No. 19-337

In the Supreme Court of the United States

REGENTS OF THE UNIVERSITY OF MINNESOTA,
Petitioner,
v.
LSI CORPORATION, ET AL.

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

BRIEF OF THE ASSOCIATION OF PUBLIC AND LAND-GRANT UNIVERSITIES AS *AMICUS CURIAE* IN SUPPORT OF PETITIONER

JOSHUA S. JOHNSON
Counsel of Record
VINSON & ELKINS LLP
2200 Pennsylvania Ave., NW, Suite 500 West
Washington, DC 20037
(202) 639-6500
joshjohnson@velaw.com

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INTEREST OF *AMICUS CURIAE*[1]

The Association of Public and Land-grant Universities ("APLU") is a research, policy, and advocacy organization dedicated to strengthening and advancing the work of public universities. With a membership of 242 public research universities, land-grant institutions, state university systems, and affiliated organizations, APLU's agenda is built on the three pillars of increasing degree completion and academic success, advancing scientific research, and expanding engagement. Annually, its 199 U.S. member campuses enroll 4.2 million undergraduates and 1.2 million graduate students, award 1.1 million degrees, employ 1.1 million faculty and staff, and conduct $42.4 billion in university-based research. APLU's U.S. member university systems and universities are listed in the appendix to this brief.

APLU has a strong interest in the outcome of this case, which has the potential to significantly affect the scientific and technological research performed by APLU's members. University research has been fundamental to the development of new technologies, medicines, and products that affect the daily lives of millions of people. Since the Bayh-Dole Act's enactment in 1980, universities have partnered with industry and entrepreneurs to license the discoveries made in university laboratories to private firms for commercial development. Universities and firms engaged in this "technology transfer" depend on strong patent

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[1] No counsel for any party authored this brief in whole or in part, and no entity or person, aside from *amicus curiae*, its members, and its counsel, made any monetary contribution intended to fund the preparation or submission of this brief. The parties were given timely notice and have consented to this filing.

laws to protect both the fruits of their labor and their investments. See Ass'n of Univ. Tech. Managers, *Frequently Asked Questions: What Is Technology Transfer?*, http://bit.ly/2lDVgVt (last visited Oct. 7, 2019) ("Technology transfer is a term used to describe a formal transfer of rights to use and commercialize new discoveries and innovations resulting from scientific research to another party.").

By stripping public universities of sovereign immunity from *inter partes* review ("IPR") proceedings, the decision below threatens the development of university discoveries that Congress has sought to foster. IPR proceedings are costly and burdensome. If public universities are forced to spend their limited litigation budgets on defending against those proceedings, they will have fewer resources to devote to other priorities, including prosecuting their intellectual-property rights through patent-infringement suits (where any claims of patent invalidity could be adjudicated in a forum in which the state has consented to suit, see Pet. 9-10). Indeed, because the prospect of future IPR proceedings would effectively raise the cost of seeking patent protection, the decision below may lead some public universities to conclude that the costs of patenting certain discoveries outweigh the benefits. Stripping public universities of sovereign immunity thus risks profound negative consequences for the development of university discoveries in conjunction with industry—potentially locking away forever useful and possibly life-saving products. APLU urges this Court to grant review, reverse the decision below, and hold that public universities enjoy sovereign immunity from IPR proceedings.

SUMMARY OF ARGUMENT

The Federal Circuit's decision below poses a real risk to American innovation. Although public universities have long been a leading source of scientific and intellectual discoveries in the United States, it was not until 1980 that federal law incentivized the transfer of those discoveries to the commercial marketplace. It did so by allowing universities to patent their inventions and license them for development by private firms. Collaboration between public universities and industry has led to the development of countless products that Americans use every day, including the search engine algorithm that became Google. In the past 25 years, approximately 380,000 inventions have been disclosed through academic technology transfer, 80,000 U.S. patents have been issued, and 11,000 start-ups have been formed. In addition to these economic and societal impacts, technology transfer occasionally provides some public universities a source of revenue that is used to deepen the impact through reinvestment in further research and educational objectives for the public good.

