

# THE JOHN MARSHALL REVIEW OF INTELLECTUAL PROPERTY LAW



## UNIVERSITY INITIATION OF PATENT INFRINGEMENT LITIGATION

JACOB H. ROOKSBY

### ABSTRACT

While the literature examining university engagement in patenting and technology transfer is quite developed, commentators largely have overlooked university involvement in patent litigation. This article focuses on one aspect of that involvement—initiation of patent infringement litigation—by providing a quantitative and textual analysis of patent infringement actions initiated by universities from 2009 through 2010. Suing for-profit actors for money may seem antithetical to the mission of not-for-profit universities, but in fact universities filed over fifty such cases in the studied time period. Examination of these cases reveals a remarkable similarity between the litigation behavior of universities and for-profit actors, as well as complex and varied relationships between universities, their licensees, and research foundations closely affiliated with universities. These findings situate within a larger conversation over the commercial, political, and social implications of science, education, and innovation and suggest that further attention to the activity is warranted, given the substantial public investments in both public and private higher education that result in patentable inventions.

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## UNIVERSITY INITIATION OF PATENT INFRINGEMENT LITIGATION

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## I. INTRODUCTION

Diminishing state support for higher education has fueled universities' ever-expanding search for revenues to support their missions.<sup>1</sup> Against this backdrop, the benefits of university<sup>2</sup> engagement in patenting and technology transfer look appealing for many reasons.<sup>3</sup> Patenting can raise the prestige of faculty inventors and their institutions while technology transfer—i.e., “the transfer of the results of basic and applied research to the design, development, production, and commercialization of new or improved products, services, or processes”<sup>4</sup>—can provide

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<sup>1</sup> See generally BURTON A. WEISBROD ET AL., MISSION AND MONEY: UNDERSTANDING THE UNIVERSITY 29–31 (2008) (calling higher education as an industry “revenue hungry” and noting that public support of public institutions through state appropriations has been declining sharply); David W. Breneman, *Entrepreneurship in Higher Education*, in ARENAS OF ENTREPRENEURSHIP: WHERE NONPROFIT AND FOR-PROFIT INSTITUTIONS COMPETE 3 (Brian Pusser ed., 2005) (discussing the impact of economic pressures on all sectors of higher education).

<sup>2</sup> *University* is used throughout this article to mean any not-for-profit, public or private, post-secondary, degree-granting research institution in the United States that is engaged in patenting and technology transfer. It is important to note, however, that not every institution that has *university* in its name is engaged in patenting and technology transfer (e.g., Southern Virginia University), just as not every institution engaged in patenting and technology transfer has *university* in its name (e.g., Dartmouth College). For purposes of this article, university affiliated research and patent entities are included within the meaning of the term *university* unless otherwise noted.

<sup>3</sup> Some view university involvement in these activities as nothing short of a revolution within the academy. See generally JONATHAN R. COLE, THE GREAT AMERICAN UNIVERSITY: ITS RISE TO PREEMINENCE, ITS INDISPENSIBLE NATIONAL ROLE, AND WHY IT MUST BE PROTECTED (2009); Henry Etzkowitz & Andrew Webster, *Entrepreneurial Science: The Second Academic Revolution*, in CAPITALIZING KNOWLEDGE: NEW INTERSECTIONS OF INDUSTRY AND ACADEMIA 21 (Henry Etzkowitz, Andrew Webster & Peter Healey eds., State University of New York Press 1998) (“[T]he second academic revolution is the translation of research findings into intellectual property, a marketable commodity, and economic development.”).

<sup>4</sup> GARY W. MATKIN, TECHNOLOGY TRANSFER AND THE UNIVERSITY 5 (1990). Some define technology transfer more broadly to include publication, networking, teaching, student placement, consulting, conferences, public meetings, and collaboration, all of which entail taking ideas generated in universities and transferring them to industry. See, e.g., NATIONAL RESEARCH COUNCIL, COMMITTEE ON MANAGEMENT OF UNIVERSITY INTELLECTUAL PROPERTY ET AL., MANAGING UNIVERSITY INTELLECTUAL PROPERTY IN THE PUBLIC INTEREST 16–17, 46 (Stephen A. Merrill & Anne-Marie Mazza eds., 2010) [hereinafter NATIONAL RESEARCH COUNCIL]. This article uses the more limited meaning as described above.

much needed revenues to universities and beneficial products to consumers.<sup>5</sup> Many university administrators have realized this, as noted by recent industry data on university involvement in technology transfer. In fiscal year 2009 alone, universities reaped \$1.7 billion dollars in revenues from licensing patents, filed over 10,000 new patent applications, were issued over 3,000 new patents, and helped create over 500 start-up companies.<sup>6</sup> In light of these figures, it is unsurprising that policymakers increasingly view universities as engines of economic growth.<sup>7</sup>

These activities are not without costs, however, both monetary and non-monetary. A vast literature has developed that criticizes university engagement in patenting and technology transfer on various grounds.<sup>8</sup> Largely absent from the discussion, however, is any focused attention on university initiation of patent infringement litigation, an assertive and multifaceted activity with important policy considerations for higher education. Patent infringement litigation is an inherently market-situated activity that involves high costs, high risks, and complex business decisions at every turn. Given that universities are typically cash-strapped, risk averse, and less focused on business dealings than for-profit actors, from a normative perspective patent infringement litigation would seem to be an activity that universities should seldom, if ever, initiate.

Yet likely for a variety reasons—and as research discussed in this article reveals—they frequently do initiate it, often pursuing litigation strategies that mimic the behaviors of for-profit actors. As one of the first focused studies of this phenomenon, this article presents quantitative and textual findings from a search to identify every patent infringement lawsuit and associated complaint filed by universities in the two-year period from January 1, 2009 through December 31, 2010. The findings provide fruitful information for scholars and university practitioners of technology transfer, an interdisciplinary activity that often spans the fields of law, business, medicine, engineering, and higher education, if not others. Findings

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<sup>5</sup> See Margo A. Bagley, *Academic Discourse and Proprietary Rights: Putting Patents in Their Proper Place*, 47 B.C. L. REV. 217, 218 (2006); David C. Mowery, Richard R. Nelson, Bhaven N. Sampat & Arvids A. Ziedonis, *The Growth of Patenting and Licensing by U.S. Universities: An Assessment of the Effects of the Bayh-Dole Act of 1980*, 30 RES. POL'Y 99, 103–04 (2001). Technology transfer also directly and indirectly impacts local and regional economies in positive ways, through added employment, new firm development, investment initiation, reinvestment in the university, and regional spillovers and knowledge flows. See Robert A. Lowe & Suzanne K. Quick, *Measuring the Impact of University Technology Transfer: A Guide to Methodologies, Data Needs, and Sources*, 19 INDUS. & HIGHER EDUC. 231, 233–36 (2005).

<sup>6</sup> See Ass'n of Univ. Tech. Managers, *Licensing Revenue and Patent Activity, 2009 Fiscal Year*, CHRON. HIGHER EDUC. (Dec. 17, 2010), <http://chronicle.com/article/Table-Licensing-Revenue-and/125729>.

<sup>7</sup> See Etzkowitz & Webster, *supra* note 3, at 39 (arguing that the new social contract between academia and society entails large-scale government support for academic research so long as it plays a key role in the new economy); Donald S. Siegel & Phillip H. Phan, *Analyzing the Effectiveness of University Technology Transfer: Implications for Entrepreneurship Education*, in 16 ADVANCES IN THE STUDY OF ENTREPRENEURSHIP, INNOVATION AND ECONOMIC GROWTH, UNIVERSITY ENTREPRENEURSHIP AND TECHNOLOGY TRANSFER: PROCESS, DESIGN, AND INTELLECTUAL PROPERTY 1, 2 (Gary D. Libecap ed., 2005).

<sup>8</sup> See *infra* Part II.B. Many of these criticisms challenge universities' historic position as set apart from society, as special bastions marked by "objectivity, impartiality, and aloofness from commercial concerns." MATKIN, *supra* note 4, at 56.

presented in the article also allow for deeper understanding of the growing adoption by universities of for-profit business practices on the institutional level.

Part II of this article provides background on university engagement in patenting and technology transfer, as well as common criticisms of these activities. Part III identifies patent-related litigation, broadly defined, as an important cost of university engagement in patenting and technology transfer. The various types of patent-related court conflicts that universities may initiate or face are briefly discussed in that section, which ends with a summary of the underdeveloped literature on university initiation of patent infringement litigation. Part IV outlines the methodology (and its limitations) used in identifying the lawsuits and complaints discussed in Part V, which presents findings and discusses implications. Part VI concludes.

## II. HISTORY AND CRITICISM OF UNIVERSITY ENGAGEMENT IN PATENTING AND TECHNOLOGY TRANSFER

### *A. History*

University faculty have conducted scientific research for over a century, but university involvement in patenting the fruits of scientific research is a more recent phenomenon. While the date of the first patent owned by a university is unknown, the first license of a university patent occurred in 1925, when the University of Wisconsin-Madison created the nation's first technology transfer office ("TTO") and exclusively licensed to Quaker Oats a patent on a process invented by a faculty member for vitamin D irradiation.<sup>9</sup> As government turned to universities to assist with defense initiatives during World War II, many universities—even ones not heavily involved in patenting—established policies to clarify that faculty inventors were obligated to assign their patent rights to the university, even as universities sought to distance themselves from the activity.<sup>10</sup> As part of this distancing effort, a non-profit intermediary organization called the Research Corporation managed the licensing of most university patents well into the 1970s.<sup>11</sup> Although the number of

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<sup>9</sup> See JENNIFER WASHBURN, *UNIVERSITY, INC.: THE CORPORATE CORRUPTION OF HIGHER EDUCATION* 50 (2006); WEISBROD ET AL., *supra* note 1, at 156.

<sup>10</sup> See DAVID C. MOWERY, RICHARD R. NELSON, BHAVEN N. SAMPAT & ARVIDS A. ZIEDONIS, *IVORY TOWER AND INDUSTRIAL INNOVATION: UNIVERSITY-INDUSTRY TECHNOLOGY BEFORE AND AFTER THE BAYH-DOLE ACT IN THE UNITED STATES* 41–43 (2004) [hereinafter *IVORY TOWER INNOVATION*]. Unsurprisingly—given their focus on agricultural and mechanical arts—land-grant institutions were the first group of universities to become involved with patents. *Id.* at 38.

<sup>11</sup> Mowery et al., *supra* note 5, at 101; Gary Rhoades & Sheila Slaughter, *Academic Capitalism and the New Economy: Privatization as Shifting the Target of Public Subsidy in Higher Education*, in *THE UNIVERSITY, STATE, AND MARKET: THE POLITICAL ECONOMY OF GLOBALIZATION IN THE AMERICAS* 103, 110 (Robert A. Rhoades & Carlos Alberto Torres eds., 2006); *IVORY TOWER INNOVATION*, *supra* note 10, at 39, 44, 58 (noting that the Research Corporation was administering inventions for more than 200 institutions by 1970).

TTOs would grow to twenty-five by 1980, most universities' patent activity was quite modest before 1980.<sup>12</sup>

The leading explanation for why universities were not active in patenting during this time period is that the federal government generally retained title to inventions funded with federal dollars, or required that the results of the sponsored research enter the public domain, unless other arrangements were made.<sup>13</sup> Each federal agency had its own policy concerning whether a funding recipient could patent an invention developed from that funding.<sup>14</sup> Only a small number of the thousands of patents owned by the federal government were licensed to private industry prior to 1980,<sup>15</sup> as “incentives to pursue commercialization and capacity to do so were limited.”<sup>16</sup> As a result, conventional wisdom held that American society was failing to reap the benefits of a considerable amount of intellectual property effectively “lost” in the morass of federal government. Partly in response to these concerns, Congress changed the presumption of government ownership in 1980 with the passage of the University and Small Business Patent Procedures Act,<sup>17</sup> which came to be known as the Bayh-Dole Act (the “Act”) in honor of its bi-partisan sponsors, former Senator Birch Bayh (D-IN) and former Senator Robert Dole (R-KS).<sup>18</sup> President Carter signed the Act into law in December of 1980, and it took effect on July 1, 1981.<sup>19</sup>

The Act as originally passed provided that nonprofit and small business<sup>20</sup> recipients of federal research funds—both referred to as “contractors” under the law—may seek patent rights for inventions stemming from such research, so long as

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<sup>12</sup> Mowery et al., *supra* note 5, at 104 (noting that only 264 patents were issued to universities in 1979).

<sup>13</sup> See IVORY TOWER INNOVATION, *supra* note 10, at 24 (“[T]he bulk of federal funding of academic research was predicated on the expectation that the research would yield practical benefits for the federal agency missions”).

<sup>14</sup> *Id.* at 87. Beginning in the 1960s, a few governmental funding agencies (like the National Science Foundation) began to negotiate Institutional Patent Agreements (“IPAs”) with individual institutions, allowing them to own and license patents flowing from funded research. *Id.* at 45. While IPAs generally resulted in more patents for universities, not all institutions had such agreements, and the granting of them varied depending on the funding agency. *Id.* at 53.

<sup>15</sup> See Rebecca S. Eisenberg, *Public Research and Private Development: Patents and Technology Transfer in Government-Sponsored Research*, 82 VA. L. REV. 1663, 1702; Michael S. Mireles, *The Intended and Unintended Consequences of the Bayh-Dole Act in 2 INTELLECTUAL PROPERTY AND INFORMATION WEALTH: ISSUES AND PRACTICES IN THE DIGITAL AGE* 283, 287 (Peter K. Yu ed., 2007).

<sup>16</sup> NATIONAL RESEARCH COUNCIL, *supra* note 3, at 3.

<sup>17</sup> Pub. L. No. 96-517, § 6(a), 94 Stat. 3019 (1980) (codified as amended at 35 U.S.C. §§ 200–12 (2006)).

<sup>18</sup> Passage of the Act led to the growing establishment of TTOs and a decline in university reliance on the Research Corporation for patenting and licensing activities. See IVORY TOWER INNOVATION, *supra* note 10, at 81. By 1985, the Research Corporation held only 5% of the total share of university patents. *Id.* at 80.

<sup>19</sup> See IVORY TOWER INNOVATION, *supra* note 10, at 91–92.

<sup>20</sup> Large business contractors now enjoy the benefits initially only extended to small businesses and nonprofits under the Act due to amendments enacted in 1983 and 1984. See Eisenberg, *supra* note 15, at 1694–95; IVORY TOWER INNOVATION, *supra* note 10, at 93. Some argue that their initial exclusion was a political calculation: liberals would not have supported the Act if they saw it as favoring big business. See WASHBURN, *supra* note 9, at 67; Ashley J. Stevens, *The Enactment of Bayh-Dole*, 29 J. TECH. TRANSFER 93, 96 (2004).

they follow certain requirements.<sup>21</sup> The general purpose of the Act was to benefit the American public by moving to the marketplace the results of government-funded research that was not being used efficiently. Congress codified the specific policy objectives of the Act as being:

- [1] to promote the utilization of inventions arising from federally supported research or development;
- [2] to encourage maximum participation of small business firms in federally supported research and development efforts;
- [3] to promote collaboration between commercial concerns and nonprofit organizations, including universities;
- [4] to ensure that inventions made by nonprofit organizations and small business firms are used in a manner to promote free competition and enterprise without unduly encumbering future research and discovery;
- [5] to promote the commercialization and public availability of inventions made in the United States by United States industry and labor;
- [6] to ensure that the Government obtains sufficient rights in federally supported inventions to meet the needs of the Government and
- [7] [to] protect the public against nonuse or unreasonable use of inventions; and
- [8] to minimize the costs of administering polices in this area.<sup>22</sup>

The rise of competition from Japan and the belief that foreign companies were benefitting from the results of federally-funded research also influenced lawmakers.<sup>23</sup> Subsequent commentators have defended the Act on many grounds, including that university engagement in technology transfer is “squarely within the research university’s core missions of discovery, learning, and the promotion of social wellbeing.”<sup>24</sup>

In addition to retaining “a nonexclusive, nontransferable, irrevocable, paid-up license to practice” any patented invention resulting from its funding,<sup>25</sup> the federal government also retains “march-in” rights under the Act whereby it can take back ownership of patented technology developed with federal funds under certain

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<sup>21</sup> It is an open question as to whether a university patentee that fails to comply with the Act’s detailed title-taking requirements may enforce the patent. *See generally* Scott D. Locke, *Patent Litigation over Federally Funded Inventions and the Consequences of Failing to Comply with Bayh-Dole*, 8 VA. J.L. & TECH. 3 (2003).

<sup>22</sup> 35 U.S.C. § 200 (2006).

<sup>23</sup> *See* Mireles, *supra* note 15, at 285; Stevens, *supra* note 20, at 94; WASHBURN, *supra* note 9, at 8.

<sup>24</sup> NATIONAL RESEARCH COUNCIL, *supra* note 3, at 2.

<sup>25</sup> 35 U.S.C. § 202(c)(4).



circumstances.<sup>26</sup> These circumstances include when a contractor fails to undertake reasonable commercialization efforts, when governmental action is necessary to alleviate health or safety needs, when governmental action is necessary to meet the requirements for public use specified by the Act, or when the patented technology has not been manufactured or implemented primarily in the United States.<sup>27</sup> In exercising its rights under this provision, the funding agency may require the contractor to grant it a non-exclusive, partially exclusive, or exclusive license in any field of use, upon reasonable terms.<sup>28</sup> The federal government has never exercised its march-in rights, which some commentators call an unintended consequence of the Act.<sup>29</sup> They argue that the Act was never meant to cede total control of federally-funded research to universities and businesses.<sup>30</sup>

In contrast to march-in rights—which only may be exercised *after* title to an invention has vested with a contractor—the “exceptional circumstances” provision of the Act allows the funding agency to restrict or eliminate a contractor’s right to retain title to a federally-funded invention *at the time of funding*.<sup>31</sup> The funding agency may exercise this provision when doing so “will better promote the policy and objectives” of the Act.<sup>32</sup> This provision, too, has seldom been used. The government’s diminished oversight and interpretation of the Act, as well as its limited access to relevant information, has resulted in the march-in and exceptional circumstances provisions having little practical importance.<sup>33</sup>

While the Act brought significant changes to university engagement in technology transfer, it was not the only policy change in the early 1980s potentially responsible for the significant increase in university patenting. The Supreme Court of the United States also influenced university engagement in patenting by changing key substantive rules on patentability.<sup>34</sup> For example, the Supreme Court decided in 1980 in *Diamond v. Chakrabarty*<sup>35</sup> that living organisms are patentable subject matter, and one year later in *Diamond v. Diehr*<sup>36</sup> that certain kinds of software can be patented. In particular, the *Chakrabarty* case likely encouraged universities to pursue developments of potentially high commercial value in the emerging field of biotechnology.<sup>37</sup> Universities also entered into a number of widely publicized large-scale agreements with corporations (including \$70 million and \$100 million deals with Hoechst and Monsanto, respectively) around the time of the Supreme Court’s expansion in the scope of patentable subject matter.<sup>38</sup>

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<sup>26</sup> See *id.* § 203(a)(1)–(4).

<sup>27</sup> *Id.*

<sup>28</sup> *Id.*

<sup>29</sup> See Mireles, *supra* note 15, at 289–93.

<sup>30</sup> *Id.*

<sup>31</sup> See 35 U.S.C. § 202(a)(ii).

<sup>32</sup> *Id.*

<sup>33</sup> See NATIONAL RESEARCH COUNCIL, *supra* note 3, at 62–63.

<sup>34</sup> See, e.g., Mowery et al., *supra* note 5, at 103; IVORY TOWER INNOVATION, *supra* note 10, at 93 (“The origins and effects of Bayh-Dole must be viewed in the context of this larger shift in U.S. policy toward intellectual property rights.”).

<sup>35</sup> 447 U.S. 303 (1980).

<sup>36</sup> 450 U.S. 175 (1981).

<sup>37</sup> IVORY TOWER INNOVATION, *supra* note 10, at 126–27.

<sup>38</sup> MATKIN, *supra* note 4, at 42, 69, 74; Etzkowitz & Webster, *supra* note 3, at 30.

Also in the early 1980s, Congress passed the Federal Courts Improvement Act of 1982<sup>39</sup> that established the United States Court of Appeals for the Federal Circuit (“CAFC”), the only federal appellate court whose docket is defined by its subject matter (mostly patent litigation and prosecution disputes) as opposed to geography. While some of the goals in establishing the CAFC were to eliminate forum-shopping and facilitate uniform rulings in a highly specialized area of the law, one of the consequences is that this court’s rulings have been viewed as more supportive of patent holders than decisions made by regional courts of appeal in the earlier judicial system,<sup>40</sup> which has made “virtually all patents more valuable.”<sup>41</sup> The CAFC therefore provides additional incentive for universities to patent, “since infringement suits are now more likely to be resolved in favor of the patent owner.”<sup>42</sup>

While the inventor is the original owner of patent rights under United States patent law, employee policies at the majority of universities in the United States help effectuate the policy purposes of the Act by dictating that “an employee is obligated to assign these rights to her employer as long as university resources are used in the research.”<sup>43</sup> These provisions typically apply to both private- and government-funded research. They also provide, as required under the Act for government-funded research, that the university share licensing proceeds with faculty inventors.<sup>44</sup>

Among government, industry, and university funding, government sources account for the majority of research and development (“R&D”) dollars flowing to universities, usually comprising around 60% of university funding for research, compared to 5–8% from industry.<sup>45</sup> In 2008, universities received \$31.2 billion from

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<sup>39</sup> Pub. L. No. 97-164, 96 Stat. 25 (1982).

<sup>40</sup> See, e.g., ADAM B. JAFFE & JOSH LERNER, INNOVATION AND ITS DISCONTENTS: HOW OUR BROKEN PATENT SYSTEM IS ENDANGERING INNOVATION AND PROGRESS, AND WHAT TO DO ABOUT IT 2 (2004) (“The new court of appeals has interpreted patent law to make it easier to get patents, easier to enforce patents against others, easier to get large financial awards from such enforcement, and harder for those accused of infringing patents to challenge the patents’ validity.”). Bessen and Meurer argue that CAFC bias for patentees is overstated due to selection bias: economic models show that only those cases where the patentee has a 65–90% chance of winning actually go to trial. CAFC decisions accordingly may appear skewed in favor of patentees. See James Bessen & Michael J. Meurer, *Lessons for Patent Policy from Empirical Research on Patent Litigation*, in 2 INTELLECTUAL PROPERTY AND INFORMATION WEALTH: ISSUES AND PRACTICES IN THE DIGITAL AGE 199, 201–02 (Peter K. Yu ed., 2007).

<sup>41</sup> Bagley, *supra* note 5, at 236.

<sup>42</sup> Jerry G. Thursby & Marie C. Thursby, *Knowledge Creation and Diffusion of Public Science with Intellectual Property Rights*, in INTELLECTUAL PROPERTY, GROWTH AND TRADE 199, 205 (Keith E. Maskus ed., 2008).

