

No. 10-1150

In The
Supreme Court of the United States

MAYO COLLABORATIVE SERVICES
(d/b/a MAYO MEDICAL LABORATORIES)
and MAYO CLINIC ROCHESTER,

Petitioners,

v.

PROMETHEUS LABORATORIES, INC.,

Respondent.

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

**BRIEF OF NINE LAW PROFESSORS
AS *AMICI CURIAE*
IN SUPPORT OF PETITIONERS**

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September 9, 2011

TABLE OF CONTENTS

	Page
TABLE OF CONTENTS	i
TABLE OF AUTHORITIES	iii
INTERESTS OF <i>AMICI CURIAE</i>	1
SUMMARY OF THE ARGUMENT.....	2
ARGUMENT	4
I. THE COURT SHOULD REAFFIRM THAT INELIGIBLE DISCOVERIES MUST BE TREATED AS PRIOR ART AND THAT INVENTION REQUIRES CREATIVITY IN THEIR APPLICATION.....	4
A. Prior Art Treatment of Excluded Dis- coveries and Creativity in Their Application Are Long-Standing Re- quirements of the Patent Act.....	8
B. These Historic Requirements Should Be Recognized as Constitutional Re- quirements.....	16
II. CONSISTENT WITH THE CONSTITU- TION, THE PATENT ACT EXCLUDES UNDER SECTION 101 CLAIMS TO UNCREATIVE APPLICATIONS OF IN- ELIGIBLE DISCOVERIES	20
A. The Patent Act Has Been Consistent- ly Construed to Require Creativity in the Application of New Discoveries.....	21
B. The 1952 Patent Act Preserved the Requirement for Inventive Creativity in Section 101	22

TABLE OF CONTENTS – Continued

	Page
C. Sections 100(b) and 103 Did Not Alter Section 101’s Requirement for Crea- tivity in the Application	25
III. THRESHOLD EXCLUSION UNDER SECTION 101 IS CRITICAL HERE	28
A. Without Prior Art Treatment, the Claims at Issue May Improperly Survive Scrutiny Under Sections 101, 102, 103, and 112.....	29
B. With Prior Art Treatment, The Claims At Issue Will Necessarily Fail Both Section 101 Eligibility Analysis and Less Efficient Section 103 Patenta- bility Analysis.....	33
C. Threshold Exclusion under Section 101 Signals that the Public Domain is Off Limits to the Patent System	36
CONCLUSION.....	38
APPENDIX – LIST OF <i>AMICI CURIAE</i> LAW PROFESSORS	1a

TABLE OF AUTHORITIES

Page

CASES

<i>In re Alappat</i> , 33 F.3d 1526 (Fed. Cir. 1994) (en banc)	4, 6, 23
<i>American Fruit Growers, Inc. v. Brogdex Co.</i> , 283 U.S. 1 (1931).....	15
<i>Ansonia Brass & Copper Co. v. Elec. Supply Co.</i> , 144 U.S. 11 (1892).....	14, 22, 25, 26
<i>Ariad Pharms., Inc. v. Eli Lilly & Co.</i> , 598 F.3d 1336 (Fed. Cir. 2010) (en banc).....	32
<i>Ashwander v. Tennessee Valley Auth.</i> , 297 U.S. 288 (1936).....	28
<i>Baker v. Selden</i> , 101 U.S. (11 Otto) 99 (1879)	13
<i>Bean v. Smallwood</i> , 2 F. Cas. 1142 (C.C.D. Mass. 1843) (No. 1,173)	21
<i>Bilski v. Kappos</i> , 130 S. Ct. 3218 (2010).....	<i>passim</i>
<i>Borough of Duryea, Pa. v. Guarnieri</i> , 131 S. Ct. 2488 (2011)	19
<i>Burrow-Giles Lithographic Co. v. Sarony</i> , 111 U.S. 53 (1884).....	16, 17, 20
<i>CCC Info. Servs., Inc. v. Maclean Hunter Market Repts., Inc.</i> , 44 F.3d 61 (2d Cir. 1994).....	13
<i>In re Christensen</i> , 478 F.2d 1392 (C.C.P.A. 1973)	34
<i>Cochrane v. Deener</i> , 94 U.S. 780 (1876).....	15
<i>Consolidated Elec. Light Co. v. McKeesport Light Co.</i> , 159 U.S. 465 (1895).....	32

