

## List of Research Projects and Collaborations (since 2015)

Project Title	Comment/Collaboration	Period
EXAMIN YOUTH Follow-up (Exercise and Arterial Cross-Talk Modulation in Youth)	Prof. Zahner/Faude, Division of Exercise and Movement Science (DSBG), Department of Education Basel-Stadt	2020- 2024 New
EXAMIN YOUTH South Africa (Exercise and Arterial Cross-Talk Modulation in Youth)	Hypertension in South Africa Research Team (HART, Prof Kruger, Northwest University of Potchefstroom	2017- 2021 Ongoing
Retinal Vessel Analysis in the COMplete Health/Heart Study (Cardiopulmonary Exercise Testing in Health/Heart Failure)	Prof Schmidt-Trucksäss, Sports Medicine (DSBG)	2018- 2021 Ongoing
Sportcheck Follow-Up: Physical fitness, cardiovascular and psychosocial health in primary school children	SNSF Grant (PI); Prof. Zahner/Faude, Division of Exercise and Movement Science (DSBG), Department of Education Basel-Stadt	2017- 2020 Ongoing
Exercise, Arterial Cross-Talk Modulation and Inflammation in an Ageing Population (EXAMIN AGE)	SNSF Grant (PI)	2015- 2018 Completed
Exercise and Arterial Cross-Talk Modulation in Youth (EXAMIN YOUTH)	Prof. Zahner, Division of Exercise and Movement Science (DSBG), Department of Education Basel-Stadt; Prof Frey (UKBB)	2015- 2018 Completed
Exercise and untargeted micro RNA expression in an ageing population- epigenetic substudy of ExAMIN AGE; Epigenetic modulation of p66 <sup>Shc</sup> pathway	Prof de Quervain/Prof Zavolan (Basel) and Prof Cosentino (Karolinska Institute, Stockholm)	2016- 2020 Ongoing
Acute effects of exercise on untargeted micro RNA expression (EXGENE)	Project with Master students (in-house); Prof de Quervain/Prof Zavolan (Basel)	2019- 2020 New
Exercise and untargeted metabolomics in an ageing population- metabolomics substudy of EXAMIN AGE	Prof Madl, University of Graz and PD Dr Schmaderer, Nephrology, Technical University of Munich	2019- 2020 New
ExAMIN AGE – new biomarkers of autonomic function; myocardial wall motion analysis (speckle tracking)	Prof Wassertheurer, Austrian Institute of Technology (AUT); PD Dr Dieterle, Kantonsspital Baselland (Liestal)	2016- 2020 Ongoing
New Frontiers in Retinal Vessel Imaging- retinal vessel microvascular wall structure imaging	PD Dr. Walthard Vilser, Imedos Systems; Prof. Kotliar, University of Applied Sciences, Aachen/Jülich	2016- 2020 Ongoing
Agility training in the Elderly – a one-year randomized controlled intervention trial (AGILE)	PD Dr Faude, Bewegungs- und Trainingswissenschaft (DSBG); Prof Donath, Sporthochschule Köln	2019- 2021 New

Effects of a school- and family-based lifestyle intervention on vascular function in school children: Youth, Vitality and Development Study (JuvenTUM 3)	Centre of Prevention and Sports Medicine, Munich, Germany; research grant (Bavarian State Ministry for the Environment and Health)	Completed
Exercise and Executive Function (ExEF); exercise intervention trial in children including retinal vessel analysis	Division of Sports Science (DSBG): Prof Gerber, Dr Ludyga	Completed
Adult preterm cerebrovascular phenotype and adaptive response to exercise (TEPHERA Trial)	Prof Leeson, University of Oxford	Ongoing
Exercise Training, Rheumatoid Disease and Cardiovascular Risk (ExTRA RISK): a Pilot Intervention Study	Prof Kyburz, Rheumatology, University Hospital Basel	2015-2019 Completed
Risk Stratification in End Stage Renal Disease (ISAR); predictive value of retinal vessel analysis	PD Dr Schmaderer, Nephrology, Technical University of Munich	Ongoing
Retinal vessel imaging in a mouse model (RVA Rodent): reproducibility and Validation	Prof Handchin, Biozentrum, University Basel	Ongoing
Effects of high intensity interval training on headache symptoms, physical fitness, cerebral capacity, endocrine function and pain perception in migraineurs	Division of Exercise and Movement Science and the Division of Diagnostic and Interventional Neuroradiology (USB): Project lead in retinal vessel analysis	Completed
Effects of 6 weeks of high intensity endurance exercise training on vascular health in patients hospitalized with depression	Division of Exercise and Movement Science (DSBG): Project lead in retinal vessel analysis	Completed
Role of IL-1 in the regulation of muscle derived IL-6 during exercise: Anakinra intervention study (MUSIL)	Division of Endocrinology, Diabetes and Metabolism, USB (Principal investigator: Prof Donath): Project lead in retinal vessel analysis (substudy)	Completed
A lifestyle intervention study investigating the role of interleukin-6 in the beneficial effect of exercise on beta-cell function in obese people and patients with type 2 diabetes (EXIL)	Division of Endocrinology, Diabetes and Metabolism, USB (Principal investigator: Prof Donath): Project lead in retinal vessel analysis (substudy)	Completed