<sup>43</sup> *Id.* at 217. On those occasions when a university does not wish to pursue a patent on an invention disclosed by a faculty member, the Act allows the faculty member to pursue a patent so long as the funding agency decides not to do so. See 35 U.S.C. § 202(d) (2006) (“If a contractor does not elect to retain title to a subject invention in cases subject to this section, the Federal agency may consider after consultation with the contractor grant requests for retention of rights by the inventor subject to the provisions of this Act and regulations promulgated hereunder.”).

<sup>44</sup> 35 U.S.C. § 202(c)(7)(B). Inventor royalties typically range from 15% to 50% and often increase inversely with the total royalties received for a patented invention. See SHEILA SLAUGHTER & GARY RHOADES, ACADEMIC CAPITALISM AND THE NEW ECONOMY: MARKETS, STATE, AND HIGHER EDUCATION 86–88 (2004) [hereinafter ACADEMIC CAPITALISM II]; Milton Cerny & Kelly L. Hellmuth, *Economic Crisis? Technology Transfer to the Rescue*, 21 TAXATION EXEMPTS 6, 13 (2010).

<sup>45</sup> See Mowery et al., *supra* note 5, at 102.

the federal government, as opposed to \$2.8 billion from private sources.<sup>46</sup> Of total university R&D that is funded by the government, the Department of Health and Human Services and the National Science Foundation provide the most funding (approximately 60% and 15% of the total).<sup>47</sup> The Department of Defense, the Department of Energy, NASA, and the United States Drug Administration are other governmental groups that support university research and development.

### *B. Criticism*

The Act had detractors at the time of its passage and continues to draw critical evaluations thirty years later. Common criticisms include that it causes taxpayers to double pay for federally-funded research, that it favors exclusive licenses that harm the public good, and that the university's enhanced focus on patenting and technology transfer—spurred in large part, but not entirely, by the Act—has eroded the sense of community in academia, created a culture of academic capitalism, caused faculty to experience difficulties in publishing their research, and deterred scientific progress by contributing to the creation of patent “thickets” and a technological “anticommons.” Each of these criticisms is further discussed below.

#### *1. Double Payment*

One argument raised by some legislators in the debate surrounding the passage of the Act was that it would cause the taxpayer to double-pay for innovative technology: once through taxes funding the research, and again in the marketplace in the form of higher prices and limited supply conferred by the patent premium on the transferred technology.<sup>48</sup> This perceived injustice still resonates with critics of the Act today, leading some commentators to call the Act a “windfall” for universities and private industry at the expense of the taxpaying public.<sup>49</sup> The federal government potentially could alleviate this concern to some extent by invoking more frequently the Act's exceptional circumstances provision. As mentioned previously, however, it seldom exercises that provision.

#### *2. Exclusive Licensure and Singular Focus on Licensing Revenues*

Another leading criticism of university involvement in technology transfer is that universities' often singular focus on generating licensing revenues leads them to

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<sup>46</sup> NATIONAL SCIENCE FOUNDATION, ACADEMIC R&D EXPENDITURES: FISCAL YEAR 2008, at 8 tbl.1 (2010), <http://www.nsf.gov/statistics/nsf10311/pdf/nsf10311.pdf>; NATIONAL RESEARCH COUNCIL, *supra* note 3, at 15. Government funding of university R&D has increased dramatically over time. See IVORY TOWER INNOVATION, *supra* note 3, at 24 tbl.2.1 (noting increase in government funding from \$2.1 billion in 1960 to nearly \$14 billion in 1995).

<sup>47</sup> See NATIONAL SCIENCE FOUNDATION, *supra* note 46, at 537 tbl.68.

<sup>48</sup> NATIONAL RESEARCH COUNCIL, *supra* note 3, at 18; WASHBURN, *supra* note 9, at 61.

<sup>49</sup> Lorelei Ritchie de Larena, *The Price of Progress: Are Universities Adding to the Cost?*, 43 HOUS. L. REV. 1373, 1386 (2007) (“The Bayh-Dole Act has been a great windfall for universities.”).

grant exclusive as opposed to non-exclusive licenses of patented technology, which critics argue undermines the public-serving goal of broad dissemination of academic research.<sup>50</sup> Although exclusive licenses can be held by more than one entity (for example, multiple fields of use or geographic areas can be parceled out and each exclusively licensed), companies are willing to pay more for exclusive licenses as they in essence pay for increased market share—“the greater the monopoly power the licensee is granted, the more it would pay for the patent license.”<sup>51</sup> Exclusive licenses provide an incentive for firms to invest in costly product development while also making it easier for universities to negotiate, as they involve fewer transaction costs compared to a TTO’s having to identify multiple licensees and separately negotiate a non-exclusive license with each one. Private industry also is more likely to prefer exclusive licenses, as technological and inventor support typically accompany exclusive licenses but not non-exclusive licenses.<sup>52</sup>

Detractors argue that exclusive licenses do not serve the public as they result in higher prices to consumers, with exclusive licensees essentially acting as monopolistic entities in setting prices. Research suggests that universities most often do what for-profit firms would do, “which is to maximize revenue by using exclusivity or not, depending on which leads to greater revenue under the specific circumstances,”<sup>53</sup> as “they have every incentive under the Bayh-Dole Act to try to negotiate license terms that will give them as big a share of the profits as they can get.”<sup>54</sup> But a singular attention to maximizing revenue generation by licensing

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<sup>50</sup> See, e.g., IVORY TOWER INNOVATION, *supra* note 10, at 191 (arguing that non-exclusive licensing agreements better disseminate academic research consistent with universities’ public-serving missions); Jerry Thursby, Richard Jensen & Marie Thursby, *Objectives, Characteristics and Outcomes of University Licensing: A Survey of Major U.S. Universities*, 26 J. TECH. TRANSFER 59 (2001) (finding that, in a survey of 76 TTOs at major research universities, licensing income was the most important criterion by which TTOs measure their own success). *But see* Ass’n of Univ. Tech. Managers, Statistics Access for Tech Transfer (“STATT”) Licensing Survey, 2000–2009 (reporting 16,294 exclusive licenses compared to 19,394 non-exclusive licenses), available at <http://www.autm.net/source/STATT/index.cfm?section=STATT> (last visited June 9, 2011).

<sup>51</sup> WEISBROD ET AL., *supra* note 1, at 158. Dovid Kanarfogel believes that existing university incentives that favor exclusive licensing can be rectified to align technology transfer practice more with the university’s public-serving mission by involving faculty in the licensing process. See Dovid A. Kanarfogel, *Rectifying the Missing Costs of University Patent Practices: Addressing Bayh-Dole Criticisms Through Faculty Involvement*, 27 CARDOZO ARTS & ENT. L.J. 533 (2009). He argues that increased faculty involvement would help assure “that those making decisions about what to do with the patent rights of a given invention are aware of all positive externalities.” *Id.* at 553. His suggestions include creating departmental representative positions on technology transfer management boards, requiring faculty conferences before certain key licensing decisions are made, and including faculty on hiring committees for TTOs. *Id.* at 551–53. Unfortunately, his proposal fails to address the extent to which universities currently practice his suggestions or the extent to which those suggestions already might have proven protective of the public interest goals he favors.

<sup>52</sup> Non-exclusive licenses are not without their own criticisms, though. Some argue that they amount to a university-levied tax. See, e.g., WASHBURN, *supra* note 9, at 53–54. Also, the prospect of commercializing certain blockbuster inventions—such as an effective drug for treating AIDS—may lead some firms to pursue commercialization without any license at all, on the belief that “their potential profitability is sufficiently large and downstream innovations can themselves be patented.” IVORY TOWER INNOVATION, *supra* note 10, at 174–76.

<sup>53</sup> WEISBROD ET AL., *supra* note 1, at 159.

<sup>54</sup> Eisenberg, *supra* note 15, at 1710–11.

patents may not be a profitable approach for many institutions.<sup>55</sup> According to a study of 101 universities and academic health centers from 1996 to 2005 conducted by Professors Joshua Powers and Eric Campbell, twenty licenses per institution per year was the optimization point for chances of net positive return on R&D investment.<sup>56</sup> Institutions licensing at that level had a 50% chance of net positive return, while net returns beyond that scale fell off considerably.<sup>57</sup> Their data also indicate that no university exceeded a 65% chance of profitability in ten years, and that 35% of the institutions never realized profitability over the ten-year period, no matter how much they invested.<sup>58</sup>

Professors Burton Weisbrod, Jeffrey Ballou, and Evelyn Asch view university use of exclusive licenses as representative of the struggle in higher education between *mission goods* and *revenue goods*—that is, activities that advance an institution’s mission versus raise money that the institution can use to further its mission. Tension arises with exclusive licenses because “[t]he direct advancement of mission calls for maximum access to university research, not to restrictive licensing of patents. Generation of revenue, by contrast, calls for not giving valuable information away but pursuing patents and then licensing their use in return for royalties and, in the process, restricting access.”<sup>59</sup> Weisbrod et al. argue that the conflict between revenue and mission is likely to be resolved in favor of revenue in most instances.

Others have suggested that patenting and exclusive licensure is not the best approach for maximizing the social returns on federal R&D investment.<sup>60</sup> These authors argue that more open channels of information dissemination, such as publications, conferences, and consulting, may be equally if not more effective. Even if pursuing such channels meant lowering financial returns on university-owned patents and licenses, Professors David Mowery, Richard Nelson, Bhaven Sampat, and Arvids Ziedonis argue that such an approach would “enhance universities’ contributions to domestic and global economic welfare.”<sup>61</sup> Their position appears to run counter to the intent of the Act’s co-sponsor, former Senator Bayh, who in introducing his bill to the Senate in 1978 argued that private companies could not

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<sup>55</sup> See, e.g., Michael N. Bastedo & Nathan F. Harris, *The State Role in Entrepreneurship and Economic Development: Governance, Oversight, and Public University Start-Up Innovation*, in 19 ADVANCES IN THE STUDY OF ENTREPRENEURSHIP, INNOVATION AND ECONOMIC GROWTH, MEASURING THE SOCIAL VALUE OF INNOVATION: A LINK IN THE UNIVERSITY TECHNOLOGY TRANSFER AND ENTREPRENEURSHIP EQUATION 215, 219 (Gary D. Libecap ed., 2009) (noting that “licensing has yet to yield significant financial returns for most universities”).

<sup>56</sup> See Joshua B. Powers & Eric G. Campbell, *University Technology Transfer in Tough Economic Times*, CHANGE, Nov./Dec. 2009, at 45–46.

<sup>57</sup> *Id.* at 46.

<sup>58</sup> *Id.*

<sup>59</sup> WEISBROD ET AL., *supra* note 1, at 153–54.

<sup>60</sup> See, e.g., Mowery et al., *supra* note 5, at 118 (arguing that the assumption that patents and exclusive licensure are the best approach to maximize the social returns to the federal R&D investments “appears to understate the effectiveness of publication and other, more open channels for information dissemination and access in enabling society to benefit from publicly funded academic research.”); Jerry G. Thursby & Marie C. Thursby, *University Licensing and the Bayh-Dole Act*, 301 SCIENCE 1052 (2003) (“Exclusive patent rights provide an incentive for firms to invest in costly development, but only to the extent that patents are effective in protecting intellectual property (IP), which varies by industry.”).

<sup>61</sup> Mowery et al., *supra* note 5, at 118.

afford the risk of commercialization expenditures unless they were given the protection of exclusive use.<sup>62</sup>

### 3. *Academic Capitalism and Entrepreneurism*

Another common criticism of university involvement in technology transfer is that it has contributed to the injection of private market values into higher education, further eroding the sense of community in academia and injuring the public good. Professors Sheila Slaughter, Gary Rhoades, and Larry Leslie are leading proponents of this argument,<sup>63</sup> although others also have made it to varying degrees.<sup>64</sup>

Slaughter, Rhoades, and Leslie's signature contribution has been in positing a theory of academic capitalism that they argue is the new regime existing in research universities, replacing or existing alongside what they style as the traditional public good knowledge/learning regime. Academic capitalism theory supports questioning "the presumption that [universities engaged in technology transfer] exist for the good of the general public and that they further the values of society."<sup>65</sup> The theory also challenges the notion of universities as set apart from society, as special bastions marked by "objectivity, impartiality, and aloofness from commercial concerns."<sup>66</sup>

Under academic capitalism theory, universities value knowledge privatization and profit taking in which institutions, inventor-faculty, and corporations have claims before the public.<sup>67</sup> Traditional barriers between public and private sectors are eroded under this theory, enabling not-for-profit institutions and professionals to engage the private sector marketplace directly, most often at their own instigation, as the "major players in and initiators of the process."<sup>68</sup> Subscribers to academic capitalism view the Act as largely responsible for these consequences,<sup>69</sup> which they view negatively.<sup>70</sup> They also identify so-called interstitial organizations (namely,

<sup>62</sup> See Stevens, *supra* note 20, at 95 (quoting Senator Bayh as saying "[u]nless private industry has the protection of some exclusive use under patent or license agreements, they cannot afford the risk of commercialization expenditures").

<sup>63</sup> See generally ACADEMIC CAPITALISM II, *supra* note 44; Rhoades & Slaughter, *supra* note 11; SHEILA SLAUGHTER & LARRY L. LESLIE, ACADEMIC CAPITALISM: POLITICS, POLICIES, AND THE ENTREPRENEURIAL UNIVERSITY (1997) [hereinafter ACADEMIC CAPITALISM I].

<sup>64</sup> See, e.g., Bagley, *supra* note 5, at 238–54 (identifying increased secrecy, the withholding of data, and an erosion of the sense of community within academia as costs of universities' increased engagement in patenting and technology transfer); DEREK C. BOK, UNIVERSITIES IN THE MARKETPLACE: THE COMMERCIALIZATION OF HIGHER EDUCATION 156 (2003) ("When rules are unclear and always subject to negotiation, money will prevail over principle much of the time. Resourceful companies will pick universities apart, finding individual faculties willing to grant them what they want, then using these concessions to pressure other institutions with which they seek to interact.").

<sup>65</sup> Ritchie de Larena, *supra* note 49, at 1412.

<sup>66</sup> MATKIN, *supra* note 4, at 56.

<sup>67</sup> See ACADEMIC CAPITALISM II, *supra* note 44, at 29.

<sup>68</sup> Rhoades & Slaughter, *supra* note 63, at 119.

<sup>69</sup> See ACADEMIC CAPITALISM I, *supra* note 63, at 46 ("In a very real sense the Bayh-Dole Act encouraged academic capitalism.").

<sup>70</sup> In her earlier work with Larry Leslie, Professor Slaughter argued that "[l]eaders of corporations, government, and tertiary institutions increasingly see faculty work as possible

TTOs) and intermediating networks (such as the Association of Technology Managers (“AUTM”))—created to foster university engagement in technology transfer—as bearing some responsibility for redefining the public sphere in higher education, wherein for-profit behavior is increasingly accommodated and even celebrated.<sup>71</sup>

A related strand of criticism focuses on academic entrepreneurship, or faculty behavior “as amphibious creatures, moving back and forth as consultants and advisors and as founders of university spin-off firms.”<sup>72</sup> Professors Diana Rhoten and Walter Powell suggest that academic capitalism and entrepreneurship have changed the historical dividing line between public versus proprietary research.<sup>73</sup> They argue that hybridized arrangements that combine elements of both public and private science increasingly will be the norm.<sup>74</sup> The characterization of science by the late sociologist Robert Merton as a social and public enterprise guided by the ideals of communalism, universalism, disinterestedness, originality, and skepticism seem quaint and outmoded under this new formulation of science.<sup>75</sup>

Positing that revenues from technology transfer often derive from research of a type that bears little or no relation to the educational and scientific public purposes for which the university is exempted from taxation on income, one author has argued that licensing revenue should be subjected to the unrelated business income tax in certain situations.<sup>76</sup> Under this proposal, two distinct types of patent-licensing agreements would exist: taxable and nontaxable.<sup>77</sup> Taxable agreements would consist of any agreement that calls for a delay in academic publishing, constitutes an exclusive license, or involves a faculty conflict of interest.<sup>78</sup> While such agreements have not been implemented, the proposal represents one way society could hold universities accountable for engaging in behavior that some view as undermining their role of furthering public as opposed to private interests.

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intellectual property, more valuable in global markets as product or commodity than as unremunerated contribution to an international community of scholars.” See ACADEMIC CAPITALISM I, *supra* note 63, at 39. They also alleged that faculty had become “state-subsidized entrepreneurs,” acting “as capitalists within the public sector.” *Id.* at 210.

<sup>71</sup> See ACADEMIC CAPITALISM II, *supra* note 44, at 306–07, 313–15; Gary Rhoades, *Housing the Measurement of University Innovations’ Social Value: Organizational Site, Professional Perspective, Institutional Outlook* in 19 ADVANCES IN THE STUDY OF ENTREPRENEURSHIP, INNOVATION AND ECONOMIC GROWTH, MEASURING THE SOCIAL VALUE OF INNOVATION: A LINK IN THE UNIVERSITY TECHNOLOGY TRANSFER AND ENTREPRENEURSHIP EQUATION 237, 241–46, 252 (Gary D. Libecap ed., 2009).

<sup>72</sup> Diana Rhoten & Walter W. Powell, *The Frontiers of Intellectual Property: Expanded Protection Versus New Models of Open Science*, 3 ANN. REV. L. & SOC. SCI. 345, 356 (2007).

<sup>73</sup> *Id.* at 346.

<sup>74</sup> *Id.*

<sup>75</sup> *Id.* at 347.

<sup>76</sup> See Peter D. Blumberg, Comment, *From “Publish or Perish” to “Profit or Perish”: Revenues from University Technology Transfer and the § 501(c)(3) Tax Exemption*, 145 U. PA. L. REV. 89, 141–42 (1996).

<sup>77</sup> *Id.* at 141.

<sup>78</sup> *Id.* at 142–46.

#### 4. Costs to Faculty

Some view university involvement in technology transfer as placing serious burdens on faculty. A leading concern is potential delay in the publication of scientific research. United States patent laws require that an invention be novel in order to be patentable.<sup>79</sup> To meet this requirement, the law further specifies that the invention not be made available to the public, via publication, use, or sale, more than one year prior to the filing of the patent application.<sup>80</sup> This one-year bar—which has been called “rigid,” “unforgiving,” and “not conducive to academic discourse”<sup>81</sup>—does not exist in many foreign countries that have “first-inventor-to-file” as opposed to “first-to-invent” patent laws, unlike the United States.<sup>82</sup> Accordingly, in the interest of maintaining novelty, some faculty choose to delay publication of research results until after at least a provisional patent application has been filed in the United States. Such delays have led some commentators to note a rising culture of secrecy among academic researchers.<sup>83</sup> Researchers’ unfamiliarity with the patent system also may cause confusion and unnecessary delays in publishing results of scientific studies.

A related potential concern to faculty researchers is that the language of patents and the language of science do not always overlap.<sup>84</sup> Legal discourse is based on a hierarchical set of rules that often turn on argumentation and nuances of expression. Scientific discourse, on the other hand, is built on accountability to empirical fact. Accordingly, some faculty may be uncomfortable or even unable to appropriately document and convey inventions within the strictures of legal discourse.<sup>85</sup> Such a difficulty could be of real concern to those faculty researchers who work at a university with a peer review system that takes into account researcher accomplishments within the patent system, as is increasingly the norm.<sup>86</sup> This trend

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<sup>79</sup> See 35 U.S.C. § 102 (2006).

<sup>80</sup> See *id.* § 102(b).

<sup>81</sup> Bagley, *supra* note 5, at 220–21.

<sup>82</sup> However, the United States’ standing as a first-to-invent country may not last much longer. The America Invents Act (Patent Reform Act of 2011), which Congress may vote on as early as this summer, would award patents to the first inventor to file. See Patent Reform Act of 2011, S. 23, 112th Cong. (2011), 157 CONG. REC. S936-02 (2011).

<sup>83</sup> See Bagley, *supra* note 5, at 221 (“[S]ecrecy is on the rise among academic researchers”). In light of this trend, Professor Bagley argues for amending the patent laws to create an opt-in system that would allow academic researchers to enjoy a two-year as opposed to a one-year grace period for purposes of meeting the novelty requirement. *Id.* at 254–65. She also notes that CAFC case law has done little to dispel any felt need for secrecy. *Id.* at 243. For example, in *In re Kopfenstein*, 380 F.3d 1345 (Fed. Cir. 2004), the court ruled that the mere presentation of study results for two and half days at a scientific conference more than two years before filing for a patent barred issuance of a patent on the subject invention, even though no copies of the document were distributed at the conference.

<sup>84</sup> See Katherine T. Durack, *Technology Transfer and Patents: Implications for the Production of Scientific Knowledge*, 15(3) TECHNICAL COMM’N Q. 315, 325 (2006) (noting the “fundamental tension between legal discourse and scientific discourse”).

<sup>85</sup> *Id.* at 324–26.

<sup>86</sup> See ACADEMIC CAPITALISM II, *supra* note 44, at 107.

The academic capitalist system is setting up an alternative system of rewards in which discovery is valued because of its commercial properties and economic rewards, broad scientific questions are couched so that they are relevant to commercial possibilities (biotechnology, telecommunications, computer science),



is particularly troubling to those scholars who see the traditional academic reward system that gives primacy to peer-reviewed publications as inherently in conflict with the new form of reward system that also takes into account contributions to technology transfer, an activity they regard as purely “focused on revenue generation from applied research.”<sup>87</sup>

### 5. Patent “Thickets” and the “Tragedy of the Anticommons”

A further consequence of the Act is that universities are seeking and obtaining patents at an increased rate each year, particularly in lucrative fields like biotechnology.<sup>88</sup> This heightened activity has led one commentator to allege that the Act allows universities to “irresponsibly over-patent”<sup>89</sup> and that “[i]deally, universities should patent less and license more, since without commercial potential, patents can only be obstructive to other researchers.”<sup>90</sup> Regardless of whether universities’ pursuit of patents has been conducted responsibly, the heightened activity may have resulted in the creation of patent “thickets”—i.e., patent-rich fields of technology—and what Professors Michael Heller and Rebecca Eisenberg call the “tragedy of the anticommons.”<sup>91</sup> In contrast to the free-rider problem associated with the late ecologist Garret Hardin’s “tragedy of the commons” theory,<sup>92</sup> “tragedy of the anticommons” theory holds that too many rights-holders in a particular technological space may block all rights holders such that no one party is able to use the property effectively. Such a phenomenon could result in an underuse of technology that frustrates innovation.

