THE HEALTHY LONGEVITY RESEARCH CENTER
THE CENTER’S GOALS

- To serve as a catalyst for translating research and development into novel devices, technologies, treatments and expertise that promote dignity, health and quality-of-life among the elderly
- To disseminate findings and recommendations among scientists, health professionals, policymakers, and the general public in Israel and around the world
- To foster a new generation of researchers in gerontology and other aging-related fields
- To initiate inter-disciplinary discussion groups on topics such as memory, loss, the emotional world of aging, age and law, intergenerational synergies, meaning of life in old age, ageism, caregiving and caregivers

ACTIVITIES

- Conferences, workshops and lectures
- Discussion groups
- Scholarships for Excellence in Research for graduate students
- Research grants

Director: Prof. Karen B. Avraham

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LEARNING AND MEMORY

Prof. Uri Ashery
School of Neurobiology, Biochemistry & Biophysics
Faculty of Life Sciences
and Sagol School of Neuroscience

Prof. Ashery completed his BSc in biology and chemistry with distinction, and his PhD in 1996 in neurobiology *cum laude* at the Hebrew University of Jerusalem. He completed his post-doctoral studies at the Max Planck Institute for Biophysical Chemistry, Germany. Ashery spearheaded the establishment of the TAU Sagol School of Neuroscience, a unique multidisciplinary “ecosystem” and served as Head of School from 2011–2020. The School is now Israel’s largest and leading neuroscience institute, with over 100 research groups led by internationally renowned scientists and clinicians. Prof. Ashery has published over 70 papers and has won awards including the Bernard Katz Prize for Neurosciences and the Rector list for best lecturer and he is supported by major grant agencies including ISF, BSF, Teva and NIH.

https://uriashery.wixsite.com/ualab

Prof. Ashery is the head of the *learning and memory lab* and leads an interdisciplinary research team focused on elucidating the molecular mechanisms of learning and memory, and their link to neurodegenerative diseases. Ashery’s lab focuses on two of the most common diseases in an aging society: Alzheimer’s disease (AD) and Parkinson’s disease (PD). (His lab investigates the mitigating effects of Hyperbaric oxygen treatment) HBOT, (a medical administration of 100% oxygen at environmental pressure greater than 1 Atmosphere absolute), on different AD mouse models. They demonstrated that HBOT ameliorates AD-related pathologies including a reduction in neuroinflammation, improvement in vascular dysfunction, reduced hypoxia and beta-amyloid plaques and improvement in behavioral tasks. His lab is also developing a new platform to allow early diagnosis of PD. This is achieved by applying a combination of super-resolution microscopy and AI and advanced analysis on skin biopsies from PD patients as part of a collaboration with several medical centers affiliated with TAU.
Dr. Avraham Ashkenazi’s lab utilizes state-of-the-art technologies to elucidate cellular mechanisms of neurological disorders. Many of these disorders progress late in life, such as Huntington’s disease and Parkinson’s disease. A common characteristic in these disorders is the accumulation of proteins that are not folded properly and can form aggregates in cells. Research in the lab is currently focused on the ubiquitin-proteasome and autophagy pathways, the main routes by which aggregate-prone proteins are degraded. Also, these pathways are important for cells to cope with various stress conditions. This research will elucidate novel regulatory pathways of protein homeostasis in cells to better understand the basis of these devastating diseases and to identify future therapeutic targets.
Prof. Karen Avraham, Ph.D.
Department of Human Molecular Genetics and Biochemistry
School of Medicine, Faculty of Medicine and Sagol School of Neuroscience

Prof. Avraham is Vice Dean at the Faculty of Medicine at Tel Aviv University and holds the Drs. Sarah and Felix Dumont Chair for Research of Hearing Disorders. She is a member of the Department of Human Molecular Genetics and Biochemistry, the Sagol School of Neuroscience and the Safra Center for Bioinformatics. Avraham was awarded the Sir Bernard Katz Prize, the Bruno Memorial Prize, the TEVA Prize for Groundbreaking Research in Rare Diseases, and the Teva Founders Prize on Breakthroughs. She is co-director of the Aufzien Family Center for the Prevention and Treatment of Parkinson’s Disease and the Taube-Koret Global Collaboration in Neurodegenerative Diseases. Prof. Avraham founded and co-directs the Biomed@TAU Research Hubs and the MSc program in Medical Sciences with a specialty in Genetic Counseling.

