HealthCure Research Alliance (HCRA)

Mission Statement

HealthCure Research Alliance (HCRA) is dedicated to promoting individual researchers and those medical, academic, scientific institutions and companies who are focused on using the revolutionary advances in AI and quantum (AI and Q) to accelerate the development of Healthcure Research to achieve breakthroughs in diagnosis, treatments, prevention, and cures for the chronic diseases that burden humanity.

Focus

1. **Strengthen the role of engineers in providing the critical infrastructure to grow these world-changing technologies.**
2. **Launch of a New Era for the AI Application Phase for these technologies prioritizing, out of the many options, the HealthCure Research sector.**
3. **Shift to policies, programs, and medicine that increasingly leverage AI and Q research for breakthroughs in diagnosis, treatments, prevention, and cures for chronic diseases.**
4. **Unite Americans by focusing national priority on the imperative to reduce the hundreds of thousands of deaths and serious harm caused by medical errors**

Goals

1. **Ensure AI leadership by accelerating the building of critical infrastructure.**
2. **Encourage national leadership to develop an overarching strategic approach to transform our policy agenda to include a more significant part of our applied research budgets to target AI and Q- assisted sector specific objectives to more quickly achieve medical breakthroughs and cures for chronic diseases.**
3. **Encourage an AI and Q- assisted systems approach, national in scope, to improve quality care, develop precision medicine, and improve the health care industry to reduce deaths and serious harms due to preventable medical errors.**

Founding Partners

Atlas Initiative for Critical Infrastructure
National Quantum Literacy Network
Cultiva Solutions

Launch a New Era of Medical Breakthroughs

The exponential growth of AI and Q is opening new horizons for many sectors of society. While national security will always take precedence, HRCA members believe that health should stand at the top of national and international agendas.

Populations are ageing, requiring more medical attention, yet funding is not keeping up with the demand. Doctors and licensed, registered nurses are facing shortages, exacerbating the patient/doctor-nurse ratio.

One of the answers to this dilemma is to accelerate the growth of AI and Q to discover new breakthroughs to help and hopefully cure people of the chronic diseases that are afflicting society.

Medicine is a vast and interdisciplinary field that integrates principles from biology, chemistry, physics, and their many categories and subcategories. While not all the disease burden can be lifted by leveraging the power of AI, there is a growing consensus that a significant part of it can be addressed through future research, especially if there is a comprehensive, targeted, and sustained strategy of support for these new technologies and applications.

Strategic Objectives

- **Leadership at the national level is paramount. It is the responsibility of leadership to explain *why* a policy should be adopted and *what* that policy is designed to achieve.**
- **Policy application is the task of experts who know the field, understand the impacts of each part of the policy, and ensure that the policy is fit for purpose.**
- **Regulations can facilitate or denigrate the desired impacts of policy. The staff that fulfil this function must ensure fidelity to the overriding purpose of the policy.**
- **Programs that apply policy should proceed in accordance with the prioritization of producing successful results to build momentum and confidence.**
- **Targeted funding should be based on the AI and Q researchers' or investigators' expertise and their experience and proven ability to develop breakthroughs and healthcures in the near term.**
- **Legislation should lift the policy and applications to attain a comprehensive, long-term impact to make Americans healthier than ever in history.**
- **National success should become a model for other countries to consider.**

Public/Private Partnerships

Potential partnerships exist between governments, nonprofits, and the private sector and these partnerships may hold the opportunity to add considerable resources to the collaborative endeavor. The HCRA will be active in educating government officials about the need to undertake health research that looks towards innovations that emphasize AI and Q.

Timetable and Grounded Hope

Given recent breakthroughs, the biggest AI and Q companies, such as Isomorphic, have dedicated themselves to making health concerns their top priority. This combination of Nobel Prize winning talent, revolutionary breakthroughs, and new financial firepower provided grounded hope that real progress is highly probable. HRCA sees the need to accelerate the buildout of these technologies and their critical infrastructure and apply them to the health field, especially AI and Q. While no one knows exactly when these breakthroughs and cures will be discovered and made available on a wide basis, the trajectory of progress is impressive.

Vision of Global Leaders on AI and Health

Jamie Metzl, biotech expert

"The convergence of AI and genomics is rewriting the rules of medicine. We're moving beyond symptom management to curing the root causes of diseases like diabetes and heart disease, and this revolution is unfolding now, not in some distant future."

Mustafa Suleyman, co-founder of DeepMind

"AI will turbocharge scientific progress and lead to a golden age of discovery. By radically accelerating the pace of medical research, we're not just treating diseases, we're on the cusp of curing them, form cancer to rare conditions, in our lifetimes.'

Michio Kaku, theoretical physicist and futurist

"Artificial intelligence will revolutionize medicine by decoding the human genome and predicting diseases before they occur, leading to cures for cancer and genetic disorders within the next few decades. The future is not about managing illness; it's about eliminating it."

Ray Kurzweil, AI and Q visionary

"By the 2030s, we will have nanobots in our bloodstream, connected to the cloud, that will repair our bodies at the cellular level and cure diseases like cancer and alzheimers by reprogramming our biology. This isn't just treatment--it's the end of disease as we know it."

The Call for Leadership with a Strategic Vision

AI is already transforming medicine by accelerating drug discovery, personalizing treatments, and improving diagnostics. There are over 3 million peer-reviewed articles on medicine published each year. To be informed about the latest advances, a doctor will need to be assisted in learning about the latest developments. Over the next five to ten years, AI and Q will get even better at sifting through massive datasets covering genomics, patient records, and clinical trial results to pinpoint novel drug targets faster than ever. It will optimize how clinical trials are designed, cut down on the time it takes to get a cure from the lab to the patient, and predict how a disease progresses and tailor an intervention before symptoms even kick in.

They say when you are healthy you think about many things, but when you are sick, you only think about one thing. AI and Q will find national leaders for national defense, but we need fearless leadership to use the tools of the 21st century to radically reduce the pain and suffering of the American people