To address these and other problems, Judge Ritchie de Larena has argued for the creation of a unified, independent, private, national technology transfer center to manage the disposition of intellectual property on all federally-funded inventions.<sup>93</sup> A percentage of royalties would go back to the funding agency, with only a nominal amount flowing to universities.<sup>94</sup> Her position is that such a system would be better equipped than “faculty-controlled institutions” to be the appropriate stewards of America’s intellectual property.<sup>95</sup> Other authors have argued that faculty ownership

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knowledge is regarded as a commodity rather than a free good, and universities have the organization capacity (and are permitted by law) to license, invest, and profit from these commodities.

*Id.*

<sup>87</sup> Donald S. Siegel, Mike Wright & Andy Lockett, *The Rise of Entrepreneurial Activity at Universities: Organizational and Societal Implications*, 16 INDUS. & CORP. CHANGE 489, 497 (2007).

<sup>88</sup> See IVORY TOWER INNOVATION, *supra* note 10, at 182 (noting the increase and “the unusual strength and economic value of patents and licenses” for inventions in the biomedical sciences).

<sup>89</sup> Ritchie de Larena, *supra* note 49, at 1376.

<sup>90</sup> *Id.* at 1425.

<sup>91</sup> Michael A. Heller & Rebecca S. Eisenberg, *Can Patents Deter Innovation? The Anticommons in Biomedical Research*, 280 SCIENCE 698, 698 (1998).

<sup>92</sup> See generally Garret Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243 (1968).

<sup>93</sup> Ritchie de Larena, *supra* note 49, at 1439.

<sup>94</sup> *Id.* at 1440–41.

<sup>95</sup> *Id.* at 1444.

of inventions would be a better model.<sup>96</sup> However, a recent study by the National Academy of Sciences concluded that neither faculty ownership of inventions nor a national technology transfer licensing center would present distinct advantages over the current system.<sup>97</sup>

### III. UNIVERSITY INVOLVEMENT IN PATENT-RELATED LITIGATION

One largely overlooked cost of university involvement in technology transfer is university involvement in patent-related litigation. As patent holders and employers of researchers actively engaged in cutting-edge research, universities both can sue and be sued for patent infringement. At first glance, universities' affirmative involvement as plaintiffs in patent-related litigation would seem to pose particular concerns for their role and image as serving the public good. Unlike large for-profit enterprises that view intellectual property litigation as a cost of doing business, universities generally are not in the business of manufacturing products or using processes covered by patents. Accordingly—and consistent with the view that the university exists to serve the public good—one may naïvely assume that universities seldom engage in patent-related litigation, or at least seldom initiate such litigation. Litigation, after all, is costly and taxing. It lifts disputes out of the realm of the private and personal, politicizes them, and allows groups and individuals to “play out their problems as conflicts between good guys and bad guys.”<sup>98</sup> Intellectual property litigation in particular “reflects competition and conflict.”<sup>99</sup> Why would a university choose to engage in such a practice? Some may view universities as having loftier endeavors to be concerned with than engaging in a contentious, public, and drawn-out process through which they seek vindication of business interests.

In reality, universities engage in various types of patent-related litigation, in both defensive and offensive postures. These involvements may seem contrary to the idealized image of the university being removed from the rough-and-tumble field of litigation, yet are fully consistent with the role of universities as intellectual property owners in a knowledge-based economy. Patenting effectively creates limited monopolies for sale.<sup>100</sup> It is by definition an expensive commercial activity. When universities engage in it they open the door to patent-related litigation of all stripes, as further discussed below.

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<sup>96</sup> See, e.g., James D. Clements, *Improving Bayh-Dole: A Case for Inventor Ownership of Federally Sponsored Research Patents*, 49 IDEA 469, 496–500 (2009) (arguing that inventor ownership would lead to a higher probability of inventions being successfully brought to market).

<sup>97</sup> NATIONAL RESEARCH COUNCIL, *supra* note 4, at 63–64.

<sup>98</sup> DEBORAH A. STONE, POLICY PARADOX: THE ART OF POLITICAL DECISION MAKING 129 (2002).

<sup>99</sup> Jean O. Lanjouw & Mark Schankerman, *Characteristics of Patent Litigation: A Window on Competition*, 32 RAND J. ECON. 129, 129 (2001).

<sup>100</sup> See JAFFE & LERNER, *supra* note 40, at 7, 51 (observing that a patent “creates a kind of monopoly for its owner” and that “patents are blunt instruments. Because of the complexity of the evolution of technology, the monopoly that they create will sometimes retard rather than encourage competition”).

### A. Varieties of “Patent Litigation”

Commentators and practitioners alike often speak of “patent litigation” as if the term had a precise and readily agreed upon meaning. But what are we really talking about when we talk about university involvement in patent litigation? The Patent Act<sup>101</sup> provides for various causes of action, including actions to overturn a decision by the United States Patent and Trademark Office (“USPTO”) to deny a patent application, dispute the inventorship of a patent, contest the length of a patent’s term or its issuance, and obtain relief for infringement of a patent. Other actions not contemplated by the Patent Act, but rather rooted in common law, may be closely tied to the university’s involvement in patenting and technology transfer, leading some to loosely call these actions *patent litigation* as well. This subsection provides a brief description of the types of patent litigation that *are not* the focus of this article.<sup>102</sup>

#### 1. Prosecution-Related Litigation

Universities aggrieved during the patent prosecution process can initiate litigation against the USPTO in response to a final office action by a patent examiner. These cases are first heard before the Board of Patent Appeals and Interferences.<sup>103</sup> Its decisions are appealable to the United States District Court of the District of Columbia or to the CAFC.<sup>104</sup> If a university cares to dispute the duration of a patent that has issued to it, it may initiate such litigation against the USPTO in the United States District Court of the District of Columbia.<sup>105</sup>

#### 2. Inventorship Litigation

Universities that believe one or more of their faculty or researchers through error are not named on a patent may bring an action in a federal district court, seeking an order that the USPTO be made to amend the listed inventors of the patent.<sup>106</sup> Actions of this sort typically arise out of faculty engagement in research

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<sup>101</sup> See 35 U.S.C. §§ 1–376 (2006).

<sup>102</sup> Subsequent research should explore the nature and extent of university involvement in these activities. This article does not attempt to do so in anything other than topical fashion.

<sup>103</sup> See 35 U.S.C. § 134(a) (“An applicant for a patent, any of whose claims has been twice rejected, may appeal from the decision of the primary examiner to the Board of Patent Appeals and Interferences, having once paid the fee for such appeal.”).

<sup>104</sup> See 35 U.S.C. §§ 141, 145.

<sup>105</sup> See, e.g., Complaint at 1, *Univ. of Mass. v. Kappos*, No. 10-0894 (D.C. Cir. May 28, 2010) (seeking that the patent term adjustment for the patent in suit be changed from 623 days to 1,276 days). 35 U.S.C. § 154(b)(4)(A) is the statute that provides for the appeal of a patent term adjustment determination. The same statute guarantees no more than a three-year application pendency. See *id.* § 154(b)(1)(B). The director of the USPTO must grant a patent term adjustment if delays occur outside the applicant’s control. See *id.*

<sup>106</sup> See 35 U.S.C. § 256. Universities also may be named defendants in such actions. See, e.g., *Stern v. Trs. of Columbia Univ. in the City of N.Y.*, 434 F.3d 1375 (Fed. Cir. 2006) (upholding grant

funded by private industry. The agreements governing such research often vest ownership of resultant intellectual property with the university, but private industry partners may decide to seek patents in their own name anyway, perhaps believing that the patent covers technology not discovered by the faculty researcher or not discovered pursuant to a research agreement with the university. The CAFC recently ruled against a university in its attempt to obtain joint ownership of a patent in precisely such a situation.<sup>107</sup>

### 3. False Marking Actions

Section 292 of the Patent Act establishes causes of action for false marking, which can include falsely marking that an unpatented article is patented, that a patent application has been filed for an article over which an application has not been filed, or for marking, affixing, or advertising “the name or any imitation of the name of a patentee, the patent number, or the words ‘patent,’ ‘patentee,’ or the like, with the intent of counterfeiting or imitating the mark of the patentee, or of deceiving the public and inducing them to believe that the thing was made, offered for sale, sold, or imported into the United States by or with the consent of the patentee.”<sup>108</sup> The fine for false marking is \$500 for every offense,<sup>109</sup> and “any person may sue for the penalty,” provided one-half of any damages awarded goes to the government.<sup>110</sup>

Universities are unlikely parties to bring false marking suits unless they have other patent-related causes of action against the same defendant.<sup>111</sup>

### 4. Interferences

Occasionally the USPTO may issue a patent covering an invention for which a university has a pending application, and for which it believes it is the first inventor. In such event the university can request that the USPTO conduct an interference proceeding between the pending application and the issued patent, in order to

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of summary judgment to the university in a lawsuit brought by a former medical student seeking to be added as a co-inventor to a university-owned patent).

<sup>107</sup> See *Vanderbilt Univ. v. ICOS Corp.*, 601 F.3d 1297 (Fed. Cir. 2010) (upholding district court finding that university is not joint owner of patents covering erectile dysfunction drug, despite prior research agreement between university faculty and company that assigned patents to defendant). Other cases of this sort include *University of Delaware v. Global Solar Energy, Inc.*, No. 09-0036 (D. Del. filed Jan. 15, 2009) (alleging that the inventorship question posed by the lawsuit arises out of work conducted by the university, through its faculty, in collaboration with the defendant), and *Administrators of the Tulane Educational Fund v. Ipsen Pharma, S.A.S.*, No. 09-2428 (D.D.C. filed Dec. 28, 2009) (alleging that university’s faculty member partnered on research efforts with defendant’s subsidiary for over twenty years).

<sup>108</sup> 35 U.S.C. § 292(a).

<sup>109</sup> *Id.*

<sup>110</sup> See *id.* § 292(b).

<sup>111</sup> See, e.g., Complaint, *STC.UNM v. Envtl. Robots, Inc.*, No. 10-0094, (D.N.M. Feb. 4, 2010) (alleging patent infringement, breach of contract, and false marking against the same defendant).

determine priority of invention.<sup>112</sup> The CAFC deems such proceedings “litigation-type activity,”<sup>113</sup> the outcome of which is appealable either to the CAFC or to a federal district court.<sup>114</sup>

### 5. Declaratory Judgment and Defense of Patent Infringement Actions

Universities also may participate in declaratory judgment actions. A claimant in such actions seeks a federal court’s declaration that its planned or actual business activity does not infringe another’s patent.<sup>115</sup> Claimants usually seek, as part of the same litigation, the court’s declaration that the patent held by the university is invalid and therefore unenforceable. The finder of fact in such litigation can conclude that the patent is invalid and not infringed, that the patent is not invalid and is infringed, or that the patent is not invalid and not infringed. Universities are more likely to defend than initiate these actions,<sup>116</sup> given that they do not typically commercialize in their own name products or processes covered by their patents.

Universities may bring such a claim, however, as a defensive measure when industry patent holders sue universities and faculty researchers, alleging that work conducted by faculty researchers infringes industry-held patents and that universities—as employers of faculty—as well as individual faculty members themselves are ultimately liable for any such infringements. Until 2002, earlier case law and opinions from industry commentators led universities to believe that the “experimental use” exception to patent infringement excused them from any potential infringement liability.<sup>117</sup> That common law exception excuses defendants from infringement liability if the infringing act is undertaken solely for amusement, to satisfy idle curiosity, or for strictly philosophical inquiry.<sup>118</sup> The CAFC limited its application, however, in a 2002 case, *Madey v. Duke University*.<sup>119</sup> While the initial

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<sup>112</sup> See 35 U.S.C. § 135(a); 37 C.F.R. § 41.202(a),(b) (2010).

<sup>113</sup> See *Vas-Cath, Inc. v. Curators of the Univ. of Mo.*, 473 F.3d 1376, 1383 (Fed. Cir. 2007).

<sup>114</sup> See *Wu v. Wang*, 129 F.3d 1237, 1240 (Fed. Cir. 1997) (judicial appeals under § 141 and § 146 are alternative routes to challenge the final judgment of the Board of Patent Appeals and Interferences in an interference proceeding). For example, in *Vas-Cath*, the University of Missouri initiated and won an interference proceeding, resulting in the award of a patent to the university and the stripping of a patent from Vas-Cath. *Vas-Cath*, 473 F.3d at 1379. Vas-Cath appealed the ruling to a federal district court, which granted the university’s motion to dismiss based on its assertion of Eleventh Amendment immunity from suit in federal court. *Id.* at 1379–80. On further appeal, the CAFC held that the university’s initiation of an interference proceeding barred its assertion of immunity in any appeal of the adjudication. *Id.* at 1383–84.

<sup>115</sup> See, e.g., Complaint ¶ 33, *Life Techs. Corp. v. Oxford Biomed. Research, Inc.*, No. 09-0029, (M.D. Tenn. Jan. 9, 2009) (seeking declaration that a patent owned by Vanderbilt University was invalid and not infringed).

<sup>116</sup> See, e.g., Complaint ¶¶ 12–19, *Genentech, Inc. v. Trs. of the Univ. of Pa.*, No. 10-2037 (N.D. Cal. May 11, 2010) (seeking declaratory judgment alleging that the university notified plaintiff “on multiple occasions that it needs to take a license” to the patent in suit to avoid infringement).

<sup>117</sup> See *IVORY TOWER INNOVATION*, *supra* note 10, at 187–88.

<sup>118</sup> See *Embrex, Inc. v. Serv. Eng’g Corp.*, 216 F.3d 1343, 1349 (Fed. Cir. 2000) (noting that the CAFC has construed the experimental use exception “very narrowly”).

<sup>119</sup> 307 F.3d 1351 (Fed. Cir. 2002). The case involved a former Duke scientist who alleged that Duke was infringing his patent for laser technology when Duke used a laser embodying the technology in one of its laboratories. *Id.* at 1352–53. The CAFC ruled against Duke, holding that

reaction was to view *Madey* as inhibiting faculty research, some have argued that its practical effect is more nuanced.<sup>120</sup> Regardless of the application *vel non* of the experimental use exception, universities may seek a court's declaration that a plaintiff's patent is invalid and not infringed in response to a plaintiff's infringement allegation. Universities also can seek such rulings affirmatively in response to a reasonable threat of litigation by a patent holder.

### 6. Common Law Disputes Involving Patents

Some cases involving universities and technology transfer may not arise under the Patent Act yet nevertheless may be tied intimately to the university's involvement in patenting and technology transfer. These lawsuits often stem from the unique contractual relationship between faculty and universities. As a condition of their employment as employees of the university, faculty and researchers typically are required to sign or accept (via assent to policies in a faculty handbook) the intellectual property policy maintained by the university. These policies usually require faculty and researchers to transfer ownership of any patentable discovery made by them during the course of their employment with the university to the university or its designee. They also typically set forth the structure for receipt of royalties for any revenues generated by university licensure of the inventor's patents. Litigation can arise when faculty or universities fail to uphold the terms of these agreements.<sup>121</sup> Issues are further complicated when for-profit companies are

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universities are not automatically exempt from patent infringement liability if the alleged infringement is in furtherance of the university's legitimate business. *Id.* at 1362. The court stated:

In short, regardless of whether a particular institution or entity is engaged in an endeavor for commercial gain, so long as the act is in furtherance of the alleged infringer's legitimate business and is not solely for amusement, to satisfy idle curiosity, or for strictly philosophical inquiry, the act does not qualify for the very narrow and strictly limited experimental use defense. Moreover, the profit or non-profit status of the user is not determinative.

*Id.*

<sup>120</sup> See, e.g., Elizabeth A. Rowe, *The Experimental Use Exception to Patent Infringement: Do Universities Deserve Special Treatment?*, 57 HASTINGS L.J. 921, 939 (2006) (arguing that a narrow experimental use exception benefits major patent-holders like universities, as "[m]illions of dollars in licensing revenues and royalties would be lost, for instance, if all research were exempted from infringement until commercialized"). Rowe further suggests that universities enjoy *de facto* immunity for purely research-related infringement activities that do not generate revenues, as patentees are deterred by the high cost of patent infringement litigation from filing suit to stop the infringement. *Id.* at 943.

<sup>121</sup> See, e.g., Complaint, *The Curators of the Univ. of Mo. v. Suppes*, No. 09-4012 (W.D. Mo. Jan. 26, 2009) (outlining the university's allegation that a faculty researcher submitted altered invention disclosure forms to the university). The complaint states:

But rather than disclose and assign those inventions as required, Suppes has on approximately 31 occasions submitted invention disclosure forms that were *altered*, usually by deleting or substantially modifying the specific assignment language contained in the forms such that Suppes did not in fact assign any meaningful rights to the University. On these occasions Suppes submitted the forms without bringing his alterations to anyone's attention.

*Id.* ¶ 15. These forms allegedly looked like the invention disclosure forms that faculty are required to submit under their employment agreements with the university, although they purportedly had

involved.<sup>122</sup> The Supreme Court recently decided a case involving competing claims to patent ownership by a university and a for-profit company.<sup>123</sup>

Disagreements also may arise between universities and their licensees over licensing issues. For example, a licensee may allege that the university has breached

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been altered to allow the faculty member to retain ownership of the inventions. *Id.* The faculty member and a post-doctoral fellow allegedly subsequently filed several patent applications without the university's knowledge or involvement. *Id.* ¶ 17. They then allegedly abandoned a few of these applications without telling the university, and refused to transfer handling and ownership of the others to the university upon its demand. *Id.* The university brought a multi-count complaint against both the faculty member and the post-doctoral fellow (who had left the university, allegedly to run a company involving technology covered by the disputed patent applications), seeking the court's determination of ownership and dates of conception and reduction to practice of the inventions created by the faculty defendants. *Id.* ¶¶ 33–41. The university also alleged breach of contract, tortious interference with business relationships, and breach of duty of loyalty, and sought immediate assignment of all inventions created by the defendants, specific performance, and an accounting of lost profits. *Id.* ¶¶ 42–84. *See also* Univ. of W. Va., Bd. of Trs. v. VanVoorhies, 278 F.3d 1288, 1297 (Fed. Cir. 2002) (affirming district court finding that former graduate student breached his contractual duty to assign patent applications to university); Regents of the Univ. of N.M. v. Knight, 321 F.3d 1111, 1120 (Fed. Cir. 2003) (affirming district court finding that faculty researchers breached their contractual duty to assign their patents and applications to university).

<sup>122</sup> *See, e.g.,* Univ. of Colo. Found., Inc. v. Am. Cyanamid Co., 342 F.3d 1298, 1310 (Fed. Cir. 2003) (finding in favor of university and its faculty inventors in protracted unjust enrichment lawsuit they brought against for-profit company that filed for patent protection of professors' invention in 1981).

<sup>123</sup> *See* Bd. of Trs. of Leland Stanford Jr. Univ. v. Roche Molecular Sys., 583 F.3d 832 (Fed. Cir. 2009), *aff'd*, 98 U.S.P.Q.2d (BNA) 1761 (2011). At issue was an assignment between a Stanford faculty researcher and a predecessor company to Roche. *See id.* at 837. The faculty member signed an intellectual property agreement with Stanford when he began work there in 1988. *Id.* In it he promised to assign to Stanford any inventions he made during his employment. *Id.* A year later, he signed a confidentiality agreement with Roche's predecessor in interest. *Id.* The agreement contained language stating that the faculty member assigned to the predecessor company all rights to any inventions stemming from his work with that company. *Id.* The key difference in the two agreements is that the one with Stanford involved a promise to assign any future inventions whereas the one with Roche's predecessor was a present-tense assignment of any future inventions.

Stanford obtained patents for the faculty member's inventions (which had been funded by federal research grants, not by Roche's predecessor) in 1999 and 2003. *Id.* at 838. Stanford initiated an infringement action against Roche in 2005 when it refused to pay a royalty for its alleged use of the patented technology in certain products. *Id.* Two Stanford faculty inventors of the patents in suit, including the one who had signed the agreement with Roche's predecessor, were co-plaintiffs in the lawsuit. The district court found that Roche had no ownership rights in the patents, which it found invalid for obviousness. *Id.* at 838–39. Both parties appealed. The CAFC held that Roche could not be liable for infringement of the patents because it held ownership rights in them based on the faculty member's assignment, given that "Stanford identifie[d] no authorities or reasons why its election of title under Bayh-Dole had the power to void any prior, otherwise valid assignments of patent rights." *Id.* at 844. In seeking a writ of certiorari from the Supreme Court, Stanford argued that the CAFC's decision conflicted with the purpose of the Act. *See* Petition for Writ of Certiorari at 20, Bd. of Trs. of Leland Stanford Jr. Univ. v. Roche Molecular Sys., No. 09-1159, 2010 WL 1138571, at \*20 (U.S. Mar. 22, 2010) (arguing that "permitting unilateral assignment by an individual inventor to circumvent the statutory scheme deprives the government and the public of the benefits intended under the Act"). However, in a 7-2 decision, the Court sided with Roche, holding that the Act does not automatically vest title to federally funded inventions in federal contractors, and therefore cannot be read to frustrate the Stanford faculty researcher's assignment of his invention to Roche's predecessor. Bd. of Trs. of Leland Stanford Jr. Univ. v. Roche Molecular Sys., 98 U.S.P.Q.2d (BNA) 1761 (2011).

a contractual obligation by granting additional licenses, failing to disclose previous licenses, or failing to provide support as specified under a license.<sup>124</sup>

### *B. University Initiation of Patent Infringement Litigation*

Universities also may engage in patent-related litigation by initiating patent infringement lawsuits. While patents grant their holders a limited right (of twenty years from the date of filing a non-provisional patent application) to exclude others in the United States from making, using, selling, or offering for sale any product or process that is covered by one or more claims of a valid patent,<sup>125</sup> they are not self-enforcing. To enforce a patent requires the patent holder to police the marketplace for potentially infringing activities. Policing typically leads to one of two outcomes: a confrontation with the alleged infringer that results in an out-of-court settlement between the parties, or a confrontation with the alleged infringer that results in a patent infringement action being filed in court.<sup>126</sup>

Patent infringement litigation has been called the “sport of kings” as it is complex, uncertain, and expensive.<sup>127</sup> It is also rare, as only 1% of subsisting patents ever will be litigated.<sup>128</sup> The expense of patent infringement litigation is enough to deter all but the most wealthy and committed of litigants. The expense also is enough to mean that fewer than 5% of all patent infringement cases actually go to trial, with the majority settling during discovery.<sup>129</sup> With respect to actual dollar values, survey data collected in 2008 by the American Intellectual Property Law Association from law firms specializing in intellectual property law revealed that for patent infringement lawsuits with less than \$1 million at risk, the median cost *for one party* to take a case through the end of discovery was \$350,000, with the mean cost being \$498,000.<sup>130</sup> The total median cost for a party to take a case with less than \$1 million at risk through trial and any appeal was \$650,000, and the mean cost was \$967,000.<sup>131</sup> The median figures for taking a case through discovery and through trial were \$1.5 million and \$2.5 million, respectively, for suits with \$1–\$25 million at risk, and \$3 million and \$5.5 million for suits with more than \$25 million at risk.<sup>132</sup>

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<sup>124</sup> See, e.g., Complaint ¶¶ 25–27, *Functional Genetics, Inc. v. Bd. of Trs. of the Leland Stanford Jr. Univ.*, No. 09-4703 (N.D. Cal. Oct. 2, 2009) (alleging failure to disclose previously issued license, allegedly rendering plaintiff’s license non-exclusive).

