STATEMENT OF

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"THE IMPACT OF ABUSIVE PATENT LITIGATION PRACTICES ON THE AMERICAN ECONOMY"

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Chairman Grassley, Ranking Member Leahy, and Members of the Senate Judiciary Committee, thank you for this opportunity to testify on such an important topic. I am Dr. Michael R. Crum and I serve as Vice President for Economic Development and Business Engagement at Iowa State University. On behalf of Iowa State, I am pleased to offer the following statement, which is endorsed by the six major higher education associations and councils that collectively represent the majority of our nation's research universities, academic health centers, and their associated technology transfer operations and technology transfer officers.[1]

Universities are dependent upon the U.S. patent system and the capacity of that system to protect the legitimate intellectual property rights of individual university inventors and large companies alike. This system drives U.S. innovation and our economic competitiveness in the world. Patents provide universities with the means to ensure that many discoveries resulting from research are transferred to the private sector where those discoveries can be turned into innovative products and processes that power our economy, create jobs, and improve quality of life.

Universities therefore have a direct, vested interest in maintaining a strong patent system and in protecting that system from abusive practices that can cripple it. Consequently, our nation's academic institutions support multi-pronged efforts to target abusive behaviors, including *but not limited to* balanced patent litigation legislation, such as the STRONG Patents Act of 2015 and the Patent Transparency Improvement Act of 2013 (S. 1720). All such efforts should be carefully calibrated so that they both effectively target abusive patent litigation practices and preserve the ability of patent holders to legitimately protect their inventions through assertion of their patent rights.

The Role of Academic Institutions in the Nation's Innovation System

America's academic institutions are the principal source of basic research that expands the frontiers of knowledge and produces discoveries that enhance our national security, strengthen our economy, improve health, and enrich the lives of our citizens. Each year since the late 1990s, universities have performed between 50% and 60% of U.S. basic research. In 2012, universities performed just over 53 percent of all basic research and almost 20% of applied research conducted in the United States.[2] Academic institutions are also the nation's leading centers for clinical and translational research, food and agricultural research, and cutting-edge engineering and computational science.

[1] The Association of American Medical Colleges (AAMC), the Association of American Universities (AAU), the American Council on Education (ACE), the Association of Public and Land-grant Universities (APLU), the Association of University Technology Managers (AUTM), and the Council on Governmental Relations (COGR).

[2] National Science Foundation, National Center for Science and Engineering Statistics, *National Patterns of R&D Resources: 2011–12 Data Update* (2013). *See* http://www.nsf.gov/statistics/nsf14304/content.cfm?pub_id=4326&id=2.

University research has greatly strengthened our nation's innovative capacity and economic competitiveness. More than half of U.S. economic growth since World War II has resulted directly from technological innovation, much of which stems from scientific, medical, and engineering research conducted at our universities.[3] Although the primary means by which university research results are disseminated is through training and peer-reviewed publications, conferences, consulting and other forms of open communication, our country increasingly benefits from university technology transfer. Technology transfer is the process by which fundamental discoveries are moved into the commercial sector for development into socially and economically beneficial products and processes.

University technology transfer's contributions to our nation were greatly enhanced by the passage of the Bayh-Dole Act in 1980, which allowed universities to retain the patent and licensing rights to inventions resulting from federally funded research. The enactment of that landmark legislation sparked a dramatic increase in university-to-industry technology transfer:

- In 1980, the year the Bayh-Dole Act was passed, the government held the titles to approximately 28,000 patents, fewer than 5% of which had been licensed for further commercial development by industry. At that time, fewer than 250 patents in total – both federally and non-federally funded – were being issued to U.S. universities annually.

- In 1985, 500 patents were issued to the top 200 research institutions.

- In 2013, U.S. university research led to 5,163 patents in total; 5,790 executed license agreements and options with companies; 747 new companies; and more than 700 new commercial products.