https://www.kbalab.com/

Hearing loss is a leading cause of disability worldwide, with an estimated 466 million people suffering from this debilitating loss. In adults, in particular in the elderly, hearing impairment causes communication difficulties, which, in turn, can lead to social isolation. Disabling hearing loss is highly prevalent in the elderly population, with about 25% between ages 65-74 and 50% of those aged 75 and above. Epidemiological and clinical studies have demonstrated that hearing loss is associated with cognitive decline in older adults. Genetic treatment for hearing loss is crucial, since the benefit from general solutions for deafness, such as hearing aids, if often low. Prof. Avraham’s goal is to determine the genetic basis of hearing loss and use genome editing to create models to study the mechanisms of auditory function. Gene therapy is being conducted on these models for human hearing loss. Regulatory mechanisms are being discovered at the level of non-coding RNA and methylation. The team’s work has demonstrated that genomic sequencing using high-throughput technologies is effective for genetic diagnoses in a diverse population, providing a guideline for precision medicine for hearing loss in Israel.
The general focus of Prof. Azem’s research is to study the function and dysfunction of proteins, with a focus on protein folding and aggregation properties inside mitochondria, the energy producing organelle in our cells. These processes are relevant during the development of neurodegenerative diseases such as Alzheimer’s and Parkinson’s. Recently, his focus has shifted to include the study of the molecular mechanisms of the development of rare genetic diseases, linked to mitochondrial function.
Prof. Benyamini studies how people think about their health. Her research focuses on subjective perceptions of health and illness as one gets older and their effects on coping with health threats and ultimately, on the psychological and physical outcomes.

Her studies provide evidence for the intricate ways in which one’s subjective perceptions of health, age, and aging are interrelated. Particular contexts include cardiac disease, chronic pain, and women’s health issues (from childbirth through midlife and aging).

Prof. Yael Benyamini, Ph.D.

Prof. Yael Benyamini is a health psychologist and a Professor at the Bob Shapell School of Social Work at the Tel Aviv University. She attained her Bachelor’s degree in Psychology and Biology and her Master’s degree in Social Psychology at the Hebrew University in Jerusalem, and her Ph.D. in Health and Social Psychology at Rutgers University in New Jersey. She is an elected Honorary Fellow of the European Health Psychology Society.

https://en-socialwork.tau.ac.il/profile/benyael
Maintaining life-long memories through preservation of Peri-Neuronal Nets (PNN). Perineuronal nets, are formed by the most stable proteins known, anchoring the location of synapses around key inhibitory neurons while also protecting them from oxidative stress and damage. It is believed that these combined functions enable the storage of life-long memories. PNN are lost during ageing and their preservation opens a new window of opportunity for healthy cognitive ageing. To this day, the study of this peculiar structure was limited to histological and ex vivo experiments which limited our understanding of their function and interactions with other cells in the brain. Blinder’s laboratory developed a novel method to longitudinally label and image PNNs. They now combine this approach with the ability to modulate the neuro-immune axis in order uncover the mechanism beyond the formation, maintenance and degradation of PNNs, opening a new horizon of research into neuronal longevity and preservation of cognitive function.

Prof. Pablo Blinder, Ph.D.

Prof. Blinder leads a multidisciplinary laboratory, where he develops and implements advanced in vivo imaging tools to uncover the nature of neurovascular coupling, under healthy and pathological conditions. This reflects his deep devotion to understand the inner workings in the brain and the path he took, which started with undergraduate and graduate studies in biology that took place at the Ben-Gurion University of the Negev, followed by a joint PhD in Neuroscience with a tutor in Physics (Ben Gurion University and Tel Aviv University) and a post-doctoral training at the Department of Physics, University of California, San Diego. He has made several fundamental contributions to the understanding of brain vascular structure and function and more recently contributed to deepening our understanding of novel aspects of the neuro-immune axis in metastases and stroke.

