

In The  
**Supreme Court of the United States**

---

---

FESTO CORPORATION,

*Petitioner,*

v.

SHOKETSU KINZOKU KOGYO  
KABUSHIKI CO., LTD., A/K/A SMC CORPORATION  
AND SMC PNEUMATICS, INC.,

*Respondents.*

---

---

**On Petition For Writ Of Certiorari  
To The United States Court Of Appeals  
For The Federal Circuit**

---

---

**BRIEF OF *AMICI CURIAE* WISCONSIN ALUMNI  
RESEARCH FOUNDATION, RESEARCH  
CORPORATION TECHNOLOGIES, INC., THE  
REGENTS OF THE UNIVERSITY OF CALIFORNIA,  
MASSACHUSETTS INSTITUTE OF TECHNOLOGY,  
REGENTS OF THE UNIVERSITY OF MINNESOTA,  
AND EMORY UNIVERSITY IN SUPPORT OF  
PETITION FOR WRIT OF CERTIORARI**

---

---

MARTIN R. LUECK  
(*Counsel of Record*)  
ANNE M. LOCKNER  
ROBINS, KAPLAN, MILLER  
& CIRESI L.L.P.  
2800 Lasalle Plaza  
800 Lasalle Avenue  
Minneapolis, MN 55402-2015  
(612) 349-8500

March 20, 2008

## TABLE OF CONTENTS

	Page
TABLE OF AUTHORITIES .....	ii
INTEREST OF THE <i>AMICI CURIAE</i> .....	1
SUMMARY OF ARGUMENT .....	10
ARGUMENT.....	12
I. The Federal Circuit’s Decision Undermines the Bayh-Dole Act and Threatens Invest- ment in New Research and Technology .....	12
II. <i>Festo XIII</i> Runs Afoul of the Purposes and the Well-Established Law of the Doctrine of Equivalents .....	18
A. The doctrine of equivalents was created to protect inventors from the inherent limitations of language and is designed to be flexible .....	18
B. The <i>Festo XIII</i> decision directly defies this Court’s precedent .....	22
III. The Unwarranted Circumscription of the Doctrine of Equivalents Frustrates the Constitutional Objective of the Intellectual Property Clause and Invades the Province of Congress .....	25
CONCLUSION .....	27

## TABLE OF AUTHORITIES

Page

## CASES

<i>Bayer Aktiengesellschaft v. Duphar Int'l Research B.V.</i> , 738 F.2d 1237 (Fed. Cir. 1984) .....	19
<i>Festo Corp. v. SMC</i> , 234 F.3d 558 (Fed. Cir. 2000) ( <i>Festo VI</i> ) .....	<i>passim</i>
<i>Festo Corp. v. SMC</i> , 535 U.S. 722 (2002) ( <i>Festo VIII</i> ) .....	<i>passim</i>
<i>Festo Corp. v. SMC</i> , 493 F.3d 1368 (Fed. Cir. 2007) ( <i>Festo XIII</i> ) .....	<i>passim</i>
<i>Graver Tank &amp; Mfg. Co. v. Linde Air Prods. Co.</i> , 339 U.S. 605 (1950).....	13, 19, 23
<i>Loctite Corp. v. Ultraseal Ltd.</i> , 781 F.2d 861 (Fed. Cir. 1985), <i>overruled on other grounds</i> by <i>Nobelpharma Ab v. Implant Innovations</i> , 141 F.3d 1059 (Fed. Cir. 1998) .....	20
<i>Morley Sewing Mach. Co. v. Lancaster</i> , 129 U.S. 263 (1887).....	18
<i>Warner-Jenkinson Co. v. Hilton Davis Chem. Co.</i> , 520 U.S. 17 (1997).....	19, 20, 22, 23, 26
<i>Westinghouse v. Boyden Power Brake Co.</i> , 170 U.S. 537 (1898).....	21
<i>Winans v. Denmead</i> , 56 U.S. 330 (1854).....	13, 18
CONSTITUTION	
U.S. Const. art. I, § 8, cl. 8 .....	25

## TABLE OF AUTHORITIES – Continued

Page

## STATUTES

35 U.S.C. § 200 .....	14
35 U.S.C. §§ 200-212 .....	<i>passim</i>

## REGULATIONS

37 C.F.R. § 401.....	2
----------------------	---

## OTHER AUTHORITIES

AUTM U.S. Licensing Survey, FY 2006 .....	14, 15
Howard W. Bremer, <i>University Technology Transfer Evolution and Revolution</i> .....	14, 15, 16
Jay I. Alexander, <i>Cabining the Doctrine of Equivalents in Festo: A Historical Perspective on the Relationship Between the Doctrine of Equivalents and Prosecution History Estoppel</i> , 51 Am. U. L. Rev. 553 (2002).....	24
National Science Foundation, <i>Science and Engineering Indicators 2008</i> .....	2
<i>The Bayh-Dole Act: A Guide to The Law and Implementing Regulations</i> , Council on Gov- ernment Relations (1999) .....	14, 15

**INTEREST OF THE *AMICI CURIAE*<sup>1</sup>**

*Amici* are major universities and an independent technology management company that own thousands of patents and invest billions of dollars annually in research and development that produces significant technological advances. The increasing number of patents that result from these advances benefit the American and international public by bringing improved health and living conditions to the global community. Furthermore, the patents provide a vital source of income for academic institutions to continue their discovery and innovation.

