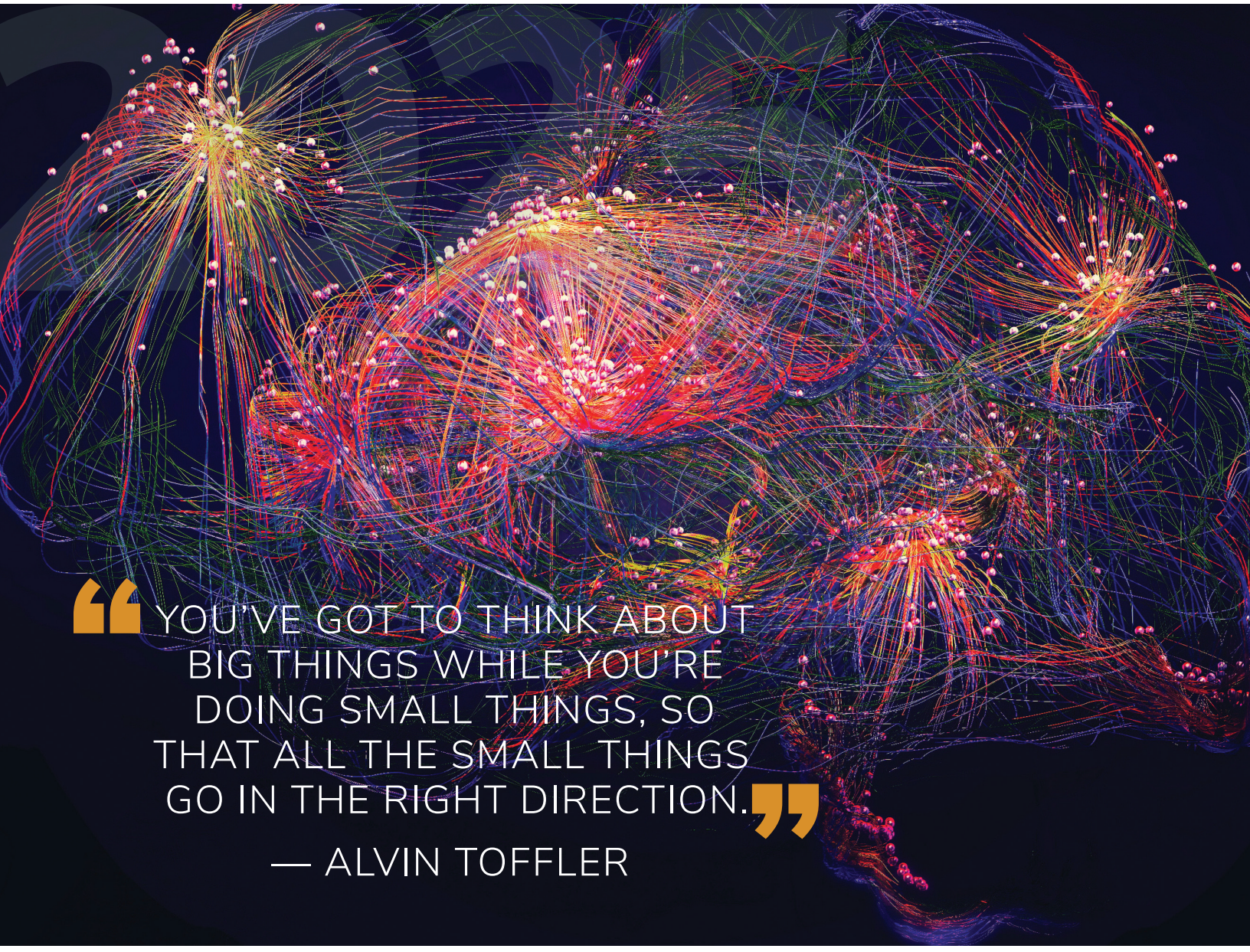
# 2025 ANNUAL REPORT

## REVOLUTIONIZING NEUROLOGICAL DISEASE RESEARCH




KAREN TOFFLER CHARITABLE TRUST

THE KAREN TOFFLER CHARITABLE TRUST IS COMMITTED TO REVOLUTIONIZING MEDICAL RESEARCH, EDUCATION, AND TECHNOLOGY TO COMBAT NEUROLOGICAL DISEASES.

# TABLE OF CONTENTS



KAREN TOFFLER CHARITABLE TRUST

# CHAMPIONING A BETTER FUTURE

The Karen Toffler Charitable Trust was born out of a love of family and a dedication to humanity. The work we do honors the legacy of our founders, Alvin and Heidi Toffler, and their daughter Karen. Our efforts are grounded in the same spirit that motivated their work and their writings about learning, technology, thinking, and change. It is with that dedication that we work to empower those who challenge conventional thinking and strive to create a healthier future.

# MESSAGE FROM TRUSTEE CHAIRMAN

In a world defined by rapid change, where technology evolves faster than institutions can adapt, the need for visionary philanthropy has never been greater. The landscape of medical research funding—especially in neuroscience—is shifting beneath our feet. Traditional models, built for stability, often struggle to keep pace with discovery. Today's greatest breakthroughs rarely emerge from established paths; they come from bold ideas in small labs, from early-career investigators willing to take risks others won't.

**Russ Glassman**
Chairman,
Karen Toffler
Charitable Trust

At the Karen Toffler Charitable Trust, we've built our mission around those very pioneers. We believe innovation begins at the edges—where imagination meets uncertainty. Our commitment is to fuel those moments of insight that can change the future of brain health. By focusing on early-stage, high-impact research, we provide the catalytic spark that allows new science to take root and flourish. These are the ideas that traditional funding overlooks, yet they are often the ones that shift entire fields.

Over the past five years, KTCT has moved beyond simply granting funds. We have become conveners—creating networks of researchers, universities, and partners who share a belief that collaboration multiplies discovery. Through our Exeloop℠ platform, we've built a bridge between disciplines and between people—biologists and data scientists, philanthropists and entrepreneurs—who might never otherwise meet. The results speak for themselves: stronger collaborations, faster knowledge exchange, and research that is already attracting new investment and recognition.

This spirit of connection and curiosity reflects the vision of our founders, Alvin and Heidi Toffler. Decades ago, they taught the world that the future does not arrive by accident—it is built by those who anticipate it. Their writings urged us to see possibility in disruption, to prepare rather than react, and to believe that ideas can be humanity's most powerful resource. At KTCT, we carry that belief forward every day.

As we look ahead, our purpose is clear: to accelerate the kind of science that redefines what's possible. We will continue to partner with institutions that value boldness over bureaucracy, with researchers who dare to imagine cures where none exist, and with donors who share our faith in the transformative power of knowledge. Together, we are not only funding research—we are shaping the future of how discovery happens.

To our funding partners, collaborating universities, and Toffler Scholars—thank you for your vision, courage, and trust. You are the reason our shared future grows brighter every year.

> WE BELIEVE INNOVATION BEGINS AT THE EDGES—WHERE IMAGINATION MEETS UNCERTAINTY.