Website: https://pblab.tau.ac.il/en/

Figure 1 Two-photon in vivo imaging of perineuronal nets (PNNs, purple) and microglia (green) interactions in the mouse somatosensory cortex.
End-of-life processes are becoming more complex due to social norms and ethics. Terminally-ill patients and their caregivers are faced with a myriad of issues, including the patient’s will and ability to accept the truth and the doctors’ hardship in delivering it, willingness to come to term with the news, and shifting to palliative treatment, the level of doctor’s involvement in the end-of-life process, the legitimacy of such process, etc. Recent studies in Israel among physicians and the public confirm this complexity and call for further research. The research led by Dr. Bodas and Dr. Baruch Velan (Gertner Institute) is aimed at generating a database of public opinion in Israel concerning the issue of life termination, collecting epidemiological data on actual end-of-life processes in the last five years in Israel, and identifying differences in attitudes across subgroups in the population.
Our laboratory is focused on understanding the molecular mechanisms underlying human disease giving an emphasis to the development of new therapeutics addressing unmet needs in neurodegenerative disorders. Of particular interest is the protein kinase, GSK-3, that plays important roles in accelerating neuron deterioration and brain function. We showed that hyperactivity of GSK-3 is a causative factor in accumulation of toxic proteins such as beta amyloid and mutant Huntingtin in Alzheimer’s and Huntington’s, respectively, and in disturbing cognitive functions. Therefore, we develop GSK-3 inhibitors with unique inhibition modality as potential drugs. We combine expertise in medicinal chemistry, computational modeling, and the use of suitable in vivo models to ultimately produce beneficial therapeutics for clinical practice.
TIME, EMOTION AND THE EXPERIENCE OF AGING: A PHILOSOPHICAL PERSPECTIVE

Prof. Ilit Ferber, Ph.D.

Prof. Ferber is an Associate Professor of Philosophy. Her research focuses on the philosophy of emotions, especially melancholy, suffering and pain, from the perspective of language. She has published articles on Benjamin, Heidegger, Leibniz, Scholem, Herder, Freud, Améry and others. She has co-edited a book on the role of moods in philosophy, two books in English and Hebrew, on lament in Gershom Scholem’s thought and a book on the grammar of the cry (in Spanish). She has also edited the new translation into Hebrew of Jean Améry’s book on aging. Ferber published two monographs: Philosophy and Melancholy: Benjamin’s Early Reflections on Theater and Language (Stanford University Press in 2013) and Language Pangs: On Pain and the Origin of Language (Oxford University Press, 2019). She is now working on the role of the five senses in Benjamin’s “Berlin Childhood” and on Améry’s philosophy of temporality in the context of his writings on the Holocaust, suicide and aging.

https://www.ilitferber.com

Ferber’s current work explores aging from two perspectives. First, the experience of time and temporality in aging in relation to the body’s decline, transformation of identity, missed opportunities and the expansion of the presence of death in life. Second, the emotional expanse of the aged, specifically, emotions such as resentment, reconciliation, nostalgia, regret, forgiveness, mourning, humiliation and hope.
Dr. Friedman studies and models how we produce movements, and how we learn to make new movements. In particular, he is interested in ways to speed up motor learning in different populations, including typically developing children and adults, as well as people with motor disorders (such as stroke, cerebral palsy, and Parkinson’s disease). His approach examines what are the building blocks of movements (movement primitives), how these building blocks are combined to produce skillful movement, how they change as we learn new movements, and how movement coordination and generation changes as we age. He plans to use this understanding to enhance motor learning.
Prof. Gepner uses cutting-edge technologies, including magnetic resonance imaging (MRI) for assessing muscle damage/mass and adipose tissue distribution, and labeled amino acid to determine protein synthesis by muscle biopsy.