The decision below conflicts with this Court's sovereign-immunity precedents and would have a chilling effect on American innovation. IPR proceedings entail costs and burdens that public universities are not well equipped to bear. At a median cost of almost half a million dollars, defending a single IPR proceeding would consume a significant portion of most public universities' limited litigation budgets. Stripping public universities of sovereign immunity from IPR proceedings would thus inhibit their ability to spend resources on other priorities, including enforcing their

patent rights through infringement actions when necessary to fulfill obligations to existing licensees or in cases of blatant infringement or refusal to negotiate reasonable license terms. A slackening of patent enforcement would make patents less attractive to potential industry partners and less valuable to the university, eliminating much of the incentive to engage in technology transfer. Indeed, because the risk of IPR proceedings increases the cost of obtaining and maintaining patents, universities might forgo patenting certain discoveries, which is the basic precondition for technology transfer to occur. And without robust technology transfer, useful and often life-saving technologies will not reach the commercial marketplace and those who most benefit from them. This Court should grant review, and should reverse the decision below.

ARGUMENT

I. The Congressionally Endorsed Process Of Technology Transfer From Public Universities Provides Substantial Benefits To Society

"Our nation's primary source of both new knowledge and graduates with advanced skills continues to be its research universities." National Research Council, Committee on Research Universities, *Research Universities and the Future of America* 1 (2012), http://bit.ly/2LurtqJ. American universities have a long track record of pursuing, and achieving, practical solutions to real-world problems. See, *e.g.*, Walter W. Powell & Jason Owen-Smith, *Universities and the Market for Intellectual Property in the Life Sciences*, 17 J. Pol'y Analysis & Mgmt. 253, 254 (1998) (Ameri-

can universities "have long had a more practical orientation than universities in the United Kingdom or Germany").

Before 1980, however, the federal government retained ownership of university inventions developed with federal funds, and thus only the federal government had the ability to transfer or license those inventions for commercial development.[2] The government had little success in attracting private industry because it generally made inventions available only through non-exclusive licenses.[3] Companies were reluctant to invest in and develop products when their competitors could acquire the same technology, and thus fewer than 5% of the 28,000 patents held by the federal government were licensed for the development of commercial products.[4] Countless inventions were confined to university laboratories because the intellectual-property laws did not provide the incentives

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[2] Council on Governmental Relations, *21 Questions and Answers About University Technology Transfer* 6 (July 7, 2007), http://bit.ly/2LtfxoQ (*21 Questions*).

[3] See President's Council of Advisors on Science and Technology, *Report on Technology Transfer of Federally Funded R&D* 2 (May 2003), http://bit.ly/2KVFAUz; Ashley J. Stevens, *The Enactment of Bayh-Dole*, 29 J. of Tech. Transfer 93, 94 (2004), http://bit.ly/2ION27m.

[4] Council on Governmental Relations, *The Bayh-Dole Act: A Guide to the Law and Implementing Regulations* 2 (Oct. 1999), http://bit.ly/2LviZQ8; see also Peter Lee, *Transcending the Tacit Dimension: Patents, Relationships, and Organizational Integration in Technology Transfer*, 100 Cal. L. Rev. 1503, 1512 n.38 (2012) ("In the 1970s, NASA had a commercialization rate of less than 1 percent for inventions under its free use policy, but 18-20 percent for inventions where contractors controlled patents.").

necessary to justify the business risk of developing universities' discoveries and making them available to the public. American innovation suffered as a result, as the United States saw its leadership role decline both in mature industries (such as automobile manufacturing) and in new industries (such as consumer electronics). See Stevens, 29 J. of Tech. Transfer at 93.

Concerned that a "significant decline in total U.S. expenditures for research and development" was contributing to "economic malaise" and causing the United States to fall behind "foreign competitors," Congress in 1980 enacted the Bayh-Dole Act, Pub. L. No. 96-517, 94 Stat. 3015 (1980) (codified at 35 U.S.C. §§ 200-212), which overhauled the legal framework governing the transfer of university-generated, federally funded inventions into the commercial marketplace. H.R. Rep. No. 96-1307(I), at 1-2 (1980). The Act sought to address the "crisis in U.S. productivity," *id.* at 2, by incentivizing universities and industry "to transform university research into real products benefiting society at large," Jonathan R. Cole, *The Great American University: Its Rise to Preeminence, Its Indispensable National Role, Why it Must Be Protected* 162-165 (2009). More specifically, the Act enabled universities to retain title to inventions made using federal research dollars, in exchange for certain obligations intended to protect the public interest. See 35 U.S.C. § 202(a). Under the Act, universities are expected to patent inventions developed using federal funds and move the inventions toward commercial development, typically through licensing to the private sector. *Id.* § 202(c)(2), (5). In entering into licensing

agreements, universities are required to give preferences to American small businesses. *Id.* §§ 202(c)(7)(D), 204.

