

Testimony before the **Subcommittee on Research and Science Education**

**Hearing: *Improving the Laboratory Experience for America's High School Students***

Representative Rubén Hinojosa (TX-15)

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Good Afternoon. I would like to thank Chairman Baird and Ranking Member Ehlers and all of the Members of the subcommittee for giving me the opportunity to present testimony on a pressing need – access to high quality laboratory science in our high schools.

I would especially like to thank my fellow Texan, Congresswoman Eddie Bernice Johnson and the Chairman of the full committee, Congressman Bart Gordon for their advice and support in developing H.R. 524, The Partnerships for Laboratory Science Act, which we are here to discuss today.

I would also like to express my appreciation to the STEM Education community, particularly the chairs of the STEM Education Coalition, James Brown of the American Chemical Society, and Jodi Peterson of the National Science Teachers Association for their advocacy on behalf of opportunities for our young people and for their commitment to ensuring that we do not lose future scientists and engineers because they did not get preparation in laboratory science in high school.

We have major holes in our pipeline for preparing future professionals in science, technology, engineering, and mathematics – the STEM fields. None is more glaring than the lack of preparation for college level work for students graduating from high schools that have high concentrations of poor and minority students.

The National Science Foundation commissioned a study by the National Research Council on the state of America's High School Labs. I would like to draw your attention to two glaring findings in that report:

1. The current quality of laboratory experiences is poor for most students and educators and researchers do not agree on what constitutes an adequate high school laboratory, hampering the accumulation of research on how to improve labs.
2. Schools with higher concentrations of non-Asian minorities and schools with higher concentrations of poor students are less likely to have adequate laboratory facilities than other schools.

Here are some other things that we know:

- Last spring the American Council on Education issued a report, *Increasing the Success of Minority Students in Science and Technology*, which identified lack of a rigorous high school curriculum as a major barrier to completing a college degree in the STEM fields.

- The latest science report card included an astonishing figure – only one in four Black or Hispanic students take the three major laboratory sciences – biology, chemistry, and physics --that are the foundation for future STEM work in college.

With these types of statistics, it should come as no surprise that we are losing our competitive edge in producing experts in math, science, and engineering. We must redouble our efforts to engage young people in these fields early in their academic careers. As we look at a broad based, national innovation or competitiveness agenda, we need to bring in partners to address this part of the pipeline.

That is why I introduced the Partnerships for Access to Laboratory Science Act. This legislation will establish a pilot program that will partner high need school districts with colleges and universities, and the private sector to improve high school laboratories as part of a comprehensive plan to improve science instruction and student learning outcomes.

This pilot is intended to develop models and test effective practices for improving laboratory science in high need schools. It will leverage resources from the local community and the private sector, and it will build on our base of knowledge of what works in teaching science. The legislation is a logical next step forward from the National Research Council's report on high school labs.

Our next generation of scientists and engineers are waiting to be discovered in our nation's high schools. Let's make sure that our schools are equipped to provide them with the laboratory experiences they need to develop their talents and foster a life-long interest in science. This is something that we can accomplish together.

Thank you for allowing me to testify to day. I would be happy to answer any of your questions.