<sup>125</sup> 35 U.S.C. §§ 154, 271 (2006). Interestingly, two-thirds of issued patents never last the full term permitted by statute, as their patentees fail to pay the modest maintenance fees due to the USPTO at 3.5, 7.5, and 11.5 years after issuance. See John R. Allison, Mark A. Lemley, Kimberly A. Moore, & R. Derek Trunkey, *Valuable Patents*, 92 GEO. L.J. 435, 440–41 (2004).

<sup>126</sup> Technically, a claim for patent infringement can be brought either in a complaint (by a plaintiff) or in a counterclaim (by a defendant), in response to an allegation that the patent in suit is invalid and not infringed.

<sup>127</sup> Douglas J. Kline, *Patent Litigation: The Sport of Kings*, TECH. REV. (Apr. 28, 2004), [http://www.technologyreview.com/read\\_article.aspx?id=13562](http://www.technologyreview.com/read_article.aspx?id=13562).

<sup>128</sup> Lanjouw & Schankerman, *supra* note 99, at 131.

<sup>129</sup> See Bessen & Meurer, *supra* note 40, at 200.

<sup>130</sup> AMERICAN INTELLECTUAL PROPERTY LAW ASSOCIATION, REPORT OF THE ECONOMIC SURVEY 29, I-128 (2009).

<sup>131</sup> *Id.*

<sup>132</sup> *Id.*



The mean costs for these high-risk cases were significantly higher than the median costs.

These figures reflect only the monetary costs of patent infringement litigation. Non-monetary costs include the disruption to inventors and other professionals in strategizing with attorneys, collecting and producing documents, testifying in depositions, and preparing for court appearances, among other time-consuming activities.<sup>133</sup> Perhaps in part because of the significant monetary and non-monetary costs, 99% of patent owners never file suit to enforce their rights, leading commentators to conclude that litigated patents are valuable patents, as “[a] rational patent owner will not file suit unless his expected return is at least a few million dollars.”<sup>134</sup>

Professors Scott Shane and Deepak Somaya provide insight into the non-monetary costs on TTOs at universities that initiate patent infringement litigation.<sup>135</sup> They conducted a mixed methods study examining the impact of university-led patent infringement litigation at 116 U.S. research institutions from 1987 to 2000.<sup>136</sup> From 203 identified lawsuits in the relevant time period, the authors calculated the number of “litigation days” that universities were involved in the lawsuits.<sup>137</sup> Using data collected by AUTM from institutions with a TTO, they then compared litigation days to the number of new patent licenses, the number of new exclusive licenses, the number of new patent applications filed, and the number of new invention disclosures filed in the subsequent year.<sup>138</sup> The results showed that university involvement in patent infringement litigation correlated with decreased numbers of new patent licenses and new exclusive licenses in subsequent years; there was no significant relationship between litigation involvement and new patent filings and invention disclosures.<sup>139</sup> Qualitative data also supported these findings.<sup>140</sup> The authors concluded that university involvement in patent infringement litigation reduces the amount of technology licensed by universities to the private sector, which they suggest is perhaps an unintended consequence of the Act.<sup>141</sup> Their study does not provide specific information on the lawsuits identified—

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<sup>133</sup> See Deepak Somaya, *Strategic Determinants of Decisions Not to Settle Patent Litigation*, 24 STRAT. MGMT. J. 17, 17 (2003) (noting that “patent litigation also involves considerable organizational dislocation, absorbing the time and energy of key managers, lawyers, engineers, and scientists in the company”).

<sup>134</sup> Allison, Lemley, Moore & Trunkey, *supra* note 125, at 441. This appears to have been the rationale of the University of Rochester, which in 2002 established an eight-figure legal fund to go after billions of dollars in back royalties that it contended it was owed by companies that manufacture and market Celebrex, the blockbuster arthritis drug. See Goldie Blumenstyk, *Taking on Goliath: U. of Rochester Risks Millions in Patent Fight with Pharmaceutical Giants*, CHRON. HIGHER EDUC., Sept. 20, 2002, at A27. The CAFC thwarted the university’s effort, however, by upholding a district court decision invalidating the university’s patent. See *Univ. of Rochester v. G.D. Searle & Co.*, 358 F.3d 916 (Fed. Cir. 2004).

<sup>135</sup> See Scott Shane & Deepak Somaya, *The Effects of Patent Litigation on University Licensing Efforts*, 63 J. ECON. BEHAV. & ORG. 739 (2007).

<sup>136</sup> *Id.* at 743–44.

<sup>137</sup> *Id.*

<sup>138</sup> *Id.* at 745.

<sup>139</sup> *Id.* at 749–52.

<sup>140</sup> *Id.* at 745–49.

<sup>141</sup> *Id.* at 753–54.

for example, descriptions of the institutions and technology involved, and the extent to which universities sued in conjunction with others, are not included.

Despite the costs and uncertainty associated with patent infringement litigation, commentators note that “universities have aggressively enforced their patents in court”<sup>142</sup> and “have shown no hesitancy to enforce their patents in court against commercial infringers.”<sup>143</sup> Little actually is known, however, about the extent and circumstances of university initiation of patent infringement litigation.<sup>144</sup> What little empirical data that exist suggest that nonprofits (which include more than just universities) are “not significantly more or less likely to litigate than other types of entities.”<sup>145</sup> One explanation for the dearth of literature could be that universities are not likely to view initiation of patent infringement litigation as central to their mission, and thus are reluctant to draw attention to it or provide information about it.<sup>146</sup> Indeed, given the costs involved and the attenuated tie to mission, one could posit that university initiation of patent infringement litigation is a poor use of university resources—in short, an activity that universities should avoid if they wish not to invite scrutiny into the age-old conception of higher education as furthering the public good.

The reality, however, is that *universities may have to initiate* patent infringement litigation in order to capture the premium conferred by patents and recoup investments in research and patenting. The patent premium is not influenced by the for-profit or non-profit nature of a patent’s holder. That is to say, the market demand for the right to exclude others from manufacturing, for example, a cure to cancer likely would not be diminished if the holder of the patent embodying that technology were a university as opposed to a for-profit pharmaceutical company. Companies clamor for exclusive rights to valuable technology and typically will pay a premium for such rights, no matter the identity of the rights holder. But because patents are not self-enforcing, the right to exclude depends on the ability to effectively enforce. This means “the patent premium flows from patent litigation or, more typically, the threat of litigation.”<sup>147</sup> Failure to enforce could mean the loss of the patent premium for a university. This leads to the inescapable conclusion that universities must enforce their patent rights if they want to generate more net

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<sup>142</sup> Rowe, *supra* note 120, at 936.

<sup>143</sup> Christopher M. Holman, *Learning from Litigation: What Can Lawsuits Teach Us About the Role of Human Gene Patents in Research and Innovation?*, 18 KAN. J.L. & PUB. POL’Y 215, 260 (2009). See also Bagley, *supra* note 5, at 218–19, 222 (noting “the growth in patent-related litigation involving universities” and “the over-zealous . . . litigation . . . of some university TTOs”).

<sup>144</sup> Anecdotes abound, however. For example, Washburn states that “[m]any schools have succeeded in generating impressive windfalls from their patent-infringement suits—the University of California won a \$200-million settlement from Genentech; the University of Minnesota settled a suit against Glaxo-Wellcome for \$300 million—emboldening numerous other schools to try and do the same.” WASHBURN, *supra* note 9, at 161.

<sup>145</sup> Allison, Lemley, Moore & Trunkey, *supra* note 125, at 466 n.134.

<sup>146</sup> Judge Ritchie de Larena argues, for example, that “universities prefer not to be judged at all” when it comes to the practices of their TTOs. See Ritchie de Larena, *supra* note 49, at 1417.

<sup>147</sup> Bessen & Meurer, *supra* note 40, at 205.

revenue from research.<sup>148</sup> Patent litigation is a costly gamble, but it is a potentially unavoidable activity for universities that seek revenues from patenting.<sup>149</sup>

Professor Christopher Holman's work provides additional insight into this phenomenon, although to date his work primarily has been focused on university involvement in litigation over the specific field of human gene patents.<sup>150</sup> In an unpublished slide presentation, however, Holman reported results from a search of patent infringement cases filed between January 1, 2000 and January 24, 2009.<sup>151</sup> Holman located 139 lawsuits during that time period where a university joined with an exclusive licensee in bringing suit, and another 51 cases where a university brought a patent infringement case by itself.<sup>152</sup> He indicates that "[s]ome lawsuits seem inconsistent with original justification for Bayh-Dole" and that "[s]ome lawsuits appear 'troll-like,'" <sup>153</sup> but the slides do not offer further insight into these conclusions, and his research on this topic has not appeared to date in any journal.

While university patenting has increased remarkably since the passage of the Act, so, too, has speculative patent infringement litigation (or "patent trolling") by non-manufacturing entities (or "patent aggregators," often pejoratively called "patent trolls"). Professor Mark Lemley explored the suggestion made by some private industry companies that universities that initiate patent infringement litigation may have traits in common with patent trolls.<sup>154</sup> Lemley ultimately—and appropriately—concluded that universities are not patent trolls because they support university inventors and engage in socially beneficial technology transfer, unlike trolls who seek only money in exchange for forbearance from litigation.<sup>155</sup> His article squarely raises the concern, however, that whether universities are viewed as being more interested in money than innovation may depend on *how* they engage in technology transfer.

Universities that are quick to initiate patent infringement lawsuits may find that such efforts undercut—in the court of public opinion, anyway—their defense to separate infringement lawsuits waged against their own researchers.<sup>156</sup> Also, for-profit companies that otherwise would be hesitant to bring an infringement lawsuit against a university no longer may be deterred if they view the university in question

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<sup>148</sup> WEISBROD ET AL., *supra* note 1, at 285.

<sup>149</sup> Cf. JAFFE & LERNER, *supra* note 40, at 76 ("Patent litigation is expensive and risky. Even the threat of being forced to defend against patent infringement will, in many cases, compel companies to pay royalties or abandon particular products.").

<sup>150</sup> See generally Holman, *supra* note 143; Christopher M. Holman, *The Impact of Human Gene Patents on Innovation and Access: A Survey of Human Gene Patent Litigation*, 76 UMKC L. REV. 295 (2007).

<sup>151</sup> Christopher M. Holman, University Patent Litigation, Presentation at Santa Clara University School of Law Symposium (Jan. 30, 2009), <http://www.cctlj.org/sites/default/files/media/symposiums/v025/slides/holman.ppt>.

<sup>152</sup> *Id.* at 12.

<sup>153</sup> *Id.*

<sup>154</sup> See Mark A. Lemley, *Are Universities Patent Trolls?*, 18 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 611, 615–19 (2008). Many view non-manufacturing entities unfavorably as they can delay the fruits of innovation from benefitting the public. Even though they do not sell anything, non-manufacturing entities can derail product launches until market entrants pay them off or prevail in defending the infringement actions they often initiate.

<sup>155</sup> *Id.* at 630.

<sup>156</sup> See e.g., WASHBURN, *supra* note 9, at 161 (noting that a university's aggressive patent enforcement may compromise "the university's legitimacy when one of its own academic investigators needs access to a particular patented technology").

as a frequent instigator of infringement litigation. Echoing the academic capitalism argument, one commentator alleges that “money has blinded most universities to this rather obvious inconsistency in commercial versus academic aims.”<sup>157</sup>

Further to this commercial actor concern, Lemley notes that because the university is a non-manufacturing entity, its “incentives in dealing with the patent system align in many ways with those of private-sector patent licensing shops.”<sup>158</sup> In patent-intensive industries, a symmetry of position exists that deters much litigation: if a competitor sues for infringement, the competitor can countersue for infringement. Such symmetry does not exist for patent-holding universities, and that reality may lessen market disincentives for universities to litigate.<sup>159</sup> Because universities do not manufacture any product, “[u]niversities aren’t going to trade their patents away in exchange for a cross-license, because they don’t need a license to other people’s patent rights. Instead, they want money.”<sup>160</sup>

But industry leaders have cautioned against university initiation of patent infringement litigation for the purpose of extracting licensing revenues. In a white paper released by Stanford University and eleven other research institutions in the summer of 2006 (and subsequently endorsed by AUTM), industry leaders urged that “enforcement action”—a euphemism for patent infringement litigation—“should be carefully considered.”<sup>161</sup> The authors stressed that universities should be mindful of their primary mission to use patents to promote technology development for the benefit of society.<sup>162</sup> To that end, the authors argued that litigation is “seldom the preferred option for resolving disputes” and should be initiated by the university only if there is a “mission-oriented rationale for doing so” that can be clearly articulated to the university and the public.<sup>163</sup> The authors maintained that “nuisance litigation” should be avoided in all circumstances.<sup>164</sup> In a separate point, they discouraged university involvement with patent aggregators, stating that licensing patents to companies that “rely primarily on threats of infringement litigation to generate revenue” does not serve the public interest.<sup>165</sup>

The Committee on Management of University Intellectual Property of the National Academy of Sciences endorsed the Stanford white paper in a report it released in late 2010.<sup>166</sup> The committee further added that “[e]nforcement of IP rights against suspected infringers should be approached carefully to protect the institution’s resources and reputation.”<sup>167</sup> In furtherance of this suggestion, the committee made the following recommendation:

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<sup>157</sup> *Id.*

<sup>158</sup> Lemley, *supra* note 154, at 615.

<sup>159</sup> See Allison, Lemley, Moore & Trunkey, *supra* note 125, at 468.

<sup>160</sup> Lemley, *supra* note 154, at 616.

<sup>161</sup> Press Release, Leland Stanford Jr. Univ., *In the Public Interest: Nine Points to Consider in Licensing University Technology* (Mar. 6, 2007), at 6, <http://www-leland.stanford.edu/group/OTL/documents/whitepaper-10.pdf>.

<sup>162</sup> *Id.*

<sup>163</sup> *Id.*

<sup>164</sup> *Id.*

<sup>165</sup> *Id.* at 8. AUTM maintains a list of institutions that have endorsed this white paper at [http://www.autm.net/source/NinePoints/ninepoints\\_endorsement.cfm](http://www.autm.net/source/NinePoints/ninepoints_endorsement.cfm) (last visited June 9, 2011).

<sup>166</sup> See NATIONAL RESEARCH COUNCIL, *supra* note 4, at 82.

<sup>167</sup> *Id.* at 8.

**Recommendation 7:** A university's decision to initiate legal action against an infringer should reflect its reasons for obtaining and licensing patents in the first instance. Examples include

- contractual or ethical obligations to protect the rights of existing licensees to enjoy the benefits conferred by the licensees;
- disregard by infringer of scientific or professional norms and standards, such as use of medical technologies outside standards of care or professional guidelines;
- disregard by an infringer of the institution's legitimate rights, for example, as evidenced by a refusal to negotiate a license on reasonable terms.<sup>168</sup>

The committee concluded that while university initiation of patent infringement litigation is rarely the preferred method for resolving a dispute, "it is an option important for universities to retain."<sup>169</sup>

Despite this recent attention from the National Academy of Sciences, surprisingly little empirical information concerning the nature and extent of university initiation of patent infringement litigation is available. Accordingly, this article's central goal is to provide insight into the phenomenon by answering the following research questions:

- How many and what kinds of patents were asserted by universities, and in how many actions, in patent infringement lawsuits filed in the two-year period between January 1, 2009 and December 31, 2010 (was the technology involved electrical/computer; drugs & medical; chemical; mechanical; other?)?
- Where were these lawsuits filed, and are there significant correlations between the number of patents, plaintiffs, and defendants involved?
- In how many of the located lawsuits were universities the sole plaintiff?
- In how many of the located lawsuits were universities actively practicing the patents in suit (according to their own allegations)?
- Were university affiliated research or patent entities ever the actual entities that filed suit instead of universities?
- How many times did universities jointly file suit with these entities?

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<sup>168</sup> *Id.*

<sup>169</sup> *Id.* at 84. Indeed, more than just *retaining* the right, universities sometimes may have a contractual *obligation* to one or more licensees to enforce university-owned patents, although the contract may allow for the university to "pass the costs of such protection on to the licensees." MATKIN, *supra* note 4, at 112.

- For universities that jointly sued with a licensee co-plaintiff, was the licensee an exclusive licensee?
- Did universities typically use in-house or outside counsel to litigate infringement actions?
- Did universities request that a judge or jury hear their claims?
- What does a textual reading of the complaints reveal about the litigation behaviors exhibited and the issues faced by universities that brought patent infringement actions?

#### IV. METHODOLOGY

Data for this article were compiled in January 2011 through searches conducted in the Derwent LitAlert database (LITALERT) within Westlaw<sup>170</sup> and the LexMachina database maintained by the Intellectual Property Litigation Clearinghouse.<sup>171</sup> An initial search was conducted in the Derwent LitAlert database. In an effort to use search language that was focused yet comprehensive, the database search targeted universities as plaintiffs, patent owners, or patent assignees.<sup>172</sup> Recognizing that many universities own, license, and litigate patents through affiliated research entities,<sup>173</sup> the search terms were intentionally broad in an effort

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<sup>170</sup> Derwent LitAlert contains records for patent and trademark litigation lawsuits filed in the ninety-four United States Federal District Courts that have been reported to the Commissioner of the USPTO. The database is updated weekly, and coverage goes back to 1973. Each record may contain several elements of identification, including the trademark registration number or patent number and date of issuance or registration, title, inventor, owner, assignee, class number and description, court, docket number, plaintiff, defendant, filing date, and judgment date, if applicable. Not included in the database are copies or links to actual court filings, which were subsequently obtained via LexMachina or the Public Access to Court Electronic Records (“PACER”) database.

<sup>171</sup> LexMachina is an intellectual property litigation database maintained at <https://lexmachina.com> by the Intellectual Property Litigation Clearinghouse (“IPLC”), originally created at Stanford University. The database contains IP case history and docket information, links to complaints and other court filings, and more. “The IPLC has been designed to make IP litigation more transparent, covering all (1) patent infringement, (2) manifest copyright, (3) manifest trademark, (4) manifest antitrust, and (5) certain trade secret lawsuits filed in the U.S. District Court from January 1, 2000 to the present.” See LEX MACHINA, <https://lexmachina.com/about/genesis> (last visited June 9, 2011).

<sup>172</sup> The exact search language used in the database was as follows: `plf(universit! college* institute* board* regent* research technolog! educat!) ow(universit! college* institute* board* regent* research technolog! educat!) pas(universit! college* institute* board* regent* research technolog! educat!) & da(aft 12/31/2008 & bef 01/01/2011)`. The search yielded 1,041 results.

<sup>173</sup> Names of such known entities, that do not contain the words *university* or *college*, include Wisconsin Alumni Research Foundation (whose mission is to “promote, encourage and aid scientific investigation and research at the University of Wisconsin-Madison and the Morgridge Institute for Research”) and Arizona Technology Enterprises (the “exclusive intellectual property management and technology transfer organization for ASU [Arizona State University]”). See *Our Vision and Mission*, WIS. ALUMNI RES. FOUND., <http://www.warf.org/about/index.jsp?cid=6> (last visited June 9, 2011); *About Us*, ARIZ. TECH. ENTERS., [http://www.azte.com/page/about\\_us](http://www.azte.com/page/about_us) (last visited June 9, 2011). This article uses “university affiliated research entity” or “research entity” to denote any

to capture the name of any entity controlled by or closely affiliated with a university that owns patents on inventions discovered by that university's faculty and researchers.

It is important to recognize limitations to the search strategy that could have resulted in the underreporting of university initiated patent infringement cases. First, the Derwent LitAlert database only contains lawsuits that were reported by federal district court clerks to the USPTO. For various reasons, some patent infringement lawsuits have gone unreported, particularly in early years. However, other studies of patent infringement litigation have relied on results located in the Derwent LitAlert database, despite this known limitation and the related risk that not every patent infringement lawsuit reported to the USPTO by a federal court clerk makes it into the Derwent LitAlert database.<sup>174</sup> Therefore, it was reasonable to use the Derwent LitAlert database for this study, recognizing that results may be under-inclusive.

Another limitation—and one more within my control—is that the proposed search terms may have failed to capture accurately the full universe of patent infringement lawsuits brought by universities or their affiliated research entities, even assuming all such cases are in the Derwent LitAlert database. For example, some patent-owning entities that are in fact controlled by or affiliated with universities may have escaped detection based on the search language I used.<sup>175</sup> Accordingly, I inspected the complaint from each case that listed a university as the patent assignee, but not as a plaintiff, in an attempt to avoid any such underreporting.<sup>176</sup>

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organization whose primary mission is to commercialize patents owned by it or a university, regardless of its precise corporate organization or oversight structure.

<sup>174</sup> See, e.g., Gwendolyn G. Ball & Jay P. Kesan, *Transaction Costs and Trolls: Strategic Behavior by Individual Inventors, Small Firms and Entrepreneurs in Patent Litigation* 18 (Ill. Pub. Law & Legal Theory Paper Series Res. Papers Series No. 08-21, Feb. 1, 2009), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1337166](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1337166); Lanjouw & Schankerman, *supra* note 99, at 133; Shane & Somaya, *supra* note 135, at 742–43; Somaya, *supra* note 133, at 21–23.

<sup>175</sup> After conducting the search in January of 2011, I subsequently discovered that the affiliated research entity for the Virginia Polytechnic Institute and State University is called Virginia Tech Intellectual Properties, Inc., a name that my search terms would not have picked up. A knockout search confirmed that Virginia Tech Intellectual Properties, Inc. did not initiate any patent infringement litigation during the studied time period, so the results were not affected. While no additional exception to the search terms was known at the time of this article's publication, others might exist that potentially could render this article's findings under-inclusive.

<sup>176</sup> For example, one located case in the Derwent LitAlert database was styled *STC.UNM v. Intel Corp.*, No. 10-1077 (D.N.M. filed Nov. 15, 2010). I reviewed the complaint because the University of New Mexico was listed as the patent's assignee. STC.UNM stands for the Science and Technology Corporation of the University of New Mexico (the definition is nowhere in the complaint). Its website provides more information than given in the complaint. See *About Us*, STC.UNM, <http://stc.unm.edu/about> (last visited June 9, 2011). The site states:

STC.UNM (STC) is a nonprofit corporation formed by and owned entirely by the University of New Mexico (UNM) (formed in 1995 by the Regents of UNM) to protect and transfer its faculty inventions to the commercial marketplace. STC licenses innovative technology developed at UNM, including optics, microfluidics, and high performance materials as well as therapeutics, diagnostics, medical devices, and drug discovery tools. We are a 501(c)(3) non-profit corporation with an independent board of directors. We work closely with UNM's Research and

Most cases that turned up in the search results did not involve universities as plaintiffs in patent infringement litigation. Instead, many consisted of non-university plaintiffs with the word *research* in their corporate names, or involved other types of suits against universities (trademark infringement lawsuits were common false positives).