As Congress recognized, granting patent protection to university discoveries "promote[s] the utilization of inventions arising from federally supported research or development"; "promote[s] collaboration between commercial concerns and nonprofit organizations, including universities"; and "promote[s] the commercialization and public availability of inventions made in the United States." *Id.* § 200. Universities perform "nearly 60% of all of the basic research in the U.S." *Academia Continues as Nation's Basic Research Hub*, R&D Magazine, 2017 Global R&D Funding Forecast 12 (Winter 2017). But they generally are not in a position to develop, mass produce, and market products, and thus must rely on industry to make the inventions available to the general public.[5] Patent protections give businesses and entrepreneurs the confidence to license, invest in, and develop university discoveries by providing assurance that no competitor can use the discoveries for a certain time period. See 156 Cong. Rec. 17,529 (2010) (recognizing that "the ability to obtain a reliable patent license for commercial development is needed to justify private sector investments").

Affording universities patent protection for their discoveries has significantly increased the transfer of universities' discoveries to the marketplace. To take

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[5] See Letter from Carl E. Gulbrandsen, Wisconsin Alumni Research Foundation, to Hon. Jon Leibowitz, Chairman, Fed. Trade Comm'n 3 (May 19, 2009), http://bit.ly/2mclrTn (Gulbrandsen Letter).

just one example, while not a single university-invented drug made it to the commercial market before the Bayh-Dole Act, over 150 such drugs have been sold commercially since the Act's passage.[6] The decision to give universities patent protection has been so effective that *The Economist* magazine has described it as "[p]ossibly the most inspired piece of legislation to be enacted in America over the past half-century." *Innovation's Golden Goose*, The Economist (Dec. 12, 2002). By "unlock[ing] all the inventions and discoveries that had been made in laboratories throughout the United States with the help of taxpayers' money," the decision "helped to reverse America's precipitous slide into industrial irrelevance." *Ibid.*; see also Letter from President's Council of Advisors on Science and Technology to President George W. Bush (May 15, 2003), http://bit.ly/2KVFAUz (technology transfer "has not only dramatically improved the Nation's ability to move ideas from R&D into commerce, but also helped enhance the return on * * * substantial taxpayer investment"). The House of Representatives has formally recognized that university ownership of patents has made "substantial contributions to the advancement of scientific and technological knowledge," has helped develop "new domestic industries and hundreds of thousands of new private sector jobs," and "remains critical to the future well being of the United States." 156 Cong. Rec. at 17,529-17,530. In the past 25 years, over 380,000 inventions were disclosed

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[6] Gene Quinn, *Post Grant Patent Challenges Concern Universities, Pharma*, IPWatchdog.com (Apr. 1, 2015), http://bit.ly/2scR4vb (Quinn, *Post Grant*).

through academic technology transfer, over 80,000 U.S. patents were issued, and approximately 11,000 start-ups were formed.[7] Between 1996 and 2015, technology transfer from American universities and nonprofit hospitals and research institutions contributed between $148 billion and $591 billion to gross domestic product, and helped employ between 1.3 million and 4.2 million people.[8] In 2017 alone, American universities received more than 6825 patents, and university-based research led to the formation of 1003 start-up companies and the introduction of 634 products into the commercial marketplace.[9]

Among the many groundbreaking developments to emerge from public universities' laboratories are HIV anti-viral therapies, nicotine patches, DNA sequencers, cellphone camera image sensors, and the search engine algorithm that became Google.[10] Collaboration between government, university researchers, and industry plays a critical role in many of these developments. For example, University of California, Irvine

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[7] Ass'n of Univ. Tech. Managers, *Driving the Innovation Economy* 1 (2017), http://bit.ly/2kqGq4p.

[8] Biotechnology Innovation Organization et al., *The Economic Contribution of University/Nonprofit Inventions in the United States: 1996-2015*, at 3 (June 2017), http://bit.ly/2LBjJDe.

[9] Ass'n of Public & Land-grant Universities, *How Tech Transfer Transforms Society*, http://bit.ly/2IMUmMV (last visited Oct. 7, 2019).

