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## WHERE WILL SCIENCE TAKE US IN 20 YEARS? NEW BLOG PROVIDES PREDICTIONS FOR THE YEAR 2034

WASHINGTON, DC – The Science Coalition today unveiled a new blog featuring predictions of what science and innovation will yield for the future. The blog – [SCIENCE 2034](#) – is intended to call attention to the need for strong and sustained federal funding for basic scientific research by highlighting the exciting possibilities of the future. Its launch was timed to coincide with the return of Congress to Washington and a renewed focus on budget matters for FY2015 and beyond.

“It’s absolutely essential that policymakers and the public make the connection between the dollars allocated for research today and the world we – and our children and grandchildren – will live in 20 years from now,” said Science Coalition President Jon Pyatt. “While we don’t know what the next ‘Big Thing’ will be, chances are it will be an innovation born from basic scientific research. Our hope is that these predictions not only come true, but that this happens in the United States where we can benefit from both their societal and economic value.”

Based on the present state of the science in their fields of expertise, commentators on **SCIENCE 2034** will offer their opinions about what will be possible in 20 years provided sustained, strong federal support for basic research. Among the inaugural blog posts are the following predictions:

1. [Nanoparticles](#) will patrol our bodies on the lookout for things that threaten our health. (University of Chicago)
2. New [urban areas](#) will meet massive world population needs without the pollution, slums and other unhealthy conditions that seem to inevitably plague today’s cities. (Argonne National Lab)
3. Novel [battery materials](#) will turn our oil-based transportation paradigm on its head. (West Virginia University)
4. Doctors will be able to restore [brain function](#) stolen by disease and trauma. (George Washington University)
5. [AIDS](#) will be history. And maybe malaria and tuberculosis, too. (University of Rochester)
6. The health and [biological diversity](#) of the world’s grasslands will be conserved – despite environmental threats. (Kansas State University)
7. A fundamental mystery of the brain – how past experience affects future behavior – will be solved, paving the way to targeted [treatments for depression](#), schizophrenia and PTSD. (University of Illinois)
8. Every type of human cell will be producible in the lab from a single pluripotent stem cell, enabling [cures for sickle cell disease](#), emphysema and pulmonary fibrosis. (Boston University)
9. The “[Internet of Things](#)” will be vast, transforming everything from healthcare delivery to personal security to education. (Princeton University)
10. Shale gas and biomass will yield a new, thriving, and non-petroleum-based U.S. [chemical industry](#). (University of Kansas)

The federal government is the single largest source of funding for basic research in the United States, providing [55 percent](#) of all funding. The University of Chicago's Matthew Tirrell notes in a [podcast](#) that while companies and foundations provide some financial support for research, they often have very targeted goals for that support. The "sustained exploratory, educational, and training component" of basic research he says "rests extremely, solidly and exclusively" on federal government support.

[Brett DePaola](#), who works in the field of atomic, molecular and optical physics at Kansas State University points out in a podcast that there is usually a 20 to 25-year lag between the initiation of basic research and any product that might evolve from that research, another reason industry doesn't do much basic research. "So, where else can we look but to the government to invest in the future," he says.

Rensselaer Polytechnic Institute President Dr. Shirley Ann Jackson, a theoretical physicist, sums up these points in her [blog](#) post:

As a society, we must make the investments that support potential, but not predictable, transformations. There will be other new thrusts in education and research that are less easily foreseen, because revolutionary developments generally take time to infiltrate our culture. The Internet, now fundamental to our lives, can be traced back to federal research investments in the 1960s. Medical breakthroughs now making headlines on a daily basis are the result of federal investments in the Human Genome Project in the 1990s. No doubt, ideas researchers are investigating today will have a significant impact by 2034.

Federal funding for R&D has been on a [downward trajectory](#) for the past decade, falling to an historic low of just 3.8 percent of the federal budget in 2013. Sequestration is expected to reduce R&D funding by tens of billions of dollars by 2021. While Congress provided temporary relief from sequestration for fiscal years 2014 and 2015, it still must operate under the tight budget caps of the Budget Control Act and has yet to pass a budget for FY15, adding to the overall uncertainty of the research funding environment.

"When federal funding for research is flat-funded, reduced or subjected to the mandatory cuts of sequestration, we create an [innovation deficit](#) that threatens our economic advancement," said Pyatt.

"Other countries are investing heavily in research and education. If America wants to maintain our innovative edge, create meaningful jobs and realize economic growth, then funding for scientific research must be made a higher priority. It is essential that Congress find ways to address the nation's budget deficit without undermining smart investments in research and education that hold the key to our future."

**SCIENCE 2034** marks the 20<sup>th</sup> anniversary of The Science Coalition by looking forward 20 years and focusing on the possibilities of the future. New viewpoints will be added to SCIENCE 2034 on an ongoing basis. They will take the form of blog posts, podcasts, info-graphics and video interviews. Don't miss new posts: Sign up for updates at [www.science2034.org](http://www.science2034.org), follow #Science2034 and [@SciCoalition](#) on Twitter, and like The Science Coalition on [Facebook](#). SCIENCE 2034 podcasts also are available on iTunes at this [link](#).

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[The Science Coalition](#) was formed 20 years ago by a handful of universities with a singular goal of strengthening federal support for basic scientific and engineering research. Today, with some [60](#) major research universities as members, we continue to work toward this goal by telling the stories of what federally funded university research makes possible. Research expands our knowledge, stimulates the economy, spurs innovation and drives America's global competitiveness.