The academic sector drives research and creation in this country. According to the latest National Science Foundation figures, in 2006 academic institutions spent \$48 billion on research and development of which 56% was spent on basic research – the lifeblood of technological advancement. The federal government provided 63% of the funds for academic research and development expenditures in 2006,

---

<sup>1</sup> The parties have consented to the filing of this brief. Counsel of record for all parties received notice at least ten days prior to the due date of the *Amici*'s intention to file this brief. No counsel for a party authored this brief in whole or in part, and no counsel or party made a monetary contribution intended to fund the preparation or submission of this brief. No person other than *Amici*, their members, or their counsel made a monetary contribution to its preparation or submission.

while the institutions themselves contributed 19% of the funding. Industry supplied 5% of such funds.<sup>2</sup>

Innovation, defined from the university perspective as the translation of basic-research results to products or processes in the marketplace, is facilitated and was dramatically improved by the Patent and Trademark Law Amendments of 1980, 35 U.S.C. §§ 200-212, commonly known as the Bayh-Dole Act, and its implementing regulations, 37 C.F.R. § 401. Congress passed this landmark legislation in 1980 to spur research in the academic sector and promote university-industry collaborations that ensure that the fruits of university research reach and benefit the public. Without this Act and the protections of U.S. patent law, much of the academic sector's research and development would languish because private companies would be reluctant to invest in the development of products, fearing that others would free-ride and receive the benefits of the invention without having to invest in the development effort. Technology transfers<sup>3</sup> of *Amici* have flourished under Bayh-Dole.

*Amicus* Wisconsin Alumni Research Foundation (WARF) was established as a non-profit entity to promote, encourage, and aid scientific investigation

---

<sup>2</sup> For the figures in this paragraph, see National Science Foundation, *Science and Engineering Indicators 2008*, available at <http://www.nsf.gov/statistics/seind08/c5/c5h.htm>.

<sup>3</sup> *Amici* use the term "technology transfer" herein to refer to the transfer of research results and new technology from universities to the commercial marketplace.

and research at the University of Wisconsin-Madison. To achieve this goal, its primary activities include promoting innovation, managing patents, and funding research. Founded in 1925, among its first actions was to patent Professor Harry Steenbock's breakthrough discoveries in vitamin D. In 1927, WARF granted its first license on vitamin D technology, which technology ultimately led to the worldwide elimination of rickets by the 1940s. Today, among WARF's most important achievements benefiting the public are: the blood anticoagulant Warfarin; a coating process for pharmaceutical tablets or other particulate material; various vitamin D derivatives offering treatments for osteoporosis, cancer, and many other disease states; magnetic resonance techniques; and a discovery known as the "Wisconsin solution" that prolongs the applicable viability of organs for transplantation. Since its founding, WARF has processed approximately 5,600 inventions created by UW-Madison faculty and staff, obtained over 1,800 U.S. patents, entered into more than 1,500 license agreements with the private sector, and has given almost \$1 billion to UW-Madison to fund research programs and educational initiatives. It has always been WARF's goal to administer all inventions for which it accepts the responsibility to manage with a commitment to continuing research, public education, and vigilance in protecting the public interest by promoting development activities, enforcing quality control, and preventing the unscrupulous exploitation of technologies. In recognition of its activities and, in particular because of its contributions leading to the

passage of the Bayh-Dole Act in 1980, WARF was awarded the 2003 National Medal of Technology.

The Bayh-Dole Act has made it possible for WARF, other *Amici*, and the university sector in general to make the contributions to the public good that they continue to do today. In the middle to late 1960s, government agencies kept title to inventions that had been funded with federal money. As a consequence, there was little technology transfer and, as an example, invention disclosures to WARF – documents prepared by the inventors for patent counsel to use in preparing patent applications – had fallen to barely one per month and what few disclosures there were had fallen in quality. The situation improved somewhat when Institutional Patent Agreements (IPAs) were obtained with (what is now) the Department of Health and Human Services in 1968 and the National Science Foundation in 1973 after prolonged negotiation. These IPAs gave WARF (and other universities) the right to elect to take title to inventions made with funds from those two agencies.<sup>4</sup>

Since the enactment of Bayh-Dole, invention disclosures to WARF, other *Amici*, and within the university and non-profit sector have ballooned. Today, WARF (a) manages over 720 pending and 880 issued U.S. patents on UW-Madison technologies, as well as 1,920 foreign equivalents; (b) offers more than

---

<sup>4</sup> The IPAs were evolutionary steps that led to the Bayh-Dole Act, which largely codified IPA provisions.