[10] See Emory University, *Discovery of HIV Antiretroviral Drugs Led to Largest University Royalty Deal in History*, http://bit.ly/2ktm6iU (last visited Oct. 7, 2019); Larry Gordon, *How the UC System is Making Patents Pay Off*, L.A. Times (Oct. 10, 2015), https://lat.ms/2Lyhtg0.

researchers developed a method to treat tinnitus—a potentially debilitating condition characterized by ringing in the ears that affects about 50 million Americans. This technology was subsequently licensed by a private equity fund, which created a company to develop the device. The discovery has since been refined to an iPod-like device that patients take home to use when they need it.[11]

II. Universities Use Revenue Generated From Technology Transfer To Further Their Research And Educational Missions

The Bayh-Dole Act requires universities to distribute the proceeds from federally funded inventions to the inventors and to support research and education. See 35 U.S.C. § 202(c)(7). Although each institution employs a different formula, in general, approximately one-third of net revenue is distributed to the inventor, one-third is distributed to the inventor's department or college, and one-third is used to support additional research and educational objectives.[12]

Therefore, a significant share of patent-licensing proceeds are typically used for research and educational expenses of graduate students, start-up research costs for new or junior faculty, seed money for new projects, computer equipment, and laboratory

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[11] Ass'n of Univ. Tech. Managers, *Relief From Ringing in the Ears Gives Tinnitus Sufferers "Their Lives Back"*, http://bit.ly/2kqIcCB (last visited Oct. 7, 2019).

[12] *21 Questions* 13.

renovation.[13] Examples of innovative programs funded through technology-transfer royalties include a summer program for female undergraduate students interested in science careers and a program that provides high technology urban planning services to inner-city communities.[14] By reinvesting revenue generated through technology transfer, public universities further their research and educational missions and deepen technology transfer's contributions to the public good.

III. If Allowed To Stand, The Decision Below Would Have Significant Negative Consequences For Public Universities And Society

A. Sovereign Immunity Provides Important Protections To Public Universities

Under our federal system, states and their instrumentalities "retain 'a residuary and inviolable sovereignty.' They are not relegated to the role of mere provinces or political corporations, but retain the dignity * * * of sovereignty." *Alden* v. *Maine*, 527 U.S. 706, 715 (1999) (quoting The Federalist No. 39, at 245 (James Madison) (C. Rossiter ed., 1961)). It has long been considered "inherent in the nature of sovereignty not to be amenable to the suit of an individual *without its consent*," *Hans* v. *Louisiana*, 134 U.S. 1, 13 (1890) (quoting The Federalist No. 81 (Alexander Hamilton)), and thus the "generation that designed and adopted

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[13] Council on Governmental Relations, *Summary Points on University Use of Royalty Income* 1-2 (July 29, 2001), http://bit.ly/2xhuRSw.

[14] *Id.* at 2.

our federal system considered immunity from private suits central to sovereign dignity," *Alden*, 527 U.S. at 715. Particularly pertinent here, the Supreme Court has recognized that the "affront to a State's dignity does not lessen"—and, indeed, is arguably "greater"—"when an adjudication takes place in an administrative tribunal as opposed to an Article III court." *Federal Mar. Comm'n* v. *S.C. State Ports Auth.*, 535 U.S. 743, 760 & n.11 (2002) ("*FMC*") (holding that sovereign immunity precluded federal agency from adjudicating private party's complaint against state-run port).

Sovereign immunity also "serves the important function of shielding state treasuries and thus preserving 'the States' ability to govern in accordance with the will of their citizens.'" *FMC*, 535 U.S. at 765 (quoting *Alden*, 527 U.S. at 750-751); see also *Hess* v. *Port Auth. Trans-Hudson Corp.*, 513 U.S. 30, 48 (1994) ("vulnerability of the State's purse" is a "salient factor in Eleventh Amendment determinations").[15]

It is undisputed that public universities "typically enjoy[] sovereign immunity" as instrumentalities of the states in which they are located. *University of*

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[15] Although the courts "sometimes refer[] to the States' immunity from suit as 'Eleventh Amendment immunity,'" the immunity "is a fundamental aspect of [State] sovereignty" that extends beyond the specific protections afforded by the Eleventh Amendment's text. *Alden*, 527 U.S. at 712-713; see also *id.* at 728-729 ("The Eleventh Amendment confirmed, rather than established, sovereign immunity as a constitutional principle; it follows that the scope of the States' immunity from suit is demarcated not by the text of the Amendment alone but by fundamental postulates implicit in the constitutional design.").