After reviewing the search results, I used LexMachina and PACER to download the complaint for each patent infringement lawsuit believed to be initiated by a university, or to have a university as a plaintiff.<sup>177</sup> Upon inspection, several were removed as not meeting the criteria for inclusion.<sup>178</sup> After these removals, a total of  $N = 57$  complaints meeting the inclusion criteria had been identified. A textual review of these complaints then followed, as part of which I created an Excel

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Technology Law (R&TL) office and the University Counsel's office in the management and administration of their responsibilities.

*Id.* To the extent that other entities exist that commonly go by acronyms or other names with no clear link to a university, they may have been missed in my search. This semantic technicality raises a larger issue that bears further investigation: how many university affiliated research entities commonly go by acronyms or other names that do not immediately signal an affiliation with a university? So as to facilitate transparency in the activity of these groups, AUTM or another industry leader should consider maintaining a publicly accessible list of the corporate and common names of every university affiliated research entity along with its corresponding university.

<sup>177</sup> While at first appearing a distinction without a difference, “initiated by a university” and a lawsuit that “has a university as a plaintiff” are overlapping but not identical concepts. *Initiation* implies an affirmative decision to litigate, and not all cases that have universities as plaintiffs necessarily carry that implication—in the situation, for example, of a university’s being named as an involuntary plaintiff. One located lawsuit involved precisely such a situation. See Complaint ¶¶ 12–14, *BioTechnology, LLC v. CIBA Vision Corp.*, No. 09-3947 (E.D. Penn. Aug. 28, 2009) (naming Drexel University—joint owner of the patents in suit—as both a defendant and an involuntary plaintiff in the action and alleging that it was contractually obligated to cooperate fully in any litigation involving the patents).

One also could argue that—even in cases where they are voluntary plaintiffs—universities may not *initiate* such actions so much as they do *participate* in them, in the sense that universities’ licensees often identify the infringer and are the driving forces behind the actual infringement lawsuits that get brought. However, because “university participation in patent infringement litigation” also could include participation as defendants in such litigation, I have used “university initiation of patent infringement litigation” to define the phenomenon of study, even though that term, too, is subject to the aforementioned concern regarding universities as involuntary plaintiffs. “University participation as plaintiffs in patent infringement litigation” may be the most precise, value-neutral description of the phenomenon, but it is also unwieldy to use.

<sup>178</sup> Removals included a declaratory judgment action brought by a university against two faculty members, alleging failure to assign patent rights to the university; an action brought by a university asking for an adjustment to a patent’s term; two cases to correct inventorship; duplicates; and cases without either a university or a university affiliated research entity as a plaintiff.

A continuation of the case that generated the largest jury verdict ever in a patent infringement action also was removed. In April of 2007, Centocor Ortho Biotech, Inc. and New York University sued Abbott Laboratories for patent infringement in the United States District Court of the Eastern District of Texas. On December 18, 2009, the judge entered final judgment of a jury award of \$1,672,594,000 in actual damages and \$175,641,661 in pre-judgment interest. See Judgment Order, *Centocor Ortho Biotech, Inc. v. Abbott Labs.*, No. 07-0139 (E.D. Tex. Dec. 18, 2009). The judge then severed plaintiffs’ continuing causes of action for future damages accruing after the jury verdict, ordering a new complaint to be filed, *id.*, which plaintiffs filed on December 28, 2009. See Complaint, *Centocor Ortho Biotech, Inc. v. Abbott Labs.*, No. 09-0389 (E.D. Tex. Dec. 28, 2009). Because the December 28th complaint essentially is a continuation of the case filed in 2007, I excluded it from the findings.



spreadsheet<sup>179</sup> with the following information: case number; the jurisdiction in which the lawsuit was filed; the name of the lead plaintiff; the names and total number of any co-plaintiffs; the names and total number of all defendants; the number of patents alleged in the complaint; the general type of technology covered by the patents in suit; the specific type of technology covered by the patents in suit; the name of any lead outside counsel firm listed on the complaint as representing the university;<sup>180</sup> whether the plaintiff(s) had demanded that the case be tried to a jury; whether the plaintiff(s) sought monetary damages; and whether the lawsuit appeared to have been filed in a strategic venue.<sup>181</sup> Descriptive and non-parametric statistics were performed on the compiled data using statistical software, the results of which are described in Part V.

The mixed methodology described above has one obvious limitation. Namely, complaints in any type of lawsuit only tell one side of the litigation story. By looking solely at the complaints in any given case (and not other pleadings, motions, or docket entries), there is a risk of losing larger meanings and nuances that a more robust review of each case might provide. While such a review would be possible, I did not undertake it here for two reasons. First, with over fifty located cases, such a review would have been time consuming and expensive. As many of the located cases have docket entries numbering in the dozens if not the hundreds, downloading and reviewing each filed document would have expanded the scope of the research significantly. While reviewing all pleadings in each located case no doubt would have provided for additional insights, ultimately I felt that such an undertaking was better suited to follow-up research conducted on a case-by-case basis. Second, while complaints may provide incomplete pictures of the nuances of individual cases, they generally are uniform in what they do offer: concise descriptions of the alleged facts deemed relevant by the plaintiffs. Because my research questions mostly concern quantifying certain aspects of university initiated patent infringement litigation, analyzing the publicly available, court-filed documents by which universities actually commence those actions seemed the most fitting approach, particularly in light of the resource constraints mentioned previously. Additional qualitative approaches toward understanding university initiation of patent infringement litigation should be undertaken in subsequent research.<sup>182</sup>

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<sup>179</sup> Data from this spreadsheet are included as Appendix A to this article.

<sup>180</sup> Names of local counsel were ignored.

<sup>181</sup> I considered a lawsuit to have been filed in a strategic venue if it was filed in a state in which no plaintiff or defendant in the case was alleged to be incorporated or alleged to have as its principal place of business. My rationale was that decisions to sue in judicial districts of states in which no plaintiff or defendant is located may reflect a strategic effort to obtain a favorable venue.

<sup>182</sup> One potential avenue worth exploring is how the lawsuits identified in this article concluded. Did they generate any written opinions that could elucidate further the nature of university initiation of patent infringement litigation? How many cases persisted through trial, which party won, and what did the victor win? For cases ending before trial, how did they conclude, and if they settled, on what terms did they settle (if known)? What did universities and news media say about these occurrences, if anything?

V. FINDINGS

*A. Quantitative Findings*

*1. Number of Patents*

A total of 125 patents were alleged in the located lawsuits. The mean number of patents alleged in a lawsuit was 2.19. The number of patents alleged in each lawsuit ranged from 1 to 9, with most suits (75%) involving 1 or 2 patents. Table 1 provides descriptive statistics and Table 2 identifies the frequencies.

**Table 1**  
**Descriptive Statistics on Number of Patents Alleged Per Lawsuit**

N	Valid	57
	Missing	0
Mean		2.19
Median		2.00
Mode		1
Std. Deviation		1.695
Range		8
Minimum		1
Maximum		9

**Table 2**  
**Frequency of Number of Patents Alleged Per Lawsuit**

		Frequency	Percent	Cumulative Percent
Valid	1	24	42.1	42.1
	2	19	33.3	75.4
	3	5	8.8	84.2
	4	6	10.5	94.7
	7	1	1.8	96.5
	8	1	1.8	98.2
	9	1	1.8	100.0
	Total	57	100.0	

### 2. Number of Co-Plaintiffs

Most located cases ( $n = 26$ , or 45.6%) involved 1 co-plaintiff. However, there was no co-plaintiff in 12 cases, meaning that universities initiated 21.1% of the located lawsuits by themselves, without a co-plaintiff. Two lawsuits involved a university and its affiliated research entity suing as co-plaintiffs.<sup>183</sup> Table 3 shows the full frequencies.

**Table 3**  
Frequencies of Number of Co-Plaintiffs Per Lawsuit

		Frequency	Percent	Cumulative Percent
Valid	0	12	21.1	21.1
	1	26	45.6	66.7
	2	6	10.5	77.2
	3	12	21.1	98.2
	5	1	1.8	100.0
	Total	57	100.0	

### 3. Number of Defendants

Nearly 45% of all located cases ( $n = 25$ ) were brought against just one defendant. Additional frequencies are shown in Table 4.

**Table 4**  
Frequencies of Number of Defendants Per Lawsuit

		Frequency	Percent	Cumulative Percent
Valid	1	25	43.9	43.9
	2	19	33.3	77.2
	3	7	12.3	89.5
	4	2	3.5	93.0
	7	1	1.8	94.7
	11	2	3.5	98.2
	13	1	1.8	100.0
	Total	57	100.0	

<sup>183</sup> See *Univ. of Iowa v. Abbott Labs.*, No. 09-0099 (S.D. Iowa filed June 22, 2009); *Cornell Univ. v. Illumina, Inc.*, No. 01-0433 (D. Del. filed May 24, 2010).

#### 4. Correlations Between Number of Patents, Co-Plaintiffs, and Defendants

The correlations between the number of patents alleged in a lawsuit, the number of co-plaintiffs in a lawsuit, and the number of defendants in a lawsuit were neither strong nor statistically significant, as illustrated in Table 5.

**Table 5**  
Correlations Between Numbers of Patents,  
Co-Plaintiffs, and Defendants Per Lawsuit

			No. of Co- Plaintiffs	No. of Patents	No. of Defendants
Spearman's rho	No. of Co- Plaintiffs	Correlation Coefficient Sig. (2-tailed)	1.000 .	.052 .700	-.014 .917
	No. of Patents	Correlation Coefficient Sig. (2-tailed)	.052 .700	1.000 .	-.057 .672
	No. of Defendants	Correlation Coefficient Sig. (2-tailed)	-.014 .917	-.057 .672	1.000 .

#### 5. Types of Technology Litigated

More than half of the cases litigated ( $n = 32$ , or 56.1%) involved patents that were directed toward pharmaceutical or medical technologies. Table 6 shows the frequencies of the technology typologies.

**Table 6**  
Frequencies of Type of Technology Litigated

		Frequency	Percent
Valid	chemical	5	8.8
	drugs/medical	32	56.1
	electrical/computer	12	21.1
	mechanical	7	12.3
	other - plant	1	1.8
Total		57	100.0

## 6. Venues

Located cases were filed in a wide variety of venues, as shown in Table 7. The United States District Court of the District of Delaware was the most popular venue, with 17 cases being filed there. The United States District Courts in New Jersey and Massachusetts were the next favored venues, with 8 and 5 cases having been filed in those courts, respectively.

**Table 7**  
**Frequency of Venues**

	Frequency	Percent
Valid C.D. Cal.	1	1.8
D. Del.	17	29.8
D. Mass.	5	8.8
D. Minn.	1	1.8
D. N.J.	8	14.0
D. N.M.	3	5.3
D. Neb.	1	1.8
D. Utah	1	1.8
E.D. Cal.	1	1.8
E.D. Pa.	1	1.8
E.D. Tex.	1	1.8
M.D. Ala.	1	1.8
M.D. N.C.	1	1.8
N.D. Cal.	1	1.8
N.D. Ill.	1	1.8
N.D. N.Y.	1	1.8
S.D. Cal.	1	1.8
S.D. Iowa	1	1.8
S.D. N.Y.	3	5.3
W.D. Pa.	1	1.8
W.D. Tex.	3	5.3
W.D. Wa.	2	3.5
W.D. Wisc.	1	1.8
Total	57	100.0

### 7. Types of Licenses

All but 12 located complaints indicated whether the patents in suit were subject to an exclusive or non-exclusive license, as indicated in Table 8. Three-quarters of the complaints ( $n = 43$ , or 75.4%) involved patents that were alleged to have been exclusively licensed,<sup>184</sup> while only 3 complaints alleged that the patents in suit were subject to non-exclusive licenses.

**Table 8**  
Frequencies of Licensing Types

	Frequency	Percent
Valid exclusive	43	75.4
no allegation of practicing	11	19.3
non-exclusive	3	5.3
Total	57	100.0

### 8. Use of Outside Counsel

Universities engaged outside counsel firms as their lead litigation counsel in all but one of the located cases.<sup>185</sup> Marshall, Gerstein & Borun LLP was used as outside counsel in more cases ( $n = 8$ , or 14.3%) than any other firm, although each of the cases in which it was involved concerned abbreviated new drug application (“ANDA”) actions brought by Pfizer, Northwestern University, and others against generic pharmaceutical companies attempting to make a generic version of Lyrica®.<sup>186</sup> Fish & Richardson P.C. was the second-highest used outside counsel firm in the located cases ( $n = 5$ , or 8.9%), and each of the cases in which it served as outside counsel involved a different plaintiff. Table 9 identifies all lead outside counsel by frequency of use.

<sup>184</sup> One such complaint involved patents exclusively licensed by a university to its affiliated research entity (Washington Research Foundation), which is the only plaintiff in the case. Complaint, Wash. Research Found. v. Silicon Labs, Inc., No. 02-1050 (W.D. Wash. June 24, 2010). The complaint also alleges that the exclusive licensee has sub-licensed use of the patents to various companies. *Id.* ¶¶ 9, 12–13. For a discussion of this arrangement’s implications, see *infra* Part V.D.3.

<sup>185</sup> In *Biagro Western Sales, Inc. v. Turfgrass Management, Inc.*, No. 09-0178 (E.D. Cal. filed Jan. 28, 2009), co-plaintiff Regents of the University of California listed an attorney from the university’s Office of the General Counsel as its attorney of record.

<sup>186</sup> See *Pfizer Inc. v. Alphapharm Pty. Ltd.*, No. 01-0204 (D. Del. filed Mar. 12, 2010); *Pfizer Inc. v. Wockhardt Ltd.*, No. 03-2069 (D.N.J. filed Apr. 30, 2009); *Pfizer v. Sandoz Inc.*, No. 03-2052 (D.N.J. filed Apr. 30, 2009); *Pfizer Inc. v. Sun Pharm. Global Inc.*, No. 03-2070 (D.N.J. filed Apr. 30, 2009); *Pfizer v. Lupin, Ltd.*, No. 01-0853 (D. Del. filed Oct. 6, 2010); *Pfizer Inc. v. Cobalt Labs., Inc.*, No. 01-0315 (D. Del. filed Apr. 29, 2009); *Pfizer Inc. v. Wockhardt Ltd.*, No. 01-0312 (D. Del. filed Apr. 29, 2009); *Pfizer Inc. v. Sun Pharm. Global Inc.*, No. 01-0313 (D. Del. filed Apr. 29, 2009).

**Table 9**  
**Frequency of Use of Outside Counsel By Firm**

		Frequency	Percent
Valid	Ballard Spahr Andrews & Ingersoll, LLP	1	1.8
	Blank Law & Technology P.S.	1	1.8
	Choate, Hall & Stewart	1	1.8
	Finnegan Henderson	3	5.4
	Fish & Richardson P.C.	5	8.9
	Fitzpatrick, Cella, Harper & Scinto	2	3.6
	Gibson Dunn & Crutcher	1	1.8
	Goodwin Procter LLP	1	1.8
	Gunn, Lee & Cave, P.C.	3	5.3
	Howrey LLP	1	1.8
	Jones Day	1	1.8
	K&L Gates LLP	1	1.8
	Kirkland & Ellis LLP	3	5.4
	Leydig, Voit & Mayer, Ltd.	1	1.8
	Marshall, Gerstein & Borun LLP	8	14.3
	Michael Mazza, LLC	1	1.8
	Morriss O'Bryant Compagni, P.C.	1	1.8
	Parsons Behle & Latimer	2	3.6
	Patterson Belknap Webb & Tyler LLP	2	3.6
	Perkins Coie LLP	1	1.8
	Proskauer Rose LLP	1	1.8
	Quinn Emanuel Urquhart & Sullivan, LLP	2	3.6
	Satterlee Stephens Burke & Burke LLP	1	1.8
	Shore Chan Bragalone DePumpo LLP	4	7.1
	Stadheim & Gear, Ltd.	4	7.1
	Sullivan & Cromwell LLP	1	1.8
	Wiley Rein LLP	1	1.8
	Williams & Connolly LLP	1	1.8
	Woodcock Washburn LLP	1	1.8
	Total	56	100.0

### 9. Damages Sought

The plaintiff or plaintiffs in the located cases requested that damages be awarded (as opposed to requesting purely non-monetary forms of relief, such as injunctive relief) in 61% of the located cases ( $n = 35$ ). Each of the 22 cases where

damages were *not* sought involved ANDAs, where by definition no commercial manufacture of an allegedly infringing product had commenced.

### 10. Jury Demand

The plaintiff or plaintiffs in the located cases demanded that a jury (as opposed to a judge) hear the patent infringement allegations in 60% of the located cases ( $n = 34$ ). ANDA cases accounted for all but two of the 23 cases brought without a jury demand.<sup>187</sup>

#### B. Summary of Quantitative Findings

Results revealed that universities asserted 125 different patents in 57 patent infringement lawsuits filed by them in the two-year time period of study. Universities sued in conjunction with at least one other plaintiff—a licensee—almost 50% of the time, although they sued as the only plaintiff in over a fifth of the lawsuits. University-owned patents covering pharmaceutical and medical devices were the most frequently litigated patents, having been litigated in over 50% of the cases. The identified lawsuits were brought in a variety of venues, although the Federal District Court of the District of Delaware—a district court located in a state widely viewed as pro-business—was home to nearly a third of the located lawsuits. Universities nearly always engaged outside counsel to litigate each of the identified lawsuits.<sup>188</sup> Some of the identified law firms are intellectual property boutiques (such as Fish & Richardson P.C.) or otherwise among the most respected—and high-priced—firms in the United States (such as Sullivan & Cromwell LLP and Gibson, Dunn & Crutcher). Universities demanded that juries (as opposed to judges) hear their infringement allegations in 60% of the cases, or generally whenever an ANDA was not involved. Universities also requested that they be awarded monetary damages (as opposed to purely non-monetary forms of relief) whenever possible. Finally, only three of the identified cases contained an allegation that the university had non-exclusively licensed the patents in suit. In all other cases, the university either alleged that the patent in suit was subject to an exclusive license (75% of cases) or made no allegation concerning whether or how the patent in suit was licensed (19% of cases).

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<sup>187</sup> The non-ANDA cases brought without a jury demand were *STC.UNM v. Intel Corp.*, No. 01-1077 (D.N.M. filed Nov. 15, 2010) and *Bayer HealthCare LLC v. Wedgewood Village Pharmacy, Inc.*, No. 01-5345 (D.N.J. filed Oct. 19, 2009).

<sup>188</sup> When they sued in conjunction with one or more licensees, universities mostly used the same outside counsel firm as their licensees. Only in twelve multiple-plaintiff cases did a complaint list a university as having outside counsel different from the outside counsel used by the university's licensee(s). Eight of those were the Pfizer/Northwestern University cases, where Marshall, Gerstein & Borun LLP served as outside counsel to Northwestern University only. See *supra* note 186 and accompanying text. The other four cases were *AsymmetRx, Inc. v. Dako Denmark A/S*, No. 01-10396 (D. Mass. filed Mar. 13, 2009), *Sirona Dental Systems Inc. v. Palodex Group Oy*, No. 03-0266 (W.D. Wisc. filed Apr. 30, 2009), *United States v. Mylan Pharm. Inc.*, No. 10-5956 (D.N.J. filed Nov. 15, 2010), and *Caliper Life Sciences, Inc. v. Carestream Health, Inc.*, No. 04-2079 (E.D. Tex. filed Feb. 23, 2010).



### *C. Implications from Quantitative Findings*

This article's findings present interesting implications for university involvement in patenting and technology transfer. First, the number of lawsuits identified ( $N = 57$ ) in the targeted two-year period suggests that university initiation of patent infringement litigation is not an infrequent occurrence. If the number of lawsuits identified in this study is typical for any given time period of similar duration, one could expect that universities initiated roughly 285 lawsuits in the past decade. While this number may seem small in the abstract, the total is more than the total number of non-profit institutions engaged in technology transfer,<sup>189</sup> indicating that some universities are repeat initiators of patent infringement litigation.<sup>190</sup> The monetary and non-monetary costs to universities that engage in this activity is a research area that merits additional empirical investigation.<sup>191</sup>

The findings also suggest that universities' behavior in patent infringement litigation mimics the strategic behavior of for-profit actors involved in such litigation. Universities in the located lawsuits preferred for juries rather than judges to hear their claims. This preference could be styled a strategic, as studies show that juries are more likely than judges to uphold a patent's validity, and "patent owners are more likely to win a suit tried to a jury than a suit tried to a judge."<sup>192</sup> For-profit actors also typically litigate in order to obtain damages as opposed to purely non-monetary forms of relief, and this study's findings suggest that universities that litigate their patents are similarly motivated. Finally, for-profit actors nearly always engage outside counsel to represent them in patent infringement litigation (as opposed to using in-house counsel), and universities again appear basically no

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<sup>189</sup> Approximately 160 to 190 research institutions have provided data to AUTM on their technology transfer operations each year since 2000. See *Licensing Surveys - AUTM*, ASS'N OF UNIV. TECH. MANAGERS, [http://www.autm.net/AM/Template.cfm?Section=Licensing\\_Surveys\\_AUTM&Template=/TaggedPage/TaggedPageDisplay.cfm&TPLID=6&ContentID=2409](http://www.autm.net/AM/Template.cfm?Section=Licensing_Surveys_AUTM&Template=/TaggedPage/TaggedPageDisplay.cfm&TPLID=6&ContentID=2409) (last visited June 9, 2011) (listing institutions in individual surveys from 2000–2009). Not all of these research institutions, however, are universities as defined in this article, as some are non-profit research institutions that do not grant degrees. For example, the Cleveland Clinic does not award degrees, while the Mayo Clinic does. See CLEVELAND CLINIC LERNER RESEARCH INSTITUTE, <http://www.lerner.ccf.org> (last visited June 9, 2011); MAYO CLINIC: Education, <http://www.mayo.edu/education> (last visited June 9, 2011).

<sup>190</sup> See Appendix A. The data presented in Appendix A bear out this assumption. For example, Northwestern University was a co-plaintiff in eight located lawsuits. Wisconsin Alumni Research Foundation was a co-plaintiff in five.