3,800 technologies for licensing; (c) maintains more than 940 active commercial license agreements, as well as 460 academic licenses; (d) has over 160 license agreements with Wisconsin companies; and (e) holds equity in 40 UW-Madison spin-off companies.

*Amicus* Research Corporation Technologies, Inc. (RCT) is an independent technology management company that has been involved in providing commercialization services to academia and other institutions since its founding in 1912. It has been pivotal to the success of many important pharmaceuticals, diagnostics, biotechnology products, and new materials and processes. Recent products include three in the cancer area: the widely used therapeutic compounds cisplatin and carboplatin, and the PSA (Prostate Specific Antigen) test for diagnosing and monitoring prostate cancer.

*Amicus* Massachusetts Institute of Technology (“MIT”) is a private, non-profit university with its main campus in Cambridge, Massachusetts. MIT also maintains a research facility, Lincoln Laboratory, in Lexington, Massachusetts, which has pioneered advanced electronics since its origin in 1951. MIT-Lincoln Laboratory has a long history of technology-transfer applications in the defense and civilian sectors. It has produced nearly 500 patents and given birth to over 800 high-technology companies, which today are at the forefront of such diverse industries as multi-media software services, advance semiconductor lithography, and medical services. For

example, neurotechnology, based on military-target-recognition techniques, is now used to detect abnormal pre-cancerous cells in Pap smears. Another neural-network application uses image-classification techniques to conduct risk assessment for bypass surgery in cardiovascular-disease patients. In the area of binary optics, MIT-Lincoln Laboratory has licensed the design and manufacture of molds for implantable binary lenses and adaptive nulling for processing radar systems used in the support of hypothermic treatment of tumors. Other radar technologies soon will be applied in FDA-approved Phase II clinical trials for the treatment of breast cancer. One of the newest research and industry partnerships initiated at MIT includes the Center for Biomedical Engineering (CBE). The mission of CBE is to combine engineering with molecular and cellular biology to develop new approaches to biotechnology and foster research in this rapidly growing discipline. CBE has 45 faculty members from the Departments at MIT's Schools of Engineering and Science, the Whitehead Institute, Harvard and Boston University Medical Schools, and the Harvard-MIT Division of Health Sciences and Technology. Among the research accomplishments this year include new developments in neural tissue engineering used to encapsulate cells such as neurons and chondrocytes.

*Amicus* The Regents of the University of California provides for technology transfer from ten campuses and five medical schools in the State, and three national laboratories operated by the University

system on behalf of the U.S. Department of Energy. Currently, there are more than 12,000 research awards at the University of California and each such award has at least one principal investigator. These efforts have led to multiple Nobel laureates in a long list of pioneering research discoveries in biochemistry, bioengineering, cell biology, disease procedures, developmental biology, endocrinology, genetics, immunology, neurobiology, oral biology, pharmacy, and pharmacology. Examples of specific discoveries include: the Cohen Boyer process for gene splicing (a co-invention of Stanford University and the University of California San Francisco (UCSF)); the Hepatitis B vaccine (UCSF); a human-growth hormone, and a method to treat aneurysms by use of a catheter instead of opening the skull (UCLA). UCSF also has contributed to cochlear implants to help the hearing impaired. UC Davis has contributed to a method detecting feline immune deficiency virus. Lawrence Livermore National Laboratory has contributed to a method for detecting chromosome abnormalities, now successfully commercialized through FDA approvals to a company dedicated to the technology. UC Irvine has contributed to a laser system to enhance treatment of skin conditions. UC Riverside has contributed to a new phosphorus fertilizer. UC Berkeley and UC San Diego have contributed to fluorescence detection systems used in manipulation of cells. UC Santa Barbara has contributed to a new atomic force microscope.

*Amicus* Regents of the University of Minnesota (“University of Minnesota”) is a national leader in the commercialization of intellectual property created by its faculty, researchers, and students. In 2006, according to figures compiled by the Association of University Technology Managers, the University of Minnesota ranked in the top ten in monies earned from licensing its intellectual property rights. For example, the University of Minnesota has been at the forefront of the development of effective AIDS treatment. University of Minnesota researcher Dr. Robert Vince, a member of the faculty in the University’s College of Pharmacy, created new and effective antiviral compounds called carbovir, with remarkable activity against HIV-viral infection. That treatment has been licensed to a well-funded pharmaceutical company and is a key therapy in the treatment of HIV world-wide. Minnesota was recognized nationally for its development and commercialization of the Assurance Pharmaceutical Care System, a software application to assist pharmacists in creating care plans for each patient. University of Minnesota horticulturists created, and the University commercially promoted, weather-hardy fruit and other plant varieties, including the acclaimed Honeycrisp apple.