# SECTION I

## THE STATE OF BRAIN HEALTH

Neurological disorders are now among the world's most urgent health challenges. According to the Global Burden of Disease Study 2021, conditions affecting the nervous system accounted for an estimated 443 million disability-adjusted life years (DALYs) worldwide—an 18 percent increase since 1990, reflecting both aging populations and improved diagnosis (Feigin et al., 2023). More than 3.4 billion people—about 43 percent of the global population—live with a neurological condition, underscoring the magnitude of this crisis (GBD 2021 Neurology Collaborators, 2024).

In the United States, the impact is staggering. The American Academy of Neurology estimates that major neurological diseases—including Alzheimer's, Parkinson's, stroke, migraine, and epilepsy—carry an annual economic burden of nearly $800 billion when medical costs, productivity losses, and caregiving expenses are combined (Erickson et al., 2017). Despite growing investment, no curative therapies exist for most neurodegenerative diseases. Current treatments largely manage symptoms or slow progression rather than halt or reverse underlying pathology (National Institute of Neurological Disorders and Stroke [NINDS], 2023).

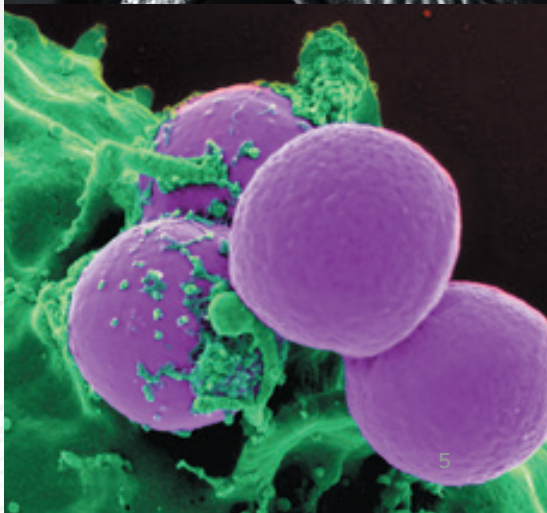
This imbalance between disease burden and therapeutic progress exposes a fundamental research gap. Early-stage, cross-disciplinary studies—where many transformative ideas begin—often struggle to secure funding. Analyses of federal allocations reveal that NIH research spending typically mirrors past patterns rather than responding dynamically to changing health burdens, which limits innovation in emerging fields (Moses et al., 2015).

Meanwhile, the funding landscape itself is shifting. The National Science Foundation reports that industry now supports roughly 75 percent of total U.S. research and development, while the federal government remains the primary funder of basic research, accounting for about 41 percent of national spending (NSF, 2024). This structure creates a "translational valley" in which discoveries require catalytic, high-risk support before they attract sustained investment.

Philanthropy plays a critical role in bridging this divide. Giving USA 2024 notes that charitable giving to health and medical research has rebounded strongly, with donors increasingly focusing on innovation and measurable impact (Giving USA Foundation, 2024). By directing resources toward early-career investigators and high-risk, high-reward projects, philanthropic organizations can drive progress where traditional funding mechanisms hesitate.


Brain health stands at a pivotal moment: the global burden is immense, yet scientific opportunity has never been greater. Investments in prevention, early detection, and mechanistic research—paired with open data and collaborative networks—can dramatically accelerate discovery. Supporting emerging researchers — those most likely to challenge convention — will be essential to unlocking the next generation of breakthroughs.

With foresight, collaboration, and courage, let us act now to create a new era of understanding, prevention, and hope for the human brain. Join us to advance progress and deliver solutions worldwide.



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# SECTION II

## WHO WE ARE

## MISSION & VISION

Driven by our legacy of world-changing breakthroughs, we forge strong partnerships with leading neuroscience institutions and early-career investigators exploring the frontiers of brain science. Our focus is on early-stage research with the potential to reveal how the brain functions, why it fails, and how it can recover. By supporting innovative studies in neurodegeneration, neural repair, advanced imagery, computational modeling and cognitive resilience, we help advance discoveries that can transform the understanding and treatment of neurological disease.

As a trusted partner to medical research institutions and individual scientists, we invest in bold, emerging ideas that expand what is known about the brain and open new paths for prevention and therapy. Through the Toffler Scholars Program, we fulfill this commitment by funding promising early-career researchers and connecting scientists, mentors, and donors who share a vision for accelerating breakthroughs in neuroscience.

Our investments focus on uncovering the biological mechanisms that drive and connect multiple neurological diseases—along with targeted investigations into specific conditions where discovery can yield near-term impact. Toffler Scholars are mapping how inflammation, vascular changes, cellular stress, and protein dynamics contribute to both shared and disease-specific pathways, generating insights that bridge Alzheimer's, Parkinson's, ALS, and other neurodegenerative and neurovascular disorders. By supporting foundational discoveries at this level, KTCT helps create a ripple effect—empowering a new generation of neuroscientists to build connections across disciplines and bring us closer to a future where brain health can be protected and restored for all.

RESEARCH
COLLABORATION
TRANSLATION
LIVES IMPACTED

# WHAT WE BELIEVE

At the Karen Toffler Charitable Trust, we believe progress begins with curiosity—and grows through connection, courage, and imagination. Our work is rooted in the belief that science and humanity move forward together when we look beyond the present and envision what's possible.

**Inspiration** drives us to see the world not as it is, but as it could be. We challenge ourselves and others to anticipate the future with open minds and bold ideas.

***Innovation*** fuels our pursuit of solutions that cross disciplines and defy convention. We champion thinkers who take risks to confront humanity's most complex challenges.

**Collaboration** reminds us that lasting change is never achieved alone. By building bridges among scientists, funders, and communities, we create momentum that benefits everyone.

**Learning** is at the heart of everything we do. We embrace relentless curiosity and lifelong discovery, knowing that each new insight brings us closer to understanding—and to meaningful, enduring change.

TOGETHER, THESE BELIEFS GUIDE EVERY PARTNERSHIP, EVERY GRANT, AND EVERY CONVERSATION AS WE WORK TOWARD A MORE CONNECTED, RESILIENT, AND HOPEFUL FUTURE.

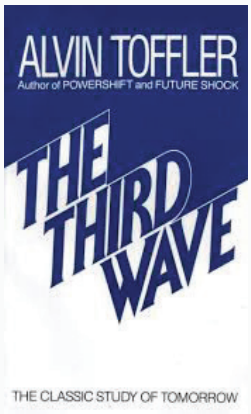
# OUR LEGACY

Alvin and Heidi Toffler explored and wrote about nearly every aspect of the transformations shaping modern society. Their words ignited a global conversation about the future—how technology, culture, and human values intertwine in times of extraordinary change. Decades later, their insights remain a compass for leaders, innovators, and everyday citizens seeking to navigate an increasingly complex world.

