

March 7, 2025, *Stand Up for Science Rally*

at the Wisconsin State Capitol

## **Fostering Appreciation of Science**

Remarks delivered by Bassam Shakhshiri, UW-Madison emeritus professor of chemistry, the William T. Evjue Distinguished Chair for the Wisconsin Idea, and former NSF assistant director.

[www.scifun.org](http://www.scifun.org)

Today, you and I stand up for science. Today and every day, you and I must stand up for science.

We live in the most advanced society in history because of great advances in science and technology. Science and technology have greatly affected:

health care for the elderly, health care for everyone, transportation in every mode, communication, smart phones, social media, business and commercial transactions, efficiency and productivity in so many aspects of our lives, new biomedical devices, gene editing, and other innovations, food safety and nutrition, space exploration, vaccines and other pharmaceuticals, renewable energy, and you and I can go on extending this list.

Science and technology are the engines that drive our economy. Science and technology greatly contribute to the quality of life and to the well-being of society.

Can you imagine what the world would be like without science and technology?

Now, I want to ask: how many are there in the crowd are in science and science education? If you are doing research or teaching science, please raise your hand.

How many are not in science? Please raise your hand.

I want to speak to the people who are in science. And I want to speak to the people who are not in science.

I want to speak about the profound and essential importance of connecting those of us who are in science to those who are not.

In science, we all do what we do because it interests us, it satisfies our curiosity, we enjoy it.

We help advance knowledge. We seek support for our research. We communicate with each other very well. We publish scientific papers. We hold scientific meetings.

However, we must improve our conversations with the taxpayers who support us. We have a responsibility and obligation to communicate our research and its value to non-scientists.

After all it is our research, and we are proud of it, and we are grateful for the funding we receive.

Hey, when was the last time you had a conversation about science with someone who is not a scientist? Or with a non-science group?

And what did you talk about? Perhaps your research project?

Did you talk about global warming?

How well did you connect with the person or group?

Did you earn their trust?

And how good of a listener were you during the conversation?

What were the 2 or 3 takeaway messages that you wanted people to walk away with?

Were you confident that you planted seeds for another conversation?

We are trained to become skilled in doing scientific research. We do a good job communicating with those who are interested in our research. But we are not skilled in talking with people outside our research group.

We should learn how to connect with people who are outside our own subspecialties. With people who are not in science. With people who vote. With people whose support to science is crucial to the survival of the science enterprise.

We excel in research by being sharply focused...inside our silos. To preserve the integrity of our work and to assure support for our research we have to succeed in talking about science with non-scientists. To engage the public with science, we have step outside of our own subspecialties.

Ask yourself, what can you tell people-- what should you be telling people about science at:

The National Park Service

The Food and Drug Administration

The Environmental Protection Agency. Hey, Earth Day is coming up! Remember Gaylord Nelson. Can you talk about stewardship?

And what about the US Geological Service?

The National Oceanic and Atmospheric Administration? Can you explain why monitoring the Earth system should not be stopped? Can you explain the immediate repercussions? The repercussions for tomorrow?

The National Science Foundation? The agency where I served for six years as assistant director.

The National Institutes of Health? Can you explain that indirect costs pay for necessary medical equipment and for the cost that assure compliance with medical standards?

As you and I stand for science today and every day, we must engage the public in meaningful conversations in and about science. And, about science education in the classroom and outside the classroom.

We must do this locally here in Dane County, in every corner of Wisconsin, and across the country.

We must work harder at engaging the public to make responsible and wise decisions to fund scientific research and science education.

Science and science literacy are necessary for the democratic process to work.

I share with you the words of President Abraham Lincoln who said,

**“Public sentiment is everything. With public sentiment nothing can fail. Without it nothing can succeed.”**

President Lincoln said SENTIMENT. Not opinion, not belief. Let me read it again:

**“Public sentiment is everything. With public sentiment nothing can fail. Without it nothing can succeed.”**

We need to cultivate public sentiment for science. That’s what everyone who stands up for science must do. Will each of you commit to work harder for a strong public sentiment for science?

I urge you to VOTE in every election. The next election in Wisconsin is on Tuesday, April 1.

I urge you to vote on April 1. And I ask that each of you recruit at least 5 eligible voters who haven’t voted.

You and I, scientists and others, must be creative and inventive in sharing the value of scientific research and science education with our elected officials AND with all voters and their families.

We depend on the generosity of the general public to support our research. The largesse of the American people has enabled us to break new frontiers of knowledge. Our discoveries have triggered innovation and technologies that improve the human condition.

All of us at the rally are grateful for the support that science receives from taxpayers, from industry, and from private donors. And it is incumbent upon us to help everyone better understand and appreciate what we do in science and how we do it.

You and I must commit to improve the level of “science literacy” in America. Science literacy does not require detailed knowledge of chemistry, physics, or biology, but rather a broad appreciation and understanding of what science is capable of achieving and, equally important, what science cannot accomplish.

Science literacy enlightens and enables people to make informed choices, to be skeptical, and to reject shams, quackery, unproven conjecture, and to avoid being bamboozled into making foolish decisions where matters of science and technology are concerned.

Science literacy is an attitude. It is like personal hygiene. It must be developed. It must be nurtured and guided. Science literacy is the public sentiment for supporting science.

Society makes progress in addressing critical issues by having both a skilled, creative, and productive work force and a citizenry able to judge the risks and enjoy the benefits of advances in science and technology. That is why science education at levels—from grade school to graduate school requires much more attention from scientists and engineers.

Science and society have what is essentially a social contract that enables great intellectual achievements but comes with mutual expectations of benefiting the human condition and protecting our planet.

Let us all be a resonant voice for science.

Let us all be a resonant voice for the common good.

And in everything we do let us be humane and humanitarian.

Scientists and supporters of science: PLEASE DO IT...please!

\*\*\*\*\*