The University of Minnesota has also partnered with the private sector in novel ways to bring its discoveries to the market. To commercialize a new technology for the diagnosis of neurological disease, the University formed a for-profit corporation. It has also entered into a joint venture with an American

steel producer to commercialize a new method for processing iron ore for steel production. In addition, the University of Minnesota is in the process of licensing or has licensed its patents and copyrights to various small Minnesota-based companies to create and sell products that diagnose or treat post-trauma patients during the so-called “golden-hour,” to isolate compounds from birch bark with intriguing and commercially relevant biological activities, along with technologies that will support the implementation of the next generation of magnetic-resonance-imaging machines.

*Amicus* Emory University (Emory) is one of the nation’s leading private research universities and a member of the Association of American Universities. Known for its demanding academics, outstanding undergraduate college of arts and sciences, highly-ranked professional schools, and state-of-the-art research facilities, Emory is ranked as one of the country’s top 20 national universities by *U.S. News & World Report*. In addition to its nine schools, the university encompasses The Carter Center, Yerkes National Primate Research Center, and Emory Healthcare, Georgia’s largest and most comprehensive health-care system. Emory’s technology-transfer success, in the life-sciences area alone, includes eight licensed products with market approval for the treatment of HIV and an additional nine potential therapeutics in various stages of clinical development by its licensees.

In order to attract investment from and contractual relationships with industry, universities rely heavily on the protections of the United States' patent system. It is those protections that encourage the licensing arrangements that enable universities to have the results of their research developed by the private sector into products for the marketplace, thus allowing the public to directly benefit from federally-supported and other research efforts. Further, technology transfer has led to the creation of thousands of new companies and jobs, thus stimulating and contributing to the national economy.

*Amici* submit this brief to provide the Court with an academic-sector and technology-development perspective on the likely effect of the Federal Circuit's ruling if it is not corrected: a devastating blow to the ability of this country's research institutions to continue to fund vital exploration and innovation, to the detriment of society at large. This brief focuses on the crucial role of a viable doctrine of equivalents in the past and future of American scientific and technological advancement.



## **SUMMARY OF ARGUMENT**

As detailed in Festo Corporation's Petition for Writ of Certiorari, the Federal Circuit's ruling in *Festo Corp. v. SMC*, 493 F.3d 1368 (Fed. Cir. 2007) ("*Festo XIII*"), contradicts the established law of the doctrine of equivalents by effectively eliminating the

unforeseeability exception to prosecution-history estoppel. As such, this decision weakens U.S. patent protection, which in turn jeopardizes the invaluable system of technology transfer that has evolved primarily from the funding of research by the federal government and the innovation process at the university-industry interface developed by *Amici* and similar institutions.

Having previously and definitively ruled that a patentee who amends a patent claim is barred only from asserting equivalents that were foreseeable at the time of amendment, the Court should reverse the Federal Circuit's undue constriction of this precedent. The decision of that court that technological equivalency is irrelevant to foreseeability in essence renders this exception meaningless and, if left uncorrected, will directly and negatively affect the research, development, and commercialization of products and technologies by U.S. universities and businesses.

Weakening the doctrine of equivalents as the Federal Circuit has done threatens the positive benefits reaped by research universities in the last 25 years through licensing and development agreements with private U.S. companies. Much of the dramatic growth in such endeavors is due to Congress's passage of the Bayh-Dole Act, which allowed universities to keep the patent rights to inventions made in whole or in part with the aid of federal funding. Under *Festo XIII*, however, this thriving system of technology transfer is in jeopardy. Without a strong and stable patent system that adequately protects pioneer

advances and provides incentives to fund the required research, the public stands to lose access to great benefits, both scientific and economic.

Furthermore, the Federal Circuit's rule contravenes and subverts the purposes and equitable nature of the doctrine of equivalents. In unjustly restricting the rights of patent holders, the decision below favors copying over innovation, upsetting the careful balance of interests the doctrine has consistently achieved.

Finally, by disturbing the long-established law of infringement, the *Festo XIII* decision frustrates the constitutional objective of advancement of the arts and sciences, and improperly and improvidently invades the role of Congress as the body assigned to promulgate and define patent law.

For these reasons of the highest importance to continued scientific and technological advancement, *Amici* respectfully request that the Court grant the instant Petition for a Writ of Certiorari.



