

# **EXHIBIT 8**

## **DECLARATION OF THERESA S. MAYER**

I, Theresa S. Mayer, declare as follows:

1. I am the Vice President for Research at Carnegie Mellon University (“CMU”) in Pittsburgh, Pennsylvania. I have held that position since February 1, 2023.

2. As Vice President for Research, I have personal knowledge of the contents of this declaration, or have knowledge of the matters based on my review of information and records gathered by CMU personnel, and could testify thereto.

3. CMU receives substantial annual funding from the National Institutes of Health (“NIH”). CMU has 189 active research awards from NIH, totaling \$136.9 million in funding. Total research expenditures for fiscal year 2024 were \$52 million, which included \$11.7 million in indirect costs.

4. The interdisciplinary teams supported by NIH funding benefit the nation by bringing together the expertise of computer scientists, engineers, biologists, chemists and others to develop innovative solutions. The funding CMU receives from NIH supports critical and cutting-edge medical research, which millions of Americans will be able to benefit from and depend on. For example:

- a. CMU researchers are working on restoring sight to patients with corneal blindness. Researchers are fabricating corneas in the laboratory that can be used to overcome the shortage of corneas from tissue donation.
- b. CMU researchers are developing new methods to keep artificial lungs from clotting and failing. This research will enable safer support of patients with short-term lung failure from diseases like pneumonia, and create new, restorative treatments for patients dying from chronic lung diseases.

- c. CMU researchers are developing more long-lasting and effective methods for stimulating deep areas in the brain to relieve symptoms of Parkinson's disease. This work promises to enable more fluid and natural motion in those suffering from the disease, based on a deep understanding of the specific neurons impacted by the disease.
- d. CMU researchers are developing a novel method for helping patients with long-term paralysis on one side of the body due to stroke. By stimulating the spinal cord, this new approach promises to help stroke sufferers recover control of their arm and hand by strengthening pathways damaged by stroke.
- e. A large-scale study of families with a history of autism spectrum disorder (“ASD”) is identifying genetic factors associated with core features of ASD. Uncovering these genetic factors holds promise for development of targeted therapies that address underlying causes of ASD, which could improve social communication and language skills, increasing independence and improving the quality of life for individuals with ASD.
- f. A study of patients undergoing removal of brain tumors is providing insight into how the brain relearns function. By comparing functionality prior to and following tumor removal, this work promises to improve outcomes in individuals undergoing invasive brain surgery.
- g. CMU researchers are developing methods to more effectively treat epilepsy, replacing invasive brain surgery with a noninvasive method to identify where in the brain disease is present. Measurements from the surface of the scalp are interpreted

with cutting-edge data science and machine learning techniques to predict disease location, improving clinical management of focal drug-resistant epilepsy.

- h. Researchers at CMU are creating multiple large-scale databases to document speech and behavior in various neurological diseases, including dementia, aphasia (inability to find words, speak, read, or write), dysfluency, and other disorders that affect communication. These multimedia data sets provide an open source for researchers and clinicians throughout the United States who study how to diagnose and treat communication disorders.
- i. A novel interface is being developed at CMU to enable paralyzed individuals who cannot speak or use their upper limbs to use brain signals to communicate through technology interfaces (e.g., driving speech synthesizers, writing email, etc.). The novel “stentrode” picks up signals in the brain that would, in a healthy individual, normally control the hand (to type) or the mouth (to speak), enabling these individuals to communicate, rather than being “locked in” due to their disability.

5. Indirect costs are essential for supporting this research. The NIH’s proposal to cut indirect cost rates to 15% would end or seriously jeopardize all of the research projects described in paragraph 4.

6. Indirect costs include high-tech lab structures, equipment and maintenance, security and data storage, operations maintenance and utilities supporting research labs and facilities, and constructing and maintaining state-of-the-art facilities required to meet the current technical requirements of advanced research. Without this equipment and facilities, we cannot conduct the research.