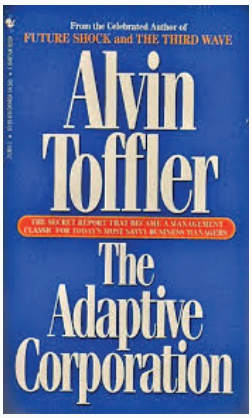
The Karen Toffler Charitable Trust carries forward their legacy of curiosity, adaptation, and innovation—transforming foresight into purpose and ideas into impact. Through our focus on early-stage neuroscience research, high-impact discovery, and cross-disciplinary collaboration, we embody the Tofflers' belief that preparing for the future begins with understanding the present. Guided by their vision, we strive to accelerate discovery, empower the next generation of thinkers, and help steer humanity toward a healthier, more connected, and profoundly hopeful future.

## PUBLISHED WORKS


1970



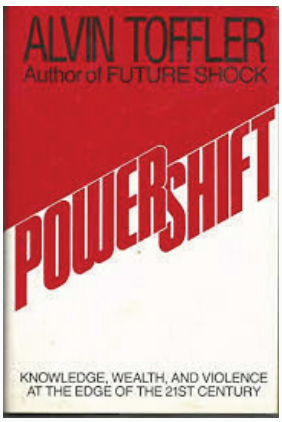

1980



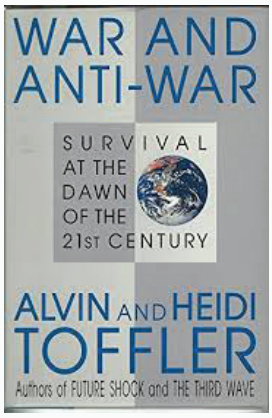

1984

# CURIOSITY IS THE FIRST STEP TOWARD CHANGE.

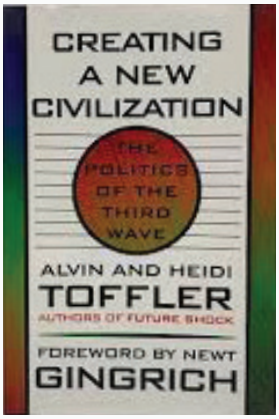
HEIDI TOFFLER



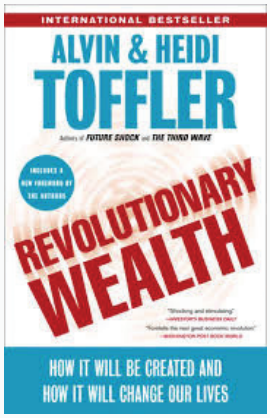

1990




1994




1995




2006

# OUR PEOPLE

## Russ Glassman

*Trustee, The Karen Toffler Charitable Trust*

Russ Glassman was introduced to Alvin and Heidi Toffler in 1979 when he became their accountant, financial advisor, and close friend—a partnership that would span more than four decades. In October 2000, he became an original co-trustee of the Karen Toffler Charitable Trust. A graduate of SUNY Buffalo with a B.S. in Accounting, Russ became a licensed CPA in 1975 and built a distinguished career as partner and co-founder in several accounting firms before retiring in 2013. Throughout his life, he has been a devoted volunteer and community leader, serving as treasurer for the PAP Corps, which raises funds for cancer research at the University of Miami. Today, Russ brings his lifelong commitment to service and financial stewardship to KTCT, where he continues to champion the Tofflers' vision by supporting cutting-edge medical and scientific research that advances human progress.

## Tom Johnson

*Trustee, The Karen Toffler Charitable Trust*
*Co-Founder, Toffler Associates*

Tom Johnson co-founded Toffler Associates with Alvin and Heidi Toffler in 1996, creating a future-focused strategic advisory firm that helps organizations thrive amid accelerating change. Under his leadership, the firm developed and applied the Tofflers' methodologies to help commercial and government clients envision and build resilient, high-value futures. Before forming Toffler Associates, Tom served on the faculty at the Wharton School of Business and as a professor at the University of Grenoble, France. He earned graduate degrees in Computer and Information Sciences from the University of Pennsylvania and an undergraduate degree from Carnegie Mellon University. As a KTCT Trustee, Tom continues to advance the Tofflers' enduring mission—linking foresight, innovation, and human potential to a more sustainable and prepared world.

## Dr. Peter Katona

*Trustee, The Karen Toffler Charitable Trust*

Dr. Peter Katona is a Clinical Professor of Medicine at the David Geffen School of Medicine at UCLA and Adjunct Professor of Public Health at the UCLA Fielding School of Public Health. A leading authority on infectious diseases, global health, and bioterrorism, he has served at the Centers for Disease Control and Prevention and on numerous national and international advisory committees, including the FDA's Anti-Infective Drugs Advisory Committee and the National Academies of Sciences, Engineering, and Medicine. Dr. Katona chairs the UCLA Infection Control Committee, co-chairs the Future Gazing Work Group of the HHS Cybersecurity Council, and serves on several nonprofit and academic boards. His teaching, research, and policy work emphasize preparedness, resilience, and the ethical responsibilities of science in shaping the future. As a KTCT Trustee, he brings deep scientific insight and global perspective to advancing the Trust's mission to accelerate discovery and strengthen the bridge between medical research and societal impact.

## Rebecca Bartoli

*Executive Director, The Karen Toffler Charitable Trust*

As the first Executive Director of the Karen Toffler Charitable Trust (KTCT), Rebecca Bartoli works closely with the Trustees to manage operations, coordinate programs, and ensure the organization fulfills its mission. She helps carry forward the vision of founders Alvin and Heidi Toffler and their daughter, Karen, by overseeing grants administration, partner engagement, and communication efforts. With a strong sense of purpose and a genuine commitment to KTCT's legacy, Rebecca supports a growing community of scholars, universities, and research collaborators. Her work helps ensure that the outcomes of KTCT-funded research are communicated with clarity, accountability, and care—strengthening the Trust's role as a steward of progress and human impact.

## Deborah Westphal

*Executive Advisor, The Karen Toffler Charitable Trust*

Deborah Westphal's career spans more than 30 years across government agencies, Fortune 100 companies, and global institutions. A passionate humanist and lifelong learner, she is dedicated to helping leaders anticipate and shape the future with both realism and optimism. In 1999, Alvin Toffler invited her to join as one of the founding members of Toffler Associates, where she helped guide world leaders, executives, and innovators to think systemically, challenge biases, and build resilience in the face of accelerating change. As Executive Advisor to KTCT, Deborah applies her foresight and strategic expertise to help the Trust extend the Tofflers' legacy—connecting visionary ideas to real-world impact in neuroscience, innovation, and philanthropy.

# EMPOWERING THE NEXT GENERATION OF RESEARCHERS

Through partnerships with leading universities, the Karen Toffler Charitable Trust supports early-career medical researchers, physicians, and scientists at pivotal stages of their development. Where others see uncertainty, we see possibility—the spark of ideas that could transform how we understand and treat disease.

In a system that often favors established labs, early investigators face steep barriers to funding and visibility. KTCT was created to change that. By providing catalytic support and a community of mentors and collaborators, we help emerging scientists pursue bold, high-impact research that advances brain health and human well-being.