TABLE OF AUTHORITIES – Continued

	Page
<i>Cuno Engineering Corp. v. Automatic Devices Corp.</i> , 314 U.S. 84 (1941).....	27
<i>Dann v. Johnston</i> , 425 U.S. 219 (1976)	34
<i>Diamond v. Chakrabarty</i> , 447 U.S. 303 (1980)	4, 15
<i>Diamond v. Diehr</i> , 450 U.S. 175 (1981)	<i>passim</i>
<i>District of Columbia v. Heller</i> , 554 U.S. 570 (2008).....	19
<i>Dolbear v. American Bell Telegraph Co.</i> , 126 U.S. 1 (1888).....	15
<i>Feist Publ'ns Inc. v. Rural Tele. Serv. Co.</i> , 499 U.S. 340 (1991).....	10, 16, 19
<i>Funk Bros. Seed Co. v. Kalo Inoculant Co.</i> , 333 U.S. 127 (1948).....	4, 15, 22
<i>Gomez v. United States</i> , 490 U.S. 858 (1989)	28
<i>Gottschalk v. Benson</i> , 409 U.S. 63 (1972)	7, 16
<i>Graham v. John Deere Co.</i> , 383 U.S. 1 (1966)	<i>passim</i>
<i>In re Grams</i> , 888 F.2d 835 (Fed. Cir. 1989)	33
<i>Great A. & P. Tea Co. v. Supermarket Equip. Co.</i> , 340 U.S. 147 (1950).....	17
<i>Hartranft v. Wiegmann</i> , 121 U.S. 609 (1887)	15
<i>Hotchkiss v. Greenwood</i> , 52 U.S. (11 How.) 248 (1851).....	14, 27
<i>Howe v. Abbott</i> , 12 F. Cas. 656 (C.C.D. Mass. 1842) (No. 6,766)	14, 21

TABLE OF AUTHORITIES – Continued

	Page
<i>In re Kemper</i> , 14 F. Cas. 286 (C.C.D.C. 1841) (No. 7,687)	19
<i>Kewanee Oil Co. v. Bicron Corp.</i> , 416 U.S. 470 (1974).....	7, 19
<i>Kregos v. Associated Press</i> , 937 F.2d 700 (2d Cir. 1991)	13
<i>KSR Int’l. Co. v. Teleflex, Inc.</i> , 550 U.S. 398 (2007).....	31, 34, 35, 36
<i>Lab. Corp. of Am. Holdings v. Metabolite Labs., Inc.</i> , 548 U.S. 124 (2006).....	11, 34, 36
<i>Le Roy v. Tatham</i> , 55 U.S. (14 How.) 156 (1853)	9, 21
<i>Lowell v. Lewis</i> , 15 F. Cas. 1018 (C.C.D. Mass. 1817) (No. 8,568)	12, 21
<i>Mackay Radio & Tel. Co. v. Radio Corp. of Am.</i> , 306 U.S. 86 (1939).....	15
<i>Mazer v. Stein</i> , 340 U.S. 201 (1954).....	19
<i>Morton v. New York Eye Infirmary</i> , 17 F. Cas. 879 (C.C.S.D.N.Y. 1862) (No. 9,865).....	8
<i>O’Reilly v. Morse</i> , 56 U.S. (15 How.) 62 (1854)....	<i>passim</i>
<i>Parker v. Flook</i> , 437 U.S. 584 (1978)	5, 6, 15
<i>In re Thuau</i> , 135 F.2d 344 (C.C.P.A. 1943)	25
<i>The Trade-Mark Cases</i> , 100 U.S. 82 (1879)	16, 17
<i>Wall v. Leck</i> , 66 F. 552 (9th Cir. 1895)	14
<i>In re Wands</i> , 858 F.2d 731 (Fed. Cir. 1988).....	32

TABLE OF AUTHORITIES – Continued

	Page
CONSTITUTION, STATUTES, AND LEGISLATIVE MATERIALS	
U.S. Const., art. I, § 8, cl. 8	<i>passim</i>
35 U.S.C. § 100 (2006)	3, 23, 25
35 U.S.C. § 101 (2006)	<i>passim</i>
35 U.S.C. § 102 (2006)	<i>passim</i>
35 U.S.C. § 103 (2006)	<i>passim</i>
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Patent Act of 1790, ch. 7, 1 Stat. 109 (Apr. 10, 1790)	2, 20, 21
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Patent Act of 1836, ch. 357, § 6, 5 Stat. 117 (July 4, 1836).....	21
Patent Act of 1870, ch. 230, § 24, 16 Stat. 200 (July 8, 1870).....	22, 23, 24
Patent Act of 1952, Pub. L. No. 82-593, 66 Stat. 792 (July 19, 1952).....	3, 22, 23
H.R. Rep. No. 82-1923 (1952).....	23, 24, 25, 26
INTERNATIONAL MATERIALS	
<i>Boulton v. Bull</i> , 126 Eng. Rep. 651 (1795).....	12
<i>Neilson v. Harford</i> , 151 Eng. Rep. 1266 (1841)	8
17 The Parliamentary History of England (William Cobbett ed., 1806-20) (1774).....	11

TABLE OF AUTHORITIES – Continued

Page

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TABLE OF AUTHORITIES – Continued

	Page
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The Compact Edition of the Oxford English Dictionary (Oxford Univ. Press 1971)	12
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TABLE OF AUTHORITIES – Continued