Regular physical activity helps to improve physical and mental functions as well as reverse some effects of chronic disease to keep older people independent and well-being. Dr. Gepner’s research focuses on understanding the impact of exercise training, combined with dietary strategies, on muscle mass, physical function, and metabolism across a range of populations. By combining applied and mechanistic metabolism and physiology adaptation studies using advanced monitoring devices, his goal is to elucidate the unique beneficial effect from physical activity.
Prof. Ilana Gozes, Ph.D.
Department of Human Molecular Genetics and Biochemistry
School of Medicine, Faculty of Medicine
and Sagol School of Neuroscience

Prof. Gozes is a Professor Emerita, formerly Lily and Avraham Gildor Chair and Director of the Adams Super Center for Brain Studies. She is currently the Director of the Elton Laboratory in Molecular Neuroendocrinology. She received her B.Sc. from Tel Aviv University, her Ph.D. from the Weizmann Institute, and performed her postdoctoral training at MIT and the Salk Institute. She was a Fogarty-Scholar-in-Residence at the NIH and a Humboldt Awardee. She mentored over 65 graduate students has published over 350 papers, with an h-index of 79. She has multiple patents including NAP, Davuentide, a clinical drug candidate targeted at the ADNP. Prof. Gozes discovered ADNP, essential for brain formation implicated in autism, schizophrenia, Alzheimer’s disease and cancer. NAP is the active site of ADNP. She was awarded multiple prizes including the Teva Founders Prize, Landau and Best Applied Scientist Prize from Tel Aviv University. She served as President of the Israel Society for Neuroscience, a member of the Council of Higher Education. She is currently Secretary of the European Society for Neurochemistry, Editor-in-Chief of the Journal of Molecular Neuroscience, and Chief Scientific Officer of ATED Therapeutics.

https://igozes.wixsite.com/website-1gozeslab-1

Prof. Gozes studies the mechanisms shared by mutations in different genes associated with autism, schizophrenia, and Alzheimer’s disease. Her research targets ADNP and Tau in Alzheimer’s disease. Her team strives to uncover shared mechanisms affecting brain diseases toward better understanding of brain function and the molecular and cellular level translated into the behavioral level, critical for learning, memory and social interactions: Using knowledge acquired in the laboratory, we aim toward drug development to currently intractable diseases.

FROM GENE TO BEHAVIOR FOR AUTISM, SCHIZOPHRENIA, AND ALZHEIMER’S DISEASE

Essential for Brain Formation and Function: ADNP Precise Mechanism of Action
LAW

LAW, FAMILIES AND GENDER

Prof. Dafna Hacker, Ph.D.
Women Studies
School of Cultural Studies
Faculty of Law

Prof. Hacker is a legal scholar and a sociologist and is a member of the Faculty of Law and the Faculty of Humanities. She received her LL.B. from the Hebrew University and her LL.M. from American University Washington College of Law, graduating summa cum laude, and holds a Ph.D., summa cum laude, from the Department of Sociology and Anthropology at Tel Aviv University. She has received numerous grants and prizes, including research grants from the Israel Science Foundation and a nomination to the Israeli Academy of Science Young Scholars in Humanities and Social Science Forum. Prof. Hacker has been a visiting professor at Cornell, Hong Kong University, the University of Warsaw, and a visiting researcher at King’s College London.

Prof. Hacker’s socio-legal research focuses on the intersection of law, families and gender and provides empirical as well as normative insights in relation to post-divorce parental arrangements, inheritance conflicts, filial piety towards elder parents, and transnational families.
Prof. Jeffrey M. Hausdorff
Department of Physical Therapy, Faculty of Medicine and Sagol School of Neuroscience

Prof. Hausdorff received undergraduate and graduate degrees from The Cooper Union, MIT, and Boston University in biomechanics and biomedical engineering. After completing postdoctoral training in gerontology at Harvard Medical School, he joined the faculty there, first as an instructor and later as an assistant professor. For the past 22 years, he has been directing a research center that studies gait, cognition, and mobility at the Tel-Aviv Sourasky Medical Center. He has authored more than 340 peer-reviewed publications and has an H-index of 95. His research has been funded by the NIH, the ISF, European Commission, and private agencies and has been widely recognized. He received the Gerontology Society of America’s Excellence in Rehabilitation of Aging Persons Award and was named a fellow of that society.