7. For example, with respect to the areas of research described in Paragraph 4:
  - a. Artificial lung and biofabricated cornea research require microscopes capable of identifying, differentiating, and imaging specific molecules and cells present on the gas exchange surfaces of artificial lungs and within the corneas;
  - b. Artificial lung research requires spectrophotometers that detect the presence of specific molecules causing coagulation and inflammation in blood;
  - c. Artificial lung and biofabricated cornea research require equipment to sterilize various research items, both at high temperatures for durable items or at low temperatures, and gaseous sterilization for devices constructed of medical plastics;
  - d. Biofabricated cornea research requires tissue culture facilities that contain biosafety cabinets that ensure a safe, sterile work environment and incubators to grow the cellular component of tissues;
  - e. Artificial lung and biofabricated cornea research require centrifuges for separating different fluids, cells, and sub-cellular components for further analysis or research processes;
  - f. Artificial lung and biofabricated cornea research require -80° C refrigeration and cold-rooms for biological samples;
  - g. Custom-fabricated, highly precise 3D bioprinting systems are required for tissue and organ engineering work;
  - h. Confocal microscopes, cell incubators, biocabinets, plate readers, IVIS and other fluorescent imaging systems, environmental Scanning Electron Microscopes, and metrology equipment are used for benchtop and in vitro tissue and organ engineering studies;

- i. Microfabrication equipment (such as laser milling systems, precise 3D printers, centrifuges, vacuum chambers, etc.), nanofab (cleanroom), and materials characterization systems (and laboratory in general) are all used to support biosciences and bioengineering research;
- j. Studies that document how the brain recovers from tumor removal and other projects investigating human neural processing rely on a central functional magnetic resonance imaging center dedicated to research (rather than clinical) applications, housed within Carnegie Mellon University. This facility (the BRIDGE Center) is currently operating at over 100% capacity, supporting the research of faculty from across the university;
- k. Large-scale computational resources are critical for application of machine learning to neuroscience data, including analysis of noninvasive measures used to predict where epileptic seizures arise in the brain;
- l. Data storage facilities and associated staff are critical for projects that require large-scale data storage, including studies that document communication disorders (aphasia, dementia, and other issues) and make the data available to researchers and clinicians outside of CMU;
- m. Studies of novel technology interfaces that enable human stroke patients and those with paralysis to control devices critically rely on shared facilities to build custom mechanical and electrical devices;
- n. Studies of human participants suffering from stroke, paralysis, dementia, aphasia, dysfluency, autism spectrum disorder, brain tumors, and epilepsy require extensive

administrative support to ensure that all studies are conducted ethically, legally, and with minimal risk that is justified by the potential benefit to human health; and

- o. Studies involving animal models of Parkinson's disease, autism spectrum disorder, and other forms of neural dysfunction require extensive administrative support and specialized, centralized facilities.

8. Physical space costs are one of the largest components of indirect costs, and the amount of space available to researchers has a direct and obvious impact on the amount of research that can be done at CMU. The Richard K Mellon Hall of Sciences, now under construction, is a new facility which will house key departments from the Mellon College of Science (Biological Sciences, Chemistry) and from the School of Computer Science (Language Technologies and Machine Learning, Computational Biology), to build on and expand the interdisciplinary research for which Carnegie Mellon is well known. Although the university has raised significant private support for this new facility, the budget also depends in part on long term expected indirect cost recovery from all sponsored funding.

9. In addition, indirect costs fund the administration of awards, including staff who ensure compliance with a vast number of regulatory mandates from agencies such as NIH. These mandates serve many important functions, including protecting human and animal subjects involved in research; ensuring research integrity; properly managing and disposing of chemical and biological agents used in research; preventing financial conflicts of interest; managing funds; preventing intellectual property, technologies, or national security expertise from being inappropriately accessed by foreign adversaries; and providing the high level of cybersecurity, data storage, and computing environments mandated for regulated data.

10. Recovery of CMU's indirect costs is based on fixed with carryforward rates that have been contractually negotiated with the federal government.

11. Through fiscal year 2025, CMU's on-campus, fixed with carryforward indirect cost rate is 51.8%.

12. The impact of a reduction in the indirect cost rate would be devastating to the work described above. Of the \$52 million in NIH research expenditures in fiscal year 2024, approximately \$28.2 million was allocated for direct costs, \$12.1 million for subcontracts (which are not eligible for overhead recovery), and \$11.7 million for indirect costs. Similarly, in fiscal year 2025, CMU expects to receive \$54 million in NIH funding for direct costs, while \$12.2 million would be allocated for indirect costs. And over the next five years, CMU anticipates receiving an average of \$57 million from the NIH for annual direct costs. Based on the fixed with carryforward indirect cost rate of 51.8%, which was agreed upon by the federal government as of July 29, 2024, the University thus expects to receive indirect cost recovery consistent with the expected average funding and prior years.