	Page
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Joshua D. Sarnoff, <i>Patent Eligible Inventions after Bilski: History and Theory</i> , 63 Hastings L.J. ____ (forthcoming, Feb. 7, 2011 draft at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1757272).....	15
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TABLE OF AUTHORITIES – Continued

	Page
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INTERESTS OF *AMICI CURIAE*

This brief is filed on behalf of the undersigned Law Professors identified in Appendix A.¹

Law Professors teach and write about patents, intellectual property, and constitutional law. Law Professors are concerned that the Patent Act should be construed in this case consistently with: (1) the historic and constitutional requirement to treat as prior art discoveries of laws of nature, physical phenomena, and abstract ideas, and the consequent exclusion from patent eligibility of claimed applications of such discoveries that lack any inventive creativity; (2) legislative recognition and preservation of these historic requirements in Section 101 of the Patent Act; and (3) the benefits of excluding at the threshold under Section 101 claims to uncreative applications of such discoveries. By protecting the public domain of science, nature, and ideas from encroachment by such claims, the Court will continue to promote scientific and technological development for human benefit. Failure to require such prior art treatment and inventive creativity in applications would threaten continued scientific and technological progress. *Amici* urge the Court to avoid this result.



¹ Letters of the Parties' consent to file amicus briefs are on file with the Court. This brief was not authored in whole or in part by counsel for any party. No one other than *Amici* and their counsel made a monetary contribution to preparing or submitting this brief.

SUMMARY OF THE ARGUMENT

In *Bilski v. Kappos*, 130 S. Ct. 3218 (2010), this Court reiterated the requirement to treat as prior art new but ineligible discoveries of laws of nature, physical phenomena, and abstract ideas. The very concept of invention thus requires a creative advance *in the application* of any such discovery. For over two centuries, prior art treatment of ineligible discoveries and the requirement for additional creativity have protected the public domain from encroachment by private patent rights. Given prior art treatment, additional creativity (“invention”) – like originality in copyright law – is a constitutional requirement, as recognized in *Graham v. John Deere Co.*, 383 U.S. 1 (1966). Patents on uncreative applications of ineligible discoveries would effectively withdraw the knowledge contained in those discoveries from the public domain. Prior art treatment derives from a historic moral duty for scientists to freely share such discoveries, which informs the constitutional meaning of “Inventors” for *their* “Discoveries.” This Court should expressly recognize prior art treatment and the requirement for creativity in the application as Constitutional requirements.

Consistent with the Constitution, the Patent Act since 1790 has been construed to require that there be creativity in the application of any scientific, natural, or abstract discovery in order for a patent-eligible “invention” to exist. This requirement and the

prior art treatment of new discoveries were preserved in the 1952 Patent Act, by codifying in both Sections 101 and 103 the judicial requirement for “invention” that had been developed under the predecessor to Section 101. Neither Section 100(b)’s “new use” authority nor Section 103’s “non-obviousness” terminology altered the requirement for invention, and thus prior art treatment and creativity in the application of ineligible discoveries remain requirements for eligibility under Section 101. Eliminating such requirements from the statute would raise serious constitutional questions.

Without prior art treatment and the requirement for creativity in the application of excluded discoveries, the claims at issue might improperly survive scrutiny under Sections 101 (eligibility), 102 (novelty), 103 (non-obviousness), and 112 (adequacy of disclosure). Given preservation of prior art treatment and the creativity requirement, threshold eligibility decisions under Section 101 perform an efficient gate-keeping role. Uncreative applications of ineligible discoveries like those at issue here will be both ineligible under Section 101 and necessarily unpatentable under Section 103. Obviousness decisions require prior art searching and complex factual evaluations that should not normally be required for such eligibility decisions. Excluding such claims under Section 101, moreover, sends important signals about protecting the public domain from encroachment and the need for public

funding of discoveries, and directs investment and activity towards creative and patentable applications of ineligible discoveries.

◆

ARGUMENT

I. The Court Should Reaffirm that Ineligible Discoveries Must Be Treated as Prior Art and that Invention Requires Creativity in Their Application.

In *Bilski v. Kappos*, 130 S. Ct. 3218 (2010), the Court reiterated that new discoveries of “‘laws of nature, physical phenomena, and abstract ideas’” (i.e., scientific principles, natural phenomena and products, and fundamental information; science, nature, and ideas for short) are not patent-eligible inventions. *Id.* at 3225 (quoting *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980)). The “concepts” covered by these “exceptions”² to the broad legislative definition of an eligible invention in Section 101 of the Patent Act “are ‘part of the storehouse of knowledge of all men . . . free to all men and reserved exclusively to none.’” *Id.* (quoting *Funk Bros. Seed Co. v. Kalo Inoculant Co.*, 333 U.S. 127, 130 (1948)).

² *But see In re Alappat*, 33 F.3d 1526, 1553 n.13 (Fed. Cir. 1994) (en banc) (Archer, C.J., dissenting) (noting the error of characterizing “nonstatutory subject matter . . . as an “‘exception’ to § 101. Defining patentable subject matter is the *raison d’être* of § 101.”) (citation omitted).