**Universities** represented:

American University Washington, DC

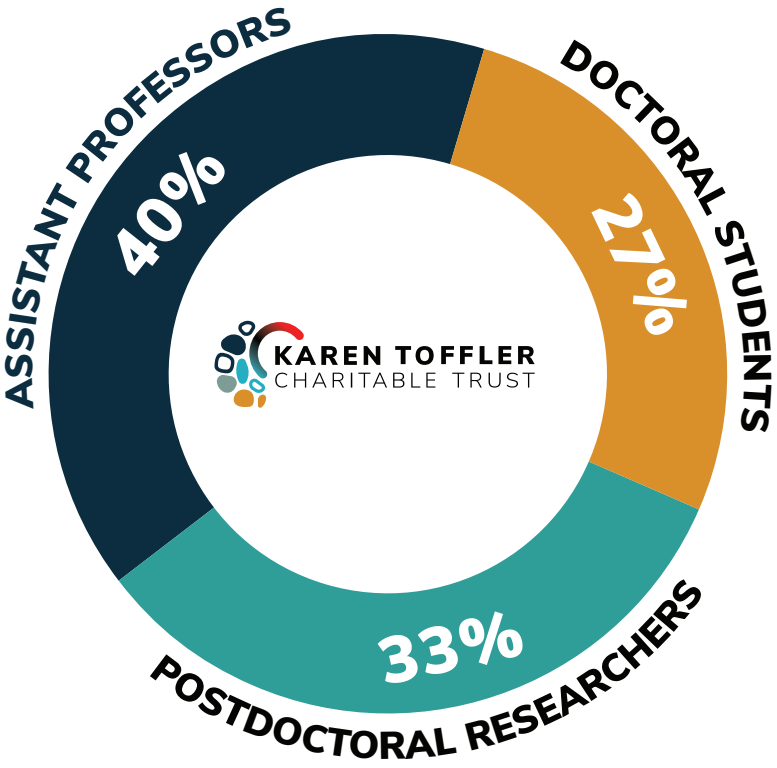
Florida State University College of Medicine

Boston University

Harvard University

Columbia University in the City of New York

Howard University




- Doctoral students 27%
- Postdoctoral researchers 33 %
- Assistant professors 40%

Johns Hopkins University

Northwestern University

UF Evelyn F. & William L. McKnight Brain Institute University of Florida

Northeastern University

Temple University Lewis Katz School of Medicine

UCLA

UC Santa Barbara

# SECTION III

## OUR IMPACT

At the Karen Toffler Charitable Trust, impact begins where curiosity meets commitment. Guided by the Toffler legacy of anticipating change, we invest in the people and ideas shaping the future of brain health. Our focus is on the earliest stages of discovery—where imagination, persistence, and scientific rigor converge to produce breakthroughs that can redefine what is possible for human health and well-being.

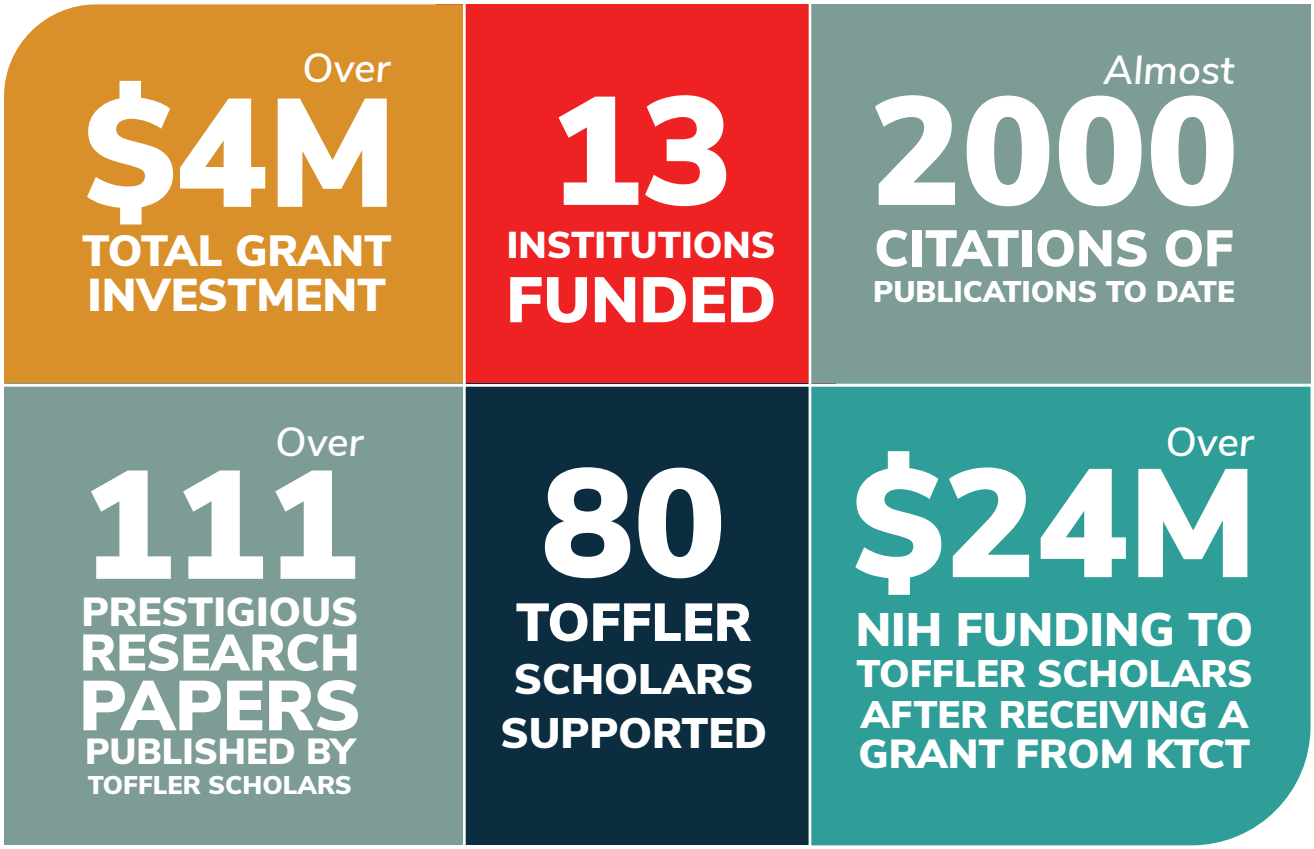
In 2025, KTCT's support reached a growing network of researchers across leading universities and medical centers. From the SuperAger Biohub at Northwestern University—an unprecedented collaboration exploring the biology of cognitive resilience—to early-career investigators examining the links between genetics, immunity, and neurodegeneration, our grants helped fuel progress across a spectrum of inquiry. These efforts are united by a shared belief: that understanding the mechanisms of resilience and decline in the brain will ultimately lead to more effective prevention and treatment strategies.

Our impact extends beyond individual projects. By fostering collaboration across institutions and disciplines, KTCT helps bridge the gaps that often slow scientific translation. We bring together scientists, clinicians, data specialists, and philanthropic partners who share a vision of accelerating innovation for the benefit of all.

The results are measurable in momentum—the papers published, the data shared, the partnerships formed, and the young investigators empowered to lead. Each discovery we help catalyze moves us closer to a future where brain health is understood, protected, and sustained across the human lifespan.

