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[00:00:00] **Speaker 1** Afternoon, everyone. Good afternoon. I'm Jay Rothman, and I have the privilege of serving as president of the universities of Wisconsin. And we thank you all for being with us today. Over the last 80 years, the United States has created and and funded the most robust, most consequential university research enterprise in the world. And Europe. And universities in Wisconsin have played a significant role in that process. Here in Wisconsin, the research our universities conduct is critical. It advances knowledge, improves lives, and helps bolster economic prosperity across our state. But the way it touches most people's lives is through the pursuit of cures and treatments for a range of debilitating diseases and afflictions. Anyone who has cared for a patient with Alzheimer's or nursed a child through cancer or developed adult onset diabetes. Knows that today we are standing in the Health Science Learning Center, next door to laboratories, engaged in a range of exciting and life changing research that you'll hear more about from Chancellor Manoogian and others. Threatening to curtail federal research. Funding for these vital projects has real implications for families and communities counting us, counting on us to find solutions to our most pressing needs. So it. So today, together with our one research universities and other partners, I am sharing a letter we presented yesterday to our congressional delegation. It is signed by business leaders and organizations across Wisconsin urging these elected officials to support continued research funding in Wisconsin. And to reverse the cuts proposed by the federal government. And it's not just our one. Universities. Universities across Wisconsin receive research funding from the federal government to work to the betterment of our people and our communities. Taking a meat cleaver to this funding is simply wrong, shortsighted, and will cause harm to people across the state of Wisconsin and the country. Our university research labs should be a hub of activity, humming to provide life saving research that families can count upon. This impacts all of us. Wisconsin should settle for nothing less. And now it is my pleasure to introduce to you the Chancellor of UW Madison, Jennifer Manoogian. Counselor. Thank you.

[00:02:58] **Speaker 2** Thank you, President Rothman, for your remarks and for your support and leadership for our incredible universities that educate and serve Wisconsin and the world. And thank you to our supporters and partners who have joined us today here in this building. We're training future doctors, scientists and other medical providers. Nearby campus researchers are leading a major grant from the National Institutes of Health to unlock the mysteries surrounding Alzheimer's disease in a quest for better treatments and ultimately, a cure. That's just one critical example of the tremendous research efforts taking place all across this campus. Joining us today is Professor Sterling Johnson, a clinical neuropsychologist and leader of a landmark study called the Wisconsin Registry for Alzheimer's Prevention, One of the world's largest and longest running studies of individuals at risk for Alzheimer's disease. Joining him is one of the 1700 individual volunteer participants, Sigrid Canty, who will also speak. Thank you both for being here and for your commitment to this work. This research, like so much research on our campus, builds on decades of critical innovation, discovery and expertise. UW Madison research has translated into billions and billions of dollars in economic impact for our state and many thousands of jobs, including over 400 UW related startup companies in Wisconsin that help to improve lives. These companies are tackling everything from blindness to improved survival rates for surgery patients in fiscal year 2023. Every dollar of NIH funding across the country generated around $2.46 of economic activity. This research fuels invention and discovery and fuels the economy here in Wisconsin and across our country. Indiscriminate reductions in research funding, funding like those we're facing right now pose significant risk to our state and our nation's future. These cuts harm our ability to make critical, lifesaving discoveries and to train our students to be global leaders. They will also damage our nation's innovation economy and our international competitiveness. Let's work together to protect and preserve the vital research work around us that's poised to make critical new discoveries and save lives here in Wisconsin and all across the nation. With that, I'm pleased to introduce Professor Sterling Johnson to discuss the Wisconsin Registry for Alzheimer's Prevention study. Thank you.

