Candidate supervisor's information summary form

Name and surname, degree, title: Tomasz Sadkowski, PhD, DSc	
Discipline/ disciplines of science	Veterinary medicine
Professional development (degrees and titles) in chronological order	2003 - veterinarian 2008 - PhD 2019 - DSc
Most important publications/patens over the last 3 years (maximum 10)	1. Ciecierska A, Motyl T, Sadkowski T. Transcriptomic profile of semitendinosus muscle of bulls of different breed and performance. J Appl Genetics 2020 | doi.org/10.1007/s13353-020-00577-1 2. Ciecierska A, Motyl T, Sadkowski T. Transcriptomic Profile of Primary Culture of Skeletal Muscle Cells Isolated from Semitendinosus Muscle of Beef and Dairy Bulls. Int J Mol Sci. 2020 | doi:10.3390/ijms21134794 3. Zahra Roudbari, Susan Coort, Martina Kutmon, Lars Eijssen, Jonathan Melius, Tomasz Sadkowski and Chris Evelo. Identification of biological pathways contributing to marbling in skeletal muscle to improve beef cattle breeding. Front. Genet. 2020 doi:10.3389/fgene.2019.01370 4. Gorji AE, Roudbari Z, Sadeghi B, Javadmanesh A, Sadkowski T. Transcriptomic analysis on the promoter regions discover gene networks involving mastitis in cattle. Microb Pathog. 2019 13(137):103801. doi: 10.1016/j.micpath.2019.103801 5. Karolina A. Chodkowska, Anna Ciecierska, Kinga Majchrzak, Piotr Ostaszewski and Tomasz Sadkowski, Simultaneous miRNA and mRNA Transcriptome Profiling of Differentiating Equine Satellite Cells Treated with Gamma-Oryzanol and Exposed to Hydrogen Peroxide. Nutrients 2018, 10(12), 1871; https://doi.org/10.3390/nu10121871 6. Karolina A. Chodkowska, Anna Ciecierska, Kinga Majchrzak, Piotr Ostaszewski and Tomasz Sadkowski, Effect of β-hydroxy-β-methylbutyrate on miRNA expression in differentiating equine satellite cells exposed to hydrogen peroxide. Genes & Nutrition, (2018) 13:10. doi: 10.1186/s12263-018-0598-2 7. Tomasz Sadkowski, Anna Ciecierska, Jolanta Oprządek, Edyta Balcerek. Breed-dependent microRNA expression in the primary culture of skeletal muscle cells subjected to myogenic differentiation. BMC Genomics (2018) 19:109. DOI: 10.1186/s12864-018-4492-5 8. Katarzyna A Szcześniak, DVM; Anna Ciecierska, DVM; Piotr Ostaszewski, PhD, DVM; Tomasz Sadkowski, PhD, DVM, Characterization of equine satellite cells transcriptomic profile response to β-hydroxy-β-methylbutyrate (HMB). British Journal

	of Nutrition' 2016 Oct 3:1-11. doi: 10.1017/S000711451600324X 9. Katarzyna A Szcześniak, DVM; Anna Ciecierska, DVM; Piotr Ostaszewski, PhD, DVM; Tomasz Sadkowski, PhD, DVM, Transcriptomic profile adaptations following exposure of equine satellite cells to nutriactive phytochemical gamma-oryzanol. Genes & Nutrition, 11(1) (2016): 1-14. DOI: 10.1186/s12263-016-0523-5
Experience in work with doctoral students (defended doctoral dissertations, doctoral programmes opened) in chronological order	1. Marta Gozdek, supervisor (2021-) 2. Abdolvahab Ebrahimpour Gorji (2021-) 3. Dr Karolina Chodkowska, auxiliary supervisor (-2019) 4. Dr Katarzyna Antonina Szcześniak, auxiliary supervisor (-2017) 5. Dr Anna Ciecierska, auxiliary supervisor (-2016)
Project/grants achievements (from the last 10 years)	1. Grant of the National Science Center 2020/37 / B / NZ5 / 01744 - Molecular basis of beta-hydroxy-beta-methylbutyric acid in supporting the treatment of muscular dystrophies - in vivo and in vitro studies, PI, 2021-2025. 2. NCN grant no. 2011/03 / B / NZ5 / 05697 - Effect of beta-hydroxy-betamethylbutyric acid and gamma-oryzanol on the transcriptomic profile of genes and miRNA expression in primary horse skeletal muscle cultures, PI, 2012-2015. 3. NCN grant no. 2011/03 / B / NZ9 / 03987 - Expression of miRNA in satellite cells of skeletal muscles and its influence on the process of myogenesis in bulls of cattle breeds of various performance, PI, 2012-2015.
Topic – research problem – for which the candidate supervisor seeks a doctoral student	The PhD student will study the molecular basis of the action of beta-hydroxy-beta-methylbutyric acid (HMB) in supporting the treatment of muscular dystrophy – in an *in vivo* model - using rats with muscular dystrophy. The PhD student will also participate in parallel studies with the use of muscle cells with muscular dystrophy from rats, dogs and human cell lines (*in vitro* studies). The research will use techniques of cell culture, NGS, metabolomics, Real-Time PCR, Western blot, and others.
<u>Contact details:</u> Faulty/Institute E-mail address Tel.	Institute of Vaterinary Medicine Department of Physiological Sciences Division of Animal Physiology Tomasz_Sadkowski@sggw.edu.pl Phone: 691 60 50 40