## AT-A-GLANCE METRICS

# SINCE 2020



# SUPERAGER BIOHUB: UNLOCKING THE BIOLOGY OF RESILIENCE

The Karen Toffler Charitable Trust (KTCT) catalyzed the SuperAger Biohub at Northwestern University's Mesulam Institute to study why certain individuals—SuperAgers—retain exceptional memory into their eighties and beyond. Conceived at KTCT's 2024 Exeloop Scholar convening, the Biohub was launched with Dr. Tamar Gefen, a KTCT Scholar and associate professor of clinical neuropsychology.

Structured as a "hub-and-spoke" model, the Biohub connects researchers exploring the biological, genetic, and environmental foundations of brain resilience. The central hub, under the direction of Dr. Gefen, integrates longitudinal clinical assessments, imaging data, and biospecimens from more than 110 SuperAger participants. With 78 donated brains, it houses the world's largest collection of SuperAger biospecimens—an unmatched resource for advancing the science of cognitive longevity.

KTCT funded the Biohub's launch and two of its inaugural spoke projects:

> **Dr. Julia TCW** | Boston University | *investigates genetic and glial mechanisms of APOE-related resilience, examining why certain genetic variants confer protection against Alzheimer's disease. Using induced pluripotent stem cell (iPSC) models and postmortem brain analysis, her work seeks to pinpoint molecular pathways that differentiate resilience from risk.*
>
> **Dr. Joe Mazzulli** | Northwestern University | *explores dopaminergic system resilience, studying whether SuperAgers maintain superior function in dopamine neurons—cells critical for cognition and movement—to identify molecular mechanisms that guard against neurodegeneration.*
>
> **Dr. Ken Paller** | Northwestern University | *examines sleep physiology in SuperAgers, using wearable monitoring technology to measure sleep quality and brain activity patterns, such as slow-wave activity and spindle density, that may strengthen memory and enhance neuroprotection.*

The Biohub's design is inherently collaborative, with multi-institutional "spoke" projects feeding into a centralized hub. The "hub" curates Northwestern's unique longitudinal data and biospecimens, while "spoke" projects target key scientific domains including genetics, immune system, cardiovascular health, neurobiology, neuroinflammation, lifestyle, and other resilience-related pathways. This collaborative model has already led to accelerated cross-institutional data sharing and enabled investigators to make early discoveries into mechanisms that protect against cognitive decline, thereby accelerating and expanding the pace and reach of innovative prevention and treatment strategies.

By combining genetics, cellular biology, sleep science, and behavioral data within a shared infrastructure, the SuperAger Biohub demonstrates how collaboration can reveal the factors that preserve brain function across a lifetime. This approach has already advanced scientific understanding by identifying unique protective patterns in SuperAgers, directly informing ongoing research into novel preventative approaches. KTCT's early commitment helped transform a promising idea into an enduring research platform—one designed to advance discovery through openness, partnership, and scientific rigor. Together, Northwestern and its collaborators are laying the groundwork for new, evidence-based strategies to prevent Alzheimer's disease and related disorders.

## PARTNER VOICES

**Tamar Gefen, Ph.D.** | Assistant Professor | *Department of Psychiatry and Behavioral Sciences, Mesulam Center for Cognitive Neurology and Alzheimer's Disease, Northwestern University Feinberg School of Medicine*

"SUPPORT FROM THE KAREN TOFFLER CHARITABLE TRUST ACCELERATED DISCOVERY NOT BY NARROWING OUR QUESTIONS BUT BY EXPANDING OUR CIRCLE OF COLLABORATION AND ENCOURAGING CREATIVITY. THEIR EXCITEMENT TOWARDS THE NORTHWESTERN SUPERAGING PROGRAM HELPED SEED AN INFRASTRUCTURE BASED ON THE BRINGING TOGETHER OF PEOPLE, DATA, AND IDEAS. ITS IMPACT WILL FORM HOW WE APPRECIATE THE BIOLOGICAL FACTORS THAT CONTRIBUTE TO SUCCESSFUL AGING FOR MANY YEARS TO COME."

DR. TAMAR GEFEN

# SECTION IV

## 2025 TOFFLER SCHOLARS

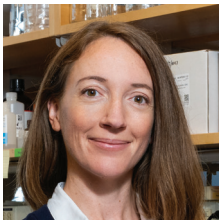
The 2025 Toffler Scholars program marked a milestone in KTCT's mission to advance early-stage neuroscience research. For the first time, the Trust opened its solicitation process to a broader pool of applicants, resulting in more than double the number of proposals received in previous years. This surge reflected both the urgent need for early-career funding and KTCT's growing reputation as a catalyst for innovation in brain science.

To guide this expansion, KTCT established a Grant Review Board composed of accomplished Associate Professors—many of them former Toffler Scholars—who now lead influential labs in neuroscience and neurodegenerative research. Their peer-led review process brought new rigor, transparency, and depth to the selection of this year's awardees.

Together, these developments strengthened KTCT's core purpose: to identify and empower emerging investigators whose ideas will transform our understanding of the brain and open new paths toward prevention, resilience, and cures.

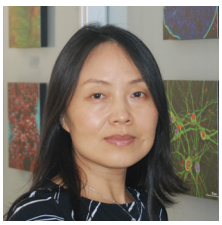
**Micaelly Alves** | Temple University | *miR-212 modulation in cerebral endothelial cell dysfunction in AD* | PhD Student

Ms. Alves is pursuing her PhD at Temple University's Lewis Katz School of Medicine, focusing on how microRNA-212 influences cerebral endothelial dysfunction in Alzheimer's disease. Her work builds on emerging evidence that vascular and endothelial changes are early contributors to Alzheimer's pathology.



**Rachel Bennett** | Harvard University / Massachusetts General Hospital | *Impact of Co-Pathology on Gene Expression in Alzheimer's* | Assistant Professor

Dr. Bennett is an Assistant Professor at Harvard Medical School affiliated with Massachusetts General Hospital, where she investigates how co-morbid pathologies such as vascular disease and protein aggregates influence gene expression in Alzheimer's disease.



**Wanhao Chi** | Northwestern University | *Restoring TDP-43 loss-of-function using novel oligonucleotide technology* | Postdoctoral Fellow

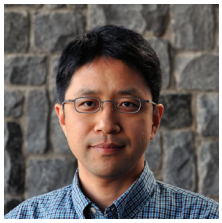
Dr. Chi is a postdoctoral researcher at Northwestern University focusing on TDP-43 loss-of-function mechanisms in neurodegenerative disorders. Her project uses novel oligonucleotide therapeutics to restore TDP-43 activity — an innovative therapeutic strategy against a key driver of ALS and related diseases.

**Adithya Gopinath** | University of Florida | *Dopamine neuron activity modulates peripheral immunity* | Research Assistant Professor

Dr. Gopinath serves as a Research Assistant Professor at the University of Florida; his lab studies how dopamine neuron signaling influences peripheral immune function and how this brain-immune axis contributes to neurodegenerative disease risk and progression.