[00:06:08] **Speaker 3** Good afternoon everybody. I'm Sterling Johnson. I'm in the Department of Medicine here at the School of Medicine and Public Health. I'm one of the leaders in the Alzheimer's program here. In addition to running the Wisconsin Registry for Alzheimer's Prevention. I'm part of the Wisconsin Alzheimer's Disease Research Center, which is an NIH funded entity that provides the glue for much of the research that we do on our campus. Alzheimer's disease affects 7 million across our country here in Wisconsin. There's about 120,000 people who were at the dementia phase of Alzheimer's disease. It's the seventh leading cause of death. And it's certainly one of the it is the only disease in the top ten causes of death that continues to rise at an extraordinary rate by 2040. We anticipate the numbers that I just mentioned will be 44% higher. And I wanted to give you an idea of the way that UW is having an impact on this disease. As I mentioned, the Alzheimer's Center is providing a lot of the glue. It's helping us train the next generation of scientists who will be facing the future iterations of this disease. It's providing key infrastructure for methodologies and for know how, so that our investigators can ask cutting edge research questions without having to be an expert in every aspect of their studies. Alzheimer's disease is defined biologically by two proteins amyloid and tan. These cause the plaques and tangles that we think about with Alzheimer's disease. But what we often don't, don't appreciate, and what we've discovered here at UW is that these these protein ofthese, if you will develop 20 or more years prior to the symptoms, that gives us quite a range of time to intervene. The insights along around this timing of events has largely come from the University of Wisconsin. We're excited that we can provide some precision on this at a personal level, so that cures and therapies can also be done at the person level as we translate this to the clinic. The along these lines also, the the UW is participating in a number of clinical trials to prevent Alzheimer's disease and also to to address it therapeutically in its symptomatic phase. We're also looking at a number of other factors health factors, lifestyle factors that may slow this disease down. The effect of exercise, the effect of of medical management of blood pressure and cholesterol, and those things we know from research done here that that health and lifestyle optimization won't necessarily stop plaques and tangles from forming, but they will slow down the symptoms that that eventuate from this disease. The I want to mention two ways that the Alzheimer centers and the Alzheimer's programs around the country are collaborating. One is a consortium of all 36 Alzheimer's centers across the country. These are all NIH funded entities that are now working together as a consortium to understand the the impact of other etiologies, besides Alzheimer's, on eventual symptoms. It's called the consortium for Clarity and Alzheimer's Disease Research Through Imaging. And it's a it's a testament to to these NIH funded entities willingness to work together and create solutions faster so that we can respond to the to the current public need of this disease. The other one I want to mention is a down syndrome consortium that the University of Wisconsin is, is highly involved with and leading many aspects of this. At the Weissman Center across the street, we are discovering that although Down's syndrome is a developmental disease, there's also an aging component to it that involves Alzheimer's disease. And in fact, if individuals live long enough who have Down's syndrome, nearly all of them will develop the plaques and tangles from Alzheimer's disease. So this this kind of insight would not be possible without the incredible infrastructure and imaging and biomarker capabilities that the university provides. I wanted to go back to the Wrap study and and let you know that this study has been NIH funded since 2006. The longitudinal data that we are collecting is being shared all across the world. It's providing key insights, and it's now speaking louder than ever as a study and as a as a data set, because we have all of this longitudinal data that we are sharing across the world. One of our participants is here, and I want to introduce her. Sigurd Kennedy is a long time participant in the study. She joined in 2005. She. You may have also seen her in the documentary on Rab called determined. She's one of the three women in that documentary that that describe their story and explain how this disease has impacted them. So proud of Sigrid for her long time commitment to the study. And I want to introduce her to you now, Sigrid.