In other words, such pre-existing or fundamental information and things are and should remain part of the public domain, free from exclusive private property rights.

Of equal importance, the Court in *Bilski* reiterated its precedents that such categorically excluded discoveries must be treated as already known prior art, even if they were not in fact known or disclosed before their discovery by the applicant:

The Court concluded [in *Parker v. Flook*] that the process at issue there was “unpatentable under § 101, not because it contain[ed] a mathematical algorithm as one component, but because once that algorithm [wa]s *assumed to be within the prior art*, the application, considered as a whole, contain[ed] no patentable invention.” . . . As the Court later explained, *Flook* stands for the proposition that the prohibition against patenting abstract ideas “cannot be circumvented by attempting to limit the use of the formula to a particular technological environment” or adding “insignificant postsolution activity.”

Id. at 3230 (quoting *Parker v. Flook*, 437 U.S. 584, 594 (1978), and *Diamond v. Diehr*, 450 U.S. 175, 191-92 (1981)) (emphasis added); see *Flook*, 437 U.S. at 595 (“If we assume that that method was also known, as we must under the reasoning in *Morse*”) (citing *O’Reilly v. Morse*, 56 U.S. (15 How.) 62, 115 (1854)).

As a result of its prior art treatment, “the discovery of such a[n ineligible] phenomenon cannot support a patent unless there is some other *inventive*

concept in its application.” Flook, 347 U.S. at 594 (emphasis added). In other words, a patent-eligible “invention” must reflect inventive creativity that is additional to any scientific creativity involved in making the discovery and to mere application of the discovered knowledge or thing to a particular context or a specific use. The requisite inventive creativity cannot be supplied by adding conventional or otherwise insignificant elements or limitations to patent claims. Such additions reflect the creativity only of a “competent [legal] draftsman,” not of an inventor. Id. at 590; see Diehr, 450 U.S. at 192 (“To hold otherwise would allow a competent draftsman to evade the recognized limitations on the type of subject matter eligible. . . .”); cf. Alappat, 33 F.3d at 1554 (Archer, C.J., dissenting) (“The discovery of music does not become patentable subject matter simply because there is an arbitrary claim to some structure.”). As this Court previously stated in Flook:

The question . . . is whether the identification of a limited category of useful, though conventional, post-solution applications of such a formula makes respondent’s method eligible for patent protection. . . . The notion that post-solution activity, no matter how conventional or obvious in itself, can transform an unpatentable principle into a patentable process exalts form over substance.

Flook, 347 U.S. at 585, 590.

These historic requirements for prior art treatment and for *inventive* creativity *in the application* of

ineligible discoveries protect the public domain of science, nature, and ideas from piecemeal encroachment by patent claims. Claims drawn to uncreative but specific applications of a categorically ineligible discovery may have a more limited scope than claims to the discovery itself. Consequently, such claims may not “wholly pre-empt” all applications of an ineligible discovery. *Bilski*, 130 S. Ct. at 3230 (quoting *Gottschalk v. Benson*, 409 U.S. 63, 72 (1972)). But they will add nothing to the public’s entitlement to benefit and to create inventions from the discovery. Without prior art treatment and the requirement for creativity in the application, large swaths of the public domain that should remain free for public use and creative investigation could be subjected to a plethora of patent rights.

The Court in this case should reaffirm that the Patent Act requires prior art treatment of ineligible discoveries and creativity in the application of such discoveries. These requirements generate and protect the public domain of science, nature, and ideas. Such prior art treatment “has made all the difference.” Robert Frost, *The Road Not Taken*, in *Six American Poets* 208 (Joel Conarroe ed. Vintage Books 1991) (1920). The Court also should affirm here that these historic requirements are mandated by the Constitution, as reflected in the language “Inventors to their respective . . . Discoveries.” Art. I, § 8, cl. 8; *see, e.g., Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 476 (1974) (“discovery is something less than invention”); Anthony W. Deller, *The United States patent system*,

in Mainly on patents: The use of industrial property and its literature 50-52 (Felix Liebesny ed., 1972) (distinguishing “‘mere discovery’” from “invention”) (quoting *Morton v. New York Eye Infirmary*, 17 F. Cas. 879, 882 (C.C.S.D.N.Y. 1862) (No. 9,865)).

A. Prior Art Treatment of Excluded Discoveries and Creativity in Their Application Are Long-Standing Requirements of the Patent Act.

The requirement for prior art treatment of new discoveries found its first *explicit* statement in American patent law in 1854 in *O'Reilly*, relying on the English precedent of *Nielson v. Harford*, 151 Eng. Rep. 1266 (1841):

Neilson claimed no particular mode of constructing the receptacle, or of heating it. . . . [T]he court at first doubted, whether it was a patent for any thing more than the discovery that hot air would promote the ignition of fuel better than cold. And if this had been the construction, the court, it appears, would have held his patent to be void; *because the discovery of a principle in natural philosophy or physical science, is not patentable.*

But after much consideration, *it was finally decided that this principle must be regarded as well known, and that the plaintiff had invented a mechanical mode of applying it to furnaces; and that his invention consisted in interposing a heated receptacle, between the blower and the furnace, and by this means*

heating the air after it left the blower, and before it was thrown into the fire. . . .