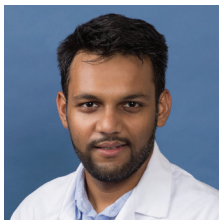
**R. Stefan Isaac** | Boston University | *Single-molecule analysis of mitochondrial mutation dynamics in neurodegeneration* | Assistant Professor of Biochemistry & Cell Biology

Dr. Isaac joined Boston University's Chobanian & Avedisian School of Medicine in 2024, after completing his postdoctoral work at Harvard Medical School, where he developed mtFiber-seq to map mitochondrial DNA accessibility at nucleotide resolution. His lab now investigates how mtDNA packaging regulates genome activity in human cells and organelles — a novel angle on mitochondrial involvement in neurodegeneration.



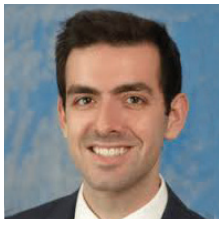
**Sung Soo Kim** | University of California, Santa Barbara | *Detecting signs of aging in neural dynamics via long-term brain imaging in behaving animals* | Assistant Professor

Dr. Kim is an Assistant Professor at UCSB whose research uses long-term in-vivo imaging in behaving animal models to identify changes in neural dynamics that accompany aging and early neurodegeneration.



**Tirth K. Patel** | UCLA David Geffen School of Medicine | *Critical role of cerebral lymphovascular system in brain health and tau-induced neurodegeneration* | Postdoctoral Fellow

Dr. Patel is a postdoctoral fellow at UCLA's David Geffen School of Medicine investigating how the cerebral lymphovascular (glymphatic) system regulates tau clearance in the brain and how its dysfunction accelerates tau-mediated neurodegeneration.



**Zachary Sorrentino** | University of Florida | *Pathological alpha-synuclean in lewy body dementia and parkinson's patients.* | Neurosurgery Resident / PhD

Mr. Sorrentino is a neurosurgery resident and PhD candidate at the University of Florida, bridging clinical neurosurgery and translational neurobiology to study how surgical and molecular approaches may converge in brain repair and neurodegenerative disease.

**Katherine Turk** | Boston University | *EEG Microstates for Predicting Cognitive Decline in Early Alzheimer's Disease* | Assistant Professor of Neurology

Dr. Turk is a board-certified neurologist and Assistant Professor at Boston University School of Medicine; she also practices at VA Boston's Memory Disorders clinic and co-leads BU's Alzheimer's Disease Research Center Outreach, Recruitment, and Engagement core. Boston University Medical Campus+1 Her research focuses on using electrophysiological markers — especially EEG microstates and event-related potentials — to detect early cognitive decline in Alzheimer's disease and related dementias.

**Ted Zwang** | Harvard University / Massachusetts General Hospital | *Does a reduction in tau-mediated silencing of neurons protect the stability of correlated neuron activity?* | Assistant Investigator / Assistant Professor of Neurology

Dr. Zwang holds appointments at Massachusetts General Hospital and Harvard Medical School, where his research harnesses flexible neuron-like electronics combined with virtual-reality systems to follow how neural circuits change in aging and Alzheimer's disease. His interdisciplinary background in chemistry and neurotechnology positions him to ask how tau pathology silences neuron populations and disrupts correlated activity in early neurodegeneration.

# SECTION V

## COLLABORATION & COMMUNITY

## THE POWER OF COLLABORATION

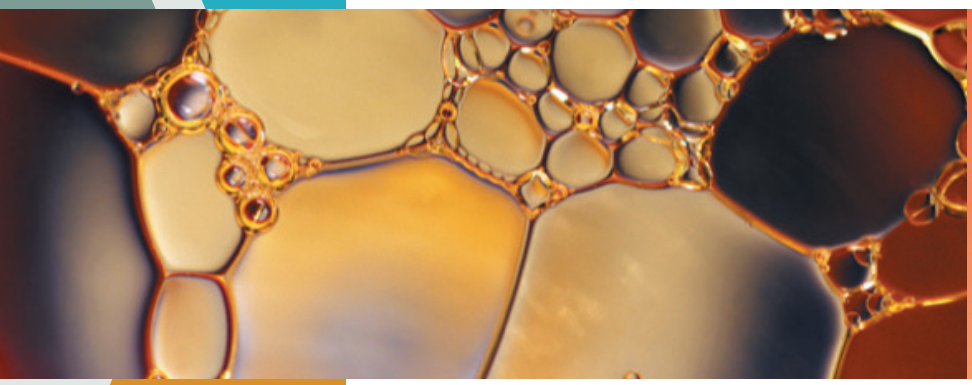
At the Karen Toffler Charitable Trust, we believe that progress in neuroscience—and in all areas of human health—begins with connection. No single institution, discipline, or funder can alone solve the profound challenges of understanding the brain. Meaningful impact happens when research and philanthropy work together, combining the curiosity of science with the courage and flexibility of investments.

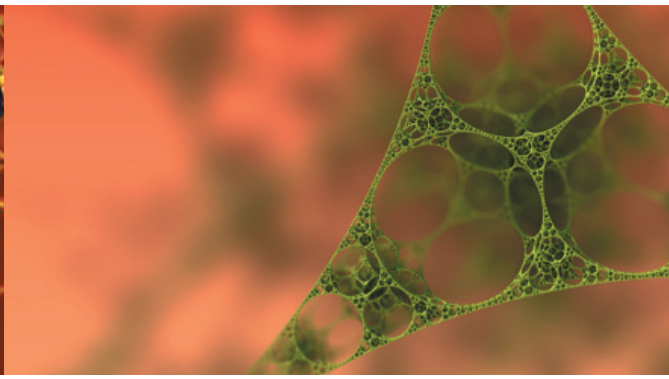
By fostering relationships across universities, disciplines, and philanthropic organizations, KTCT helps connect visionaries who might not otherwise cross paths. These connections amplify the potential of early-stage research, allowing ideas to grow through shared data, resources, and expertise. Established investigators bring experience and perspective; early-career scholars contribute fresh thinking and curiosity.

When these voices come together, the pace of discovery accelerates.

Through partnerships spanning laboratories and foundations, KTCT is helping reimagine how discovery takes shape. Collaboration gives early-stage researchers access to mentorship, data, and tools they need to pursue bold ideas that might otherwise go unexplored. It also empowers philanthropic partners to amplify their impact, ensuring that promising insights move swiftly from the lab to real-world applications.

Together, we are building a community united by purpose—linking today's leading scientists with tomorrow's innovators, advancing discovery across generations, and shaping a future where brain health and human well-being are within everyone's reach.