[00:11:51] **Speaker 2** I was asked to speak about why was in the study. Well, I'm in the study because I'm a woman, and therefore I have a 50% chance higher rate of having Alzheimer's than a man. I'm also in it because I'm a daughter of someone who had Alzheimer's, which increases my risk. Not only did my mother have Alzheimer's, but her cousin who was a first cousin twice because brothers, married sisters so very closely related genetically. Also died of Alzheimer's and most likely their grandmother because her death certificate states hardening of the arteries, and they described her as being childish as she got older. Over the last 20 years, I participated in a number of NIH funded studies. I have had cognitive tests, MRI, Pet scans, spinal taps, and even an endurance test on a treadmill. I've also served on the first advisory board where I was. I had the opportunity to actually see the research coming together in a coherent process and showing a path to treatment and to prevention. I've also been inspired by these studies and have adjusted my lifestyle to pursue my mental health, my brain health. I exercise, I participate, I eat the mind, the mind study. I don't know if you're familiar with that. It's very close to the Mediterranean diet, but it has a little, little differences. Anyway, I really feel like I've been honored to be a part of this. It's so big. It's so important and it's very hopeful. I don't know if many of you have seen or met or know anyone who's been in the last stages of Alzheimer's, but I will tell you, it is not very pretty. You don't just lose your memory. Your brain is failing. You can't walk. You can't talk. You can't swallow. And the late stages of Alzheimer's generally requires 24, seven, 24 hours a day, seven days a week care. And usually not one caregiver can deal with this person. And it often requires nursing home care, which is extremely expensive. It's average about $82,000 a year after taxes for a family. Social security doesn't really cover that, does it? I want to share a story with you. My son in law's aunt was diagnosed with Alzheimer's about ten years ago, and her memory was progressively she lost her memory progressively. Her husband was her only caregiver. He was a college professor, retired college professor, and they had no children and no grandchildren, so caring for her was up to him. Just a few weeks ago, in mid-January, my son in law received a text from his uncle and it was very simple. It said, I cannot do this any longer. He shot his aunt, he shot himself. And that is how their 60 year love story ended violently. It was not necessary. He was unfortunate. So I began by saying, I'm in this study because I'm at risk. But clearly my family has Alzheimer's unit and for several generations. So I'm a mother. And I'm also a grandmother. And I want Alzheimer's to be. I want to be the last person. And I want this generation to. And Alzheimer's. And for that, I'm counting on Stirling and the University of Wisconsin to get it done. I'm very proud of my university and very proud of what's happening here. Thank you.

[00:16:00] **Speaker 3** Thank you. Cigarette? I'd like to now turn this over to Professor Karen Frick from the University of Wisconsin, Milwaukee, who is professor of psychology and chair in the neuroscience area. Professor frick.

[00:16:22] **Speaker 4** Good afternoon. On behalf of Chancellor Mark Monet, who was unable to be here this afternoon. I offer warm greetings from the University of Wisconsin-Milwaukee. Hi, I'm Karen Frick. I'm a distinguished professor in the Department of Psychology, where I direct a research laboratory supported by funds from the National Institutes of Health. In this lab, I train and supervise undergraduate research assistants and scientists from around the world who are pursuing their PhDs or conducting postgraduate research. For much of the past 25 years. My research has been driven by the fact that, as you just heard, women are at significantly greater risk of developing Alzheimer's disease than men, which we think is related to estrogen loss at menopause. The NIH funded research conducted in my lab is designed to understand how estrogen to regulate memory on a cellular and molecular level, so that we can use this information to develop new treatments to reduce memory loss and the risk of Alzheimer's in women as well as men. The NIH funds my lab has received benefit UW, Milwaukee, Wisconsin and the nation in several important ways. First, they provide our undergraduate students with unparalleled opportunities to engage in research which not only provides invaluable hands on experiential learning and skill development, but enhances academic success and graduation rates. Moreover, undergraduate research experience helps students accomplish their career goals, as illustrated by my lab's graduates who have gone on to careers as physicians, veterinarians, scientists, mental health providers, occupational therapists, and genetic counselors. Most of these graduates stay here in Wisconsin, benefiting our communities and our economy. Second, NIH funds my lab have received have been instrumental in training the next generation of scientists at the doctoral level. These scientists have made important and novel discoveries about how the brain makes memories that have laid the foundation for the development of next generation drug therapies, to reduce the epidemic of memory dysfunction and Alzheimer's disease in our increasingly older population. My own NIH funded research has led to the development of new therapies for reducing memory loss, alleviating hot flashes, and reducing the risk of Alzheimer's disease, which we hope will reach the clinic in the next 5 to 10 years. If you remember one thing from my remarks today, it's that federal funding for basic and clinical research is critical for training the next generation of scientists and health professionals while developing new treatments for Parkinson's disease, Alzheimer's disease, schizophrenia, addiction, as well as conditions such as cancer, heart disease, stroke and diabetes, which are among the leading causes of death in the United States. Simply put, these desperately needed treatments would not be possible without NIH funding. Thank you. I would like to next introduce Mr. Tom still, president of the Wisconsin Technology Council.