Undoubtedly, the principle that hot air will promote the ignition of fuel better than cold, was embodied in this machine. *But the patent was not supported because this principle was embodied in it. . . .*

. . . If the Court of Exchequer had said that Neilson's patent was for the discovery, that hot air would promote ignition better than cold, and that he had an exclusive right to use it for that purpose, there might, perhaps, have been some reason to rely upon it. But the court emphatically denied this right to such a patent.

O'Reilly, 56 U.S. (15 How.) at 115-16 (emphasis added). One year earlier, the Court had explicitly stated that scientific, natural, and abstract discoveries are ineligible for patent protection. *See Le Roy v. Tatham*, 55 U.S. (14 How.) 156, 175 (1853) (“[a] principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right.”). But these requirements had a long history, predating the Constitution.

Before and through the late 18th century, “invention” had a technical meaning that distinguished it from discoveries of scientific principles, natural phenomena, and fundamental information (as well as

from discoveries of exploration or in the liberal and fine arts).³ Discoveries of science, nature, and ideas, and the world they described, were thought to originate from God. Accordingly, such discoveries were not thought to be human creations that were the proper objects of exclusive property rights.⁴

Further, scientists who made such discoveries were thought to owe moral duties to share their discoveries freely with the public, which was then entitled to benefit from the information. As Lord

³ See, e.g., Edward C. Walterscheid, *The Nature of the Intellectual Property Clause: A Study in Historical Perspective* 365-66, 375-76 (William S. Hein & Co. 2002) hereinafter “Walterscheid, *Study*”) (arguing that “Discoveries” of “Inventors” are limited to the “useful arts,” which excludes “anything not made or created by man”); John R. Thomas, *The Patenting of the Liberal Professions*, 40 B.C. L. Rev. 1139, 1164-65 (1999).

⁴ See Christine MacLeod, *Inventing the Industrial Revolution: The English Patent System 1660-1800*, at 198-203 (Cambridge Univ. Press 2002) (1988); cf. *Feist Publ'ns, Inc. v. Rural Tele. Serv. Co.*, 499 U.S. 340, 341 (1991) (distinguishing “discovery” from “creation” in the copyright context; holding that facts cannot be original creations of their discoverers); 1 William C. Robinson, *The Law of Patents for Useful Inventions* 93-94 (Little, Brown 1890) (surveying earlier efforts to define invention); Letter from Thomas Jefferson to Isaac MacPherson (Aug. 13, 1813), in Thomas Jefferson, *the Portable Thomas Jefferson* 529-30 (Merrill D. Peterson ed., Penguin Books 1977) (1975) (hereinafter “Jefferson Letter”) (explaining why ideas are not naturally subject to property rights); see generally Walterscheid, *Study, supra*, at 39 (explaining how the medieval belief that creativity came from God delayed the development of intellectual property, as it was thought improper to seek commercial benefit from what had been given freely by God).

Camden stated in 1774, scientists are “intrusted by Providence with the delegated power of imparting to their fellow-creatures that instruction which heaven meant for universal benefit; they must not be niggards to the world, or hoard up for themselves the common stock.” 17 *The Parliamentary History of England* col. 999 (William Cobbett ed., 1806-20) (1774); see 1 Robinson, *supra*, at 39 (“To benefit by the discoveries of his fellow-men is thus not only a natural right, it is also the natural duty which every man owes to himself and to society; and the mutual, universal progress thence resulting is the fulfillment of the earthly destiny of the human race.”).

It is this moral duty of scientists to create, protect, and disseminate a public domain of science, nature, and fundamental information⁵ that grounds prior art treatment of ineligible discoveries in patent law. The moral duty is effectuated by treating a new (*i.e.*, not previously disclosed) discovery as prior art, constructively giving it to the public when a patent application discloses it. This moral duty is distinctive by *creating* a public domain of science, nature, and ideas, although it overlaps with utilitarian beliefs in the social benefits of *protecting* and *disseminating* the public domain that exists as a result of non-patent disclosures. See 1 Robinson, *supra*, at 39; *Lab. Corp. of Am. Holdings v. Metabolite Labs., Inc.*, 548 U.S.

⁵ See generally Robert K. Merton, *The Normative Structure of Science*, in Robert K. Merton *The Sociology of Science* 275-77 (1973).

124, 128 (2006) (Breyer, J., dissenting from dismissal as improvidently granted) (“protection in such cases, despite its potentially positive incentive effects, would too often severely interfere with, or discourage, development and the further spread of useful knowledge itself”); *cf.* Michael J. Madison, Brett M. Frischmann & Katherine J. Strandburg, *Constructing Commons in the Cultural Environment*, 95 *Cornell L. Rev.* 657, 659-65 (2010) (discussing created institutions that treat knowledge as a commons).

