TALKING POINTS: UNIVERISTY TECHNOLOGY COMMERCIALIZATION, FEDERAL RESEARCH FUNDING, THE BAYH-DOLE ACT, AND FEDERAL SUPPORT FOR ENTREPRENURSHIP/GAP FUNDING PROGRAMS

Key Messages:

- **Research universities are committed to strengthening our nation's economy and expanding opportunities for all Americans.** This commitment is the cornerstone of the historic partnership the federal government forged with the nation's universities to perform innovative research that advances our economy, improves public health, strengthens national security. Universities do this by, among other things, training the future highly-skilled workforce, encourage faculty consulting, and partnering with industry to develop new ideas into commercial products.

- **Commercializing university research through technology transfer and start-ups is a critical facet of universities' public missions.** And universities' primary goal in commercializing their research and building start-ups is to benefit society through improved health and cutting-edge technologies that create new or improve existing industries, generate jobs, and boost local, regional, and national economies.

- **One of the most important ways universities foster economic development is by nurturing and helping to spin off new startup companies based upon university-generated intellectual property.**

- ***Highlight the work of your particular start-up company****. Emphasize and describe the role that federal funding played in the research underlying your start-up.*

How Can the Congress and the Federal Government Facilitate University Technology Transfer and Startup Creation?

1) Support and Invest in Federal Research

- As Congress seeks to optimally allocate limited resources, funding for scientific research at agencies like the National Science Foundation (NSF) and National Institutes of Health (NIH) should be a top priority.

- Robust federal investment in scientific research is necessary to the U.S. prevents an innovation deficit and remains a global innovation leader.

- Congress should provide steady and sustained real growth of at least 4 percent annually for basic scientific research, a recommendation of the 2014 American Academy of Arts & Sciences report, Restoring the Foundation: The Vital Role of Research in Preserving the American Dream.

2) Support the Bayh-Dole Act of 1980

- The Bayh-Dole Act, enacted in 1980, spurred universities and their faculty members to take an even more active role in commercializing technology based on their discoveries.

- Bayh-Dole has enabled a remarkable expansion of university technology commercialization over the past few decades. This law is critical to encouraging faculty and students to generate new start-up companies.

- Before 1980, fewer than 250 patents were issued to U.S. universities annually; discoveries were rarely commercialized for the public's benefit. By contrast, according to a recent survey by the Association of University Technology Managers (AUTM), in 2015 alone U.S. universities filed 15,953 U.S. patent applications; were issued 6,680 U.S. patents; spun off 1,012 startup companies (735 of which reside in the institution's home state); and generated 879 new commercial products (resulting in $28.7 billion in net sales). And, the

Biotechnology Industry Organization (BIO) reports that between 1996 and 2015, U.S. university and nonprofit patent licensing activity supported 4.3 million jobs and contributed $591 billion to the U.S. GDP and $1.33 trillion to U.S. industry gross output.

3) Support Existing and Develop New Programs to Facilitate Technology Commercialization, Faculty and Student Entrepreneurship and Gap Funding for Startups

- *Preserve the current funding set-aside ratio for the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs.* Universities support the SBIR and STTR programs. Both programs play an important role in the nation's overall innovation ecosystem by transforming cutting-edge, innovative ideas and research into viable, market-ready products for the American consumer.

- *Expand and adequately fund faculty and student entrepreneurship training programs such as NSF's Innovation-Corps (I-Corps).* The NSF's I-Corps program has been instrumental in providing faculty researchers and graduate students with the entrepreneurial training needed to move research from the lab to the marketplace. Since its creation in FY2011, several other federal agencies have funded I-Corps cohorts. The NIH initiated its I-Corps program with pilot program funds previously provided in the SBIR/STTR reauthorization. This administrative funding pilot has since expired. We urge the administration and Congress to support its renewal.

- *Create new federal gap funding/early stage proof-of-concept programs*. There is a funding gap – the so-called "valley of death" – between early-stage inventions with apparent commercial potential and later-stage inventions that are validated as having significant commercial applications. The high level of risk associated with investing in these early stage technologies has left companies, angel investors, and venture capitalists wary of supporting the proof-of-concept, scaling up, and modeling activities required to explore the commercial value of promising but early-stage inventions. The federal government can help bridge this gap by providing direct federal support that gives private industry the confidence to risk investing in inventions with nascent commercial potential. Such funding is often not readily available from either public or private sources, and NIH is currently supporting a demonstration program, the Research Evaluation and Commercialization Hubs (REACH) program, which might serve as a model for such programs aiming to address this need.

- *Improve the R&D tax credit to encourage increased industry-university collaboration*. To facilitate increased collaborative efforts between universities and industry, the basic research tax credit which currently narrowly defines basic research projects as "not having a specific commercial objective" should be broadened. At a minimum, Congress should amend current law and allow any research expenditures at universities to qualify for the basic research credit. Additionally, industry should receive an additional tax incentive to conduct collaborative research with universities and federal laboratories. This could easily be done by doubling the existing credit from a 20 percent flat credit to a 40 percent flat tax credit.

- *Amend current tax law to allow for increased public-private use of bond financed facilities*. For example: H.R. 1819 of the 114th Congress would have amended the tax code to create more flexible standards under which public-private research activities at tax-exempt bond financed research facilities can occur.

- *Evaluate and revise the public health service conflict of interest reporting requirements as required by the 21st Century Cures Act*. The current requirements are costly and have had a chilling effect on the willingness of faculty to engage with industry to develop discoveries. Conflict of interest which must be effectively managed by universities. Federal agencies should call attention to the importance of identifying and managing potential conflicts, but avoid regulations that discourage interactions among faculty, universities, and industry.