[00:19:43] **Speaker 5** Thank you. Karen. Well hello everyone. I'm Tom Steele from the Wisconsin Technology Council. As Rothman, Chancellor Luke and others, thank you for for being a part of this today. You know, it's interesting when you talk about Alzheimer's. I own family has been touched by that. And we you know, we've seen it in some some fairly serious ways. And so it's it's more evidence of the kinds of things that are going on here. Why I think my role here today, because of president of the Tech Council, by the way, it was a little bit late because it was a Capitol hearing on economic development today where I had to to testify. I did sneak in the NIH cuts there. So more the more audience, the better, right? You know, when you look at the impact of NIH in Wisconsin historically. 2023, about 654 million, you divide that by our roughly 6 million people. You come up with about $110 per year capital. That's a pretty you know, that's a pretty small investment when you look at it in terms of what we're getting out of that, not only in this state, but in the research that's done here. And well beyond that extends beyond our borders. And in the meantime, because of the sort of the ripple effect of that kind of research. You see it in construction jobs, you see it in tech company jobs. You see it in all kinds of things that are adding to the economy. So those NIH dollars are contributing in ways that, you know, even go beyond what's going on here. A couple of stories that I could talk about there that I think are pertinent. Let's look at GE Health Care Waukesha. They have been making MRI machines for a long time. They almost plateaued in terms of the construction of those kinds of jobs and the need for those kinds of machines, because their MRI was limited to a few selective uses. But, you know, thanks to the research done here and in many other places, all of a sudden there the uses expanded vascular system, stroke detection, tumors, head trauma, chronic liver diseases a lot more. So that company and the help that it provides through having those machines out in the world is expanding 13,000 such MRI machines in the United States today. I think about 50,000 globally. An example of a company that continues to thrive, continues to innovate, and continues to see the results of the kind of research that in our space for it. Another another good example here in town. Third wave technologies third wave is in some ways is is the grandfather of biotech in in Madison. I can point to Promega for the same thing. And Promega is another great example. With third wave is a place where. They produce molecular diagnostics to to help in reagents, to help in analyzing DNA and RNA. And so it became really important as they moved along. And by the way, you can go back in time and you could look at some some of the researchers here at the UW go back to Howard Timman. And so in his Nobel Prize winning week or years ago, what third wave? It was quick research on what they got in terms of the NIH grants was about 1.6 million over time. Not only was there the research that led to the creation of that, but then more beyond that. Well, Third Way was eventually acquired by a company called Hologic. And the story just just grew. I mean, $580 million. Excellent on that. In terms of Hologic purchase led to the the rebirth. Exactly. Essentially of exact sciences. You know, many of, you know, exact sciences here in medicine which which makes kits for colon cancer detection. Well, that was that was Kevin Conroy and Maneesh Aurora, who were a part of that third wave we had acquired, Exact Sciences brought it back. There have been probably a dozen or so executives who came out of third wave, who have done other things in this community, in this state, over time to build on that economy. So obviously, the NIH cuts are going to hit first in places like here to, you know, the Madison, you know, in Milwaukee, where Professor Frick is. The Mooresville clinic is actually number five in the state in terms of NIH dollars. I'm on the board of directors there. So I know that they're doing great research. And the Medical College of Wisconsin, another great example, Marquette. So it's not just here is statewide, and it's embedded in years of excellent, excellent research that have been translated in so many ways. So it's it's a great story that kind of goes beyond what's happening here to to what's happening around the state. And I see I see Dean Golden's here from medical school and he's he's followed this intently and have done so much to to build on this. So thanks. I know we'll all be around later for questions, but I wanted to introduce Nicholas Ferris by a forward. He can talk. He's on the board there. He can talk more deeply. I think about what it means in the bio health industry in general. And I think also maybe specifically the bio health tech hub that's emerging in Wisconsin and where we need to go from there. So thank you all very much. Thank you, Tom, for the great introduction. I'm Nicholas Perez, I'm chair of bio for the Wisconsin, the voice of bio. Your health industry in Wisconsin through its 250 members and Unless to mention yes, we are the governance body for the newly created. Thank you that your health industry in Wisconsin, it's a national leader driving innovation and economic growth, but also contributing, of course, to health outcomes. We have plenty of example today. It's a very wide ecosystem with notably biomedical research and testing, digital health, drug and pharmaceuticals, medical devices, and a lot of manufacturing that goes with that distribution. So it's a whole big ecosystem and bio forward. When we talk about during Wisconsin space industry, we are talking about a collaborative effort between industry leaders, research institution, of course, and policy makers. All states institution like UW Madison, UW, UVU, Waukee Medical College of Wisconsin and all the others. Play a critical role in advancing groundbreaking medical research. Academic year R&D in Wisconsin has grown faster than the average youth. Do you ever get sorry? During the previous years and I had funding here. Permitting of GSP, as it's been underlined, is I hear here in Wisconsin than anywhere else in the U.S.. So getting federal funding, particularly an age grant, would severely impact not only our ability to innovate, but also our ability to improve lives and grow our economy. So Tom rightfully mentioned NIH investment brought $654 million to Wisconsin in 2023, and thousands of direct jobs and generally billions in in economic activity for the state. These funds from an age don't just drive research. Attract biotech companies, venture capital. They attract top scientists and talents to the state. They drive manufacturing, drive services, and even more so if there's no research. There are no discoveries, no treatments, nor new or fast growing companies and no ecosystem to support them. So there's no doubt that reducing NIH funding would be a direct threat for us in Wisconsin. But for the US in general, its position as a global leader in favor with innovation would be compromise. At a time where China is aggressively investing in research and biotech, aiming to surpass the U.S. in life science innovation. Now is not the time for America to weaken its competitive advantage. And you were mentioning the tech hub. Yes, we are very proud of our tech hub. But what I take up without funding to innovate. So the proposed 15% cap on interim cost would make it, of course, harder for Wisconsin research institution to conduct world class research. It would be putting us at a serious, serious disadvantage globally and funding for the entire ecosystem that turns academic discoveries into life saving treatments and thriving businesses. It is not only a research problem, it is everyone's problem. So we must protect NIH funding to keep Wisconsin at the forefront of better health innovation. Of course. Investment in medical breakthroughs. And together, we must defend Wisconsin leadership in bail out and ensure we continue building the future of medicine. Thank you.

