

# ANNUAL REPORT



2022

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# ABOUT TAMCAM

Tampere Center for Child, Adolescent and Maternal Health Research (TamCAM) is a population-group based research center formed around multidisciplinary research groups that strive to advance the health and wellbeing of human beings from the womb to adulthood.

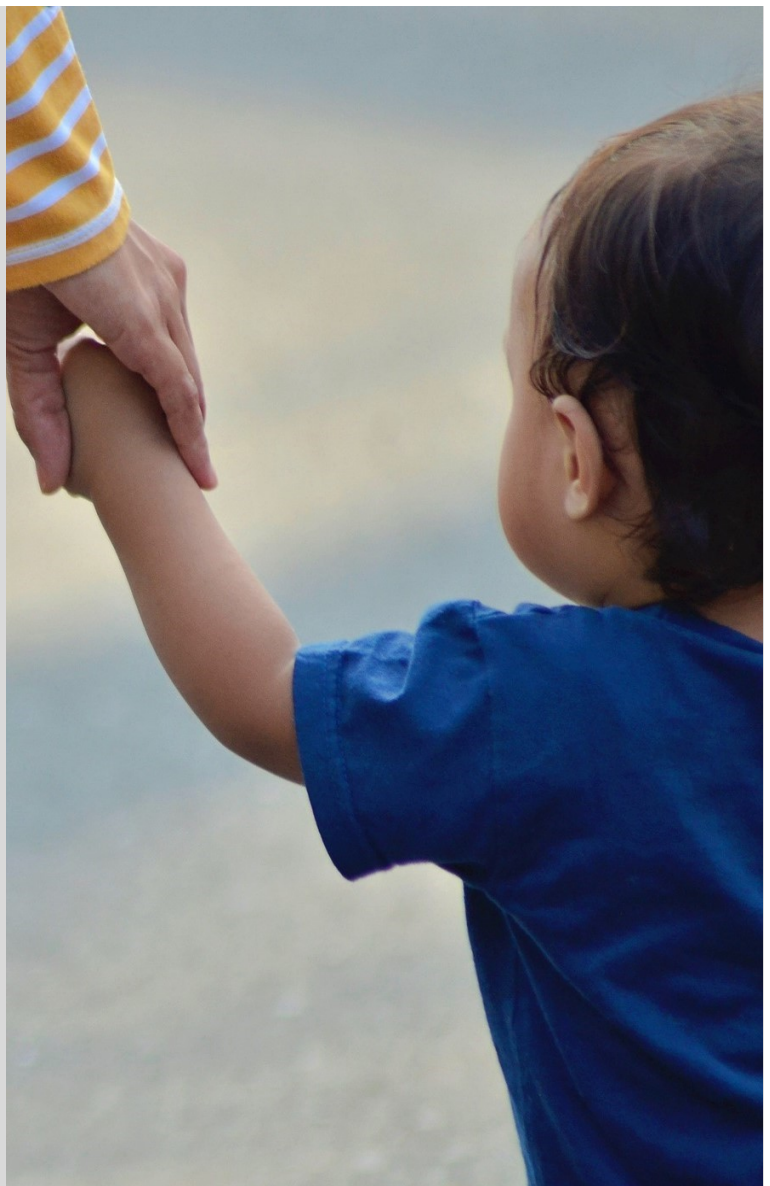
The TamCAM research center brings together eleven research groups from the faculties of Medicine and Health Technology (MET) and Social Sciences (SOC) of Tampere University. Currently, further 21 affiliated docents and emeritus professors from Tampere University

Hospital operating division 4 and previous Tampere Center for Child Health Research (TACC), as well as two Academy Research Fellows conduct research at the center.

In 2022, there was a monthly research seminar to inform about the center's approach and research aims, as well as to promote synergies and discussion among students, clinical personnel and investigators from the areas of interest of TamCAM.