- Between 1996 and 2013, U.S. university licensing activity contributed $181 billion to the U.S. GDP, supporting 1.44 million person years of employment and $404 billion in gross output.[4]

Federally funded university research has played a critical role in the development of the laser and its myriad applications, microprocessors, magnetic resonance imaging and later MRI applications, the CAT scan and PET/CT scanner, Doppler radar, GPS, bar codes, web browsers, and hundreds of medicines and vaccines, to name just some of the most widely known examples.

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[3] Robert Solow, *Technical Change and the Aggregate Production Function*. REVIEW OF ECONOMICS AND STATISTICS 39, no. 3 (1957): 312–20; *see also* Gordon Reikard, *Stimulating Economic Growth Through Technological Advance*, AMSTAT NEWS (Mar. 1, 2011), *available at* http://magazine.amstat.org/blog/2011/03/01/econgrowthmar11/.

[4] *See* Appendix C of Biotechnology Industry Organization, *Measures of Economic Contribution of University/Nonprofit Inventions in the United States: 1996-2013* (March 2015).

Furthermore, university research has not only produced ground-breaking inventions that have led to valuable products, processes, medicines, medical treatments, and new technologies in a wide range of fields, but has also led to the creation of new companies — as noted above, nearly 750 in 2013. The Science Coalition's list of 100 companies that have grown out of federally funded university research includes major companies such as Google, Cisco Systems, Genentech, Sun Microsystems, and Xenogen, a leader in *in vivo* optical imaging.

At my home institution of Iowa State University, for example, technology transfer has led to numerous technologies, products, and processes that have had a major impact locally, nationally, and internationally, including the fax machine; hybrid corn (named in 2015 by the Association of University Technology Managers as one of the forty most important inventions by a university); a method for monitoring the communication signature of digital communication devices that can be used for authentication and other security applications; and a vaccine that can help prevent transmission of the bacteria that cause salmonellosis among chickens and reduce food-borne disease caused by eating contaminated eggs.

Between 2010 and 2014, inclusive, the three State of Iowa Regent universities – the University of Iowa, Iowa State University, and the University of Northern Iowa – were responsible for the execution of 472 licenses and options, including 183 to companies in Iowa. During that same period, Iowa universities generated 1,059 invention disclosures and 767 patent applications.

The Iowa Regent universities also preferentially license the technologies they develop to Iowa companies, such as Iowa Approach, Inc., which licensed intellectual property from the University of Iowa to commercialize a collection of catheter-based tools to treat atrial fibrillation. Over the past twenty years, more than 500 Iowa companies and individuals have licensed patented and non-patented varieties of soybeans from the Iowa State University Research Foundation (ISURF) covering more than 500,000 acres.

In the last five years, faculty and students from the Regent universities in Iowa have launched 190 startups, supported by over $24 million in outside funding. In 2014, Iowa companies earned $24,724,000 in revenue from technologies and inventions created by these three universities.

As noted above, by allowing universities to retain the rights to their inventions arising from federally funded research, Bayh-Dole has created a powerful incentive for academic institutions to pursue the technology transfer that the federal government did not. It is essential to emphasize here, however, that the purpose of university technology transfer – consistent with the overall university mission of education, research, and service – is to enable the commercial sector to generate products and processes that benefit society, *not* to enable the higher education sector to generate revenue. In fact, most university technology transfer operations do not receive enough royalties to offset their total operating costs.

The ability of university technology transfer to achieve its societal benefits is critically dependent on a strong patent system. Because the inventions emerging from university research tend to be early-stage, high-risk inventions, successful university technology transfer transactions must operate within a patent system that protects these inventions. Without such robust patent protections, licensees and venture capitalists will not take on the significant risk associated with investing in and developing such inventions. Strong patents are particularly critical for the small, often undercapitalized startup companies built upon university discoveries. Indeed, patents are often the most critical assets of these startups and small businesses. To be able to gain a foothold in often well-developed markets, such companies must be able to assert their patent rights effectively.