[00:29:58] **Speaker 1** My first thank you very much and thank you to all of our presenters today. I think what you can take away from this is that research has certainly enormous economic impact, but it has so much more than that. It provides that opportunity for current researchers to do their work, to grow the next generation of researchers that will do great things, but most importantly, it provides hope and it provides the opportunity to improve lives. It is that simple. So again, we thank you for being here. We have a couple of minutes for questions, and a number of our presenters today will be able to stay a little bit longer and answer any other questions you may have. So are there any questions Kimberly.

[00:30:47] **Speaker 6** So, you know, they're open to, you know, these large indirect possibilities. But this is just a way to pay overhead for university. So where do indirect. Cost Costco. You know, 26%. What does.

[00:31:01] **Speaker 1** That mean? What does that mean? I think there are a lot of things where they indirectly go. I view it as though you can have a car, but if you don't have gasoline in the car, the car's not going to move. They are important to provide, you know, the laboratory space that is there. They are important to provide regulatory compliance that are important to provide. The issues around patient safety and funds, all of that. But the way I would step back and look at it is this is that there have been what we want to cut indirect costs, but there is no evidence that that money is going to be reinvested in research. And that, I think, is the real serious issue here, because this goes to who we are as a society. Are we going to invest in our future? And I think that's the way we ought to look at this. And I you know, if the indirect costs are cut, there has been no indication that that's going back to be reinvested in research. Are you our universities? I think universities across the country. This is watched very closely. They invest that money wisely. Yes.

[00:32:02] **Speaker 6** A federal magistrate lot. And I need some funding. What do you make of that? Do you think that's going to help you guys? Are you optimistic about that?

[00:32:10] **Speaker 1** I think some of the judicial actions that have been taken are temporary pieces. I think the bigger issue is when Congress deals with the reconciliation budget process going forward. And I think that's where this will really come to a head. And I think that's why we are particularly concerned about the impact that these cuts could have on research funding. But I would hope all of us would be concerned about not having those opportunities to have that hope and have those cures for ourselves, for our children, for our families.