Utah v. *Max-Planck-Gesellschaft zur Forderung der Wissenschaften e.V.*, 734 F.3d 1315, 1319 (Fed. Cir. 2013). In the public-university context, sovereign immunity not only protects state funds, but also helps ensure that universities can advance their core educational and civic missions without disruption from private lawsuits.[16]

B. The Federal Circuit's Erroneous Decision That Sovereign Immunity Does Not Apply To IPR Proceedings Risks Chilling Innovation At Public Universities

The Federal Circuit's decision would strip public universities of their right to determine "*where* [they] may be sued," *Pennhurst State Sch. & Hosp.* v. *Halderman*, 465 U.S. 89, 99 (1984), by refusing to recognize claims of state sovereign immunity in the context of IPR proceedings. That decision is irreconcilable with this Court's sovereign-immunity precedents. See Pet. 15-31. In particular, the Federal Circuit's decision conflicts with *FMC*, which held that sovereign immunity applied to Federal Maritime Commission administrative proceedings. As petitioner explains, on the question of whether sovereign immunity applies, no meaningful basis exists for distinguishing IPR proceedings from the proceedings at issue in *FMC*. *Id.* at 16-19, 25-26. Here, as in *FMC*, a state is being called on "to defend itself in an adversarial proceeding

[16] Although private universities do not enjoy sovereign immunity, "[e]venhandness" between private parties and states "is not to be expected," *College Sav. Bank* v. *Fla. Prepaid Postsecondary Educ. Expense Bd.*, 527 U.S. 666, 685-686 (1999), under "our Nation's constitutional blueprint," *FMC*, 535 U.S. at 751.

against a private party" before a "court-like administrative tribunal[]." *FMC*, 535 U.S. at 760-761. Sovereign immunity thus applies.

The decision below makes it more likely that public dollars that could otherwise be devoted to education, research, community engagement, and other priorities would instead be expended on additional litigation. Public universities are not well equipped to bear the burdens and costs of IPR proceedings. Public universities rely heavily on taxpayer funding, and since 2008, state spending on higher education at public colleges and universities has fallen by 16% (after adjusting for inflation). See Michael Mitchell et al., Center on Budget and Policy Priorities, *Unkept Promises: State Cuts to Higher Education Threaten Access and Equity* 3 (Oct. 4, 2018), http://bit.ly/2m1Qvox. Accordingly, most public universities' litigation budgets are extremely limited, and a single IPR proceeding would consume a significant portion of those budgets. The median cost of defending just one IPR proceeding through appeal approaches half a million dollars. See Pet. 32. As Carl Gulbrandsen, the former Managing Director of the University of Wisconsin-Madison's technology-transfer organization, explained, "[m]any universities * * * don't have the budget to fund a cost like that." Quinn, *Post Grant*; see also, *e.g.*, Rob Perez, *Legal Fees Spike at UH*, Honolulu Star Advertiser, June 12, 2011 (reporting that University of Hawaii's eight-attorney general counsel's office had an internal annual operating budget of only $1.1 million and spent $2.23 million on outside counsel from May 2010 to March 2011, while the Universities of Kentucky and Arizona spent $1.2-$1.3 million on outside counsel during the same period); Lawrence White, National

Association of College and University Attorneys, *Managing Your Campus Legal Needs: An Essential Guide to Selecting Counsel* 26 (2008), http://bit.ly/2kQ5TEr (in 2005, the average operating budget of colleges' in-house legal offices was $680,947, and they spent just over $1 million on outside counsel fees).[17]

Further multiplying the costs of IPR, multiple *inter partes* petitions can be filed against a single patent. See, *e.g.*, *Cepheid* v. *Roche Molecular Sys., Inc.*, IPR2015-00881, 2015 WL 9599203, at *1, *3 (P.T.A.B. Sept. 17, 2015) (instituting IPR after previous request by same challenger was denied). Patents are frequently subjected to multiple petitions,[18] and some have had more than a dozen petitions filed against them.[19]

Forced to expend scarce litigation resources on *defending* against IPR proceedings, public universities may be left with insufficient resources to *enforce* their patent rights where appropriate. Indeed, public universities are *already* reluctant litigants. Suing a mem-

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[17] Although licensees or other third parties might reimburse some legal expenses in patent litigation, public universities frequently fund a significant share of the expenses themselves. See, *e.g.*, University of California, *Annual Report of Legal Expenses for Outside Counsel* 26 (2015), http://bit.ly/2kQOrja (reporting that over a third of the University of California's patent-related legal expenses were not reimbursed in 2015).