tinyurl.com/cmcmTASMC

Prof. Hausdorff and the research team that he leads aim to better understand, evaluate, and treat gait, balance, cognitive function, and their changes with aging and disease. They study gait, motor control, and brain function, with a special focus on motor-cognitive interactions, gait variability, “fractal” physiology, falls in older adults, and freezing of gait. His research on the dependence of everyday walking on specific cognitive abilities lead to important new insights about fall risk and paved the way for new therapeutic approaches such VR-based interventions and the use of non-invasive brain stimulation. Innovative studies quantifying real-world mobility set the stage for a new way of evaluating gait and fall risk.
Dr. Lev-Ari’s research is concerned with assessing and strengthening protective factors for health promotion and good mental health and enabling access to skills, resources and supportive environments that will keep individuals and populations physically and mentally healthy. Dr. Lev-Ari is currently a visiting scientist at Prof. Michael Snyder’s Lab, Department of Genetics, Stanford University and is working on developing innovative precision medicine tools for health promotion and longevity.
Prof. Eliyahu Mizrahi, M.D., MHA
Geriatric and Rehabilitation Hospital, Beer-Yaakov
Faculty of Medicine

Prof. Mizrahi received a Doctor of Medicine degree (M.D.) from the Faculty of Medicine, Technology Israel Institute of Technology in Haifa, Israel. He then specialized in geriatric medicine at the Rambam General Hospital and at the Flieman Medical and Rehabilitation Center in Haifa. Mizrahi received his advanced training with a Fellowship in neurogeriatrics at the Department of Neurology of the Scholl of Medicine at Case Western Reserve University and University Hospitals of Cleveland. He was then head of the Department of Geriatrics and Medicine at the Chaim Sheba Medical Center. In 2012, he became head of the Department of Geriatrics and Medicine at Shmuel-Harofe, Geriatric and Rehabilitation Hospital in Beer-Yaakov, affiliated to the School of Medicine at Tel Aviv University. From 2018 to 2022, Mizrahi was the CEO of the Geriatric and Medical Center “Shmuel-Harofe” in Beer-Yaakov.

Prof. Mizrahii’s research deals with identifying risk factors for cognitive decline in patients aged 65 and over. His research works to identify independent predictive factors that may predict the success of rehabilitation in patients after surgery to fix a fracture in the femoral head joint, ischemic stroke, and patients who experienced a significant functional decline after prolonged hospitalization.

He also tests the effect of various infectious agents such as Covid-19 and Clostridium Difficile in geriatric hospitals and antibiotic resistance in the elderly patient population who are hospitalized in geriatric hospitals.

Prof. Mizrahi develops analytical methodologies that would be able to perform diagnostic evaluation of several diseases at once by individual or combined evaluation parameters and selects the most informative parameters or parameter combinations.

He also works on a methodology to provide a measurement and definition, the effects of individual or combined diagnostic parameters and therapeutic interventions on multimorbidity using information theoretical measure of normalized mutual information.
Swallowing disorders are prevalent in older adults and have severe health implications including dehydration, malnutrition, pneumonia and reduced quality of life. Dr. Zeltzer’s research focuses on investigating the effects of ageing on the swallow and devising prophylactic treatment methods for the preservation of swallow function in the elderly. She utilizes high resolution manometry and biomechanical analysis of the swallow to characterize physiological components of both normal and disordered swallowing, with the goal of designing accurately targeted preventative and rehabilitative treatment for adults with dysphagia (difficulty swallowing). Her research also focuses on identifying risk factors and biomarkers for the development of aspiration pneumonia, a common complication of swallowing disorders, and translating these research discoveries into novel approaches for pneumonia prevention in individuals with dysphagia.
MOLECULAR MECHANISMS OF NEURON DEGENERATION

Prof. Eran Perlson, Ph.D.
Department of Physiology & Pharmacology
School of Medicine, Faculty of Medicine and Sagol School of Neuroscience

Prof. Eran Perlson is an Associate Professor with the long-term research goal to understand the molecular mechanisms of neurodegeneration during diseases like ALS. His scientific work has earned him many distinguished grants, awards, and honors, and he is the author of numerous high-profile scientific publications and invited speaker to lead international meetings.

https://www.perlsonlab.sites.tau.ac.il

Neuron cell death and synapse disruption occur during aging and neurodegenerative diseases like Amyotrophic Lateral Sclerosis (ALS).