[00:32:44] **Speaker 5** Question to your left, president.

[00:32:46] **Speaker 1** Yes, sir.

[00:32:47] **Speaker 6** This week, just to look.

[00:32:48] **Speaker 2** At evidence and specific.

[00:32:50] **Speaker 6** Steps that you have now taken to prepare and respond challenge of hunting cuts involves the changes. What specific steps have the university's response in a higher level taken to address these changes?

[00:33:01] **Speaker 1** The area anticipating it? We are certainly looking at a number of things. I have introduced a hiring freeze, we have restricted travel, and we are looking at other contingency planning relative to how we would, as the universities of Wisconsin administration, do with that, because that just applies to UW, USA, not to our universities, but our universities are going through a lot of contingency planning. And I'll let the Chancellor address how the actions that that her administration is doing at UW Madison.

[00:33:33] **Speaker 2** Thanks. President Rothman, I'd actually like to come back to Kimberly's question about indirect, because I know the numbers can seem big, but the thing to understand is that indirect cost expenditures are real costs. They're not there. For example, in the Alzheimer's study, those big pieces of medical Equipment that we're using to study people that community is getting tested on. Those are Hendricks. Those are those are absolutely critical. Yes. They're the gasoline. There are a lot more than the gasoline there. All of the technology infrastructure and the big picture, big ticket items that help support the doing of research. They are also all of the compliance costs that we have to do what we're required to do in order to do federal research and to do it safely. So I think it's it's easy to sort of say, gee, are they just overhead? But they're actually very real costs. And so if you took those away, even if you put them back into research, it would reduce the research we could do, because unless we could find other ways we could pay for those very real costs. We couldn't do the research that we're doing all around the university. And so I think it's very important to try to explain that we are taking a variety of steps. There's a lot of uncertainty right now about where all this will land. And so we're trying to be cautious about about how we spend money or trying to scenario plan for a variety of futures. And we're also trying to stay focused on our core missions of research, teaching and service and what we can do to protect those parts of what we need to keep doing for our students, for the state. For the Wisconsin idea. Thanks.

[00:35:17] **Speaker 1** Other questions? Yes, sir.

[00:35:19] **Speaker 7** What is the proposed cap on NIH funding mean for undergraduate students who are looking to get their foot in the door at some of these research labs? We're looking to sort of gain that experience. And could we see changes for students that are already in those positions if these.

[00:35:36] **Speaker 1** Cats are replaced?

[00:35:37] **Speaker 6** So yeah.

[00:35:40] **Speaker 3** That's a great question. I think we'll both have opinions on that. It's certainly going to impact our ability to train the next generation of scientists. Undergrads come into our labs. They gain crucial experience that then serves as the next stepping stone into graduate school or other professional opportunities. If the labs aren't able to to conduct that research, there'll be no basis, no no projects for them to come in and and learn on. So it is a big concern for us.

[00:36:13] **Speaker 4** I would just echo that as well. So, you know, undergrads or delay the lifeblood of our research enterprise. And without NIH funding, those opportunities for undergraduates simply won't be there. And so they won't be able to get that experience. And for, you know, students come to places like UW Madison, UW Milwaukee for that research experience that they would really lose a valuable aspect of their undergraduate experience.

[00:36:41] **Speaker 7** We can't we've got time for one more question.

[00:36:44] **Speaker 1** Yes.

[00:36:44] **Speaker 6** Yeah. Can you talk about any changes to the graduate admissions at UW as well as a result?

[00:36:50] **Speaker 1** I think that would also be a good question for the Chancellor to address.

[00:36:56] **Speaker 2** A number of schools around the country have frozen or paused graduate admissions. We've taken a somewhat lighter touch to this, at least so far, in part because graduate research isn't just a start and stop activity. If we have to pause and really have reductions, there'll be very long term consequences. We have asked departments and units to look carefully at their admissions and to be cautious, but we haven't had any university level hard and fast rules about exactly what that looks like.

[00:37:29] **Speaker 1** Again, thank all of you for for being here today. I know a few of the presenters will be staying around to answer any additional questions you have, but again, thank you very much. Thanks.

[00:37:41] **Speaker 7** We'll also be able to take folks on a.