

Candidate supervisor's information summary form
maximum 2 pages – it should be a summary of most important achievements

Name and surname, degree, title: Arkadiusz Szterk, Prof. Dr. Habil. Eng.	
Academic discipline/disciplines	Veterinary sciences
Professional development (degrees and titles) in chronological order	<p>2020: Professor of Medical and Health Sciences</p> <p>2013: Habilitated Doctor (Dr. Habil.) of Agricultural Sciences in the field of Food Technology and Human Nutrition, specialization in Analytical Chemistry</p> <p>2009: Doctor of Agricultural Sciences in the field of Food Technology and Human Nutrition</p> <p>2006: Master of Science in Engineering (M.Sc. Eng.) in Food Technology</p>
Most important publications/ patents in the last 3 years (maximum 10)	<p>Publications</p> <ol style="list-style-type: none"> 1. Pharmacokinetics of Oxycodone in Rats: Influence of Micronized Magnesium Lactate on Oxycodone Bioavailability. EUROPEAN JOURNAL OF PHARMACOLOGY, 2025 in press 2. Genistein Supplementation and Bone Health in Breast Cancer in Rats. Nutrients, 2024 3. Chemical Composition of the Foam Enfolded Juveniles of Aphrophora alni (Hemiptera: Aphrophoridae). Journal of Asia-Pacific Entomology, 2024 4. Changes in Physicochemical and Bioactive Properties of Quince (Cydonia oblonga Mill.) and Its Products. Molecules, 2023 5. Effect of Nano- and Microzinc Supplementation on the Mineral Composition of Bones of Rats with Induced Mammary Gland Cancer. Foods, 2023 6. Effect of Various Drying Methods on Physicochemical and Bioactive Properties of Quince Fruit (Cydonia oblonga Mill.). Agriculture (Switzerland), 2023 7. Phytochemical Screening and Effect of Viscum album L. on Monoamine Oxidase A and B Activity and Serotonin, Dopamine, and Serotonin Receptor 5-HT_{1A} Levels in Galleria mellonella (Lepidoptera). Journal of Ethnopharmacology, 2022 8. Separation of Menaquinone-7 Geometric Isomers by Semipreparative High-Performance Liquid Chromatography with Silver Complexation and Identification by Nuclear Magnetic Resonance. Food Chemistry, 2022 9. Content of Health-Promoting Fatty Acids in Commercial Sheep, Cow, and Goat Cheeses. Foods, 2022 <p>Patents (International)</p> <ol style="list-style-type: none"> 10. Liquid Composition of Phosphodiesterase Type 5 (PDE-5) Inhibitors, Method of Its Preparation and Use for the Treatment of Erectile Dysfunction. PL444363A1, WO2024215214A1, PCT procedure, Earliest priority: 2023-04-08. 11. Formulation of a Turmeric Extract Comprising Curcuminoids, Method of Production Thereof, the Use of the Formulation, and Products Comprising Thereof. EP4110299A1; EP4110299A4; TW202137886A; WO2021173020A1, Earliest publication: 2021-09-02.
Experience in work with doctoral students (defended doctoral dissertations, initiated doctoral procedures) in chronological order	<p>Supervision of Defended Doctoral Theses</p> <ol style="list-style-type: none"> 1. Supervisor of the doctoral dissertation of Dr. Eng. Mateusz Rogalski "Oxidative Stability of Alpha-Linolenic Acid in Extruded Corn Snacks with the Addition of Flaxseed Oil" Defense date: 21.12.2016 Institution: Warsaw University of Life Sciences (SGGW), Faculty of Human Nutrition and Consumer Sciences. 2. Supervisor of the doctoral dissertation of Dr. Eng. Jakub Mikiciuk "Application of Silver Nanoparticles in Food Preservation with Consideration of Their Potential Toxicity to Human Gastrointestinal Microflora in In Vitro Studies" Defense date: 26.09.2016 Institution: Warsaw University of Life Sciences (SGGW), Faculty of Human Nutrition and Consumer Sciences. 3. Supervisor of the doctoral dissertation of Adam Zmysłowski "Impact of Oxidized Forms of Sterols and Their Derivatives on the Development and Progression of Atherosclerosis" Defense year: 2021 Institution: National Medicines Institute Field: Medical and Health Sciences / Pharmaceutical Sciences <p>Supervision of Ongoing Doctoral Theses</p> <ol style="list-style-type: none"> 1. Anna Szurpnicka, Institution: National Medicines Institute Topic: Pharmacological Potential of European Mistletoe (Viscum album L.) in the Prevention of Central Nervous System Diseases. Project reference: 2021/41/N/NZ7/02117. 2. Karol Ofiara, Institution: Joint Doctoral School of Translational Medicine Topic: Application of Octenyl Succinic Anhydride-Modified Starch as an Effective Carrier for Curcuminoids in the Design of Oral Liquid Formulations. Project: Conducted within ASLAB Science PSA.