The goal of the Perlson lab is to elucidate the molecular mechanisms of motor neuron degeneration in ALS. The lab study mechanisms of axon and neuromuscular junction degeneration and regeneration.

The Perlson lab combines advanced microscopy, transgenic mice models, human iPSC, and a unique Lab-on-a-Chip platform that mimics the motor unit. This platform enables the growth of neurons and muscle on a silicon chip and provides a powerful tool for studying new neuromuscular junction biology in health and disease.

Current efforts are focused on

- Local protein synthesis in axons and NMJs
- Mitochondrial maintenance at the NMJs
- Phase separation at axon/NMJ
- Neurotropic signaling

NMJ-on-a-Chip platform for studying neurodegeneration and regeneration
Prof. Rand is particularly interested in healthy aging, focusing on the physical, cognitive and social aspects of older adults and how these may impact daily living and quality of life. She aims to develop clinical interventions to maintain and improve independence in daily living and participation. She integrates technologies for assessment and/or interventions. Executive function (cognitive) deficits are common in older adults and individuals with stroke. Prof. Rand has developed ‘real-life’ functional assessments such as online shopping or bill payment, to assess executive functions and to understand how these deficits impact daily functioning.

Prof. Debbie Rand, Ph.D.
Department of Occupational Therapy,
School of Health Professions
Faculty of Medicine

Debbie Rand is an Associate Professor and an experienced occupational therapist in the field of geriatrics and stroke rehabilitation. She completed her doctorate in Occupational Therapy (Virtual Reality for Rehabilitation) at Haifa University and travelled to Vancouver for her post-doctoral training at the University of British Columbia (researching physical activity post stroke).

https://en-med.tau.ac.il/profile/drand
Gaming for Rehabilitation Lab:
https://www.tau.ac.il/~drand/
Dr. Gal Raz, Ph.D.
Steve Tisch Schools of Film and Television and Sagol School of Neuroscience

Dr. Raz is a Senior Lecturer and has an interdisciplinary background, including film and television studies, biology, culture research, and medical research. He received his B.A. in Film and Television Studies at Tel Aviv University and a B.Sc. in Biology at Tel Aviv University (magna cum laude). He completed his M.A. at the Unit of Culture Research at Tel Aviv University (summa cum laude) on Relative Feminine Dominance in Epigenetic Inheritance Research and his Ph.D. at the Graduate School of Medicine at Tel Aviv University on Neural Markers of Cinematic Emotion Experience - The Role of interregional Coupling Dynamics. Raz performed his post-doc in the Psychology and Neuroscience Faculty at Maastricht University.

In his research, Dr. Raz seeks to actively construct bridges between art and science, theory and empirics, design and academic inquiry, and basic and applied research. He employs various neuroimaging and psychophysiological methods including functional magnetic resonance imaging, encephalography, eye tracking, and physiological measurements. His current research projects include a neuroscientific account of the cinematic device of point-of-view editing and its application in communicating with children on the autism spectrum, the development of a gamified intervention in Tourette’s Syndrome in children, augmented reality for diagnosing freezing-of-gait in Parkinson’s Disease, and a gamified virtual reality rehabilitation tool for children with cerebral palsy.
Dov Shmotkin conducts research that designs an integrated theory on the pursuit of happiness in the face of adversity. This work expands his studies on well-being across the life span, as well as on long-term traumatic effects among Holocaust survivors and older adults at large. His studies in this area examine interrelations of biographical experiences (e.g., trauma), time perspective, and self-conception systems (e.g., subjective well-being, meaning in life, the hostile-world scenario). He has been engaged in gerontological research on developmental and aging processes along adulthood and late life, focusing on outcomes of physical and mental health. He has served in leading research roles in nationwide studies on the Israeli older population, including the Cross-Sectional and Longitudinal Aging Study (CALAS) and the Israeli branch of the Survey of Health, Ageing and Retirement in Europe (SHARE). His research has largely addressed adaptation to aging among particular sub-populations that faced life adversities, including trauma survivors, persons in very old age, minorities of sexual orientation, and bereaved parents.
Our research on aging includes using THC to extend cognition in old mice, understanding the molecular mechanisms involved in neurogenesis in aged brains and how it affects the phenotype, mutations involved in aging-related diseases, and looking into microRNA expression of tissues along a natural aging pathway. Prof. Shomron is passionate about using basic science to advance better healthcare. Shomron heads the Genomic Intelligence Research Laboratory leading a multidisciplinary team of scientists: biologists, physicians, computer scientists and bioinformaticians. The team collects clinical data and develops computational methods for parsing molecular and big-data in the bio-medical field using Artificial Intelligence, successfully publishing hundreds of scientific papers and applying for dozens of patents.
Prof. Tzipi Strauss, M.D., MPH
Sheba Medical Center and Faculty of Medicine

