specifically downregulated in females with aging included lysosome, inflammation and phagolysosome. Consistently, our data shows that aged female, but not male macrophages, display decreased phagocytic efficiency. Our results support the notion that there are differences in aging trajectories in female vs. male mice.

DYNAMICS OF HUMAN MUCOSAL-ASSOCIATED INVARIANT T CELL REPERTOIRES ACROSS THE HUMAN LIFE SPAN

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Mucosal-associated invariant T (MAIT) cells are innate-like lymphocytes and are important for immune responses against bacterial and viral infections. While MAIT cells are known to undergo marked numerical changes with age in humans, our understanding of how these cells alter during these different phases across the human lifespan is largely unknown. Here we investigated MAIT cells from umbilical cord, children, young-adults and elderly. Functional analyses across 18-90 y/o adults showed that their MR1-dependent polyfunctionality was robust throughout old age. Strikingly, elderly MAIT cells displayed upregulated basal inflammatory cytokines, which were reduced to the level of young-adult MAIT cells in the absence of the aged environment. T cell receptor αβ analyses of MAIT cells across the human lifespan showed narrowing with age and large clonal TCRαβ expansions in elderly. These data suggest that MAIT cells in the elderly display remarkable plasticity, highlighting MAIT cells as key players in aged immune responses.

A LONGEVITY PROMOTING FACTOR THAT SUPPRESSES IMMUNITY AND HEALTHSPAN

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A positive correlation exists between stress resistance and longevity, but emerging evidence suggests that lifespan and stress endurance are physiologically distinct. A major challenge in aging biology has been identifying factors that play distinct roles in these closely coupled processes because genes that promote longevity often enhance stress resistance. Here, we demonstrate that TCER-1, the Caenorhabditis elegans homolog of the human transcription elongation and splicing factor, TCERG1, has discrete and opposite effects on lifespan and stress resistance. We previously identified tcer-1 as a gene that promotes longevity in germline-less C. elegans and reproductive fitness in wild-type animals. Surprisingly, tcer-1 mutants exhibited exceptional resistance against multiple biotic and abiotic stressors, including infection by the human opportunistic pathogen Pseudomonas aeruginosa. Conversely, TCER-1 overexpression increased susceptibility to infection. TCER-1 acted cell non-autonomously to both enhance longevity and repress immunity. Interestingly, TCER-1 inhibited immunity only during the fertile stages of life and not in post-reproductive adults. Elevating its levels ameliorated the fertility loss that follows infection, suggesting that TCER-1 may repress immunity to augment fecundity. Mechanistically, TCER-1 acts through the inhibition of the conserved kinase, PMK-1, as well as through repression of PMK-1-independent, novel antibacterial factors critical for innate immunity. Overall, our data establish key roles for TCER-1 in coordinating immunity, longevity and fertility, and reveal the molecular mechanisms that distinguish length of life from functional aspects of aging.

SESSION 3545 (SYMPOSIUM)

IMPLEMENTING THE 4MS IN PRIMARY CARE: BUILDING AN AGE-FRIENDLY HEALTH SYSTEM

Chair: Ellen Flaherty, *Dartmouth-Hitchcock Medical Center, Lebanon, New Hampshire, United States*
Discussant: Terry Fulmer, *The John A. Hartford Foundation, New York, New York, United States*

The Age Friendly Health Systems initiative is a culture change movement funded by the John A. Hartford Foundation in collaboration with the Institute for Health Care Improvement. Transforming clinical training environments into integrated geriatrics and primary care systems to become Age-Friendly Health Systems must incorporate the principles of value-based care and alternative-payment models. This symposium will discuss how the implementation of the Geriatric Interprofessional Team Transformation in Primary Care (GITT-PC) model and the Reducing Avoidable Facility Transfer Model (RAFT) in primary care will improve patient outcomes focused on the 4M's of the Age Friendly Health System. The success of the GITT-PC model focuses on 4 Medicare reimbursable services including the Annual Wellness Visit, Transitional Care Management, Chronic Care Management and Advance Care Planning. The RAFT model focuses on What Matters Most to residents of long term care facilities and reduces ED visits and hospital transfers through elicitation of goals of care and 24 hour virtual support from an interprofessional geriatric team.

REDUCING AVOIDABLE FACILITY TRANSFERS: THE RAFT MODEL

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Reducing Avoidable Facility Transfers (RAFT) is a Dartmouth-developed program that identifies and honors "what matters most" to patients residing in skilled nursing facilities in a value-based, sustainable way. RAFT aims to reduce avoidable facility transfers of older adults from long-term care and post-acute care facilities to emergency departments (ED). Key components of RAFT presently include (1) systematically eliciting goals of care for all