NUTRIM

SCHOOL OF NUTRITION
AND TRANSLATIONAL RESEARCH
IN METABOLISM

Maastricht University

Maastricht UMC+

NUTRIM research contributes to healthy living, health maintenance and personalised medicine by unraveling lifestyle and disease induced derangements in metabolism and by developing targeted nutritional, exercise and environmental interventions.

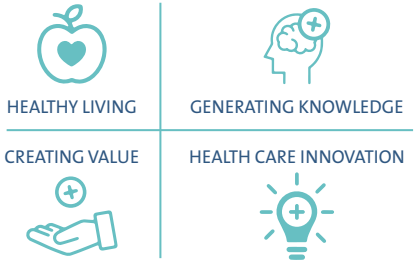
NUTRIM SCHOOL OF NUTRITION AND TRANSLATIONAL RESEARCH IN METABOLISM

NUTRIM is a multidisciplinary research school of approximately 150 researchers, 245 PhD students and 85 support staff. Our core research programme is organised around integrated multidisciplinary themes in three research lines at 16 clinical and basic sciences departments of Maastricht University Medical Centre+ (MUMC+).

NUTRIM's innovative interdisciplinary research is driven by a genuine commitment to help people adopt a healthy lifestyle, adjust to changing health status during the life course and receive the best possible care when needed. We are committed to understanding the metabolic disturbances and underlying mechanisms that influence health and wellbeing and translating that knowledge into the development and scientific evaluation of innovative prevention programmes and treatments.

The strength of NUTRIM is that we do not approach health and disease from one organ, but holistically, from the whole human being, focusing on the interplay between organs and tissues. The insights we gain offer points of reference for a healthy mind in a healthy body, even in cases where one or more organs fail because of chronic illness or cancer. We also translate these insights in therapies designed to better withstand the disease and the treatments.

Innovations and societal impact of NUTRIM



NUTRIM's mission is to promote translational research into chronic metabolic and inflammatory disorders with a high societal burden that will contribute to personalised lifestyle and medicine.

NUTRIM RESEARCH

MISSION OF OUR RESEARCH

NUTRIM promotes translational research into chronic metabolic and inflammatory disorders with a high societal burden that will contribute to personalised lifestyle and medicine. NUTRIM offers an excellent research programme that encompasses the entire spectrum of basic, translational, clinical and prevention projects, providing NUTRIM with a distinct international health sciences profile that optimally fits within the Maastricht UMC+ care vision and organisation.

NUTRIM research achievements are possible through collaboration of open-minded basic scientists and clinical opinion leaders and by using an excellent research infrastructure.

CENTRE OF EXCELLENCE FOR SCIENTIFIC RESEARCH

With the availability of unique patient cohorts and biobank as well as an internationally distinct, state of the art infra-structure for metabolic phenotyping, allowing a network-based approach linking tissue and organ systems within chronic metabolic disorders, we are able to conduct cutting edge research and to mentor scientists at different stages of their academic career.

RESEARCH FOCUS

NUTRIM research focuses on etiology and progression of chronic diseases, including diabetes, COPD, inflammatory bowel disease, liver disease and chronic kidney disease and contributes to improving cancer care. Biomedical research is directly linked to clinical trials and research focusing on behavioural interventions and health promotion. A primary goal within this approach is to accelerate the translation of science to patient and population with a distinct focus on nutrition and metabolism.

NUTRIM RESEARCH STRUCTURE

DIVISION 1
OBESITY, DIABETES & CARDIO-VASCULAR HEALTH

Obesity, type 2 diabetes and cardiovascular disease are major metabolic diseases impacting global health. With our research we try to understand how pharmacological or lifestyle interventions can improve metabolic health.
By performing human intervention studies, we study the underlying mechanisms by which such interventions improves metabolic health. In order to develop strategies that allow to make healthy choices easier, to assist people in changing their lifestyle in order to improve their quality of life and to reduce the public health impact of metabolic diseases.

DIVISION 2
LIVER & DIGESTIVE HEALTH

Providing novel insights into the pathophysiological processes of the gut and liver and translation of these findings to the clinic. Central disorders that are investigated within this division include e.g. inflammatory bowel disease, liver failure, irritable bowel syndrome, cancer cachexia, cholestasis and non-alcoholic steatohepatitis.
While the main research focus lies within the gut-liver axis and it's enterohepatic circulation, a secondary research goal of this division is to extrapolate research findings to related organ systems such as the cardiovascular or central nervous system. Inter-organ crosstalk as well as the role of microbiota on physiology and different pathologies are investigated.

DIVISION 3
RESPIRATORY & AGE-RELATED HEALTH

Understanding the onset of disease related to age and lifestyle. With the goal to identify those people with an enhanced risk for disease and (re-)hospitalization and to develop more effective strategies to halt or even reverse chronic disease progression and support healthy ageing.
We research the ageing process and the related metabolic impairments and chronic diseases with a specific focus on respiratory diseases (COPD and lung cancer). We study the impact of changes experienced during life in lifestyle (smoking, physical (in)activity, (mal)nutrition) and the environment and their interaction with our genetic background. Healthy ageing is within our capacity and we aim to increase our understanding of the human ageing process (from in utero to old age) in various tissues.

