

RESEARCH LAB PROFILE

Name of lab / institute	Institute for Prevention and Cancer Epidemiology
Head of lab / institute	Prof. Dr. Dr. Karin Michels tumorepidemiologie@uniklinik-freiburg.de Phone: 77360
Lab/Office Address	Elsässerstr. 2, 79110 Freiburg
Lab members working on microbiome	<ul style="list-style-type: none"> • Dr. Virginie Stanislas (Statistician) virginie.stanislas@uniklinik-freiburg.de, phone: 78030 • Carolin von Kleist carolin.kleist@uniklinik-freiburg.de, phone: 77320 • Nelly Schropp nelly.schropp@uniklinik-freiburg.de, phone: 77320 • Christian Köder christian.koeder@uniklinik-freiburg.de, phone: 78030
Link to lab / institute page	https://www.uniklinik-freiburg.de/ipe.html
Lab description	We are an interdisciplinary group with expertise in epidemiology, nutrition, statistics and biology. Our main aim is to investigate the effects of selected dietary interventions on the composition of the human gut microbiome and on the host-microbiome interaction. Our institute is also one of the main recruitment centers for a nationwide cohort study (NAKO), which aims to investigate the causes, risk factors and predictive biomarkers of chronic diseases, such as cancer, diabetes, cardiovascular diseases, dementia, and many more in order to improve prevention, early diagnoses and treatment of these widely spread disorders.
Keywords	Disease Prevention, Intervention studies, Observational studies, Human microbiome, Biostatistics
METHODS / RESOURCES	
Lab tools	Human studies including large-scale cohort studies and intervention studies Statistical design and analysis, including analysis of high-dimensional microbiome data (Pre-processing microbiome data; Quantifying patterns in microbiome variation; Multivariate comparison; Differential abundance; Mediation analysis) Growth analysis of typical gut bacteria <i>in vitro</i>
Selected Publications	<p>Thriene K, Michels KB. Human Gut Microbiota Plasticity throughout the Life Course. <i>Int J Environ Res Public Health</i>. 2023 Jan 13;20(2):1463.</p> <p>Thriene K, Hansen SS, Binder Nadine, Michels KB. Effects of Fermented Vegetable Consumption on Human Gut Microbiome Diversity – A Pilot Study. <i>Fermentation</i>. 2022;8(3):118</p> <p>Thriene K, Stanislas V, Amend L, Strowig T, Michels KB. Assessment of the Gut Microbiota during Juice Fasting with and without Inulin Supplementation: A Feasibility Study in Healthy Volunteers. <i>Foods</i>. 2022;11(22):3673.</p> <p>Stiemsma LT, Michels KB. The Role of the Microbiome in the Developmental Origins of Health and Disease. <i>Pediatrics</i>. 2018;141(4).</p>

	<p>Michels KB, Binder N, Courant F, Franke AA, Osterhues A. Urinary excretion of sex steroid hormone metabolites after consumption of cow milk: a randomized crossover intervention trial. Am J Clin Nutr. 2019;109(2):402-410.</p> <p>Akmatov MK, Koch N, Vital M, ... Michels KB, et al. Determination of nasal and oropharyngeal microbiomes in a multicenter population-based study - findings from Pretest 1 of the German National Cohort. Sci Rep. 2017;7(1):1855.</p>
<p>SELECTED ONGOING MICROBIOME-RELATED COLLABORATIONS</p>	
<p>COLLABORATORS Name, Lab</p>	<ul style="list-style-type: none"> • Till Strowig, Helmholtzzentrum für Infektionsforschung Braunschweig