Shortly after the Constitution was enacted, English and American courts explicitly declared the implicit, widespread understanding that patents could not issue for scientific discoveries or abstract ideas. *See, e.g., Boulton v. Bull*, 126 Eng. Rep. 651, 667 (1795) (Lord Eyre, C.J.) (no patents for “mere principle[s]”); *id.* at 663 (Buller, J.) (no patents for “an idea or principle alone”); *Lowell v. Lewis*, 15 F. Cas. 1018, 1019 (C.C.D. Mass. 1817) (No. 8,568) (“It has been often decided, that a patent cannot be legally obtained for a mere philosophical⁶ or abstract theory.”). The Court recognized by the middle of the 19th century that prior art treatment was logically entailed by the exclusion of such discoveries and of their underlying scientific creativity from the patent system. As the Court explained in *O’Reilly*, Neilson’s right to a patent could not have been premised either

⁶ “Philosophical” was then understood to mean pertaining to the natural sciences. *See, e.g.,* The Compact Edition of the Oxford English Dictionary 180 (Oxford Univ. Press 1971).

on the discovery itself or on the fact that the discovery was applied in and through a machine. *See* 56 U.S. (15 How.) at 115-16. Rather, Neilson's patent could be justified, if at all, only by some different, inventive creativity. *See id.*

Allowing patents for uncreative applications would *effectively* provide exclusive rights in and impermissibly reward the ineligible discovery itself.⁷ Allowing such patents would constrict the public domain by restricting the use of such discoveries.⁸ As aptly stated by the Ninth Circuit near the end of the 19th century:

[E]mployment of [a scientific discovery] in the modes or through the instrumentalities by which it is applied in nature is a mere limitation of what every man is able to perceive and reproduce as well as [t]he [patentee]. All endeavors to confine it to himself are at once futile and *unjust*. . . . Not until some new instrument or method is contrived for its

⁷ *See, e.g.,* Hector M. Holmes, *Patent Rights for Scientific Discoveries by C.J. Hamson*, 45 Harv. L. Rev. 1431, 1432 (1932) (“a scientific discoverer is not a creator”).

⁸ Similar concerns animate the copyright doctrine of merger, which precludes protection for an author's expression if it “would effectively accord protection to the idea itself.” *Kregos v. Associated Press*, 937 F.2d 700, 705 (2d Cir. 1991). This is because “ideas are too important to the advancement of knowledge to permit them to be under private ownership.” *CCC Info. Servs., Inc. v. Maclean Hunter Market Repts., Inc.*, 44 F.3d 61, 69 (2d Cir. 1994); *see Baker v. Selden*, 101 U.S. 99, 103 (1879).

direction *towards ends which it cannot naturally accomplish* does his creative genius manifest itself.

Wall v. Leck, 66 F. 552, 558 (9th Cir. 1895) (citing 1 Robinson, *supra*, § 136) (emphasis added).

Unless the patent claimed a creative use or thing that was not analogous to the discovery itself, there could be no patent-eligible invention. See *Ansonia Brass & Copper Co. v. Electric Supply Co.*, 144 U.S. 11, 18 (1892) (“nothing is better settled in this court than that the application of an old process to a new and analogous purpose *does not involve invention*, even if the new result *had not before been contemplated*.”) (emphasis added); *Howe v. Abbott*, 12 F. Cas. 656, 658 (C.C.D. Mass. 1842) (No. 6,766) (“The application of an old process to manufacture an article, to which it had never before been applied, is not a patentable invention.”); cf. *Hotchkiss v. Greenwood*, 52 U.S. (11 How.) 248, 267 (1851) (“[T]here was an absence of that degree of skill and ingenuity which constitute essential elements of every *invention*. . . . [T]he improvement is the work of the skilful mechanic, not that of the inventor.”) (emphasis added). Novelty and utility have never been sufficient for patent eligibility. Were it otherwise, two centuries of this Court’s eligibility precedents would have come out differently.

Two decades after *O’Reilly*, this Court relaxed somewhat the way that patent-eligible inventive creativity could be *claimed*, permitting patents for methods that *creatively* applied discoveries but were

not restricted to particular arrangements of specific machines. *See Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876). But this Court has continued to require creativity in the application itself.⁹ Claiming uncreative but limited applications of discoveries remains insufficient,¹⁰ even if specific machines are employed