<sup>191</sup> While AUTM surveys non-profit research institutions on a yearly basis across several metrics (revenue generated from licenses, number of patent applications filed, number of patents issued, etc.) and publishes the results, it does not query members concerning involvement in patent infringement litigation. In fact, a question concerning legal fees in the survey specifically excludes any "significant litigation expenses." See AUTM U.S. LICENSING ACTIVITY SURVEY: FY 2008, at 3, [http://www.autm.net/AM/Template.cfm?Section=FY\\_2008\\_Licensing\\_Activity\\_Survey&Template=/CM/ContentDisplay.cfm&ContentID=4218](http://www.autm.net/AM/Template.cfm?Section=FY_2008_Licensing_Activity_Survey&Template=/CM/ContentDisplay.cfm&ContentID=4218) (last visited June 9, 2011). Surveys conducted before 1999 did not contain this exclusion, which AUTM indicates "is intended to eliminate skews in the data as a result of significant litigation." *Id.* at 4. Accordingly, AUTM's recent annual surveys are silent on this important cost of university involvement in technology transfer. See also Rhoades, *supra* note 71, at 244 ("[T]he AUTM survey provides data on legal fees, but since 1999, these figures have only included the costs of patent prosecution, and have not included major litigation fees of universities, or the costs of university or externally hired attorneys who deal with technology transfer issues.").

<sup>192</sup> Bessen & Meurer, *supra* note 40, at 3.

different in this regard, even though most large universities have in-house counsel who could represent them. The fact that outside counsel manifestly was involved in all but one of the fifty-seven located lawsuits suggests that saving money on outside counsel fees may not be a primary concern for universities that initiate patent infringement litigation.

Another implication that flows from the quantitative data is that patent infringement litigation brought by universities is likely to involve exclusively licensed patents. Potentially adding to the suggested limitations of exclusive licenses brokered by universities,<sup>193</sup> the prevalence of litigated patents that are exclusively licensed may mean that universities and consumers bear additional costs when universities engage in this form of licensure. As to why non-exclusively licensed patents appear rarely litigated, one possibility is that such patents are less valuable to the university, and thus not worth the cost of enforcement. One also could imagine that universities may be reluctant to sue over non-exclusively licensed patents because the mere act of doing so could jeopardize the university's royalty stream for those patents, particularly if the university ends up losing the case. Non-exclusive licensees also are unlikely to be contractually obligated to contribute to the litigation costs of the licensed patents. Accordingly, the prospect of having to pay for litigation with no hope for reimbursement could diminish a university's enthusiasm for pursuing a case involving a non-exclusive license.<sup>194</sup>

Additional research should investigate to what extent the exclusive or non-exclusive nature of a licensed patent affects a university's calculus in deciding whether to initiate litigation over that patent. Also meriting further consideration is university initiation of patent infringement litigation over non-licensed patents. Ten located lawsuits were (1) brought by a university without a co-plaintiff, and (2) contain no allegation in the complaint that the university that owns the patent is practicing it. Lawsuits of this sort should be closely examined to gain better understanding of universities' goals and motivations in bringing lawsuits without the participation of licensees. If no licensees exist in such instances, universities' pursuit of the lawsuits anyway may indicate a purely rents-driven approach to technology transfer, or a breakdown in the licensing negotiation process (i.e., the university sues a would-be licensee because it is practicing the patented technology but declined to take a license from the university). Either scenario presents unique policy considerations for university activity in this space.

#### *D. Textual Findings*

Textual examination of the located complaints provides for additional insights into university initiation of patent infringement litigation in strategic venues, the relationship between university patent owners and their licensees, and the relationship between universities and their affiliated research entities. It also gives enhanced perspective into situations where universities and students compete.

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<sup>193</sup> See *supra* Part II.B.2.

<sup>194</sup> Alternative billing arrangements, such as bringing a lawsuit on a contingency fee basis, could lessen a university's legal costs. Unfortunately, the prevalence of contingency fee and other alternative billing arrangements among universities that litigate patents is unknown.

### 1. *Litigation in Strategic Venues*

At least six lawsuits appear to have been filed in what could be called strategically selected venues. In *Shotspotter, Inc. v. Safety Dynamics, Inc.*,<sup>195</sup> lead plaintiff Shotspotter, Inc. alleges to be incorporated in Delaware and have its principal place of business in California.<sup>196</sup> Co-plaintiff Johns Hopkins University is both incorporated and located in Maryland, and the lone defendant allegedly is incorporated in Delaware and headquartered in Arizona.<sup>197</sup> In short, the only tie to the Southern District of New York is that the plaintiffs allege that the defendant has committed infringing acts in that judicial district.<sup>198</sup> The choice to file suit in New York may reflect a strategic decision to litigate in a forum where presiding judges are believed to be knowledgeable about patents and sympathetic to owners of intellectual property.

Similar to Johns Hopkins in its strategic selection of venue, Georgia-based Emory University selected or consented in the selection (by its co-plaintiff) of the Southern District of New York as the district court in which to litigate patent infringement claims against Teva Pharmaceuticals, despite any apparent connections to New York.<sup>199</sup> Emory's co-plaintiff, Gilead Sciences, Inc., allegedly is incorporated in Delaware and headquartered in California.<sup>200</sup> The two Teva defendants allegedly are incorporated and/or based in Delaware, Pennsylvania, and Israel.<sup>201</sup>

Abbott Laboratories—along with co-plaintiff Wisconsin Alumni Research Foundation (“WARF”)—brought two cases in the United States District Court of the District of Delaware against generic drug manufacturers that (along with the plaintiffs) were neither incorporated nor based in Delaware.<sup>202</sup> The United States government (acting through the National Institutes of Health) and the University of Illinois likewise chose Delaware as the venue for their ANDA action against generic drug manufacturers Mylan Pharmaceuticals Inc. and Lupin Pharmaceuticals, Inc., even though no party to the case was alleged to be incorporated or located in that state.<sup>203</sup> Like the parties that selected the Southern District of New York as the venue of their suits, it is conceivable that the plaintiffs in the aforementioned lawsuits made a strategic decision to litigate in Delaware under the belief that the courts there are more favorable to intellectual property holders. As described in Part V.A.6. above, universities were plaintiffs in more lawsuits in Delaware than in any other venue during the studied time period.<sup>204</sup>

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<sup>195</sup> No. 09-7828 (S.D.N.Y. filed Sept. 11, 2009).

<sup>196</sup> Complaint ¶ 1, *Shotspotter, Inc. v. Safety Dynamics, Inc.*, No. 09-7828 (S.D.N.Y. Sept. 11, 2009).

<sup>197</sup> *Id.* ¶¶ 2–3.

<sup>198</sup> *Id.* ¶ 6.

<sup>199</sup> See Complaint, *Gilead Scis., Inc. v. Teva Pharms. USA, Inc.*, No. 10-1798 (S.D.N.Y. Mar. 5, 2010).

<sup>200</sup> *Id.* ¶ 2.

<sup>201</sup> *Id.* ¶¶ 4–5.

<sup>202</sup> See Complaint ¶¶ 2–5, *Abbott Labs. v. Sandoz, Inc.*, No. 09-0215 (D. Del. Apr. 1, 2009); Complaint ¶¶ 2–4, *Abbott Labs. v. Roxane Labs., Inc.*, No. 10-0998 (D. Del. Nov. 19, 2010).

<sup>203</sup> See Complaint ¶¶ 2–6, *United States v. Mylan Pharms. Inc.*, No. 10-5956 (D.N.J. Nov. 15, 2010).

<sup>204</sup> See *supra* Part V.A.6 tbl.7.

In each of the five cases discussed above, the plaintiffs based their claims of personal jurisdiction on the allegation that the defendants had sold infringing products in the state where the lawsuit was filed, regularly transacted business within that state, and/or previously consented to personal jurisdiction in other lawsuits in that state. But even if the personal jurisdiction bar is met, venue may not be proper, causing the strategic selection to backfire. Stanford University experienced this when it filed suit in conjunction with its licensee and the licensee's subsidiary in the United States District Court of the Eastern District of Texas,<sup>205</sup> a judicial district increasingly known for its speed and efficiency in resolving patent infringement lawsuits.<sup>206</sup> Stanford is based in California, its licensee and subsidiary are incorporated in Delaware and based in Massachusetts, and the defendant was alleged to have its headquarters in New York.<sup>207</sup> After answering the complaint, PACER docket entries show that the defendant moved to transfer the case to the Northern District of California, the federal judicial district in which Stanford is located. The parties subsequently stipulated to the transfer, and the case is now pending in California.

## 2. Relationships Between University Patent Owners and Licensees

Not all relationships between universities and their licensees go smoothly. A licensee one day can become a defendant the next, as illustrated by *Massachusetts Institute of Technology v. Still River Systems, Inc.*, where the defendant allegedly failed to meet certain contractual milestones, leading the university to terminate its license.<sup>208</sup> Similarly, a university and an exclusive licensee may find that a current or former licensee has breached the terms of its license. For example, in *AsymmetRx, Inc. v. Dako Denmark A/S*, Harvard and its exclusive licensee AsymmetRx alleged that a non-exclusive licensee—with authority pursuant to its license to sell products covered by the patents in suit for research uses only—had entered the exclusive licensee's exclusive field of use, thereby infringing its patent rights.<sup>209</sup>

The *AsymmetRx* case raises an important question: must a university join its exclusive licensee in bringing a patent infringement action? If universities would prefer not to initiate patent infringement litigation (or should avoid such litigation, as some have argued), why not let their exclusive licensees bring such actions

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<sup>205</sup> See Complaint, *Caliper Life Scis., Inc. v. Carestream Health, Inc.*, No. 10-2079 (E.D. Tex. Feb. 23, 2010).

<sup>206</sup> See *The Eastern District of Texas: A Magnet for Patent Litigation*, METROPOLITAN CORP. COUNS., Sept. 1, 2006, at 53, available at <http://www.metrocorp-counsel.com/pdf/2006/September/53.pdf>. According to LexMachina, the mean time to termination for patent infringement lawsuits filed in the United States District Court of the Eastern District of Texas is 479 days, and nearly 2,000 patent infringement cases have been filed there since 2000, the second highest among all federal judicial districts. See LEX MACHINA, <http://www.lexmachina.com> (last visited June 9, 2011).

<sup>207</sup> Complaint ¶¶ 4–6, *Caliper Life Scis.*, *supra* note 205.

<sup>208</sup> Complaint ¶¶ 19–20, *Mass. Inst. of Tech. v. Still River Sys., Inc.*, No. 10-12225 (D. Mass. Dec. 23, 2010). See also Complaint ¶¶ 15–20, *STC.UNM v. Envtl. Robots, Inc.*, No. 10-0094 (D.N.M. Feb. 4, 2010) (alleging breach of contract for failure to pay royalties pursuant to non-exclusive license).

<sup>209</sup> Complaint ¶¶ 14–15, 18–19, *AsymmetRx, Inc. v. Dako Denmark A/S*, No. 09-10396 (D. Mass. Mar. 13, 2009).

without them? While such a solution might serve policy goals, the law offers no helpful distinction between university owners of patents and for-profit owners of patents. Both can be patentees under the Patent Act, which defines *patentee* as including “not only the patentee to whom the patent was issued but also the successors in title to the patentee.”<sup>210</sup> As AsymmetRx learned in a separate lawsuit before joining with Harvard in bringing the above described action against Dako Denmark, determining who is a successor in title to the patentee requires looking at any licenses granted by “the patentee to whom the patent was issued” and assessing whether they constitute an intention to assign “all substantial rights” to the patent, or merely an intention to license its use.<sup>211</sup> The CAFC has indicated that all substantial rights are *not* assigned when the patentee retains the right to initiate litigation on its own,<sup>212</sup> however, insisting on being informed of any lawsuit brought by a licensee, or contracting to receive portions of damages recovered in infringement suits, are not provisions that, by themselves, mean that all substantial rights were not conveyed.<sup>213</sup> Determining who has the right to “indulge infringements” is particularly dispositive in analyzing if a license is merely a license or is actually an assignment of all substantial rights in the patent.<sup>214</sup>

A textual review of the complaints revealed that many universities that co-sued with exclusive licensees alleged that the licensees had the contractual ability to sue “in their own name,” yet the universities had joined the suits anyway. For example, in Stanford’s case against Carestream, plaintiffs alleged that co-plaintiff “Xenogen licenses the [patents in suit] pursuant to an exclusive license agreement with Stanford. The license agreement authorizes Xenogen to bring suit in its own name to enforce the [patents in suit].”<sup>215</sup> Despite this purported agreement, Xenogen did not bring suit alone.<sup>216</sup> Stanford is a co-plaintiff. Similar language appears in the complaints of other located cases.<sup>217</sup> Notwithstanding this language and apparent

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<sup>210</sup> See 35 U.S.C. § 100(d) (2006).

<sup>211</sup> See *AsymmetRx, Inc. v. Biocare Med., LLC*, 582 F.3d 1314, 1319 (Fed. Cir. 2009) (“[T]he critical determination regarding a party’s ability to sue in its own name is whether an agreement transferring patent rights to that party is, in effect, an assignment or a mere license.”); *Vaupel Textilmaschinen KG v. Meccanica Euro Italia S.P.A.*, 944 F.2d 870, 874 (Fed. Cir. 1991); see also Jeffrey L. Newton, *Assuring All Substantial Rights in Exclusive Patent Licenses*, 44 LES NOUVELLES 235, 235 (2009) (“Despite their best of intentions, parties draft license agreements which purport to have the patentee grant sufficient rights for a licensee to assert a patent against third parties, but fail to grant all substantial rights to sue.”).

<sup>212</sup> See *AsymmetRx*, 582 F.3d at 1320–21 (finding that university patent owner did not convey entire right to enforce patents to licensee when it retained the right to sue infringers if licensee declined to do so, required licensee to consider university’s “views and the public interest” in determining whether to bring an infringement action, maintained the right to approve any settlement, and maintained the right to join as a co-plaintiff in any action brought by the licensee).

<sup>213</sup> See *Vaupel*, 944 F.2d at 875 (finding that retained rights by patent owner to veto any sublicensing, obtain patents on the invention in other countries, and receive a share of damages from any infringement action were not inconsistent with an assignment).

<sup>214</sup> See *Abbott Labs. v. Diamedix Corp.*, 47 F.3d 1128, 1132 (Fed. Cir. 1995) (holding that although licensee had the option to initiate lawsuit for infringement, because licensor also maintained such right “it does not enjoy the right to indulge infringements, which normally accompanies a complete conveyance of the right to sue”).

<sup>215</sup> Complaint ¶ 5, *Caliper Life Scis.*, *supra* note 205.

<sup>216</sup> *Id.*

<sup>217</sup> See, e.g., Complaint ¶ 22, *Gilead*, *supra* note 199 (“Pursuant to an agreement entered into between Gilead and Emory, Gilead has substantial rights in the [patents in suit], including but not

authorization from the universities to “go it alone,” universities joined their exclusive licensees in suit in each instance, likely out of an abundance of caution.<sup>218</sup>

Further research remains to be conducted concerning universities that sue in conjunction with exclusive licensees, as well as exclusive licensees that sue without the universities to which the patents were originally assigned.<sup>219</sup> Questions to be explored include what do licensing contracts say about which party pays for the litigation in these relationships, which manages the litigation strategy, which selects the outside counsel, and which has ultimate authority to determine if and how to settle a case short of trial? On what issues are the contracts silent, and how have

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limited to, rights associated with being a licensee of the [patents in suit], and the right to sue for infringement of the [patents in suit].”); Complaint ¶ 13, *Shotspotter*, *supra* note 195 (“ShotSpotter has the right to sue for and obtain equitable relief and damages for infringement of the [patent in suit].”); Complaint ¶ 10, *AsymmetRx*, *supra* note 209 (“AsymmetRx is the exclusive licensee of the [patents in suit] in the commercial diagnostic field and has the right to prosecute in its own name any infringement of these patents within the diagnostic field.”); Complaint ¶ 13, *Brigham Young Univ. v. Hitachi High Techs. Am., Inc.*, No. 09-0302 (D. Utah Apr. 7, 2009) (“On March 19, 2008, by written agreement, BYU granted [co-plaintiff] Torion an exclusive license to make, manufacture, use, sell, and otherwise practice the inventions described in the [patent in suit]. The agreement grants Torion the right to enforce the [patent in suit] as well.”); Complaint ¶ 11, *Bd. of Regents of the Univ. of Neb. v. Siemens Healthcare Diagnostics Inc.*, No. 09-3075 (D. Neb. Apr. 20, 2009) (“The University has granted an exclusive license to the Patents-in-Suit to [co-plaintiff] UNeMed, which has given an exclusive sublicense to the Patents-in-Suit to Abbott Laboratories. UNeMed has authority to bring this action pursuant to its sublicense with Abbott Laboratories.”); Complaint ¶ 9, *Sirona Dental Sys. Inc. v. Palodex Group Oy*, No. 09-0266 (W.D. Wisc. Apr. 30, 2009) (“Among Sirona’s rights as exclusive licensee is the sole authority to enforce the [patent in suit] in the Field, including without limitation the sole authority to initiate, conduct and conclude legal proceedings.”).

<sup>218</sup> The opposite was true in one located case, *BioTechnology, LLC.*, where Drexel University allegedly had agreed to “cooperate fully . . . in any litigation involving any patent” it licensed to BioTechnology, yet refused to join as a co-plaintiff in the lawsuit. See Complaint ¶ 19, *BioTechnology*, *supra* note 177. BioTechnology relied on Federal Rule of Civil Procedure 19 to join Drexel University in the action, despite its recalcitrance, as the CAFC has suggested is appropriate to do in such situations. *Id.* ¶ 20; see *AsymmetRx, Inc. v. Biocare Med., LLC*, 582 F.3d 1314, 1322 (Fed. Cir. 2009) (discussing the potential appropriateness of involuntary joinder of university patent licensors).

<sup>219</sup> Such lawsuits do exist. See, e.g., Complaint ¶¶ 1, 12–16, *Nanosys, Inc. v. Sigma-Aldrich Corp.*, No. 09-0258 (W.D. Wisc. Apr. 27, 2009) (lawsuit brought by exclusive licensee of five patents owned by Massachusetts Institute of Technology; alleges licensee “has the right to recover for infringement” of each patent in suit); Complaint ¶¶ 8–10, *Athena Diagnostics, Inc. v. Ambry Genetics Corp.*, No. 09-40202 (D. Mass. Nov. 18, 2009) (lawsuit brought by exclusive licensee of patent owned by Baylor University; alleges licensee has “the right to initiate actions against infringers of the [patent in suit] in [its own] name and to join Baylor as a party-plaintiff if legally required to do so”); Complaint ¶¶ 9–10, *Direct Electron, LP v. FEI Co.*, No. 09-2845 (S.D. Cal. Dec. 18, 2009) (lawsuit brought by exclusive licensee of patent owned by the Regents of the University of California; alleges licensee “is authorized under the exclusive license agreement to enforce the patent-in-suit including the right to sue and collect damages”); Complaint ¶¶ 19, 46–48, *NeuroGrafix v. Siemens Med. Solutions USA, Inc.*, No. 10-1990 (C.D. Cal. Mar. 18, 2010) (lawsuit brought by sub-licensee of exclusive licensee of patent originally owned by the University of Washington; alleges sub-licensee is authorized “to enforce the [patent in suit] and sue infringers for past and present infringement”); Complaint ¶¶ 18, 20, *Rapid Mobile Techs., Inc. v. Motorola, Inc.*, No. 10-62504 (S.D. Fla. Dec. 23, 2010) (lawsuit brought by exclusive licensee—controlled by patent’s inventor—of patent owned by the University of Florida Research Foundation, Inc.; alleges licensee has “the right to police and enforce the parameters of the [patent in suit] through any legal means, including but not limited to, though [sic] the filing of a patent infringement lawsuit such as the instant one”).

TTOs and licensees interpreted these contracts in the face of litigation? While answers to these questions can be conjectured through speculation and anecdote, empirical data would provide much needed insight into the complex and varied relationships between universities and their licensees.

### *3. Relationships Between Universities and Affiliated Research Entities*

A textual examination of the located complaints also reveals perplexing nuances concerning the relationship between universities and their closely affiliated research entities. Such entities can shield universities from liability and allow them to engage in certain business activities without jeopardizing their tax-exempt status.<sup>220</sup> They also historically have served as buffer organizations for “technology transfer activities that are less consistent with the traditional missions of the university, less in tune with the prevailing academic culture, and less consonant with the public image of the functions appropriate for a university.”<sup>221</sup> Assuming that one of the purposes of a closely affiliated research entity is to have it conduct business activities that the university itself either cannot or would rather not conduct, one might speculate that a university and its closely affiliated research entity would never join forces and sue as co-plaintiffs.

Yet such lawsuits do occur, as revealed by two discovered in this study. In *University of Iowa v. Abbott Laboratories*,<sup>222</sup> both the university and its affiliated research entity (the University of Iowa Research Foundation (“UIRF”)) are named as plaintiffs, although UIRF, and not the University of Iowa, is the sole owner of the patents in suit.<sup>223</sup> The complaint describes UIRF and its purpose as follows:

UIRF is a 501(c)(3) corporation organized and existing under the laws of Iowa with its principal place of business at 2660 University Capital Centre, Iowa City, Iowa 52242-5500. Although separately incorporated in 1975, the UIRF is an affiliated organization of the University and acts as an instrumentality of the University by performing functions that the University would itself ordinarily carry out. Specifically, the University has designated the UIRF as the owner of its patent rights and manager of its interests in qualifying inventions. Pursuant to this designation, the UIRF is organized and operates to support the research and educational missions of the University by taking ownership of University-invented technologies and then transferring them to the marketplace for the benefit of the University, its inventors, the State of Iowa, and society at large. Through the commercialization of University intellectual property and the formation of new business ventures to support those technologies, the UIRF also

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<sup>220</sup> MATKIN, *supra* note 4, at 107.

<sup>221</sup> *Id.* at 307.

<sup>222</sup> No. 09-0099 (S.D. Iowa filed June 22, 2009).

<sup>223</sup> *Id.*

serves a key role in the University's efforts to support and enhance economic development in the State of Iowa.<sup>224</sup>

The above paragraph is intriguing in the level of detail it provides. Whether UIRF benefits "society at large" and furthers economic development in the state of Iowa are not likely to be contested issues in the litigation. Accordingly, one questions the need and purpose of including such laudatory language in the complaint.<sup>225</sup>

In *Cornell University v. Illumina, Inc.*,<sup>226</sup> Cornell University's affiliated research entity, Cornell Research Foundation, Inc., joined the university as a plaintiff in the lawsuit. The research entity, and not the university, is an assignee of each of the patents in suit (curiously, so are the Board of Supervisors of Louisiana State University and Agricultural and Mechanical College and the Regents of the University of Minnesota, although neither is party to the lawsuit or mentioned in the complaint). The complaint describes the research entity as "a wholly owned subsidiary of Cornell University, whose mission is to manage the intellectual property invented by Cornell University employees under Cornell University's Inventions and Related Property Rights Policy, including obtaining patent, trademark, or copyright protection where appropriate and licensing intellectual property for commercial development and use."<sup>227</sup>

While the *Cornell* and *University of Iowa* cases offer no obvious explanation as to why the universities and their affiliated research entities jointly sued in those cases, other cases involving university affiliated research entities provide further noteworthy descriptions of these organizations and insight into their relationships with their affiliated universities. For example, the role of Washington Research Foundation ("WRF")—the research entity affiliated with the University of Washington—is described as follows in *Washington Research Foundation v. Silicon Laboratories Inc.*:<sup>228</sup>

Washington Research Foundation (also referred to as "WRF") is an independent nonprofit Washington State 501(c)(3) organization based in Seattle, Washington. Washington Research Foundation was created in 1981 and is mandated by federal statute to review technology disclosures by the University of Washington and other Washington research institutions, obtain protection for such technology through patents, copyrights, or other means, and provide for the license, sale, or other exploitation of such technology. The activities of the WRF are funded by revenue from technology licensing and the investment of retained funds. Washington Research Foundation has benefited Washington State research institutions by licensing a variety of technologies to industry, including the basis for a hepatitis B virus vaccine, blood clotting factors, recombinant insulin, and

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<sup>224</sup> *Id.* ¶ 7.