## OUR RESEARCH GROUPS:

- Paediatric Early Phase Clinical Trials Unit (PeeTU)
- Child and adolescent health promotion
- Computational neuroscience
- Child psychiatry
- Epidemiology
- Virology
- Global health
- Adolescent psychiatry
- Obstetrics and clinical genetics
- Pediatric hematology and oncology
- NEDIS – Research on Children's and Adolescents' Health Promotion



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# RESEARCH HIGHLIGHTS

In 2022, TamCAM has set out to produce data that will increase the scientific evidence and new ways to improve the health of our target population. Some research highlights of 2022 include:



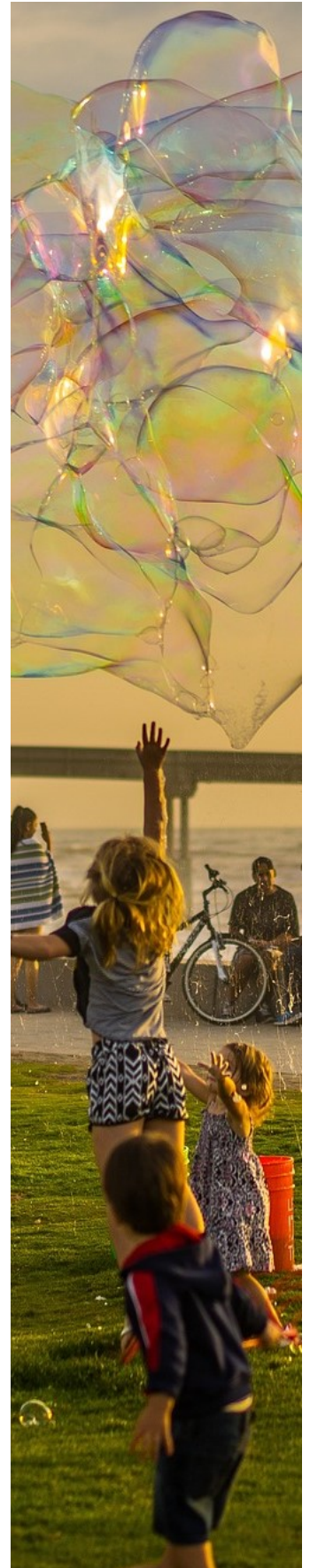
- Contribution to the work of an international group of scientists who proposed new guidelines to the development of multi-scale brain models in neuroscience (Eriksson et al., 2022).
- Finding that polygenic risk score for blood pressure (HBP-PRS) is associated with an increased risk of pre-eclampsia, recurrent pre-eclampsia and pre-eclampsia with severe features. The results strengthened the evidence pointing toward the role of genetic variants associated with blood pressure regulation in the etiology of preeclampsia, especially its more severe forms. (Kivioja et al. 2022.)
- Contribution to the writing of the Child barometer 2022 publication about children's sense of security.
- Finding that a systematic intervention significantly changed cough and cold medicine prescription habits of paediatricians, general practitioners and other specialists. The finding pointed out that prescription rates of cold and cough medicines can be reduced by active intervention. (Csonka et al. 2022.)
- Finding that the majority of pregnancy-related subarachnoid hemorrhage cases are aneurysmal, and women with aneurysm have considerable mortality and morbidity. Thus, counseling of pregnant women about smoking cessation and monitoring of blood pressure and symptoms of pre-eclampsia are important interventions to prevent pregnancy-related subarachnoid hemorrhage. (Korhonen et al. 2023.)
- Identifying systematic sex-related differences in cardiovascular function in a cohort from a low-income country with high exposure to prenatal and postnatal malnutrition and infectious diseases. This finding will facilitate development of preventive interventions against increased blood pressure in countries undergoing disease transition. (Choudhary et al. 2022.)
- Finding that antibiotic prescribing for children with upper respiratory tract infections have been decreased, but children still receive unnecessary antibiotics due to uncomplicated viral respiratory tract infections (Korppi et al. 2022).