It is also crucially important for universities and their licensees, particularly startups without substantial financial resources, to be protected from potentially crippling abusive patent litigation practices. We also note that many universities own or are affiliated with hospitals and academic health systems that provide lifesaving services to local communities and are often major regional economic drivers. These health centers, too, are targets for abusive patent litigation practices. Accordingly, like so many other innovators in the U.S. economy, academic institutions have a genuine interest in pursuing balanced reforms that address abusive practices and also safeguard the ability of patent holders to enforce their patent rights in good faith.

Balanced Patent Legislation in an Evolving Patent Landscape

We recognize that abusive patent litigation practices are a corrosive assault on the nation's patent system and must be forcefully countered. We also believe strongly, however, that a careful, fact-based cost/benefit evaluation of each of these proposals must be carried out, particularly given that the evidentiary basis for sweeping patent reform has been called sharply into question. Moreover, the patent landscape has shifted considerably since various patent reform proposals were first proposed, creating fundamental questions about the urgency of broad patent reform at this time.

<u>The necessity of cost/benefit analyses to preserve balance in the patent system</u>

A number of prevailing proposals to curtail abusive patent litigation practices would cause far more damage to the system than the benefits they might provide in stemming or mitigating abuses. In fact, they would have the presumably unintended consequence of eroding the overall strength of the U.S. patent system by weakening the ability of patent holders to legitimately enforce their patents.

Universities are particularly concerned about proposals for presumptive fee-shifting and involuntary joinder. The fee-shifting proposals would require courts to award attorneys' fees and costs to the prevailing party in patent cases, unless the position and conduct of the nonprevailing party was "reasonably justified in law and fact" or "special circumstances" (such as severe economic hardship to the named inventor) would make fee-shifting unjust.

Proposals for waiver of fee-shifting are well-intentioned, insofar as they propose to target fee-shifting at nonprevailing parties whose conduct and position are judged by the court to be unreasonable. But judges already have discretion to make a sensitive, case-specific determination to shift fees to punish parties for bringing frivolous or nuisance patent lawsuits. A codified presumption in favor of fee-shifting would diminish just such judicial discretion and result in increased uncertainty and financial risk that would discourage universities and other patent holders lacking extensive litigation resources from legitimately asserting their patents. This heightened uncertainty and risk also would deter potential licensees and venture capitalists from investing in university patents, reducing the number of research discoveries that advance to the marketplace.

The proposed involuntary joinder provisions would magnify the potentially damaging impact of the proposed fee-shifting provisions. Involuntary joinder would force universities into paying costs and damages for the actions of third parties over which they had no control. As with fee-shifting, the proposed joinder provisions include language calling for courts to implement joinder only in cases where the nonprevailing party's interest in the subject matter of the case is primarily to assert the patent in litigation. The joinder language is sufficiently vague or subjective, however, that a well-financed prevailing party could successfully conflate very different kinds of non-practicing patent-holding entities.

Proposals for heightened pleading, discovery limitations, and increased disclosure would also cause more harm than good. Heightened pleading would add unnecessarily to the burden of filing infringement cases, discovery limitations would preclude cases where broader discovery would lead to more efficient resolution of those cases, and new disclosure requirements would require information that would violate confidentiality agreements, thereby chilling venture capital investments.

Evolving patent landscape

Several judicial and administrative actions have occurred since the initial patent litigation reform proposals were advanced in 2013. These actions call for a broad re-evaluation of patent litigation before proceeding with proposals that could do serious damage to the strong U.S. patent system.

