixodes ricinus*
- 2001 - MS in Biological Sciences – University of Szczecin, Poland, Master's thesis: Polymerase chain reaction (PCR) as a method of *Babesia microti* identification in *Ixodes ricinus*

Employment

- since 2019 - associate professor - University of Szczecin, Poland
- since 2016 - associate professor – University of Physical Education and Sport in Gdansk, Poland
- 2016-2017 - associate professor – University of Szczecin, Poland
- 2004-2015 - assistant professor – University of Szczecin, Poland
- 2002–2004 - lecturer – University of Szczecin, Poland

Functions

- 2016-2017 - Head of Department of Molecular Biology, University of Szczecin, Poland
- 2016-2017 - Head of Laboratory of Genetics, Center for Human Structural and Functional Analyses, Szczecin, Poland

Membership in scientific organizations and editorial boards of journals

- Since 2002 - member of Polish Society of Genetics
- Since 2013 - member of International Scientific Society of Sports Games
- Since 2013 - member of Editorial Board of the journal "Pedagogics, psychology, medical-biological problems of physical training and sports"

Awards

- 2002-2012 1st, 2nd and 3rd degree Rector's awards for Scientific Achievement – University of Szczecin, Poland (5 times)
- 2015-2016 Rector's Congratulatory Letter Recipient for Scientific Achievement, University of Szczecin, Poland (2 times)

Scientific training, cooperation with other scientific institutions

- 06-07.2018, 09-11.2018 – Scientific Training at the Faculty of Physical Education and Sport, Charles University in Prague, Czech Republic (cooperation with prof. Miroslav Petr and prof. Petr Stastny)
- 21.05.2012 - 25.05.2012 Academic Training in the laboratory of the Exercise, Department of Physiological and Medical Sciences, the Jerzy Kukuczka Academy of Physical Education in Katowice, Poland
- Since 2012 - Institute of Sport, Exercise and Active Living (ISEAL)/ Institute of Health and Sport (IHES), Victoria University Victoria University, Melbourne, Australia, Genes and performance research group (cooperation with prof. Nir Eynon and prof Kathryn North)
- Since 2012 - UCT/MRC Research Unit for Exercise Science & Sports Medicine, University of Cape Town, Cape Town, South Africa, Identification of genetic risk factors of musculoskeletal soft tissue injuries (cooperation with prof. Malcolm Collins and prof. Alison September)
- Since 2013 - Sydney Medical School, University of Sydney, Sydney, Australia, Genome-wide association study (GWAS) of elite athletes

Participation in research projects funded under regional, national and international funding (selected)

- 2017-2020 - National Science Centre, Poland: Genotypic, haplotypic analyses and methylation of selected genes in the context of dopaminergic theory of motivation to act and seeking strong sensations in athletes training various sports disciplines (Opus 11, 2016/21/B/NZ7/01068) - Researcher
- 2012-2016 - National Science Centre, Poland: Influence of polymorphisms of selected genes (ACE, AMPD1, ATP1A2, HIF1, PPAR, GABPB1, VEGF, PPARG, ACTN3, IGF1, IL5, TNF) on post training adaptation in humans (Opus 4, 2012/07/B/NZ7/01155) - Researcher
- 2008-2011 - Polish Committee for Scientific Research/National Science Centre, Poland: Polymorphism of selected candidate genes as a base for DNA profiling of athletes. (NN 404 166334) – Research Director

Achievements in academic supervision

As a supervisor of doctoral dissertations:

- Arkadiusz Jańczyk, the candidate for the doctoral degree in Health Sciences, entitled “The role of selected chemokines in the pathogenesis of osteoarthritis”. Pomeranian Medical University in Szczecin, since April 2019

As a reviewer:

- Ryszard Mikołajewski, the candidate for the doctoral degree in Physical Culture Sciences, entitled “Forms of speed and strength training and the level of physical performance of volleyball players in

the preparatory period". Supervisor: professor Zbigniew Jastrzębski, Gdansk University of Physical Education and Sport, 2016

- Katarzyna Luterek-Puszyńska, the candidate for the doctoral degree in Medical Sciences, entitled "The role of *CD28* and *CTLA4* gene polymorphisms in the pathogenesis of rheumatoid arthritis", Supervisor: professor Andrzej Pawlik, Pomeranian Medical University in Szczecin, 2016
- Michał Puszyński, the candidate for the doctoral degree in Medical Sciences, entitled "Analysis of polymorphisms of genes encoding chemokine 9 and 10 (*CXCL9*, *CXCL10*) in patients after kidney transplantation", Supervisor: professor Marcin Słojewski, Pomeranian Medical University in Szczecin, 2017
- Melchior Szydłowski, the candidate for the doctoral degree in Medical Sciences, entitled "Impact of *VAV1*, *MAP3K14* and *CYBA* polymorphisms on transplanted kidney function", Supervisor: professor Andrzej Pawlik, Pomeranian Medical University in Szczecin, 2019
- Joanna Bujak, the candidate for the doctoral degree in Medical Sciences, entitled "Effect of arginine methyltransferase inhibitors (AMI-1 and SAH) on the biology of rhabdomyosarcoma (Rhabdomyosarcoma) cell lines". Supervisor: professor Maciej Tarnowski, Pomeranian Medical University in Szczecin, 2020.

As a tutor of the trainees:

- Anna Cwynar, PhD, the internship in molecular techniques at the Centre for Human Structural and Functional Research at University of Szczecin, 2017.
- Elżbieta Piskorska, PhD, the internship in molecular techniques at the Centre for Human Structural and Functional Research at University of Szczecin, February 2017.

Other activities

- 2019 - Cofounder of Allegen (an innovative Start-up that provides services in the field of genetic testing of athletes and physically active people)

Scientific achievements (Summary)

- 85 scientific papers published in Journals with Impact Factor (total of 160 IF)
- H-index – Scopus 20, Google Scholar 25
- Total citations – Scopus 1102, Google Scholar 1760
- Peer-reviewed Articles with IF: 12
- Participation in Scientific Conferences: 50

Research interest

- Sport Genetics – genetic determinants of physical performance
- Nutritional Genomics - relationship between human genome and nutrition and its impact on people health
- Molecular bases of selected human diseases