<sup>225</sup> This complaint also is interesting in that it is the only one located that was signed by an assistant attorney general acting as local counsel for the plaintiffs. *Id.* at 10. Perhaps the manifest involvement of a state agency in the filing of the lawsuit explains the curious preemptive defense of UIRF and its activities.

<sup>226</sup> No. 10-433 (D. Del. filed May 24, 2010).

<sup>227</sup> Complaint ¶ 2, *Cornell Univ. v. Illumina, Inc.*, No. 10-433 (D. Del. May 24, 2010).

<sup>228</sup> No. 10-1050 (W.D. Wa. filed June 24, 2010).



wireless technology supporting the “Bluetooth” and other wireless technologies.

Washington Research Foundation provides support through gifts and grants for scholarship and research to the University of Washington. Such gifts and licensing disbursements have totaled more than \$280 million, thus providing a substantial return on investment to the taxpayers whose dollars support this institution. The gifts from the Washington Research Foundation have supported the creation of over 100 endowments for chairs, professorships, research fellowships and graduate stipends in science, medicine and engineering, all at reduced or no cost to the taxpayer. Educational programs created and supported by the Washington Research Foundation include the Center for Technology Entrepreneurship (University of Washington Business School) and the Program for Technology Commercialization (University of Washington Bioengineering), all of which substantially benefit society and improve the human condition. The Washington Research Foundation was a founding supporter of technology “gap” funding programs at the University of Washington, the Fred Hutchinson Cancer Research Center, and Washington State University.<sup>229</sup>

At issue in this lawsuit is low intermediate frequency radio frequency receiver technology invented by a faculty inventor at the University of Washington who assigned his patents to the University of Washington, not WRF.<sup>230</sup> The University of Washington, in turn, exclusively licensed the patents in suit to WRF “to include in its patent licensing program and, if necessary, to enforce in the name of the Washington Research Foundation all rights available in law and equity under the [patents in suit] including the right to sue for infringement and collect damages therefor.”<sup>231</sup> The complaint mentions WRF’s having consummated sub-licenses with a variety of low intermediate frequency radio chipset companies, including Toshiba and Ericsson.<sup>232</sup> WRF is the only plaintiff in the lawsuit.<sup>233</sup>

The assignment and licensing structure in *Washington Research Foundation* would seem to reflect an intentional decision by the university not to have to involve itself directly in any enforcement activity. However, just four months later, the University of Washington sued an alleged infringer without the involvement of WRF over patents to which it was again the sole assignee.<sup>234</sup> From reading the two complaints, no explanation is readily apparent as to why the university is involved in one case but not the other.

A consistent decision not to be involved in any litigation may exist at the University of New Mexico, where in two located cases it owned the patents in suit but

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<sup>229</sup> Complaint ¶¶ 2–3, *Wash. Research Found. v. Silicon Labs, Inc.*, No. 10-1050 (W.D. Wa. June 24, 2010). For a description of the “mandate” referenced in the complaint, see discussion *infra* accompanying note 246.

<sup>230</sup> *Id.* ¶ 6.

<sup>231</sup> *Id.* ¶ 8.

<sup>232</sup> *Id.* ¶ 12.

<sup>233</sup> *Id.* ¶¶ 2–4.

<sup>234</sup> See Complaint, *Univ. of Wash. v. Gen. Elec. Co.*, No. 10-1933 (W.D. Wash. Nov. 30, 2010).

was not named a plaintiff in either.<sup>235</sup> Interestingly, language in both complaints seems to suggest that there may be little distinction between the university and its affiliated research entity that is actually the lone plaintiff in the lawsuits. Both complaints describe the research entity as “a nonprofit corporation formed by and owned entirely by the University of New Mexico”<sup>236</sup> and “formed in 1995 by the Regents of the University to protect and transfer its faculty inventions to the commercial marketplace.”<sup>237</sup>

In both *Washington Research Foundation* and the two cases involving the University of New Mexico’s affiliated research entity, the sequential patent assignment and licensing structure is as follows: inventor assigns patent to university; university exclusively licenses patent to affiliated research entity; university affiliated research entity presumably issues sub-licenses to industry. This 3-layered assignment/licensing structure differs from the 2-layered structure existing in other located cases involving a university affiliated research entity as plaintiff. The faculty inventor in such cases assigns an invention directly to the university’s affiliated research entity, without involving the university. For example, in *Abbott Laboratories v. Teva Parenteral Medicines, Inc.*,<sup>238</sup> the faculty inventors of the patents in suit assigned the patents directly to WARF, not the University of Wisconsin-Madison.<sup>239</sup> The university is not a party to the lawsuit, although its relationship with WARF is described in the complaint as follows:

Wisconsin Alumni Research Foundation (“WARF”) is a nonprofit Wisconsin corporation, having its principal place of business at 614 Walnut Street, Madison, Wisconsin 53726. WARF is the designated technology transfer organization for the University of Wisconsin-Madison (“University”). WARF’s mission is to support research at the University, to transfer technology, and to ensure that the inventions and discoveries of the University benefit humankind. WARF carries out this mission by patenting and licensing University inventions and by returning a portion of the proceeds of that licensing to fund additional research at the University. To date, WARF’s contributions to the University have included funds to support research, build facilities, purchase land and equipment, and provide many faculty and graduate student fellowships.<sup>240</sup>

Similarly, the university affiliated research entities in *Research Foundation of State University of New York v. Bruker Corp.*<sup>241</sup> and *Bayer Healthcare, LLC v.*

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<sup>235</sup> Compare Complaint ¶¶ 1–2, *Sci. & Tech. Corp. of the Univ. of N.M. v. Toshiba Am. Elec. Components, Inc.*, No. 09-0310 (D.N.M. Mar. 30, 2009), with Complaint ¶¶ 1–3, *STC.UNM v. Intel Corp.*, 10-1077 (D.N.M. Nov. 15, 2010).

<sup>236</sup> Complaint ¶ 1, *Sci. & Tech. Corp.*, *supra* note 235; Complaint ¶ 1, *STC.UNM*, *supra* note 235.

<sup>237</sup> Complaint ¶ 2, *Sci. & Tech. Corp.*, *supra* note 235; Complaint ¶ 2, *STC.UNM*, *supra* note 235.

<sup>238</sup> No. 09-0884 (D. Del. filed Nov. 19, 2009).

<sup>239</sup> Complaint ¶ 20, *Abbott Labs. v. Teva Parenteral Meds., Inc.*, No. 09-0884 (D. Del. Nov. 19, 2009).

<sup>240</sup> *Id.* ¶ 3.

<sup>241</sup> No. 09-0071 (N.D.N.Y. filed Jan. 21, 2009).

*Wedgewood Village Pharmacy, Inc.*,<sup>242</sup> and not their affiliated universities, are the assignees of the patents in those lawsuits. The affiliated universities (SUNY and the University of Kentucky, respectively) are not plaintiffs in those lawsuits, let alone even described in the complaints.

Whether a 3-layered assignment/licensing structure (inventor → university → affiliated research entity) or 2-layered structure (inventor → affiliated research entity) ultimately is more beneficial for universities would appear to depend on what their goals are for adopting one structure over another. Each structure's tax implications are complicated and likely relevant to a university's decision. While IRS rulings indicate that royalties from licensing patents are not considered unrelated business income for federal tax purposes, the agency "has not provided much guidance on whether technology transfer and commercialization activities will jeopardize an organization's tax-exempt status."<sup>243</sup> Whether those activities are orchestrated out of the university (which is presumptively tax-exempt), a supporting organization to the university (also presumptively tax-exempt), or a for-profit subsidiary of either entity could affect the tax treatment.<sup>244</sup> Unfortunately the agency's private letter rulings on this subject have been varied and situation specific.<sup>245</sup> Although Congress enacted an amendment to the tax code in 1986 intended to establish the tax-exempt status of certain research entities, the provision was drafted so narrowly as to apply only to WRF.<sup>246</sup>

The 2-layered structure may grow in popularity as universities increasingly "outsource" their TTOs to report directly to affiliated foundations and research entities.<sup>247</sup> For those institutions concerned with being viewed as litigious, the 2-layered structure would appear to offer universities greater leeway to engage in patent infringement litigation without appearing—on paper, at least—directly engaged in such activity.

#### 4. When Universities and Students Compete

A final interesting finding from the textual review of the located complaints comes from Auburn University's lawsuit against IBM.<sup>248</sup> This case touches on the

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<sup>242</sup> No. 09-5345 (D.N.J. filed Oct. 19, 2009).

<sup>243</sup> Cerny & Hellmuth, *supra* note 44, at 11.

<sup>244</sup> *See id.* at 6–15.

<sup>245</sup> *Id.* at 11–12.

<sup>246</sup> *See* Tax Reform Act of 1986, Pub. L. No. 99-514, § 1605(a)(4), 100 Stat. 2085, 2769 (codified as amended at 26 U.S.C. § 501 (2006)) (applying only to organizations "incorporated on July 20, 1981").

<sup>247</sup> For example, the University of Arizona announced in November of 2010 that it was establishing a nonprofit corporation to handle the commercialization efforts previously managed by its TTO. *See U-Arizona to convert its TTO into a nonprofit*, TECH. TRANSFER TACTICS (Nov. 3, 2010), <http://www.technologytransfertactics.com/content/2010/11/03/u-arizona-to-convert-its-tto-into-a-nonprofit>. The new entity is named the University of Arizona Research Corporation and operates under the auspices of the University of Arizona Foundation. *Id.* The university's executive vice president and provost said the new structure offers greater flexibility to work with faculty on ideas and to develop relationships with companies. *Id.* Why that flexibility was diminished when the TTO reported through internal academic channels went unreported.

<sup>248</sup> Complaint, Auburn Univ. v. Int'l Bus. Machs., Corp., No. 09-0694 (M.D. Ala. July 23, 2009).

blurring between public and proprietary research as discussed by Rhoten and Powell.<sup>249</sup> It helps explain how such activity occurs, how students as well as faculty are involved in it, and what such blurring might mean for universities.

The case centers around a professor of electrical engineering at Auburn, his former graduate student, and their relationship with IBM.<sup>250</sup> According to the complaint, the professor and graduate student jointly conducted research aimed at devising a method for classifying computer components based on expected reliability and estimating the reliability of those components based on the classification.<sup>251</sup> Inventions flowed from this research for which Auburn applied for patents in 2001.<sup>252</sup> The applications listed the professor, Dr. Singh, and his graduate student, Mr. Barnett, as co-inventors.<sup>253</sup> Around this time, IBM asked Dr. Singh whether Mr. Barnett would be interested in spending the summer at IBM.<sup>254</sup> Implicit in the complaint is that Dr. Singh, as a leader in his field, had some prior existing relationship with IBM.

Mr. Barnett accepted IBM's invitation and ended up spending the summer at IBM's office in Burlington, Vermont.<sup>255</sup> He then returned to his studies at Auburn.<sup>256</sup> After Mr. Barnett returned to Auburn, IBM filed its own patent applications for technology similar to the technology that Dr. Singh and Mr. Barnett had invented and for which Auburn had recently filed its own patent applications.<sup>257</sup> Mr. Barnett was listed as a co-inventor, along with IBM personnel, on the patent applications filed by IBM.<sup>258</sup> Dr. Singh was not listed as a co-inventor.<sup>259</sup> Auburn's applications matured into the patents that form the basis of its infringement complaint.<sup>260</sup> IBM's applications matured into patents as well.<sup>261</sup> In addition to its claims of patent infringement, Auburn also alleges unjust enrichment and conversion of its intellectual property by IBM.<sup>262</sup>

Auburn's complaint does not specify whether Mr. Barnett completed his Ph.D. at Auburn, or where he might be if he is no longer a student there. One can only imagine that his summer in Burlington was more eventful than his advisor had hoped. Whether Auburn potentially had a viable cause of action against Mr. Barnett under conversion or any other legal theory is unknown. One can speculate, though, that a decision by Auburn to sue its current or former student would have been viewed critically by many, whatever the legal merits of such action. Auburn may have decided not to pursue any claim it might have had against Mr. Barnett for that reason alone. But assuming the future occurrence of situations such as this one at other institutions, and given faculty and universities' financial stakes in patenting, is

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<sup>249</sup> See Rhoten & Powell, *supra* note 72.

<sup>250</sup> See Complaint, *Auburn Univ.*, *supra* note 248.

<sup>251</sup> See *id.* ¶¶ 2–5.

<sup>252</sup> *Id.* ¶ 20.

<sup>253</sup> *Id.*

<sup>254</sup> *Id.* ¶ 22.

<sup>255</sup> *Id.* ¶ 23.

<sup>256</sup> *Id.* ¶ 24.

<sup>257</sup> *Id.* ¶¶ 26–27.

<sup>258</sup> *Id.* ¶ 28.

<sup>259</sup> *Id.*

<sup>260</sup> *Id.* ¶¶ 20, 31.

<sup>261</sup> *Id.* ¶¶ 26–27.

<sup>262</sup> *Id.* ¶¶ 43–50.

it unreasonable to think that the day of universities suing current students over their inventions might not be too far off?<sup>263</sup>

## VI. CONCLUSION

Much remains to be learned about university initiation of patent infringement litigation. This article represents, however, a useful first step toward gaining empirical understanding of the phenomenon, its extent, its contours, and its complexities as part of a broader effort to provide a transparent accounting of university engagement in patenting and technology transfer.<sup>264</sup> As universities continue to seek revenues through patenting in an era of dwindling public funding for higher education, the appeal of initiating infringement actions over university-owned patents is only likely to grow in popularity. All the more reason for TTOs, scholars, and policymakers to consider proactively the complex issues raised by the activity.

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<sup>263</sup> In fact, the day already may have arrived. According to a widely publicized story in January of 2011, the University of Missouri purportedly demanded a 25% ownership stake and 2/3 of any profits generated from an iPhone app created by a current student at the university in March of 2009, while he was a student at the university. See Alan Scher Zagier, *Young Inventors Prompt Colleges to Revamp Rules*, SEATTLE TIMES, Jan. 24, 2011, available at [http://seattletimes.nwsourc.com/html/nationworld/2014021707\\_apusstudentinventors.html](http://seattletimes.nwsourc.com/html/nationworld/2014021707_apusstudentinventors.html); see also *iPhone App Raises Questions About Who Owns Student Inventions*, CHRON. HIGHER EDUC. (Jan. 31, 2011), <http://chronicle.com/blogs/wiredcampus/iphone-app-raises-questions-about-who-owns-student-inventions>. Apparently the app—which aids in tracking local apartment rentals—has been quite successful, generating over 250,000 downloads. Although the university relented in its demands, the *Seattle Times* article noted that the situation raises the question of “[w]ho owns the patents and copyrights when a student creates something of value on campus, without a professor’s help?” Zagier, *supra*. The answer largely will depend on the wording of an institution’s intellectual property policy and the circumstances in which it applies to students, if at all.

To date, some universities have shown no hesitancy to pursue former professors and students when the stakes are high enough. For example, in 2008, St. John’s University sued a retired professor and Ph.D. graduate of the university for allegedly failing to assign patentable inventions discovered while both were at the university. See *Former Professor Fails to Dismiss St. John’s Suit Over ‘Secret’ Patent*, TECH. TRANSFER TACTICS (Dec. 29, 2010), <http://www.technologytransfertactics.com/content/2010/12/29/former-professor-fails-to-dismiss-st-johns-suit-over-%E2%80%98secret%E2%80%99-patent>. The retired professor and his former graduate student had formed a start-up company and applied for various patents (which they received) after each had left the university. *Id.* Portions of the former graduate student’s dissertation apparently appeared in one of the patent applications. *Id.* The start-up company allegedly licensed the patents for at least \$100 million, 30% of which the university claims it is owed. *Id.* The judge denied the defendants’ motion to dismiss the case in December of 2010, allowing the university’s claims of fraud, conversion, unjust enrichment, breach of contract, and breach of fiduciary duty to go forward. See *St. John’s Univ. v. Bolton*, 757 F. Supp. 2d 144, 194 (E.D.N.Y. 2010).

<sup>264</sup> See Rhoades, *supra* note 11, at 244 (“Rather than a full accounting of costs as well as revenues, there is an effort to track mostly the credit side of the accounting ledger, monitoring the growth of activities and revenues, but not assessing the net gains.”).

<b>Case No.</b>	1:09cv71	1:09cv178	0:09cv541
<b>Date Filed</b>	1/21/2009	1/28/2009	3/6/2009
<b>Court</b>	N.D. N.Y.	E.D. Cal.	D. Minn.
<b>Lead Plaintiff</b>	The Research Foundation of State University of New York	Biagro Western Sales, Inc.	Mayo Foundation for Medical Education and Research
<b>Co-Plaintiff(s)</b>		The Regents of the University of California	
<b>Defendant(s)</b>	Bruker Corp.; Bruker Biospin GmBh; Bruker Biospin Corp.; Varian, Inc.	Turfgrass Management, Inc. d/b/a Grigg Brothers; Baicor L.C.	Royal Philips Electronics Inc.
<b>Patents Alleged</b>	1	2	4
<b>License Type</b>	no allegation of practicing	exclusive	no allegation of practicing
<b>Seeks Damages?</b>	Yes	Yes	Yes
<b>Strategic Venue?</b>	No	No	No
<b>Jury Demand?</b>	Yes	Yes	Yes
<b>Outside Counsel</b>	Shore Chan Bragalone LLP	University of California, Office of the General Counsel	Fish & Richardson P.C.
<b>Specific Technology</b>	method of using g-matrix fourier transformation nuclear magnetic resonance spectroscopy for rapid chemical shift assignment and secondary structure	formulation of phosphorous fertilizer for plants	imaging methods and technology relating to the determination of the elasticity of tissue

<b>Case No.</b>	2:09cv290	1:09cv10396	1:09cv184
<b>Date Filed</b>	3/6/2009	3/13/2009	3/19/2009
<b>Court</b>	W.D. Pa.	D. Mass.	D. Del.
<b>Lead Plaintiff</b>	Carnegie Mellon University	AsymmetRx, Inc.	The Research Foundation of State University of New York
<b>Co-Plaintiff(s)</b>		President and Fellows of Harvard College	New York University; Galderma Laboratories Inc.; Galderma Laboratories, L.P.
<b>Defendant(s)</b>	Marvell Tech. Group, Ltd.; Marvell Semiconductor, Inc.	Dako Denmark A/S; Dako North America, Inc.	Mylan Pharmaceuticals Inc.
<b>Patents Alleged</b>	2	2	2
<b>License Type</b>	no allegation of practicing	exclusive	exclusive
<b>Seeks Damages?</b>	Yes	Yes	No
<b>Strategic Venue?</b>	No	No	No
<b>Jury Demand?</b>	Yes	Yes	No
<b>Outside Counsel</b>	K&L Gates LLP	Goodwin Procter LLP	Kirkland & Ellis LLP
<b>Specific Technology</b>	noise predictive detection for reach-channel integrated circuit devices	p63 antibodies and the use of them to diagnose prostate cancer	antibiotic commercially sold as Oracea used for treating acne, pneumonia, and other things

<b>Case No.</b>	1:09cv310	1:09cv215	3:09cv1587
<b>Date Filed</b>	3/30/2009	4/1/2009	4/2/2009
<b>Court</b>	D. N.M.	D. Del.	D. N.J.
<b>Lead Plaintiff</b>	The Science and Technology Corporation of the University of New Mexico	Abbott Laboratories	Abbott Laboratories
<b>Co-Plaintiff(s)</b>		Wisconsin Alumni Research Foundation	Wisconsin Alumni Research Foundation
<b>Defendant(s)</b>	Toshiba America Elecs. Components, Inc.; Toshiba Corp.	Sandoz, Inc.; Sandoz GmbH	Sandoz, Inc.; Sandoz GmbH
<b>Patents Alleged</b>	1	2	2
<b>License Type</b>	no allegation of practicing	exclusive	exclusive
<b>Seeks Damages?</b>	Yes	No	No
<b>Strategic Venue?</b>	No	Yes	No
<b>Jury Demand?</b>	Yes	No	No
<b>Outside Counsel</b>	Stadheim & Grear, Ltd.	Patterson Belknap Webb & Tyler LLP	Patterson Belknap Webb & Tyler LLP
<b>Specific Technology</b>	method and apparatus for extending spatial frequencies in photolithography images	vitamin D compounds used in treating hyperparathyroidism, sold commercially as Zemplar	vitamin D compounds used in treating hyperparathyroidism, sold commercially as Zemplar



<b>Case No.</b>	2:09cv302	4:09cv3075	1:09cv272
<b>Date Filed</b>	4/7/2009	4/20/2009	4/22/2009
<b>Court</b>	D. Utah	D. Neb.	D. Del.
<b>Lead Plaintiff</b>	Brigham Young University	Board of Regents of the University of Nebraska	Eli Lilly & Co.
<b>Co-Plaintiff(s)</b>	Torion Technologies, Inc.	UneMed Corp.	The Trustees of Princeton University
<b>Defendant(s)</b>	Hitachi High Technologies America, Inc.	Siemens Healthcare Diagnostics, Inc.	Barr Laboratories, Inc.
<b>Patents Alleged</b>	1	2	1
<b>License Type</b>	exclusive	exclusive	exclusive
<b>Seeks Damages?</b>	Yes	Yes	No
<b>Strategic Venue?</b>	No	No	No
<b>Jury Demand?</b>	Yes	Yes	No
<b>Outside Counsel</b>	Morriss O'Bryant Compagni, P.C.	Leydig, Voit & Mayer, Ltd.	Williams & Connolly LLP
<b>Specific Technology</b>	electron ionization source for othogonal acceleration time-of-flight mass spectrometry	method for automatic testing of laboratory specimens	glutamic acid derivatives used in treating mesothelioma or nonsquamous non-small cell lung cancer, sold commercially as Alimta