The Supreme Court's April 2014 decisions in *Octane Fitness v. Icon Health & Fitness* and *Highmark v. Allcare* significantly expanded the discretion of district courts to award attorney costs and fees and raised the bar to overturning such determinations on appeal. One early study that examined samples of awards before and after *Octane* showed a significant increase in the rate at which awards are granted (from 32% to 45% between 2011 and 2013).[5] A second, more recent study that looked at post-*Octane* grants of

[5] Randy Lipsitz, Aaron Frankel, & Hanna Seifert, *Recent Supreme Court Decision Takes Us Back to the Future: Attorney Fee Award Rate Increases in Patent Cases*, BLOOMBERG BNA PATENT, TRADEMARK & COPYRIGHT LAW DAILY (Jan. 7, 2015), *available at* http://www.bna.com/recent-supreme-court-n17179921906/.

motions for attorney fees also determined that there has been a substantial increase in the percentage of motions granted after *Octane*.[6]

The Judicial Conference of the United States has recommended changes to the Federal Rules of Civil Procedure that will make it harder for plaintiffs to pursue frivolous patent claims while protecting the rights of patent holders to enforce their patents. These changes will heighten pleading requirements by eliminating the Form 18 standard, which will make operative the Supreme Court standards established in *Ashcroft v. Iqbal* and *Bell Atlantic Corporation v. Twombly*. These decisions obviate the need for stricter statutory guidelines.

The Judicial Conference recommendations will also streamline discovery by proposing that discovery in patent litigation cases include only documents that are "proportional to the needs of the case," and directing courts to shift discovery expenses to the requesting party if producing the documents would place undue burden on the producing party.

The enactment of the America Invents Act (AIA) provided the U.S. Patent and Trademark Office (USPTO) with enhanced post grant review procedures, substantially improving the pre-AIA *inter partes* reexamination with a new *inter partes* review, and establishing a new post-grant review. Both provisions provide a faster, cheaper alternative to court for challenging weak or overly broad patents, and initial evidence shows that these provisions are proving highly effective in eliminating invalid patent claims.[7]

Scope of the problem of abusive patent practices

Among the evidence cited for the need for sweeping patent litigation reform is a sharp increase in patent litigation. But the cited increase in patent cases is attributable largely to changes in the joinder provisions of the AIA. A recent study of 2014 litigation trends shows a 23% decrease from 2013 to 2014 to 16,089 cases, the lowest level since 2009.[8]

A widely cited claim that patent trolls cost U.S. businesses $29 billion a year has been vigorously criticized. A recent letter written by forty economists and law professors thoroughly documents the methodological flaws in studies purporting to show that litigation by non-practicing entities (NPEs) is harmful to startup firms, reduces R&D, and reduces venture capital investment. In calling into question the claims made by these studies, the authors of the letter cite conflicting data sources, inaccurate proxies, limited and non-generalizable samples, flawed methods for measuring costs of litigation, and disregard for the AIA and other factors.

[6] In the 365 days preceding Octane, district courts granted seven motions for fees filed by defendants and denied forty and they granted eight motions filed by plaintiffs and denied seventeen. In the period after *Octane* and, as of January 2014, district courts granted 20 motions for fees filed by defendants and denied thirty-three and they granted ten motions for fees filed by plaintiffs and denied two. *See* Eric C. Cohen, *Is There a Need for Patent Reform Legislation?* Pre-publication White Paper (March 15, 2015).

[7] According to Kappos, former USPTO Director, 86% of IPR requests are instituted by the PTO and, of those, 77.5% have found at least one claim unpatentable. *Id.*

Conclusion

Abusive patent practices are real and they are harmful. Universities vigorously support efforts to rein in such practices. But we believe that sweeping patent legislative reform is not the right instrument. Such a blunt instrument would do more harm than good by weakening the nation's patent system and, by extension, crippling the innovative capacity of the nation. To quote a March 13, 2015 speech by former USPTO Director David Kappos: "[W]e now have a lot of facts and data showing that our intellectual property system is rapidly returning to health. In fact, I submit to you that there is no patent troll driven crisis facing our nation that needs to be corrected with sweeping new legislation. Of course, the system can be further streamlined to reduce needless litigation, but no major overhaul is needed."

Instead, we believe that an approach involving carefully targeted legislation, developed in the context of the changing landscape created by judicial and administrative actions, can effectively combat abusive patent practices while maintaining the capacity of our robust patent system that supports the innovation and economic competitiveness that serves this nation and its citizens so well. U.S. universities stand ready to work with members of Congress in crafting and supporting such legislation.