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# EXPLOITATION ACTIVITIES

- Financializing and successfully piloting the Virtual Natural Environment (VirNE) application with pediatric patients.
- Per Ashorn served as the co-chair on a World Health Organization Guideline Development Committee on the treatment and prevention of severe acute malnutrition in children and as the vice chairman for the Council for Biosciences, Health, and Environment at the Academy of Finland.
- Prof. Laivuori served as the president of The Finnish Society of Obstetrics and Gynecology.
- Docent Palomäki was a member of the Finnish Perinatal Society's CTG- expert group and Elli Toivonen was the group's secretary. In 2022, the group drafted the Current Care guidelines on the use of cardiotocograph during pregnancy. The group also developed a web course on the subject for Duodecim.
- Prof. Kaltiala's work in the development of adolescents' gender anxiety treatments and research efforts in studying adolescent's gender identity attracted international interest, and Kaltiala gave consultations on the Finnish treatment guidelines for other countries (Australia, Israel and United States). Kaltiala also gave lectures in Estonian, Denmark and Bhutan.
- In 2022, prof. Puura's book "*Näin kasvatat lapsestasi mukavan aikuisen*" sold selling rights to Holland, and Puura also acted as an expert consultant for the children's tv show "*Jyrkin ja Neposen kommervenkit*".
- Marja-Leena Linne gave an invited, general-purpose talk about Brain, Memory and Brain Health in TEK Naisakatemia (TEKNA) event.



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# VISIBILITY

In 2022, TamCAM's PIs engaged in public discussion on topics such as: adolescent's mental health issues and situation of child and adolescent psychiatric services, new medical treatments for childhood leukemia, diagnosis and treatment of celiac disease and the importance of pediatric medicine research.

The center's leading investigators were interviewed in different printed (for example:

Aamulehti [1/2022](#) & [6/2022](#) Helsingin Sanomat [12/2022](#), Yle [5/2022](#)) and digital media ("[Elämälle kiitos](#)" – Elossa 24h – [yle.fi](#)).

In addition, TamCAM investigators gave numerous lectures and talks in different conferences and forums.



## KEY PERFORMANCE INDICATORS:

<b>Number of publications</b>	<b>128</b>
Publications in JUFO category 3	5%
Publications in JUFO category 2	19%
Open Access publications	92 %
International joint publications	55%
<b>Total sum of grant money awarded</b>	<b>2 494 537 €</b>
<b>PhD degrees completed</b>	<b>6</b>

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# NETWORKS AND INTERNATIONALITY



TamCAM had strong links to Tampere University Hospital, the city of Tampere, PirSOTE, Finnish Institute for Health and Welfare (THL), FINPEDMED and multiple research groups at TAU, other Finnish universities and internationally. In 2022, TamCAM research groups also had active collaborations in several Nordic, European, North American, African and Asian universities and institutes.

Besides bilateral research collaborations, TamCAM PIs served in responsible roles in

international research networks. Furthermore, the research groups of the center took part in numerous nation-wide and international research projects and consortiums, such as the ALLTogether leukemia study, DIPP, E3 project, EBRAINS, EHEN project, FinnGen, HEDIMED, ITCC Consortium, LAKANA trial, MSOP-PRE, nPOD study and TEDDY study.



# PRINCIPAL INVESTIGATORS

**DIRECTOR**



**PER ASHORN**

GLOBAL HEALTH

**VICE DIRECTOR**



**HANNELE LAIVUORI**

OBSTETRICS AND  
CLINICAL GENETICS



**RIITTAKERTTU KALTIALA**

ADOLESCENT PSYCHIATRY



**KAIJA PUURA**

CHILD PSYCHIATRY



**KALLE KURPPA**

CHILD AND ADOLESCENT  
HEALTH PROMOTION



**HEIKKI HYÖTY**

VIROLOGY



**SAULI PALMU**

PAEDIATRIC EARLY  
PHASE TRIALS UNIT



**MARJA-LEENA LINNE**

COMPUTATIONAL  
NEUROSCIENCE



**PEKKA NUORTI**

EPIDEMIOLOGY



**ARJA RIMPELÄ**

RESEARCH ON CHILD  
AND ADOLESCENT  
HEALTH PROMOTION



**OLLI LOHI**

PEDIATRIC HEMATOLOGY  
AND ONCOLOGY

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