13. If—contrary to what CMU has negotiated with the federal government—the indirect cost rate is reduced to 15%, that would reduce the University's anticipated annual indirect cost recovery by 71%. Therefore, in fiscal year 2024 the loss of indirect cost recovery would be approximately \$8.3 million.

14. This reduction will have deeply damaging effects on CMU's ability to conduct research from day one. Most critically, it will necessarily and immediately result in staffing reductions. For example, as indicated above, indirect cost recovery is used to support the salaries of research administrators who play a crucial role in the research ecosystem. They support the administrative and financial aspects of research grants, in addition to supporting compliance with



regulations governing such things as human subjects, animal research, biosafety, data privacy, and security. Without appropriate funding for indirect costs, the University would have to reduce this staffing which would immediately and negatively impact CMU's ability to support critical research projects.

15. CMU has for decades relied on the payment of indirect costs. Until now, we have been able to rely on the well-established process for negotiating indirect cost rates with the government to inform our budgeting and planning. Operating budgets rely on an estimate of both direct and indirect sponsored funding to plan for annual staffing needs (*e.g.*, post-docs, PhD students, and other research staff), infrastructure support (*e.g.*, IT networks, regulatory compliance, and grant management support), and facility and equipment purchases. In some cases, CMU has long-term obligations—for example, tenured faculty, salaries, space lease, capital renewal, service contracts, software licensing costs and admitted PhD students—and it relies on budgeted grant funding, including associated indirect cost recovery, to fulfill these commitments.

16. Disruptions to CMU's research will also have negative effects in the Pittsburgh area, the state of Pennsylvania, and the broader region. CMU is one of the largest employers in Pennsylvania, with 5,979 employees at its Pittsburgh campus alone. CMU engages in important collaborations with state and local partners to help solve regional challenges through joint research and innovation. CMU's research also drives discoveries that launch new ventures, attract private investment, and make a positive social impact by supporting the commercialization of novel technologies. As such, CMU plays a crucial role in catalyzing regional and national economic development. These startups drive economic activity, create high-skilled jobs, and contribute to the growing innovation ecosystem. The reduction in CMU's research budget would immediately and seriously jeopardize these economic contributions.

17. CMU's researchers are at the forefront of AI research, pioneering technologies that are transforming health care and the life sciences. Slowing down or halting the research conducted by CMU and other American universities will allow competitor nations that are maintaining their investments in research to surpass the United States on this front, threatening both our Nation's national security and its economic dominance.

18. CMU cannot cover the funding gap itself that would result from the reduction of the indirect cost rate. While CMU maintains an endowment, it is neither feasible nor sustainable for CMU funds or other revenue sources to offset shortfalls in indirect cost recovery, for several reasons:

- a. The majority of CMU's endowment—around 83.8%—is restricted to specific donor-designated purposes, such as scholarships, faculty chairs, and academic programs. CMU is not legally permitted to use those funds to cover research infrastructure costs.
- b. Even the portion of the endowment that is unrestricted is subject to a carefully managed annual payout, typically around 5%, to ensure long-term financial stability for the institution.
- c. As a non-profit institution, CMU reinvests nearly all of its revenue into mission-critical activities, leaving little margin to absorb unexpected funding gaps. In other words, unlike for-profit organizations, CMU does not generate significant surpluses that could be redirected without impacting core academic priorities such as educational programs and financial aid support for students.

19. Moreover, absorbing the cost of a lower indirect cost rate, even if it were possible, would create long-term budget pressures on CMU—which would in turn force reductions in key

investments supporting CMU's faculty, students, staff, research, and teaching infrastructure, as well as other critical activities needed to maintain CMU's academic excellence. This change to the indirect rate will undermine CMU's ability to advance its mission to educate the next generation and create knowledge that benefits society as a whole.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on February 10, 2025 at 5000 Forbes Avenue, Pittsburgh, Pennsylvania,  
15213.

/s/ Theresa S. Mayer

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Theresa S. Mayer