⁹ *See, e.g., Dolbear v. American Bell Telephone Co.*, 126 U.S. 1, 534 (1888) (“In the present case the claim is not for the use of a current of electricity in its natural state as it comes from the battery, but for putting a continuous current, in a closed circuit, into a certain specified condition, suited to the transmission of vocal and other sounds, and using it in that condition for that purpose”); *Mackay Radio & Tel. Co. v. Radio Corp. of Am.*, 306 U.S. 86, 94 (1939) (“We assume, without deciding the point, that this advance was *invention* even though it was achieved by the logical application of a known scientific law to a familiar type of antenna.”) (emphasis added); *Funk Bros. Seed Co.*, 333 U.S. at 131 (“The aggregation of select strains of the several species into one product is an application of that newly-discovered natural principle. But however ingenious the discovery of that natural principle may have been, the application of it is hardly more than an advance in the packaging of the inoculants.”). *See generally* Joshua D. Sarnoff, *Patent Eligible Inventions after Bilski: History and Theory*, 63 *Hastings L.J.* __ (forthcoming, Feb. 7, 2011 draft at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1757272) (tracing this history with additional examples).

¹⁰ *See, e.g., Bilski*, 130 S. Ct. at 3231 (“*Flook* established that limiting an abstract idea to one field of use or adding token postsolution components did not make the concept patentable.”); *Chakrabarty*, 440 U.S. at 310 (new biological things must have “markedly different characteristics” from natural discoveries); *id.* (invention requires “a product of human ingenuity ‘having a distinctive name, character [and] use.’”) (quoting *Hartranft v. Wiegmann*, 121 U.S. 609, 615 (1887)); *American Fruit Growers, Inc. v. Brogdex Co.*, 283 U.S. 1, 13 (1931) (“a new and different article must emerge”).

or physical transformations are achieved.¹¹ See Brief of Eleven Law Professors and AARP as *Amici Curiae* in Support of Respondent, at 17-22, *Bilski v. Kappos*, 130 S. Ct. 3218 (2010) (No. 08-964).

B. These Historic Requirements Should Be Recognized as Constitutional Requirements.

As this Court held in *Feist*, Article I, Section 8, clause 8 of the Constitution imposes a threshold requirement of originality (sufficient creativity) for any grant of copyrights. “Originality is a constitutional requirement. . . . [In *The Trade-Mark Cases*, t]he Court explained that originality requires independent creation plus a modicum of creativity. . . . [In *Burrow-Giles*,] the Court emphasized the creative component of originality.” *Feist*, 499 U.S. at 346

¹¹ *Cf. Bilski*, 130 S. Ct. at 3226-27 (“the machine-or-transformation test is a useful and important clue. . . . [i]t is not the sole test for deciding”) (citing, inter alia, *Benson*, 409 U.S. at 63). As the holding in *Bilski* suggests, the machine-or-transformation framework is no test at all. The Court did not rely on it, but rather analyzed the claims under the ineligible abstract idea-insignificant post-solution activity approach. See *id.* at 3231. The machine-or-transformation framework only invites artful claim drafting that adds no *inventive* creativity. See, e.g., *Benson*, 409 U.S. at 72. To avoid confusion, the Court in this case should disavow the machine-or-transform framework as a clue or test, and should mandate judicial and administrative use of the prior art treatment and creative application of ineligible discoveries approach.

(citing *The Trade-Mark Cases*, 100 U.S. 82, 94 (1879), and *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53, 58 (1884)); see Paul J. Heald, *The Vices of Originality*, 1991 Sup.Ct. Rev. 143, 168-75 (Congress may not circumvent the originality requirement by protecting unoriginal works under the Commerce Clause).

Similarly, in *Graham v. John Deere Co.*, 383 U.S. 1 (1966), this Court stated in regard to patents that Article I, Section 8, clause 8:

is both a grant of power and a limitation. . . . to the promotion of advances in the ‘useful arts.’ . . . [The Congress may not] enlarge the patent monopoly without regard to the innovation, advancement or social benefit gained thereby. Moreover, Congress may not authorize the issuance of patents whose effects are to remove existent knowledge from the public domain, or to restrict free access to materials already available.

Id. at 5-6; see *Great A. & P. Tea Co. v. Supermarket Equip. Co.*, 340 U.S. 147, 154-55 (1950) (Douglas, J., concurring) (“[E]very patent case involving validity presents a question which requires reference to a standard written into the Constitution. . . . It is not enough that an article is new and useful.”).

Granting patents on insufficiently creative applications of new discoveries of science, nature and ideas will withdraw existent knowledge from the public domain constructed by the prior art treatment of ineligible discoveries. Given prior art treatment,

creativity in the application of ineligible discoveries is a constitutional requirement.¹²

Prior art treatment of ineligible discoveries is also a constitutional requirement. When the Constitution was enacted, there was a fundamental, widespread belief in a moral duty to create, preserve, and disseminate the public domain of science, nature, and ideas, which (in light of additional concerns over government created monopolies) limited the power granted to Congress to authorize exclusive patent rights *only* to “Inventors” for *their* “Discoveries.” U.S. Const., art. I, § 8, cl. 8; *see Graham*, 363 U.S. at 5; Jefferson Letter, *supra*, at 531; *see generally* Giles S. Rich, *The Relationship Between Patent Practices and the Anti-Monopoly Laws*, 14 Fed. Cir. B.J. 5 (2004-2005) (1942); Harold G. Fox, *Monopolies and Patents: A Study of the History and Future of the Patent Monopoly* (1947). As this Court and lower courts have previously suggested, Congress lacks the power to grant copyrights or patents to those who are not