[18] See Gregory Dolin, *Dubious Patent Reform*, 56 B.C. L. Rev. 881, 928 (2015); see also U.S. Patent & Trademark Office, *An Analysis of Multiple Petitions in AIA Trials* (Oct. 24, 2017), http://bit.ly/2mcfeXz.

[19] See Pedram Sameni, Patexia, *Patexia Insight 31: Can Patents Survive Multiple IPR Challenges? (Case Study)* (Mar. 8, 2017), http://bit.ly/2iGkosG.

ber of industry poses a number of reputational and fiscal risks for universities. See Jacob H. Rooksby, *Innovation & Litigation: Tensions Between Universities and Patents and How to Fix Them*, 15 Yale J. of Law & Tech. 312, 318, 359 (2013). Accordingly, most universities tend to be "exceedingly cautious and reluctant" in initiating patent-infringement suits. See *id.* at 353; see also *21 Questions* 9 ("In only a small number of cases do universities seek to enforce patents by pursuing legal action to enforce their patent rights."). Technology transfer best-practices recommendations issued by leading research universities advise that litigation is "seldom the preferred option for resolving disputes" and should be initiated by a university only if a "mission-oriented rationale for doing so" can be clearly articulated, such as fulfilling obligations to existing licensees or addressing blatant infringement or refusals to negotiate reasonable license terms.[20] A wide range of universities has endorsed these recommendations,[21] as has a committee of the National Research Council of the National Academy of Sciences.[22]

The risk of IPR will further decrease the likelihood of public universities' enforcing their patent rights. If

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[20] Stanford University et al., *In the Public Interest: Nine Points to Consider in Licensing University Technology* 6 (2007), http://bit.ly/2GUvscz.

[21] See Ass'n of Univ. Tech. Managers, *Nine Points to Consider in Licensing University Technology*, http://bit.ly/2kqNtKp (last visited Oct. 7, 2019).

[22] National Research Council, Committee on Management of University Intellectual Property, *Managing University Intellectual Property in the Public Interest* 6-7 (2011), http://bit.ly/2kr1xzM.

public universities file patent-infringement actions, they can expect that well-resourced and well-counseled defendants will frequently petition for IPR to challenge the patent's validity, as happened in this case.[23] IPR offers an avenue for defendants to increase litigation costs, and thus potentially increase their negotiating leverage in settlement discussions. Confronted with the increased litigation costs created by the possibility of IPR, public universities might decide to forgo valid patent-infringement actions altogether.

That, in turn, would make patents less attractive to potential industry partners and less valuable to the university. Failing to enforce a patent in court when warranted "undermines the commercialization system" created by the Bayh-Dole Act. Rooksby, 15 Yale J. of Law & Tech. at 360. It also "sends a signal to industry that [a university] may not be willing to enforce other patents it owns," which may discourage companies from licensing university inventions. *Ibid.*

Indeed, the decision below may deter public universities from patenting certain discoveries in the first place. The risk of IPR proceedings significantly increases the costs of obtaining and maintaining patents. Universities may conclude in certain instances that those costs outweigh the benefits of seeking patent protection. That is especially the case considering that patents are significantly more likely to be invalidated in IPR proceedings before the Patent Trial and

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[23] See Postgrant HQ Reporter, *2018 Analysis on PTAB Contested Proceedings* 7, http://bit.ly/2kHYjMf (over 85% of IPR proceedings involve patents as to which concurrent district court litigation is pending, demonstrating that "defendants in patent infringement suits are driving the filing of IPR petitions").

