Despite concern about the state of the world economy, the continued success of science to produce new ideas and new solutions gives us reason for optimism.

The U.S. research and development system — one that relies heavily on the nation’s public and private universities — remains the envy of the world. Far from stagnating, the science and engineering occurring today at our universities is leaping forward, the result of changes at once cultural, technological and institutional. These changes haven’t received a lot of attention outside academe, but they are reshaping science in America, raising its potential for good even as financial support dwindles.

One huge change involves how university scientists work.

Where researchers traditionally toiled as individuals or in small groups of like-minded colleagues, they are increasingly attuned to the benefits of collaboration with those outside their expertise.

Another change is technological. Thanks to increasing computing power, ambitious research no longer requires ultra-expensive equipment. Simulation has become a cheaper — and even more powerful — option.

A third change: While still devoted to pure science, universities are more focused on science that matters to people today. Universities are as likely to market discoveries as publish them, speeding their delivery to the public.

These changes may seem broad and conceptual, but they have a real and practical impact. Several notable initiatives at UF tell the story:

- Sustainable Energy
- Emerging Pathogens
- UF Water Institute
- UF’s statewide collaboration

The current contraction is not the first “down” cycle in the U.S. economy in the past 70 years, and it won’t be the last. But beginning with the nation’s recovery from World War II, U.S. university research has been at the heart of the nation’s economic strength. It was university research, after all, that sparked the information technology revolution. University research has been critical to the genesis of biotechnology and nanotechnology, both seen as key to a future where a booming world population places an increasing strain on natural resources.

If history is any guide, the change in university laboratories and research centers today will play a similarly positive role in the nation’s recovery from its current doldrums, and help the U.S. maintain its status as a global leader.
Florida Institute for Sustainable Energy — Energy Technology Incubator.

With a biofuel pilot plant and a prototype development laboratory, this state Center of Excellence is moving promising energy technologies from the research to the prototype stage. In the past, it was rare for universities to focus resources on "scaling up" discoveries to test their merit as industrial products. Incubators like this one shift the paradigm.
The Emerging Pathogens Institute. This interdisciplinary institute pulls together scientists from eight colleges to confront pathogens that menace not just humans, but animals and plants. Such a global focus would have been unheard of a few years ago.
The UF Water Institute. The severe drought that plagues much of the Southeast makes obvious the growing need to ensure adequate water supplies for people and nature alike. UF has had many researchers working on diverse water problems. The Water Institute draws them together to work on common goals and solutions and it brings industry and public policy groups into the mix.
UF’s growing ties with other leading research and medical institutions around the state — including Scripps Florida in Jupiter, the Burnham Institute for Medical Research near Orlando and The Moffitt Cancer Center in Tampa — are examples of the linkages essential to answering the big questions in science and medicine.
Proposals Submitted 5,430
Awards Received 6,175
New Awards Received 2,668
Continuations or Supplementals 3,507
Grant and Contract Dollars Awarded $549,875,156
Gifts for Research $11,776,484
Total Sponsored Research Funding $561,651,640
Projects Active During the Fiscal Year 6,799
Faculty Receiving Awards 1,932
Sponsors 1,047