## ARGUMENT

### **I. The Federal Circuit's Decision Undermines the Bayh-Dole Act and Threatens Investment in New Research and Technology.**

The key to successful and widespread development of, and public access to, inventions created within the academic sector is a strong and viable

patent system. *Amici's* and other institutions' ability to continue their licensing activities, through which they are able to fund further research, is directly dependent upon sufficient legal protection of their patents. Thus, legislative or judicial weakening of U.S. patent law deters interest and investment in the development of patented inventions for the marketplace, thereby stifling innovation and ultimately depriving the public of invaluable inventive contributions to aid and improve the human condition, all of which defeat the objectives and benefits of the Bayh-Dole Act.

The doctrine of equivalents, as this Court has recognized for over 150 years, is a vital component of U.S. patent law. See *Winans v. Denmead*, 56 U.S. 330, 343 (1854); *Festo Corp. v. SMC*, 535 U.S. 722, 732 (2002) ("*Festo VIII*"). It serves to protect inventors from "the unscrupulous copyist" who could otherwise avoid infringement through trivial changes that add nothing to the invention. *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 607 (1950). The doctrine thus ensures the necessary incentive for the pursuit and funding of innovation. *Festo VIII*, 535 U.S. at 732. By contravening this Court's precedent and crippling the foreseeability exception to prosecution-history estoppel, the Federal Circuit unduly and unwisely narrows the doctrine of equivalents, thereby weakening patents.

With the enactment of the Bayh-Dole Act in 1980, the *ab initio* ownership of any invention made in whole or in part with federal funds shifted from the

government to the non-profit entity or small business that had used the federal funds in creation of the invention. See 35 U.S.C. §§ 200-212. The Act thus provided “the legal framework for transfer of university generated, federally funded inventions to the commercial marketplace.”<sup>5</sup> This legislation envisioned and enabled the collaboration of universities and commercial partners to efficiently and rapidly bring to the public the fruits of institutional research that previously remained inaccessible or unrealized. 35 U.S.C. § 200.<sup>6</sup>

The Bayh-Dole Act has been a resounding success. Under the Act, university patenting and licensing activities have skyrocketed and led to the commercialization of thousands of technologies and products that enhance the lives of millions. See Council on Government Relations Report at 8-9. From 1998 to 2006, the licensing efforts of universities have made more than 4,350 new products commercially available.<sup>7</sup> Seventy percent of active licenses for university-generated inventions are in the

---

<sup>5</sup> *The Bayh-Dole Act: A Guide to The Law and Implementing Regulations*, Council on Government Relations (1999) (“Council on Government Relations Report”), available at [http://www.cogr.edu/docs/Bayh\\_Dole.pdf](http://www.cogr.edu/docs/Bayh_Dole.pdf).

<sup>6</sup> See Howard W. Bremer, *University Technology Transfer Evolution and Revolution* (“Bremer Article”) at 4-6, 8-9, available at <http://www.cogr.edu/docs/Bremerarticle.htm>.

<sup>7</sup> AUTM U.S. Licensing Survey, FY 2006 (“AUTM 2006 Survey”) at 5, available at [http://www.autm.net/events/file/AUTM\\_06\\_US%20LSS\\_FNL.pdf](http://www.autm.net/events/file/AUTM_06_US%20LSS_FNL.pdf).

essential domain of life sciences, covering products such as artificial lung surfactant for newborn infants, cisplatin and carboplatin cancer therapeutics, and Haemophilus B conjugate vaccine, to name only a few. *See* Council on Government Relations Report at 8. In 2006, the members of the Association of University Technology Managers (AUTM) managed 12,672 licenses and options. AUTM 2006 Survey at 5. The bulk of the income from these contractual relationships goes to further research and development.

In addition to the scientific advances achieved, the drastic increase in technology transfer has led to nationwide economic growth. For example, approximately \$30 billion of annual economic activity and 250,000 jobs are attributable to the commercialization of university-owned inventions. AUTM 2006 Survey at 5; Council on Government Relations Report at 9. In 2006 alone, 553 new start-up companies were launched as a result of academic-institution licensing, and technology-transfer staffing levels hit a record high with more than 1,800 total employees. AUTM 2006 Survey at 5.

Just as the Bayh-Dole Act is vital to the delivery to the public of these enormous benefits of university and non-profit research, a viable and flexible doctrine of equivalents is vital to the continued functioning of the Bayh-Dole's technology-transfer system. This is so because the underlying contractual relationships depend entirely on the strength of the patents, particularly given that most university-created inventions are pioneering developments. *See* Bremer

Article at 14. These breakthrough inventions, often starting from scratch, require a great deal of time and resources to develop and, therefore, have a critical need for exclusivity in licensing to motivate the private sector to commercialize them. *See id.* at 10, 14; *Festo Corp. v. SMC*, 234 F.3d 558, 623-24 (Fed. Cir. 2000) (“*Festo VI*”) (Linn, J., dissenting).