Appeal Board than in traditional district court patent-infringement litigation. Approximately 80% of final Board decisions invalidate at least one patent claim, and approximately 63% invalidate all claims at issue in the proceedings. See U.S. Patent & Trademark Office, *Trial Statistics* 10 (July 2019), http://bit.ly/2lQTboX (*Trial Statistics*).[24] By contrast, a study of district court cases filed in 2008 and 2009 found that courts invalidated patent claims in only about 42% of cases that did not settle—an invalidation rate approximately half the Board's rate. See John R. Allison et al., *Understanding the Realities of Modern Patent Litigation*, 92 Tex. L. Rev. 1769, 1787 fig. 4 (2014). In fact, IPR is so likely to result in invalidation that the Board has been referred to as the patent "death squad."[25]

American innovation would suffer from any chilling of public universities' incentives to obtain and enforce patents. As explained above, while universities will always conduct basic scientific and technological research, they are not well equipped to develop that research into products for consumers. "[U]niver-

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[24] These data include Board decisions in all three types of post-issuance review proceedings created by the Leahy-Smith America Invents Act of 2011—IPR, post-grant review, and covered-business-method review. See *Return Mail, Inc.* v. *U.S. Postal Serv.*, 139 S. Ct. 1853, 1860 (2019). IPR accounts for the lion's share of post-issuance review petitions filed with the Board—93% of the total petitions filed between September 2012 and June 2019. *Trial Statistics* 3.

[25] Rob Sterne & Gene Quinn, *PTAB Death Squads: Are All Commercially Viable Patents Invalid?*, IPWatchdog.com (Mar. 24, 2014), http://bit.ly/2KZShy1 (quoting former Federal Circuit Chief Judge Randall Rader's description of Board).

sities and their patent licensing organizations * * * depend on the ability to license to established or start-up companies to commercialize their inventions." Gulbrandsen Letter 3. If such licensing arrangements are discouraged, the United States may well see a regression to the pre-Bayh-Dole era, in which only a fraction of universities' discoveries ever reached the public. This Court should prevent such a result by granting review of the Federal Circuit's erroneous decision and reaffirming public universities' broad sovereign immunity.

CONCLUSION

For the foregoing reasons and those in the petition, the petition for a writ of *certiorari* should be granted.

Respectfully submitted.

JOSHUA S. JOHNSON
Counsel of Record
VINSON & ELKINS LLP
2200 Pennsylvania Ave., NW, Suite 500 West
Washington, DC 20037
(202) 639-6500
joshjohnson@velaw.com

Counsel for Amicus Curiae

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APPENDIX

Association of Public and Land-grant Universities ("APLU") U.S. Members

APLU's U.S. Member University Systems

American Indian Higher Education Consortium (AIHEC)
Colorado State University System
Southern Illinois University System
Southern University System
Texas A&M University System
Texas Tech University System
The California State University System
The City University of New York System
The State University of New York System
The University of Texas System
University of Alabama System
University of Alaska System
University of California
University of Colorado System
University of Hawaii System
University of Illinois System
University of Massachusetts System
University of Missouri System
University of Nebraska System
University of North Carolina System
University of Tennessee System
University of Wisconsin System
University System of Georgia
University System of Maryland

APLU's U.S. Member Universities by Jurisdiction

ALABAMA

Alabama A&M University
Auburn University
Tuskegee University
The University of Alabama
The University of Alabama at Birmingham
The University of Alabama in Huntsville
University of South Alabama

ALASKA

University of Alaska Fairbanks

AMERICAN SAMOA

American Samoa Community College

ARIZONA

Arizona State University
Northern Arizona University
University of Arizona

ARKANSAS

University of Arkansas
University of Arkansas at Pine Bluff

CALIFORNIA

California Polytechnic State University, San Luis Obispo
California State University, Fresno

California State University, Fullerton
California State University, Northridge
California State University, Sacramento
San Diego State University
San Francisco State University
San Jose State University
University of California, Berkeley
University of California, Davis
University of California, Irvine
University of California, Los Angeles
University of California, Merced
University of California, Riverside
University of California, San Diego
University of California, Santa Barbara
University of California, Santa Cruz

COLORADO

Colorado School of Mines
Colorado State University
University of Colorado at Boulder
University of Colorado Denver/Anschutz Medical Campus

CONNECTICUT

University of Connecticut

DELAWARE

Delaware State University
University of Delaware

DISTRICT OF COLUMBIA

University of the District of Columbia

FLORIDA

Florida A&M University
Florida Atlantic University
Florida International University
Florida State University
University of Central Florida
University of Florida
University of South Florida

GEORGIA

Augusta University
Fort Valley State University
Georgia Institute of Technology
Georgia Southern University
Georgia State University
Kennesaw State University
The University of Georgia

