

MEDIA RELEASE
FOR IMMEDIATE RELEASE**Date: 7 August 2024****A*STAR INSTITUTE FOR HUMAN DEVELOPMENT AND POTENTIAL (IHDP)
EXPANDS RESEARCH TO TACKLE NATIONAL CHALLENGES IN ADOLESCENT
WELL-BEING, MENTAL HEALTH, AND HEALTHY AGEING**

SINGAPORE – The Agency for Science, Technology and Research's (A*STAR's) Singapore Institute for Clinical Sciences (SICS) is expanding its research scope to address three new focus areas: adolescence well-being, mental health, and healthy ageing.

To reflect its expanded focus on human potential across various life stages, the institute will be renamed to the A*STAR Institute for Human Development and Potential (IHDP).

A*STAR IHDP will explore the complex interactions of social dynamics and environmental influences on population health. This strategic shift will enhance human potential and promote healthier life trajectories and holistic development for Singaporeans across key life stages by informing public policy and action.

Moving Beyond Birth Cohort Studies into Adolescence Research

One key research pillar for SICS has been the Growing Up in Singapore Towards healthy Outcomes (GUSTO) programme, a major birth cohort study involving academic and healthcare partners across Singapore such as the National University of Singapore (NUS), National University Health System (NUHS), and KK Women's and Children's Hospital (KKH). Since 2009, GUSTO has provided public agencies with valuable insights into the early development and health outcomes of Singaporean children (Please refer to Annex A).

According to the World Health Organization, adolescence years are a critical developmental stage where adolescents learn to manage emotions and relationships, as well as acquire attributes and abilities for assuming adult roles¹. As the children from

¹ <https://www.who.int/news-room/questions-and-answers/item/adolescent-health-and-development>

GUSTO enter adolescence, A*STAR IHDP is integrating these participants into a new adolescence research programme.

A*STAR IHDP is working closely with Ministry of Education's (MOE) DRivers, Enablers, and pathways of Adolescent developMent in Singapore (DREAMS) study to increase the participant pool and improve replicability of findings across cohorts.

Addressing National Challenges of Mental Health and Healthy Ageing

With the rise of mental health issues in Singapore, A*STAR IHDP is contributing to Singapore's efforts to better understand this national challenge.

Under the Cities of Tomorrow (CoT) R&D programme, A*STAR IHDP is leading the Population Mental Health Risk Prediction (PRISMS) study to investigate the impact of the urban built environment on mental well-being in Singapore (Please refer to Annex A).

To support healthy ageing, A*STAR IHDP is also embarking on research that offers critical insights into the molecular and metabolic underpinnings of biological ageing. The study will pave the way for developing targeted interventions that can slow down or reverse aspects of accelerated ageing by focusing on modifiable risk factors.

A*STAR IHDP continues to partner closely with academia, public agencies, community, and industry partners to drive translational R&D activities to achieve its goals in improving health and well-being across life stages.

"With strong capabilities in translating research evidence into practice and a renewed focus on studying diverse life stages, A*STAR IHDP is dedicated to supporting Singapore's needs in population health and advancing human potential, health, and well-being. We are honoured to embark on this exciting journey with key partners such as MOE to shape a brighter and healthier future for populations in Singapore and beyond," said Prof Johan Eriksson, Executive Director of A*STAR IHDP.

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About the Institute for Human Development and Potential (IHDP)

(人类发展与潜能研究院)

A*STAR Institute for Human Development and Potential (IHDP) is host to a range of research activities that emphasise human potential and opportunities to improve health and well-being across the life course. We enable this through our research, as well as the support and participation of multiple ecosystem partners within and beyond A*STAR.

Through our work, we hope to enable communities and societies to be better versions of themselves, through opportunities to understand and access ladders for improved health and well-being. These include observational studies, pilot interventions, and evidence recommendations to practitioners and policy makers.

Our aim is to be a lead institute contributing to Singapore's vision to build human capital and potential, as part of the Human Health and Potential domain in RIE2025. Our strong foundational capabilities in translational research, renewed focus areas and commitment to supporting Singapore's needs in population health will help advance human potential, health and well-being. For more information, visit www.a-star.edu.sg/ihdp.

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About the Agency for Science, Technology and Research (A*STAR)

The Agency for Science, Technology and Research (A*STAR) is Singapore's lead public sector R&D agency. Through open innovation, we collaborate with our partners in both the public and private sectors to benefit the economy and society. As a Science and Technology Organisation, A*STAR bridges the gap between academia and industry. Our research creates economic growth and jobs for Singapore, and enhances lives by improving societal outcomes in healthcare, urban living, and sustainability. A*STAR plays a key role in nurturing scientific talent and leaders for the wider research community and industry. A*STAR's R&D activities span biomedical sciences to physical sciences and engineering, with research entities primarily located in Biopolis and Fusionopolis. For ongoing news, visit www.a-star.edu.sg.

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Factsheet on key research programmes of the A*STAR.Institute for Human Development and Potential (A*STAR IHDP)

- **GUSTO:** The Growing Up in Singapore Towards healthy Outcomes (GUSTO) study is a major collaborative research effort involving A*STAR IHDP, KK Women's and Children's Hospital (KKH), National University Health System (NUHS), and the National University of Singapore (NUS).

This study aims to understand how conditions during pregnancy and early childhood influence the health and development of women and children. Between 2009 and 2010, over 1,200 Singaporean women were enrolled in GUSTO during early pregnancy. Their infants were closely monitored as they grew, with more than 10 observation visits within the first 18 months of life.

The detailed observations and sampling of these mothers and children have been instrumental in identifying features specific to the local and Asian populations, ultimately aiming to enhance the health and potential of our communities from an early start. Find out more about the programme at www.gusto.sg.

- **PRISMS:** The Urban Redevelopment Authority and the Housing & Development Board have commissioned the PRISMS study which will be led by A*STAR IHDP. PRISMS will be embarking on a comprehensive investigation into the impact of the urban built environment on mental well-being in Singapore.

This will be done through a multi-pronged approach that includes creating a harmonised mental well-being index, evaluating the current research landscape, and studying how different areas in Singapore affect mental health. The study will also look at how urban factors, such as the environment and indoor spaces, impact mental well-being by measuring stress level, examine how family and individual factors can influence the effects of neighborhood environments, and explore how built and natural environments can help counter negative impacts using data collected during the COVID-19 period in 2019.

- **S-PRESTO:** A collaborative effort by KKH, NUS, NUHS and A*STAR IHDP, the S-PRESTO study was launched in 2015 to investigate the effects of nutrition, lifestyle, mental health and other environmental factors before and during pregnancy on the eventual health and socio-emotional outcomes of the mother and baby. Recruited before conception, 1,000 women between the ages of 18 to 35 years old who were planning to conceive were recruited prior to pregnancy and followed up through their pregnancy, until their child was two years of age. Through

assessments such as imaging of the womb and ovaries, blood tests to determine ovarian health, as well as measurements of their body mass index and blood pressure, researchers have been able to establish the important mechanisms linking maternal and perinatal health and nutrition to child development while also using the data to assess fertility rates in Singaporean couples intending to conceive. The long-term goal is to develop effective approaches to prevent metabolic diseases and neurodevelopment disorders – ultimately enhancing health outcomes for every birth.