Prof. Strauss is Head of the Department of Neonatology at the Sheba Medical Center and Professor at the School of Medicine. She obtained her M.D. from the Rappaport Faculty of Medicine at the Technion Institute of Technology and an MPH from the School of Public Health at Harvard. She performed her residency in Pediatrics at the Sheba Medical Center. During her residency she performed research at the Leiden University Medical Center in Holland. Formerly she served as Deputy Director of the Edmond and Lily Safra Children’s Hospital. She has recently established the first academic and clinical research center for Longevity in Israel.

Prof. Strauss’ main research topics are hemostasis and prematurity. She has studied how breast milk feeding (BMF) practices among very preterm infants influence their growth, as well as the recent consequences of vaccination during pregnancy on maternal-neonatal transfer of SARS-CoV-2 antibodies. Her focus is that the children of today are the adults of tomorrow, so that the quality and care will affect us throughout adulthood and the aging process. She has published more than 50 original articles in international journals.

The Longevity Academic Center at the Sheba Medical Center aims to enhance knowledge and interventions in aging and longevity to identify opportunities for improving the quality of life and function in older age. The Center focuses on studying life from younger adulthood to the centenarian’s age group (45-100 years old), including cutting-edge diagnostic, analysis and monitoring of health biomarkers and biological age, while studying multidisciplinary interventions.
Prof. Toker’s research strives to discover the extent to which occupational and environmental factors, stress perceptions, and organizational resources affect employees’ physical and mental wellbeing. By combining various areas of knowledge such as occupational psychology, cognition, and medicine, in addition to conducting experimental and observational longitudinal studies among thousands of employees, she points to the risk involved in exposure to occupational and environmental stressors (including the fear of terrorism).
The potential roles of ICT for alleviating social frailty in older adults: Elderly people are prone to become lonely and socially isolated, especially in times of pandemics. Dr. Wellner examine the role of ICT in this complex process with tools from philosophy of technology. The hypothesis is that greater social frailty will be associated with reference to ICT as a quasi-other (alterity relations), and lower social frailty will be associated with embodying ICT and turning the technology into part of the user’s body scheme (embodiment relations).

The “Data-fied” self – Health and happiness in the digital age: Digital technologies enable an efficient collection of data in real time and effortlessly in order to produce an omics portrait. Why do people constantly measure themselves? And why do they publish their omics? Privacy can hardly explain this phenomenon, as visibility is no longer a threat, but rather the invisibility. The socio-ethical challenges are now in developing risk awareness and new tools to investigate health-related risks.

Dr. Galit Wellner, Ph.D.
The Multidisciplinary Program in Humanities
Faculty of Humanities

Dr. Galit Wellner, PhD, lectures at Tel Aviv University. Dr. Wellner specializes in philosophy of digital technologies and their inter-relations with humans. She is an active member of the Postphenomenology community. Her book A Postphenomenological Inquiry of Cellphones: Genealogies, Meanings and Becoming was published in 2015 in Lexington Books. She translated to Hebrew Don Ihde’s book Postphenomenology and Technoscience (Resling 2016). She also co-edited Postphenomenology and Media: Essays on Human–Media–World Relations (Lexington Books, 2017). Galit is interested in the ways in which digital technologies transform medical and scientific practices.

https://www.researchgate.net/profile/Galit-Wellner