NUTRIM FACTS & FIGURES

70 SUPPORT STAFF

245 PHD STUDENTS

40 Theses
delivered per year

51% Female ♀

49% Male ♂

29% Abroad

150 RESEARCHERS
from 16 clinical departments

***500 Publications**
in science citation indexed journals

***1100 Times cited in the Media**
in the last 5 years

**Average*

NUTRIM PHD PROGRAMME

NUTRIM's PhD programme cultivates research capabilities and broad understanding of human nutrition and metabolism, to provide PhD students with specific knowledge and skills needed for top-level research and to stimulate interdisciplinary training. The PhD training programme meets the demand for scientists who are acquainted with novel fundamental research concepts and are equipped to optimise the translation from science to the clinic and to public health.

The PhD training programme results in well-trained graduates who have developed an integrated view on most advanced and state-of-the-art topics in the research domain of nutrition, toxicology and metabolism. They have developed skills needed for top-level research in a multidisciplinary and international oriented environment. Training PhD candidates includes classes, lecture series, research meetings, symposia and collaborative training opportunities with NUTRIM and Faculty of Health, Medicine and Life Sciences partners.

As centre of excellence for scientific research with the availability of unique patient cohorts, biobank, an internationally distinct, state of the art infrastructure for human metabolic research and a broad international network, we are able to mentor scientists at different stages of their academic career.

NUTRIM PHD GRADUATE PROGRAMME

Grant for talented young researchers

In 2012, the NUTRIM research school successfully obtained a prestigious grant from the Netherlands Organisation for Scientific Research (NWO) for the graduate programme "Metabolism and Chronic Disease". In contrast to the regular PhD programme, applicants for the graduate programme are offered the opportunity to propose their own topic, research proposal and supervisors, optimally using the available infrastructure and expertise within NUTRIM and its international research network. The graduate programme also stimulate bottom-up new research collaborations.

NUTRIM COLLABORATIONS & SOCIETAL IMPACT

Based in Maastricht, NUTRIM collaborates with leading research institutes, societal health partners and industries within the region as well as on all continents around the world.

Collaboration with a wide range of partners is crucial to solve current and future global health challenges. We like to join forces in an innovative and challenging research environment and share knowledge and expertise. Moreover, to optimise the translation from multidisciplinary, cross-border and project-based collaborative science to the clinic and to public health. Together with all relevant stakeholders, we create a real impact for healthy living and in the innovation of health care.

Brightlands is the brand name of a joint triple helix initiative of the Dutch province of Limburg, regional knowledge institutes including UM and MUMC+, in close partnership with leading companies. It encompasses 4 Campuses. NUTRIM is strongly involved in the Brightlands Maastricht Health Campus and the Brightlands Campus Greenport Venlo.

NUTRIM research is possible through collaboration of open-minded basic scientists and clinical opinion leaders and by using excellent research facilties.

SOCIETAL IMPACT

Societal impact is on NUTRIM's agenda in all our activities. The health challenges we face worldwide motivate our scientists in providing novel insights and solutions and by implementing these into innovative products and guidelines for improving health care. Benefits for society lie in early diagnostics, prevention strategies, therapeutic applications and services. We also care to create an impact on society by utilizing our knowledge and infrastructure to transfer to a wider audience by organizing various types of meetings, and exposure in non scientific journals, newspapers, TV programmes and social media.

GENERATING KNOWLEDGE

HEALTHY LIVING

HEALTH CARE INNOVATION

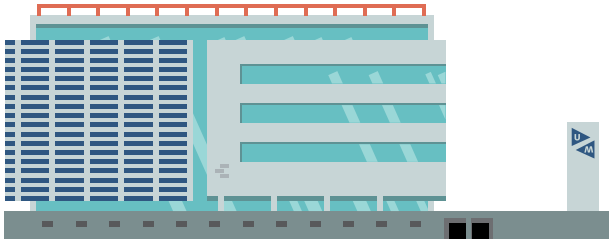
CREATING VALUE

NUTRIM MAASTRICHT UNIVERSITY AND MAASTRICHT UMC+

MAASTRICHT UNIVERSITY (UM)

Outstanding international research university in the Netherlands. With approximately 17,000 students and 4,300 employees, our community is still growing. UM has quickly built up a solid reputation thanks to its high-quality, multi-disciplinary research and study programmes as well as a strong focus on social engagement, The university is particularly renowned for its innovative education model and international character. UM has quickly built up a solid reputation. Today it is considered one of the best young universities in the world.

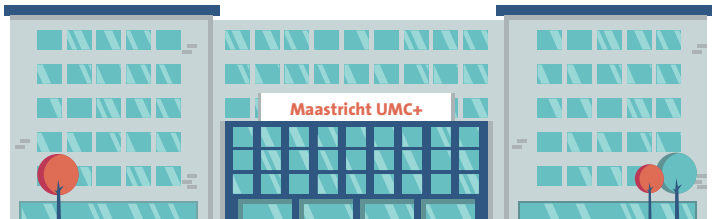
Maastricht University is a stimulating environment. Where research and teaching are complementary. Where innovation is our focus. Where talent can flourish. A truly student oriented research university.



MAASTRICHT UNIVERSITY MEDICAL CENTRE+ (MUMC+)

Since 2008, Faculty of Health, Medicine and Life Sciences (FHML) cooperates with Maastricht's academic hospital under the name Maastricht University Medical Centre+ (Maastricht UMC+). It's a centre for integrated health care, research and education that covers the entire spectrum of the health sciences, medicine and molecular life sciences.

The '+' added to the name is an expression of its focus on health instead of (only) medicine, cure or care. Through a combination of biomedical, applied clinical, public health and primary care research concentrated in graduate Schools and institutes, FHML aims to strengthen the research and increase knowledge transfer by incorporation and implementation of the 'integrated care concept' within Maastricht UMC+.



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