# Massachusetts Institute of Technology



"Greater Boston has developed an astonishing triple-threat distinction: It's a premier global hub of clinical excellence, of biomedical research, and of AI expertise. By tapping these shared strengths, the MIT Health and Life Sciences Collaborative will speed the development of new biologically based solutions to real human problems in fields from cancer to climate change."

Sally Kornbluth MIT President

## MIT Health and Life Sciences Collaborative

Spurring innovative collaborations at the convergence of multiple disciplines to impact human health

The new MIT Health and Life Sciences Collaborative (MIT HEALS) is expanding the Institute's role as a central hub for innovation, connectivity, and translation in life sciences and health. To accelerate positive health and life sciences outcomes, the collaborative will:

- harness the potential of AI to revolutionize health care solutions;
- make MIT's life sciences community a magnet for top talent;
- enhance core life sciences and health research and education;
- support exceptional scientists dedicated to transforming our understanding of health;
- incorporate input from economists and policymakers;
- catalyze links with the Boston area's world-class biotech and pharma companies as well as research hospitals to speed innovation and translation in life sciences and health.

To deliver high-impact solutions for human health, MIT's leading experts will form new, cross-disciplinary ventures – and build on existing successes – that connect the Institute to leading industry partners and area hospitals. MIT HEALS will pursue ambitious goals such as AI and life science, low-cost diagnostics, neuroscience and mental health, environmental life science, food and agriculture, the future of public health and health care, and women's health.

### **CORE ELEMENTS OF MIT HEALS**

MIT HEALS will thrive by attracting and supporting top talent through a flagship postdoctoral program, offering graduate fellowships, and funding Undergraduate Research Opportunities Programs (UROPs) and SuperUROPs. A core mission is to accelerate innovation in health care, quickly moving solutions from lab bench to patient bedside. While Institute researchers already collaborate on health-related projects across disciplines, the rapid advancement of AI has opened up a new world of possibilities for game-changing cross-disciplinary projects. A few examples follow.



#### Al/computation and genetics

Jonathan Weissman PhD '93, member of the Whitehead Institute and professor of biology, uses computational strategies to create novel, high-density genetic maps to understand cell pathways and potentially help tailor drug treatments to a patient's genetic makeup.



#### Al/computation and cancer screening

Regina Barzilay, the School of Engineering Distinguished Professor for AI and Health, has demonstrated that AI-risk models, paired with AI-designed screening policies, offer significant improvements to cancer screening, particularly for breast and lung cancers.



#### **Pediatric innovation**

Led by Elazer R. Edelman MD, '78, SM '79, PhD '84, the Edward J. Poitras Professor in Medical Engineering and Science, MIT is working with area hospitals to accelerate the translation of cutting-edge scientific, technological, and engineering advancements to real-world application for children's health.



#### Women's health

Linda Griffith, the School of Engineering Professor of Teaching Innovation, codirects the MIT Center for Gynepathology Research, which brings together more than 15 laboratories and clinical practices in the Boston area and around the world to foster basic and clinical research in endometriosis, infertility, preterm birth, sexually transmitted infection, and other pathologies of the female reproductive tract.

#### THE IMMEDIATE NEED

MIT seeks seed program funding to activate MIT HEALS, incubate new interdisciplinary research ideas, and support faculty and graduate student involvement.

For more information about supporting the MIT Health and Life Sciences Collaborative, contact:

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