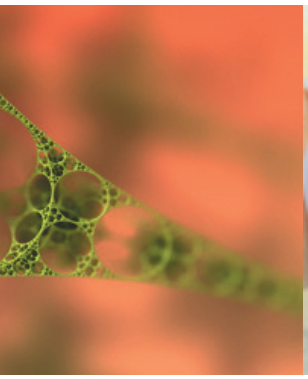


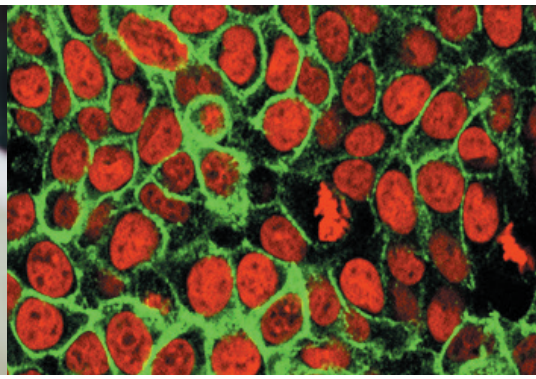
# ABOUT EXELOOP℠

Exeloop℠ serves as a dynamic hub for connection. It links the Karen Toffler Charitable Trust (KTCT) with a growing community of researchers, university partners, policymakers, and philanthropic investors. These groups share a commitment to advancing neuroscience. Built around secure, collaborative gatherings, Exeloop events bring together past and present Toffler Scholars with research supporters from diverse disciplines and institutions.

Exeloop is more than a meeting series. It is a platform for cross-connection and idea exchange. Each convening is designed to accelerate progress. Gatherings foster dialogue between early-stage investigators and partners who can help translate discovery into real-world impact. Discussions explore new scientific directions. They address shared infrastructure and innovative funding strategies that bridge the gap between laboratory insight and clinical application.

By cultivating relationships across research and philanthropy, Exeloop embodies KTCT's belief that progress happens faster when people think and work together. The result is a collaborative network where ideas gain momentum. Partnerships deepen, and the future of brain health is shaped through collective effort and shared vision.





# SCHOLAR EXELOOP℠

The Scholar Exeloop℠ is a cornerstone of the Karen Toffler Charitable Trust (KTCT) community—an interactive forum that connects past and present Toffler Scholars with university partners, mentors, and collaborators. These sessions are designed to strengthen the network of researchers supported by KTCT and to expand their perspectives on how bold ideas in neuroscience take shape and grow.

Each Scholar Exeloop brings together a diverse group of early-career scientists to learn from one another, share their research journeys, and explore new ways of thinking about discovery. The day's program typically includes panel discussions where scholars and guest speakers reflect on the challenges and triumphs of scientific exploration, networking opportunities that foster multi-dimensional problem-solving across disciplines, and laboratory tours that provide firsthand insights into how collaboration drives innovation.

Recent Scholar Exeloop gatherings have been hosted at Boston University, Northwestern University, and the Kavli Foundation Headquarters in Culver City. Each event offered a unique environment for meaningful exchange—bridging neuroscience, technology, and philanthropy through open dialogue and shared purpose.

More than a series of meetings, the Scholar Exeloop represents a growing community of thinkers committed to advancing science. It embodies KTCT's belief that discovery flourishes when researchers connect, learn, and imagine the future together.

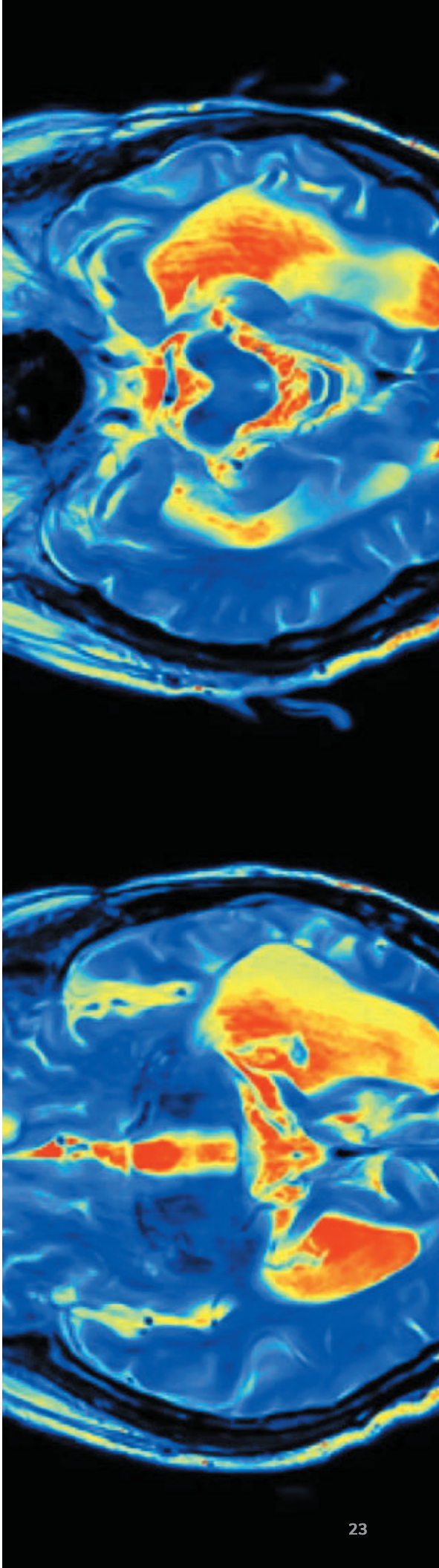
# COLLABORATION IN DISCOVERY: UNDERSTANDING TAU AND NEURAL CONNECTIVITY

A breakthrough collaboration that began at the 2023 Scholar Exeloop[SM] led to new insight into how mutant tau proteins disrupt communication in the brain. Supported jointly by the Karen Toffler Charitable Trust (KTCT), the Kavli Foundation, and the Cure Alzheimer's Fund, the project united Dr. Theodore Zwang at Harvard University / Massachusetts General Hospital and Dr. Andrew Holbrook at UCLA in an effort to understand how Alzheimer's disease destabilizes neural networks.

Using advanced neurotechnology and machine-learning models, the team discovered that mutant tau can disconnect neurons from their networks by temporarily silencing their activity, leading to a loss of synchronization between the hippocampus and entorhinal cortex—regions central to memory formation. Remarkably, this network failure does not result from neuron loss, but from the neurons' inability to re-establish proper connections after silencing.

This finding reveals a previously unrecognized mechanism by which tau pathology undermines brain function. Even more compelling, the disconnected neurons remain alive, indicating a therapeutic window in which their function might be restored before irreversible degeneration occurs.

Through this collaboration, KTCT and its partners helped illuminate a new frontier in Alzheimer's research—one that brings hope for early intervention and renewed connectivity in the living brain.



# ABOUT THE EXECUTIVE EXELOOP℠

The Executive Exeloop℠ Roundtable Dinners are invitation-only gatherings that bring together senior leaders, innovators, and philanthropists to explore the future of medical research. Hosted by the Karen Toffler Charitable Trust (KTCT), these private, in-person discussions create space for candid dialogue about the forces reshaping science, funding, and innovation. Each dinner invites participants to share perspectives, identify common challenges, and imagine new pathways for collaboration across sectors.

In 2025, KTCT hosted a pivotal Executive Exeloop in Los Angeles on October 22, convening senior executives from academia, industry, government, and philanthropy. Participants examined how the global research ecosystem—now exceeding $1.7 trillion in annual investment—is evolving amid funding constraints, administrative pressures, and shifting public trust. The discussion centered on bridging the “valley of death” between discovery and application, improving support for early-career researchers, and strengthening cross-sector collaboration to accelerate innovations to patients.