GUAM

University of Guam

HAWAII

University of Hawaii

IDAHO

Boise State University
University of Idaho

ILLINOIS

Illinois State University
Northern Illinois University
Southern Illinois University at Carbondale
University of Illinois at Chicago
University of Illinois at Urbana-Champaign

INDIANA

Ball State University
Indiana University
Indiana University-Purdue University Indianapolis
Purdue University

IOWA

Iowa State University
University of Iowa

KANSAS

Kansas State University
University of Kansas
Wichita State University

KENTUCKY

Kentucky State University
University of Kentucky
University of Louisville

LOUISIANA

Louisiana State University and Agricultural & Mechanical College

Louisiana Tech University
Southern University and A&M College, Baton Rouge
University of Louisiana at Lafayette
University of New Orleans

MAINE

The University of Maine

MARYLAND

Morgan State University
United States Naval Academy
University of Maryland, Baltimore County
University of Maryland, College Park
University of Maryland Eastern Shore
University of Maryland University College

MASSACHUSETTS

Massachusetts Institute of Technology
University of Massachusetts Amherst
University of Massachusetts Boston
University of Massachusetts Lowell

MICHIGAN

Central Michigan University
Michigan State University
Michigan Technological University
Oakland University
University of Michigan
Wayne State University
Western Michigan University

MINNESOTA

University of Minnesota
University of Minnesota Duluth

MISSISSIPPI

Alcorn State University
Jackson State University
Mississippi State University
The University of Mississippi
The University of Southern Mississippi

MISSOURI

Lincoln University
Missouri University of Science and Technology
University of Missouri-Columbia
University of Missouri-Kansas City

MONTANA

Montana State University
The University of Montana

NEBRASKA

University of Nebraska-Lincoln

NEVADA

University of Nevada, Las Vegas
University of Nevada, Reno

NEW HAMPSHIRE

University of New Hampshire

NEW JERSEY

Montclair State University
New Jersey Institute of Technology
Rowan University
Rutgers, The State University of New Jersey
Rutgers University-Newark

NEW MEXICO

New Mexico State University
The University of New Mexico

NEW YORK

Binghamton University, SUNY
Cornell University
Stony Brook University, SUNY
SUNY Polytechnic Institute
The City College of New York, CUNY
University at Albany, SUNY
University at Buffalo, SUNY

NORTH CAROLINA

East Carolina University
North Carolina A&T State University
North Carolina State University
The University of North Carolina at Chapel Hill
University of North Carolina at Charlotte
University of North Carolina at Greensboro
University of North Carolina at Wilmington

NORTH DAKOTA

North Dakota State University
The University of North Dakota

NORTHERN MARIANA ISLANDS

Northern Marianas College

OHIO

Bowling Green State University
Central State University
Cleveland State University
Kent State University
Miami University
Ohio University
The Ohio State University
The University of Toledo
University of Cincinnati
Wright State University

OKLAHOMA

Langston University
Oklahoma State University
University of Oklahoma

OREGON

Oregon State University
Portland State University
University of Oregon

PENNSYLVANIA

The Pennsylvania State University
Temple University
University of Pittsburgh

PUERTO RICO

University of Puerto Rico Mayaguez

RHODE ISLAND

The University of Rhode Island

SOUTH CAROLINA

Clemson University
South Carolina State University
University of South Carolina

SOUTH DAKOTA

South Dakota School of Mines & Technology
South Dakota State University
University of South Dakota

TENNESSEE

Middle Tennessee State University
Tennessee State University
The University of Memphis
The University of Tennessee, Knoxville

TEXAS

Prairie View A&M University
Texas A&M University

Texas State University
Texas Tech University
University of Houston
University of North Texas
University of Texas at Arlington
University of Texas at Austin
University of Texas at Dallas
University of Texas at El Paso
The University of Texas at San Antonio

UTAH

The University of Utah
Utah State University

VERMONT

The University of Vermont

VIRGIN ISLANDS

University of the Virgin Islands

VIRGINIA

The College of William & Mary
George Mason University
Old Dominion University
University of Virginia
Virginia Commonwealth University
Virginia Polytechnic Institute & State University
(Virginia Tech)
Virginia State University

WASHINGTON

University of Washington
Washington State University

WEST VIRGINIA

Marshall University
West Virginia State University
West Virginia University

WISCONSIN

University of Wisconsin-Madison
University of Wisconsin-Milwaukee

WYOMING

University of Wyoming