The companies that have licensed university-generated inventions are willing to undertake the costly development efforts for these products because of the expectation that the fruits of this funding will be protected from competition by virtue of an exclusive license under strong and viable patents, through which they can recoup their investment in the development phase. *See Festo VI*, 234 F.3d at 621 (Linn, J., dissenting) (“the patent laws attempt to provide each inventor with reasonable assurances that the reward to which he or she is entitled will, in fact, be given”); *id.* at 639 (Newman, J., dissenting) (“It has long been understood that technological advance and industrial vigor flow from legal and economic policies that encourage invention and support investment in the products of invention.”). Universities likewise rely on the receipt of license fees and royalties to defray the costs of patenting and technology transfer, as well as to support additional research. A diminished doctrine of equivalents, and the attendant weakening of the patent position thus discourages companies from licensing and marketing these key discoveries. *See Festo VIII*, 535 U.S. at 732; *Festo VI*, 234 F.3d at 629 (Linn, J., dissenting).

If the parties believe they will have no recourse against infringement by copyists making trivial changes to avoid the literal claim language of a patent, they will have little incentive to fund the development of and market these inventions. With almost all patent applications being amended at some point during the prosecution process, the Federal Circuit's rigid conscription of the foreseeability exception poses a great risk to the thousands of university-owned patents. *See Festo VI*, 234 F.3d at 638 (Newman, J., dissenting) (noting that "very few patent applications traverse the PTO without amendment or argument"). Potential licensees, faced with the inability to assert equivalents that were present in the prior art but whose equivalency for a particular purpose was entirely unknown, will have reduced incentives to continue to invest in scientific and technological development. *See Festo XIII*, 493 F.3d at 1386 (Newman, J., dissenting). The Federal Circuit's unwarranted reduction of the doctrine of equivalents will therefore create a chilling effect on the beneficial and successful technology transfer facilitated by the Bayh-Dole Act, to the great detriment of the public good.

In fact, not only does the Federal Circuit's ruling decrease the economic motivation to license university-developed technologies, it also creates the perverse incentive for competitors to profit from the research and development efforts of inventors without investing in the process of developing a given invention for introduction into the marketplace.

Armed with the knowledge that the patentee will be helpless against equivalents known in the prior art, but unforeseen as technological equivalents, copyists will be able to wait for the patented invention to be marketed, examine the prosecution history, and make trivial changes based upon the amendments made during prosecution. Such insubstantial alteration does not advance the science and arts, but rather stifles innovation by discouraging the support of and undertaking to develop breakthrough discoveries. The Court should grant the instant petition for certiorari to reinstate and reaffirm its sound doctrine of equivalents policy and correct this invitation for abuse.

## **II. *Festo XIII* Runs Afoul of the Purposes and the Well-Established Law of the Doctrine of Equivalents.**

### **A. The doctrine of equivalents was created to protect inventors from the inherent limitations of language and is designed to be flexible.**

Adopted from English common law to ensure sufficient protection for American patent holders, the doctrine of equivalents has stood as an integral element of U.S. patent law for more than a century. See *Winans v. Denmead*, 56 U.S. at 343; *Morley Sewing Mach. Co. v. Lancaster*, 129 U.S. 263, 273, 280 (1887). Because “the nature of language makes it impossible to capture the essence of a thing in a patent application,” the Court long recognized the need for a flexible doctrine to protect inventors

“against efforts of copyists to evade liability for infringement by making only insubstantial changes to a patented invention.” *Festo VIII*, 535 U.S. at 731; see *Graver Tank*, 339 U.S. at 607. Acknowledging that such an extension beyond literal terms renders a patent’s scope less certain, the Court has consistently held that this uncertainty is “the price of ensuring the appropriate incentives for innovation.” *Festo VIII*, 535 U.S. at 732.

The doctrine of equivalents is thus designed and applied to make equitable a system that is subject to the inherent limitations of language and “unscrupulous copyists [who seek] a free ride on the coattails of legitimate inventors.” *Festo VI*, 234 F.3d at 620 (Linn, J., dissenting). Of course, to be fair and strike the proper balance, such a rule must have boundaries, and the Court has carefully delineated the parameters of prosecution-history estoppel to prevent a patentee from recapturing that which was purposefully surrendered. See *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 33-34 (1997). The mere fact of amendment, however, does not result in a complete bar. *Id.* at 33. The law is clear that the reason for the amendment must be considered and the file history examined to determine whether the patentee relinquished an equivalent to avoid prior art or otherwise secure patentability. *Id.* at 30-33; *Bayer Aktiengesellschaft v. Duphar Int’l Research B.V.*, 738 F.2d 1237, 1243 (Fed. Cir. 1984). If no reason for the amendment appears, a presumption of estoppel arises, which an inventor can rebut by showing that

the claimed equivalent was unforeseeable at the time of amendment. *Festo VIII*, 535 U.S. at 740. The rule is therefore logical and just, as it precludes only that which an inventor should not fairly recapture, having known of and relinquished that equivalent, while placing reasonable limits on equivalency. *Warner-Jenkinson*, 520 U.S. at 33-34.