<b>Case No.</b>	1:09cv315	1:09cv312	1:09cv313
<b>Date Filed</b>	4/29/2009	4/29/2009	4/29/2009
<b>Court</b>	D. Del.	D. Del.	D. Del.
<b>Lead Plaintiff</b>	Pfizer Inc.	Pfizer Inc.	Pfizer Inc.
<b>Co-Plaintiff(s)</b>	Warner-Lambert Co. LLC; C.P. Pharmaceuticals Int'l C.V.; Northwestern University	Warner-Lambert Co. LLC; C.P. Pharmaceuticals Int'l C.V.; Northwestern University	Warner-Lambert Co. LLC; C.P. Pharmaceuticals Int'l C.V.; Northwestern University
<b>Defendant(s)</b>	Cobalt Laboratories, Inc.; Cobalt Pharmaceuticals, Inc.	Wockhardt Ltd.; Wockhardt USA, LLC	Sun Pharma Global Inc.; Sun Pharmaceutical Industries Ltd.; Sun Pharmaceutical Industries, Inc.
<b>Patents Alleged</b>	2	1	1
<b>License Type</b>	exclusive	exclusive	exclusive
<b>Seeks Damages?</b>	No	No	No
<b>Strategic Venue?</b>	No	No	No
<b>Jury Demand?</b>	No	No	No
<b>Outside Counsel</b>	Marshall, Gerstein & Borun LLP	Marshall, Gerstein & Borun LLP	Marshall, Gerstein & Borun LLP
<b>Specific Technology</b>	gamma amino butyric acid analogs and optical isomers, branded as Lyrica	gamma amino butyric acid analogs and optical isomers, branded as Lyrica	gamma amino butyric acid analogs and optical isomers, branded as Lyrica

<b>Case No.</b>	3:09cv2070	3:09cv2052	3:09cv2069
<b>Date Filed</b>	4/30/2009	4/30/2009	4/30/2009
<b>Court</b>	D. N.J.	D. N.J.	D. N.J.
<b>Lead Plaintiff</b>	Pfizer Inc.	Pfizer Inc.	Pfizer Inc.
<b>Co-Plaintiff(s)</b>	Warner-Lambert Co. LLC; C.P. Pharmaceuticals Int'l C.V.; Northwestern University	Warner-Lambert Co. LLC; C.P. Pharmaceuticals Int'l C.V.; Northwestern University	Warner-Lambert Co. LLC; C.P. Pharmaceuticals Int'l C.V.; Northwestern University
<b>Defendant(s)</b>	Sun Pharma Global Inc.; Sun Pharmaceutical Industries Ltd.; Sun Pharmaceutical Industries, Inc.	Sandoz Inc.	Wockhardt Ltd.; Wockhardt USA, LLC
<b>Patents Alleged</b>	1	2	1
<b>License Type</b>	exclusive	exclusive	exclusive
<b>Seeks Damages?</b>	No	No	No
<b>Strategic Venue?</b>	No	No	No
<b>Jury Demand?</b>	No	No	No
<b>Outside Counsel</b>	Marshall, Gerstein & Borun LLP	Marshall, Gerstein & Borun LLP	Marshall, Gerstein & Borun LLP
<b>Specific Technology</b>	gamma amino butyric acid analogs and optical isomers, branded as Lyrica	gamma amino butyric acid analogs and optical isomers, branded as Lyrica	gamma amino butyric acid analogs and optical isomers, branded as Lyrica

<b>Case No.</b>	3:09cv266	1:09cv10832	3:09cv99
<b>Date Filed</b>	4/30/2009	5/19/2009	6/22/2009
<b>Court</b>	W.D. Wisc.	D. Mass.	S.D. Iowa
<b>Lead Plaintiff</b>	Sirona Dental Systems, Inc.	E8 Pharmaceuticals LLC	The University of Iowa
<b>Co-Plaintiff(s)</b>	California Institute of Technology	Massachusetts Institute of Technology	University of Iowa Research Foundation
<b>Defendant(s)</b>	Palodex Group Oy; Instrumentarium Dental, Inc.	Navigenics, Inc.	The Abbott Laboratories; Abbott Biosearch Center, Inc.; Abbott Biotechnology Ltd.
<b>Patents Alleged</b>	4	1	2
<b>License Type</b>	exclusive	exclusive	non-exclusive
<b>Seeks Damages?</b>	Yes	Yes	Yes
<b>Strategic Venue?</b>	No	No	No
<b>Jury Demand?</b>	Yes	Yes	Yes
<b>Outside Counsel</b>	Shore Chan Bragalone LLP	Wiley Rein LLP	Ballard Spahr Andrews & Ingersoll, LLP
<b>Specific Technology</b>	digital intraoral sensor using complementary metal oxide semiconductor	method for performing genetic analysis using a small sample of DNA and a small number of reactants	CMV promoter, used to promote the expression of genes and production of proteins for production of protein-based drugs

<b>Case No.</b>	1:09cv483	3:09cv694	5:09cv624
<b>Date Filed</b>	7/2/2009	7/23/2009	8/3/2009
<b>Court</b>	D. Del.	M.D. Ala.	W.D. Tex.
<b>Lead Plaintiff</b>	The Research Foundation of State University of New York	Auburn University	Board of Regents of the University of Texas System
<b>Co-Plaintiff(s)</b>	New York University; Galderma Laboratories Inc.; Galderma Laboratories, L.P.		Radworks Corp.
<b>Defendant(s)</b>	Lupin Ltd.; Lupin Pharms., Inc.	International Business Machines, Corp.	Sirona Dental Systems, Inc.; John Does 1 - 10
<b>Patents Alleged</b>	2	2	1
<b>License Type</b>	exclusive	no allegation of practicing	exclusive
<b>Seeks Damages?</b>	No	Yes	Yes
<b>Strategic Venue?</b>	No	No	No
<b>Jury Demand?</b>	No	Yes	Yes
<b>Outside Counsel</b>	Kirkland & Ellis LLP	Fish & Richardson P.C.	Gunn, Lee & Cave, P.C.
<b>Specific Technology</b>	antibiotic commercially sold as Oracea used for treating acne, pneumonia, and other things	methods for estimating reliability of integrated circuits	radiograph display system for selecting digitized stored images

<b>Case No.</b>	7:09cv7114	2:09cv3947
<b>Date Filed</b>	8/12/2009	8/28/2009
<b>Court</b>	S.D. N.Y.	E.D. Pa.
<b>Lead Plaintiff</b>	LG Electronics, Inc. *	BioTechnology, LLC
<b>Co-Plaintiff(s)</b>	Mitsubishi Electric Corp.; Samsung Electronics Co., Ltd.; The Trustees of Columbia University in the City of New York; U.S. Philips Corp.; Koninklijke Philips Electronics, N.V.	Drexel University (involuntary plaintiff)
<b>Defendant(s)</b>	Haier America Trading, LLC; Haier Group Co.; HAIM LLC	CIBA Vision Corp.
<b>Patents Alleged</b>	2	4
<b>License Type</b>	no allegation of practicing	no allegation of practicing
<b>Seeks Damages?</b>	Yes	Yes
<b>Strategic Venue?</b>	No	No
<b>Jury Demand?</b>	Yes	Yes
<b>Outside Counsel</b>	Sullivan & Cromwell LLP	Shore Chan Bragalone LLP
<b>Specific Technology</b>	world-wide video compression standard known as MPEG-2	methods of making biocompatible surface modified materials

\* This action has other co-plaintiffs; only the co-plaintiffs who join The Trustees of Columbia University in the City of New York in its causes of action have been listed; the lead plaintiff is otherwise British Telecommunications PLC.

<b>Case No.</b>	1:09cv7828	1:09cv703	1:09cv5345
<b>Date Filed</b>	9/11/2009	9/18/2009	10/19/2009
<b>Court</b>	S.D. N.Y.	D. Del.	D. N.J.
<b>Lead Plaintiff</b>	Shotspotter, Inc.	The Research Foundation of State University of New York	Bayer Healthcare LLC
<b>Co-Plaintiff(s)</b>	The Johns Hopkins University	New York University; Galderma Laboratories Inc.; Galderma Laboratories, L.P.	New Ace Research Co.; University of Kentucky Research Foundation
<b>Defendant(s)</b>	Safety Dynamics, Inc.	Impax Laboratories, Inc.	Wedgewood Village Pharmacy, Inc.
<b>Patents Alleged</b>	2	2	1
<b>License Type</b>	exclusive	exclusive	exclusive
<b>Seeks Damages?</b>	Yes	No	Yes
<b>Strategic Venue?</b>	Yes	No	No
<b>Jury Demand?</b>	Yes	No	No
<b>Outside Counsel</b>	Satterlee Stephens Burke & Burke LLP	Kirkland & Ellis LLP	Woodcock Washburn LLP
<b>Specific Technology</b>	gun shot digital imaging used in law enforcement	antibiotic commercially sold as Oracea used for treating acne, pneumonia, and other things	use of triazine-based anti-coccidials to treat or prevent Equine Protozoan Myelencephalitis in horses

<b>Case No.</b>	1:09cv6957	1:09cv884	4:09cv114
<b>Date Filed</b>	11/5/2009	11/19/2009	11/25/2009
<b>Court</b>	N.D. Ill.	D. Del.	E.D. Tex.
<b>Lead Plaintiff</b>	Armin Rudd d/b/a ABT Systems, LLC	Abbott Laboratories	Rutgers, the State University of New Jersey
<b>Co-Plaintiff(s)</b>	The University of Central Florida Board of Trustees on behalf of the University of Central Florida	Wisconsin Alumni Research Foundation	
<b>Defendant(s)</b>	Lux Products Corp.; Emerson Climate Techs.; Braeburn Systems, LLC; Lennox Int'l Inc.	Teva Parenteral Medicines, Inc.; Teva Pharmaceuticals USA, Inc.; Teva Pharmaceutical Industries Ltd.	A&A Nursery; Maple Bend Nursery; Bob Young's Nursery
<b>Patents Alleged</b>	3	3	1
<b>License Type</b>	exclusive	exclusive	no allegation of practicing
<b>Seeks Damages?</b>	Yes	No	Yes
<b>Strategic Venue?</b>	No	No	No
<b>Jury Demand?</b>	Yes	No	Yes
<b>Outside Counsel</b>	Michael Mazza, LLC	Finnegan Henderson	Stadheim & Gear, Ltd.
<b>Specific Technology</b>	thermostats that utilize a fan recycling control	vitamin D compounds used in treating hyperparathyroidism & sold commercially as Zemplar	dogwood tree - stellar pink



<b>Case No.</b>	1:09cv916	5:10cv54	5:10cv55
<b>Date Filed</b>	12/2/2009	1/22/2010	1/22/2010
<b>Court</b>	D. Del.	W.D. Tex.	W.D. Tex.
<b>Lead Plaintiff</b>	Konarka Technologies, Inc.	Board of Regents of the University of Texas System	Board of Regents of the University of Texas System
<b>Co-Plaintiff(s)</b>	Dupont Displays, Inc.; The Regents of the University of California	Radworks Corp.	Radworks Corp.
<b>Defendant(s)</b>	Plextronincs, Inc.	Camsight Co., Inc.; John Does 1 - 10	MacPractice, Inc.; MacPractice, LLC
<b>Patents Alleged</b>	1	1	1
<b>License Type</b>	exclusive	exclusive	exclusive
<b>Seeks Damages?</b>	Yes	Yes	Yes
<b>Strategic Venue?</b>	No	No	No
<b>Jury Demand?</b>	Yes	Yes	Yes
<b>Outside Counsel</b>	Fish & Richardson P.C.	Gunn, Lee & Cave, P.C.	Gunn, Lee & Cave, P.C.
<b>Specific Technology</b>	conjugated polymer-acceptor heterojunctions; diodes, photodiodes, and photovoltaic cells	radiograph display system for selecting digitized stored images	radiograph display system for selecting digitized stored images

<b>Case No.</b>	1:10cv84	1:10cv94	1:10cv1798
<b>Date Filed</b>	2/2/2010	2/4/2010	3/5/2010
<b>Court</b>	D. Del.	D. N.M.	S.D. N.Y.
<b>Lead Plaintiff</b>	Carl Zeiss Meditec, Inc.	STC.UNM f/k/a Science & Technology Corp. @ UNM	Gilead Sciences, Inc.
<b>Co-Plaintiff(s)</b>	University of Miami		Emory University
<b>Defendant(s)</b>	Optovue, Inc.	Environmental Robots, Inc.	Teva Pharmaceuticals USA, Inc.; Teva Pharmaceutical Industries Ltd.
<b>Patents Alleged</b>	2	1	2
<b>License Type</b>	exclusive	non-exclusive	exclusive
<b>Seeks Damages?</b>	Yes	Yes	No
<b>Strategic Venue?</b>	No	No	Yes
<b>Jury Demand?</b>	Yes	Yes	No
<b>Outside Counsel</b>	Fish & Richardson P.C.	Stadheim & Grear, Ltd.	Fitzpatrick, Cella, Harper & Scinto
<b>Specific Technology</b>	optical coherence tomography for anatomical mapping used in ophthalmic diagnostic technologies	soft actuators and artificial muscles	HIV-1 drug

<b>Case No.</b>	1:10cv204	1:10cv288
<b>Date Filed</b>	3/12/2010	4/9/2010
<b>Court</b>	D. Del.	D. Del.
<b>Lead Plaintiff</b>	Pfizer Inc.	Sirona Dental Systems, Inc.
<b>Co-Plaintiff(s)</b>	Warner-Lambert Co. LLC; C.P. Pharmaceuticals Int'l C.V.; Northwestern University	California Institute of Technology
<b>Defendant(s)</b>	Alphapharm Pty. Ltd.; Mylan Pharms., Inc.	Cefla S.C.; Cefla Capital Services, S.p.A.; Cefla Dental Group America, Inc.; Danaher Corp.; DEXIS LLC; Planmeca Oy; PLANMECA U.S.A. Inc.
<b>Patents Alleged</b>	1	4
<b>License Type</b>	exclusive	exclusive
<b>Seeks Damages?</b>	No	Yes
<b>Strategic Venue?</b>	No	No
<b>Jury Demand?</b>	No	Yes
<b>Outside Counsel</b>	Marshall, Gerstein & Borun LLP	Fitzpatrick, Cella, Harper & Scinto
<b>Specific Technology</b>	gamma amino butyric acid analogs and optical isomers, branded as Lyrica	camera devices with image sensors used in dental radiography

<b>Case No.</b>	3:10cv2079	1:10cv433	2:10cv1050
<b>Date Filed</b>	5/17/2010	5/24/2010	6/24/2010
<b>Court</b>	N.D. Cal.	D. Del.	W.D. Wa.
<b>Lead Plaintiff</b>	Caliper Life Sciences, Inc.	Cornell University	Washington Research Foundation
<b>Co-Plaintiff(s)</b>	Xenogen Corp.; Board of Trustees of the Leland Stanford Junior University	Cornell Research Foundation, Inc.; Life Technologies Corp.; Applied Biosystems, LLC	
<b>Defendant(s)</b>	Carestream Health, Inc.	Illumina, Inc.	Silicon Laboratories Inc.
<b>Patents Alleged</b>	7	8	2
<b>License Type</b>	exclusive	exclusive	exclusive
<b>Seeks Damages?</b>	Yes	Yes	Yes
<b>Strategic Venue?</b>	Yes	No	No
<b>Jury Demand?</b>	Yes	Yes	Yes
<b>Outside Counsel</b>	Howrey LLP	Parsons Behle & Latimer	Blank Law & Technology P.S.
<b>Specific Technology</b>	non-invasive in vivo optical imaging useful in identifying diseases at early stages	polymerase chain reaction methods used in genetic analysis	low intermediate frequency radio frequency receiver technology (Bluetooth)

<b>Case No.</b>	1:10cv11176	1:10cv681	3:10cv4837
<b>Date Filed</b>	7/14/2010	9/8/2010	9/20/2010
<b>Court</b>	D. Mass.	M.D. N.C.	D. N.J.
<b>Lead Plaintiff</b>	Metabolix, Inc.	Allergan, Inc.	Schering-Plough Healthcare Products, Inc.
<b>Co-Plaintiff(s)</b>	University of Massachusetts	Duke University	Santarus, Inc.; The Curators of the University of Missouri
<b>Defendant(s)</b>	International Paper Co.	Apotex Inc.; Apotex Corp.	Par Pharmaceutical, Inc.
<b>Patents Alleged</b>	1	3	4
<b>License Type</b>	exclusive	exclusive	exclusive
<b>Seeks Damages?</b>	Yes	No	No
<b>Strategic Venue?</b>	No	No	No
<b>Jury Demand?</b>	Yes	Yes	No
<b>Outside Counsel</b>	Fish & Richardson P.C. acting as special ass't AG	Gibson Dunn & Crutcher	Quinn Emanuel Urquhart & Sullivan, LLP
<b>Specific Technology</b>	polyactic acid-based blends	hypotrichosis treatment (eyelash regrowth), sold commercially as Latisse	substituted benzimidazole dosage forms, sold commercially as Zegerid OTC

<b>Case No.</b>	3:33av1	1:10cv853	3:10cv2127
<b>Date Filed</b>	9/20/2010	10/6/2010	10/12/2010
<b>Court</b>	D. N.J.	D. Del.	S.D. Cal.
<b>Lead Plaintiff</b>	Schering-Plough Healthcare Products, Inc.	Pfizer Inc.	Life Technologies Corp.
<b>Co-Plaintiff(s)</b>	Santarus, Inc.; The Curators of the University of Missouri	Warner-Lambert Co. LLC; C.P. Pharmaceuticals Int'l C.V.; Northwestern University	Molecular Probes, Inc.; The Regents of the University of California
<b>Defendant(s)</b>	Perrigo Co.; Perrigo Research and Development Co.	Lupin Ltd.; Lupin Pharmaceuticals, Inc.	Ebioscience Inc.
<b>Patents Alleged</b>	4	2	3
<b>License Type</b>	exclusive	exclusive	exclusive
<b>Seeks Damages?</b>	No	No	Yes
<b>Strategic Venue?</b>	No	No	No
<b>Jury Demand?</b>	No	No	Yes
<b>Outside Counsel</b>	Quinn Emanuel Urquhart & Sullivan, LLP	Marshall, Gerstein & Borun LLP	Parsons Behle & Latimer
<b>Specific Technology</b>	substituted benzimidazole dosage forms, sold commercially as Zegerid OTC	gamma amino butyric acid analogs and optical isomers, branded as Lyrica	organo luminescent semiconductor nanocrystal probes for biological applications and process for making and using such probes

<b>Case No.</b>	1:10cv912	1:10cv11921	2:10cv5956
<b>Date Filed</b>	10/25/2010	11/9/2010	11/15/2010
<b>Court</b>	D. Del.	D. Mass.	D. N.J.
<b>Lead Plaintiff</b>	Abbott Laboratories	Akamai Technologies, Inc.	United States of America
<b>Co-Plaintiff(s)</b>	Wisconsin Alumni Research Foundation	Massachusetts Institute of Technology	Board of Trustees of the University of Illinois
<b>Defendant(s)</b>	Anchen Pharmaceuticals, Inc.; Anchen Inc.	Cotendo, Inc.	Mylan Pharmaceuticals Inc.; Lupin Pharmaceuticals, Inc.; Lupin Ltd.
<b>Patents Alleged</b>	1	1	1
<b>License Type</b>	exclusive	exclusive	non-exclusive
<b>Seeks Damages?</b>	No	Yes	No
<b>Strategic Venue?</b>	No	No	Yes
<b>Jury Demand?</b>	No	Yes	No
<b>Outside Counsel</b>	Finnegan, Henderson, Farabow, Garrett & Dunner, LLP	Choate, Hall & Stewart	Jones Day
<b>Specific Technology</b>	vitamin D compounds used in treating hyperparathyroidism, sold commercially as Zemplar	content delivery services over the Internet	darunavir ethanolate tablets, sold commercially as Prezista

<b>Case No.</b>	1:10cv1077	1:10cv998
<b>Date Filed</b>	11/15/2010	11/19/2010
<b>Court</b>	D. N.M.	D. Del.
<b>Lead Plaintiff</b>	STC.UNM	Abbott Laboratories
<b>Co-Plaintiff(s)</b>		Wisconsin Alumni Research Foundation
<b>Defendant(s)</b>	Intel Corp.	Roxane Laboratories, Inc.
<b>Patents Alleged</b>	1	1
<b>License Type</b>	no allegation of practicing	exclusive
<b>Seeks Damages?</b>	Yes	No
<b>Strategic Venue?</b>	No	Yes
<b>Jury Demand?</b>	No	No
<b>Outside Counsel</b>	Stadheim & Grear, Ltd.	Finnegan, Henderson, Farabow, Garrett & Dunner, LLP
<b>Specific Technology</b>	method and apparatus for extending spatial frequencies in photolithography images	vitamin D compounds used in treating hyperparathyroidis, sold commercially as Zemplar



<b>Case No.</b>	2:10cv9099
<b>Date Filed</b>	11/24/2010
<b>Court</b>	C.D. Cal.
<b>Lead Plaintiff</b>	California Institute of Technology
<b>Co-Plaintiff(s)</b>	
<b>Defendant(s)</b>	STMicroelectronics NV; STMicroelectronics, Inc.; SETi Co., Ltd.; Siliconfile Technologies, Inc.; Toshiba Corp.; Toshiba America Electronic Components, Inc.; LG Electronics, Inc.; LG Electronics Mobilecomm U.S.A., Inc.; LG Electronics U.S.A., Inc.; Nokia Corp.; Nokia, Inc.; Pantech Co., Ltd.; Pantech Wireless, Inc.
<b>Patents Alleged</b>	9
<b>License Type</b>	no allegation of practicing
<b>Seeks Damages?</b>	Yes
<b>Strategic Venue?</b>	No
<b>Jury Demand?</b>	Yes
<b>Outside Counsel</b>	Shore Chan Bragalone LLP
<b>Specific Technology</b>	CMOS active pixel sensor technology

<b>Case No.</b>	2:10cv1933	1:10cv12225
<b>Date Filed</b>	11/30/2010	12/23/2010
<b>Court</b>	W.D. Wa.	D. Mass.
<b>Lead Plaintiff</b>	University of Washington	Massachusetts Institute of Technology
<b>Co-Plaintiff(s)</b>		
<b>Defendant(s)</b>	The General Electric Co.; GE Healthcare, Inc.	Still River Systems, Inc.
<b>Patents Alleged</b>	1	3
<b>License Type</b>	no allegation of practicing	exclusive
<b>Seeks Damages?</b>	Yes	Yes
<b>Strategic Venue?</b>	No	No
<b>Jury Demand?</b>	Yes	Yes
<b>Outside Counsel</b>	Perkins Coie LLP	Proskauer Rose LLP
<b>Specific Technology</b>	apparatus and method for interactive 3D registration of ultrasound and magnetic resonance images based on a magnetic position sensor	magnet structure for particle acceleration and high-field superconducting synchrocyclotron