	<p>3. Bartosz Strus, Institution: Joint Doctoral School of Translational Medicine. Topic: Study of Cytotoxic Properties of Different Administration Forms of Selected Topoisomerase I Inhibitors Against Human Glioblastoma Cells. Project: Funded by ASLAB Science PSA</p>
Achievements in the area of projects/grants (in the last 5 years)	<p>Publicly Funded Projects Conducted in Scientific Institutions or ASLAB Science – Project Leader</p> <ol style="list-style-type: none"> 1. Development of an Innovative Solid Dosage Form of a Strong Analgesic with Anti-Abuse Properties [Acronym: ANTI-ABUSE OPIOID ANALGESICS (AAOA)]. Funding: NCBR, INNOGLOBO/I/81/AAOA/2022 (22.09.2022). Completed and settled (August 2024). Location: ASLAB Science. 2. Analysis of the Chemical Composition of Aphrophoraalni Larval Foam and Its Antibacterial, Antifungal, and Anticancer Properties. Funding: NCN, UMO-2018/29/B/NZ7/00380. Completed and settled (August 2023). Location: Warsaw University of Life Sciences (SGGW) <p>Privately Funded Projects Conducted in ASLAB Science – Project Leader (Responsible for Finding Investors)</p> <ol style="list-style-type: none"> 3. Development of Generic Medicinal Products Containing Trazodone Hydrochloride Strengths: 75 mg CR, 150 mg CR, 150 mg XR, 300 mg XR. Contract Signed: 2024. 4. Development of Generic Medicinal Products Containing Bupropion Hydrochloride. Strengths: 150 mg XR, 300 mg XR. Contract Signed: 2024. 5. Development of an Innovative Drug Combining Two Active Substances: Bupropion Hydrochloride and Trazodone Hydrochloride. Contract Signed: 2024. 6. Development of an Innovative Drug Combining Two Active Substances: Trazodone Hydrochloride and Escitalopram. Contract Signed: 2024. 7. Development of an Innovative Drug Combining Two Active Substances: Dehydroepiandrosterone (DHEA) and Melatonin. Contract Signed: 2024. 8. Development of the Synthesis of Semaglutide and a Generic Medicinal Product Containing Semaglutide. Contract Signed: 2024. 9. Development of the Synthesis of Aripiprazole Monohydrate and a Generic Injectable Medicinal Product. Contract Signed: 2024. 10. Development of an Innovative Formulation of a Natural Turmeric Extract. Contract Signed: 2024. 11. Development of Dietary Supplements Based on Turmeric. Project Status: Completed in 2024. 12. Development of Three Medical Nutrition Products Based on Sodium Butyrate and Simethicone. Project Status: Completed in January 2025. 13. Development of Innovative Dietary Supplements Based on Menispermaceae Extract. Contract Signed: 2025. <p>Projects are conducted on behalf of various pharmaceutical companies (Europharma, Global Pharma, META Pharmaceutical, LEK-AM, ADAMED, BIOMED, Institute of Health and Democracy, National Medicines Institute, Transfer of Science, Sativa-MED, MT-Laboratories, The Heart).</p> <ol style="list-style-type: none"> 14. Application of AE-001 in the Prevention and Treatment of Food Allergies. Collaboration: University of Warsaw. Investor: The Heart. <p>Ongoing Project Proposals in Preparation</p> <ol style="list-style-type: none"> 1. ABM under the TRANSMED Project (ABM/2024/8) Development of an Innovative Opioid Medication with Significantly Reduced Addiction Potential and Strong Anti-Abuse Properties. Applicant: Warsaw University of Life Sciences (SGGW). Collaboration: Dr. Habil. Sylwia Flis, Prof. SGGW. 2. SMART, PARP for SMEs. Development of an Innovative Pharmaceutical Dosage Form for Selected Non-Steroidal Anti-Inflammatory Drugs with Fast Action and Reduced Dosage While Maintaining Pharmacological Effect. Applicant: ASLAB Science
Subject area of the research project for which the candidate student is being recruited	<ol style="list-style-type: none"> 1. Development of New Synthesis Pathways for Semaglutide and Tirzepatide, and the Search for Innovative GLP-1 Analogs. 2. Development of an Innovative Opioid Medication with Significantly Reduced Addiction Potential and Strong Anti-Abuse Properties. 3. Application of AE-001 in the Prevention and Treatment of Food Allergies. 4. Development of a Technology for Obtaining Beta-Glucans from Cereals and Their Application in the Treatment of Chronic Gastritis, Along with the Evaluation of Alternative Methods for Monitoring Therapy Effectiveness
<p><u>Contact details:</u></p> <p>Institute</p> <p>E-mail address</p> <p>Telephone number</p>	<p>Department of Preclinical Sciences IVM, SGGW</p> <p>arkadiusz.szterk@sggw.edu.pl</p> <p>+48 880580474</p>