Thus, by its very nature, the doctrine of equivalents requires an examination of the relevant changes made and reasons therefore, in the context of the particular invention. See *Loctite Corp. v. Ultraseal Ltd.*, 781 F.2d 861, 871 n.7 (Fed. Cir. 1985) (“prosecution history estoppel to limit the doctrine of equivalents should be performed as a legal matter on a case-by-case basis, guided by the equitable and public policy principles underlying the doctrines involved and by the facts of the particular case”), *overruled on other grounds* by *Nobelpharma Ab v. Implant Innovations*, 141 F.3d 1059, 1068 (Fed. Cir. 1998). To ensure proper and just results, the Court “has consistently applied the doctrine in a flexible way, not a rigid one,” because to do otherwise would “resort[] to the very literalism the equivalents rule is designed to overcome.” *Festo VIII*, 535 U.S. at 738.

The Federal Circuit’s ruling is precisely the type of unduly constrained application of the doctrine of equivalents that this Court has consistently and firmly rejected. By making the unforeseen “foreseeable after someone later discovers it,” the court contravenes the equitable nature of the doctrine of equivalents and strips the foreseeability exception of

any real meaning. *Festo XIII*, 493 F.3d at 1385 (Newman, J., dissenting). With the vast majority of patent claims amended at some juncture, this overly rigid holding threatens to deprive huge numbers of patentees of recourse to infringement by equivalency even where they could not have foreseen that the element in question would function as an equivalent. *Id.*; *Festo VI*, 234 F.3d at 638 (Newman, J., dissenting). Such a result does not serve the equitable purposes of the doctrine of equivalents, but rather “promotes free riding and undercuts the return on a patentee’s investment.” *Festo VI*, 234 F.3d at 627 (Linn, J., dissenting).

The stakes are particularly high for institutions such as *Amici*, whose efforts often aim at and result in breakthrough advances that are qualitatively of the highest value to the public, but being pioneering in nature may be very difficult to accurately define and describe in the initial patent application. See *Festo VIII*, 535 U.S. at 731; *Westinghouse v. Boyden Power Brake Co.*, 170 U.S. 537, 561-62 (1898). If each amendment in the patent’s evolution bears the risk that an excluded alternative, known generally in the field but unknown as a possible equivalent, will be later held foreseeable, many inventors will be unfairly robbed of the fruits of their work. Not only is this unjust, but, as shown above, it is bad policy because it negates the incentive to undertake expensive, demanding ground-breaking research and thus deprives the public of great benefits. *Festo VI*, 234 F.3d at 624 (Linn, J., dissenting).

The Court has long recognized and consistently affirmed the need for the doctrine of equivalents: “If patents were always interpreted by their literal terms, their value would be greatly diminished. Unimportant and insubstantial substitutes for certain elements could defeat the patent, and its value to inventors could be destroyed by simple acts of copying.” *Festo VIII*, 535 U.S. at 731 (2002). It has also constructed logical limits so that a patentee cannot unjustly claim that which was surrendered in order to obtain the patent. *See Warner-Jenkinson*, 520 U.S. at 33-34. As such, the doctrine strikes an equitable balance between protection from unscrupulous imitation and the need for notice and delineation. *Id.* The Federal Circuit’s rule that an equivalent is foreseeable even if its function as an equivalent is wholly unknown at the time of the patent application is as unjust and unwise as it is illogical. It undermines the purposes of the doctrine of equivalents and “unfairly tips the balance away from patentees and toward competitors by constraining the legitimate rights of patentees to their inventions.” *Festo VI*, 234 F.3d at 620-21 (Linn, J., dissenting). It is also a direct contravention of controlling law.

**B. The *Festo XIII* decision directly defies this Court’s precedent.**

This Court was explicit and unequivocal: a complete bar based on amendment is not and should not be the law. *Festo VIII*, 535 U.S. at 737-38. Rather, if the doctrine of equivalents is to have substance,

thereby continuing to ensure that the patent law does not become “a hollow and useless thing,” the Court must consider the reasons for the claim amendments and the purpose for which changes were made. *Graver Tank*, 339 U.S. at 356; *see also Festo VIII*, 535 U.S. at 737-38. Echoing the estoppel principles of *Warner-Jenkinson*, the *Festo VIII* Court enunciated that “[t]here is no reason why a narrowing amendment should be deemed to relinquish equivalents unforeseeable at the time of the amendment and beyond a fair interpretation of what was surrendered.” *Festo VIII*, 535 U.S. at 738; *see Warner-Jenkinson*, 520 U.S. at 33 (introducing a new element “does not necessarily preclude infringement by equivalents of that element”). Accordingly, an inventor is not denied recourse to the doctrine of equivalents for unforeseeable equivalents. *Festo VIII*, 535 U.S. at 738, 740.