The resulting reports—The Future of Research: Power Shifts and Implications (Washington, D.C., September 2022), The Future of Research: Coalitions for Future Impact (Boston, September 2023), The Future of Research and Innovation: Collaborations for Future Impact (Chicago, October 2024), and The Future of Innovation and Research: From Fragmentation to Coherence (Los Angeles, October 2025)—capture the insights and outcomes of these high-level discussions. Together, they reflect KTCT’s commitment to fostering coherence, collaboration, and imagination as the foundation for a stronger, more connected future of research.

“

THE KAREN TOFFLER CHARITABLE TRUST CONVENES THE KIND OF CROSS-DISCIPLINARY DIALOGUE WE NEED TO BUILD AN OPEN, EQUITABLE RESEARCH ECOSYSTEM-ONE THAT ACCELERATES EARLY-STAGE INNOVATION WHILE KEEPING IMPACT ON PATIENTS AND SOCIETY AT THE CENTER.

Dr. Aydogan Ozcan, Chancellor's Professor at UCLA, Volgenau Chair for Engineering Innovation, Electrical & Computer Engineering, Bioengineering, Associate Director California NanoSystems Institute (CNSI)

THE MEETING WAS AN EXCELLENT OPPORTUNITY TO GET TOGETHER WITH OTHER STAKEHOLDERS AND DISCUSS HOW WE CAN, TOGETHER, MAKE THE BEST OF OUR EFFORTS TO KEEP THE SCIENCE ALIVE DESPITE THE CURRENT SITUATION. MILLIONS OF PEOPLE SUFFERING FROM VARIOUS DISORDERS HAVE HIGH HOPES FOR SCIENCE, AND THAT IS OUR PRIMARY MOTIVATION.

Dr. Alysson R. Muotri, Professor, Director Archealization Center (ArchC), Director Sanford Stem Cell Education and Integrated Space Stem Cell Orbital Research (ISSCOR) Center, Director Gene Therapy Initiative Associate Director for the Center for Academic Research & Training in Anthropogeny (CARTA)

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# RESEARCH RENAISSANCE PODCAST

Launched in 2024, Research Renaissance was created by the Karen Toffler Charitable Trust to explore the frontiers of brain science and the people shaping its future. The podcast grew from KTCT's belief that early-stage neuroscience flourishes when diverse voices—scientists, innovators, and curious minds—come together to share knowledge.

Each episode takes listeners on a journey of discovery, featuring early-career researchers pioneering breakthrough studies alongside voices from the investment community, policymakers, and leaders from major research institutions. Together, they unravel the complexities of neurological diseases, their causes, potential treatments, and the ongoing quest for cures.

Equally important, Research Renaissance was designed to make the latest research accessible to a wider audience—people beyond the scientific community who are searching for understanding and hope. By translating complex science into meaningful conversation, the podcast opens doors for patients, families, students, and lifelong learners to connect with the discoveries shaping the future of brain health.

Through storytelling and open dialogue, Research Renaissance reveals the human side of discovery—the persistence, creativity, and collaboration that drive progress. By shining a light on these stories, the podcast advances KTCT's mission to connect people and ideas, inspire innovation, and build a future where scientific discovery is both inclusive and impactful.

> "I LOVE HOW RESEARCH RENAISSANCE COMBINES FASCINATING SCIENCE WITH REAL HUMAN STORIES. IT REALLY OPENED MY EYES TO THE BIG CHALLENGES AND EXCITING BREAKTHROUGHS IN BRAIN HEALTH."

# FUTURE-FOCUSED LEADERSHIP PROGRAM

Launched in 2020, the Future-Focused Leadership Program was created by the Karen Toffler Charitable Trust (KTCT) to equip early-career researchers with the vision and tools to lead in a constantly evolving scientific world. The program goes beyond traditional research training—helping scientists develop foresight, adaptability, and the ability to connect their discoveries to a rapidly changing future.

Taught at the Massachusetts Alzheimer's Disease Research Center (MADRC) at Harvard University, the program draws directly on the future-thinking framework of Alvin and Heidi Toffler. Participants learn to apply the Tofflers' principles of anticipating change, challenging assumptions, and viewing systems holistically—ensuring that their research is not rooted in the past, but directed toward the emerging frontiers of science and human health.

Through interactive workshops, thought-provoking discussions, and group exercises, participants learn to detect emerging trends, cultivate resilient teams, and align their research with long-term societal priorities. They are encouraged to look beyond immediate experiments and short-term funding—to act as leaders shaping the trajectory of discovery.

Now integral to KTCT's commitment to developing talent, the Future-Focused Leadership Program shapes scientists who are both visionary and exacting. By fostering forward-thinking and purposeful action, KTCT nurtures a new generation of scientific leaders ready to guide society through the coming change.

# SECTION VI

## LOOKING AHEAD

As we look to the future, the Karen Toffler Charitable Trust (KTCT) remains inspired by the vision and humanity of Alvin and Heidi Toffler—two thinkers who believed that the future is not something we enter, but something we create together. Their legacy reminds us that progress begins with imagination, and that every discovery carries the potential to improve lives.

In the years ahead, KTCT will continue to seek out the most promising minds and the most courageous ideas in neuroscience. We will strengthen our operations and partnerships, ensuring that every investment we make—whether in research, people, or collaboration—moves us closer to a world where brain health and human potential can flourish side by side.

Our work is as much about people as it is about science. Through the Toffler Scholars, Exeloop[SM] gatherings, and the Future-Focused Leadership Program, we are building a community of innovators who believe that curiosity and compassion are as vital to discovery as data and technology.

> WE FUND THE FUTURE BY FUNDING THE FEARLESS.
>
> RUSS GLASSMAN

The Tofflers taught us that the ability to foresee change is the foundation of hope. KTCT carries that belief forward—championing researchers who not only study the brain but imagine what is possible for the mind, for humanity, and for generations still to come.

# SUPPORT OUR RESEARCH

Every breakthrough begins with belief. It begins with belief in the power of science, in the imagination of people, and in the possibility of a better future. At the Karen Toffler Charitable Trust (KTCT), we invest in that belief every day by supporting early-career researchers and collaborations that are redefining what is possible in neuroscience.

We cannot do this work alone. Partnership makes discovery possible. Support from individuals and organizations helps turn ideas into progress by fueling new research, accelerating innovation, and creating hope for millions affected by neurological disease.

If you are interested in supporting KTCT's mission, we invite you to reach out and begin a conversation. Together, we can explore opportunities aligned with your interests and values and discuss how your engagement can help advance bold, early-stage brain research.

Each partnership, no matter its form or scale, helps sustain the Tofflers' legacy of curiosity, foresight, and humanity. Together, we can ensure that today's ideas become tomorrow's solutions.

# FOLLOW US

STAY CONNECTED AS WE SHARE STORIES OF DISCOVERY, COLLABORATION, AND HOPE.

## Follow us on:

@ResearchRenaissance

@TofflerTrust

@TofflerTrust

@ResearchRenaissance

or subscribe by email for updates on new research, events, and opportunities to engage.

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