Not only is such a rule good policy, it makes perfect sense. As the Court expressed, and as the origin and growth of the doctrine reveal, the purpose of prosecution-history estoppel is fairness: to prevent a patentee from subsequently obtaining that which she disclaimed in order to secure her patent. *Festo VIII*, 535 U.S. at 737-38; *see Warner-Jenkinson*, 520 U.S. at 31-32 (listing and discussing prior decisions demonstrating that in each case “estoppel was tied to amendments made to avoid the prior art, or otherwise

to address a specific concern” of patentability).<sup>8</sup> Asserting an equivalent that was unknown at the time but later proven to be a functional substitution, in no way seeks to repudiate prior representations or to reclaim that which was affirmatively disclaimed. *See Festo VIII*, 535 U.S. at 738. After all, one cannot reasonably be held to have disclaimed something unforeseeable as a possible substitute. *See Festo XIII*, 493 F.3d at 1385 (Newman, J., dissenting). The Court’s logical conclusion in *Festo VIII* is clear that estoppel will not preclude infringement by equivalents where the equivalent was unforeseeable at the time of the patent application. *Festo VIII*, 535 U.S. at 738, 740.

Yet this is exactly what the Federal Circuit has allowed. It has deemed foreseeable substitutions that were entirely unknown as technological equivalents at the time of the invention. In so ruling, the court directly contradicted controlling precedent. “[I]f the particular technology is not recognized as equivalent at the time of the application – whether recognized by

---

<sup>8</sup> Indeed, the Federal Circuit itself, for almost 20 years prior to its *Festo VI* decision, “adhered to the view . . . that courts should undertake a case-specific analysis of the prosecution history of the patent-in-suit to determine whether, on particular set of facts, application of the doctrine of equivalents would run afoul of prosecution history estoppel.” Jay I. Alexander, *Cabining the Doctrine of Equivalents in Festo: A Historical Perspective on the Relationship Between the Doctrine of Equivalents and Prosecution History Estoppel*, 51 Am. U. L. Rev. 553, 595-96 (2002).

the applicant or others of skill in the field – that technology cannot be foreseeable.” *Festo XIII*, 493 F.3d at 1385-86 (Newman, J., dissenting). If the equivalent was not foreseeable, it is not, under established law, a bar to infringement by equivalents. *Festo VIII*, 535 U.S. at 740. In Judge Newman’s pointed and apt summary, the decision of the *Festo XIII* majority “strays from controlling precedent as well as from logic” and should be reversed. *Festo XIII*, 493 F.3d at 1386 (Newman, J., dissenting).

### **III. The Unwarranted Circumscription of the Doctrine of Equivalents Frustrates the Constitutional Objective of the Intellectual Property Clause and Invades the Province of Congress.**

The patent system was enacted pursuant to Congress’s authority “to promote the Progress of science and useful arts” through a limited term monopoly. U.S. Const. art. I, § 8, cl. 8. Eroding the doctrine of equivalents, rather than encouraging scientific and technological exploration and advancement, frustrates this constitutional objective. By unjustifiably weakening patents, the Federal Circuit’s restriction of the foreseeability exception diminishes the incentives for these activities, running counter to the clear purposes of the intellectual property clause and U.S. patent law.

As the Court has remarked on multiple occasions, if the doctrine of equivalents “is to be discarded, it is

Congress and not the Court that should do so.” *Festo VIII*, 535 U.S. at 733; see *Warner-Jenkinson*, 520 U.S. at 28. In essentially abolishing the foreseeability exception to prosecution-history estoppel, the Federal Circuit has so constrained the doctrine of equivalents as to render it virtually inaccessible for any amended claims. See *Festo XIII*, 493 F.3d at 1383 (Newman, J., dissenting) (the majority’s “new rule further erodes the residue of the doctrine of equivalents, for its foreseeable result is to deprive amended claims of access to the doctrine of equivalents”). Such a significant impingement on “a firmly entrenched part of the settled rights protected by the patent” should be left for Congress. *Festo VIII*, 535 U.S. 733; *Warner-Jenkinson*, 520 U.S. at 28. The Court should grant certiorari and reverse this decision.



**CONCLUSION**

*Amici* believe the doctrine of equivalents, in its true and complete form, is an essential feature of our patent law and one upon which much positive and beneficial activity depends. They therefore respectfully request that the Court grant the Petition for Writ of Certiorari and correct the improvident and unjust judgment rendered below.

Respectfully submitted,

MARTIN R. LUECK

*(Counsel of Record)*

ANNE M. LOCKNER

ROBINS, KAPLAN, MILLER

& CIRESI L.L.P.

2800 Lasalle Plaza

800 Lasalle Avenue

Minneapolis, MN 55402-2015

(612) 349-8500

March 20, 2008