¹² *See, e.g.*, Walterscheid, *Study, supra*, at 335-44 (discussing arguments for a qualitative invention standard in the Constitution); Edward C. Walterscheid, *The Hotchkiss Unobviousness Standard: Early Judicial Activism in the Patent Law*, 13 J. Intell. Prop. L. 103, 124-26 (2005) (hereinafter “Walterscheid, *Unobviousness*”) (arguing that the Court in *Graham* interpreted the Constitution to impose a requirement of inventive creativity beyond novelty, but did not justify the specific requirement of obviousness on the Constitution).

“Authors” of “Writings” or “Inventors” of “Discoveries.”¹³ This moral duty and restriction on legislative power has been consistently effectuated by Congress, from the first Patent Act through the present. The duty should be understood to protect a fundamental, historical right of the public that may not be abridged by Congress.¹⁴ As Thomas Jefferson reminisced, the

¹³ See, e.g., *Kewanee Oil Co.*, 416 U.S. at 476 (discussing “discovery” and “invention”); *Feist*, 499 U.S. at 346-47 (discussing “writings” and “authors”); *In re Kemper*, 14 F. Cas. 286, 287 (C.C.D. D.C. 1841) (No. 7,687) (“‘Invention differs from discovery.’ . . . A discovery, in this sense, is not the subject of a patent; and it will be found, by a careful perusal of the constitution and laws of the United States upon the subject of patents for useful arts, &c., that it is not there used in this sense, but always as synonymous with invention.”) (citation omitted); Giles S. Rich, *Laying the Ghost of the “Invention” Requirement*, 1 APLA Q.J. 26, 29-34 (1972-73) (hereinafter “Rich, *Laying the Ghost*”) (noting that a qualitative “invention” requirement is reflected in the Constitution’s restriction to “Inventors”); Albert H. Walker, *Text-book of the Patent Laws of the United States of America* 2 (2d ed. 1889) (“The word ‘discovery’ does not have, either in the Constitution or the statute, its broadest signification. It means invention, in those documents, and in them it means nothing else.”); cf. *Mazer v. Stein*, 340 U.S. 201, 220-21 (1954) (Douglas, J., concurring) (“Perhaps these are all ‘writings’ in the constitutional sense. But to me, at least, they are not obviously so. It is time that we came to the problem full face.”).

¹⁴ Cf. *District of Columbia v. Heller*, 554 U.S. 570, 592 (2008) (“This meaning is strongly confirmed by the historical background of the . . . Amendment. We look to this because it has always been widely understood that the . . . Amendment . . . codified a *pre-existing* right.”); *Borough of Duryea, Pa. v. Guarnieri*, 131 S. Ct. 2488, 2503 (2011) (“The reference to ‘the right of the people’ indicates that the Petition Clause was
(Continued on following page)

1790 Patent Board had adopted exclusions for uncreative new uses of pre-existing things shortly after the Constitution was ratified, as otherwise patent rights would “take” this right to free benefit from the public “and give [it] to a monopolist.” Jefferson Letter, *supra*, at 531; *cf. Burrow-Giles*, 111 U.S. at 57 (“The construction placed upon the Constitution by the first act of 1790 . . . is . . . entitled to very great weight.”).

In sum, this Court should declare that the Constitution requires both prior art treatment and the exclusion from eligibility of discoveries of science, nature, and ideas, which creates a public domain of pre-existing and fundamental information and things. This also implies a constitutional requirement for “invention” to reflect creativity in the application of excluded discoveries, without which patents impermissibly withdraw useful knowledge from this public domain.

II. Consistent with the Constitution, the Patent Act Excludes under Section 101 Claims to Uncreative Applications of Ineligible Discoveries.

Since the first Patent Act of 1790, ch. 7, 1 Stat. 109 (Apr. 10, 1790), the Patent Board (later the Patent Office), the Congress, and the courts have excluded from “inventions” uncreative applications of

intended to codify a pre-existing individual right, which means that we must look to historical practice to determine its scope.”).

ineligible discoveries. The Court here should continue to construe the Patent Act to exclude such uncreative applications under Section 101.

A. The Patent Act Has Been Consistently Construed to Require Creativity in the Application of New Discoveries.

In the 1793 Act, Congress confirmed the approach adopted by the Patent Board under the 1790 Act, excluding from “discovery” any simple change “to the form or proportions” of two of the recognized statutory classes of subject matter. Patent Act of 1793, ch. 11, § 2, 1 Stat. 318, 321 (Feb. 21, 1793). Under that Act, lower courts confirmed the exclusions for discoveries and the requirement for additional inventive creativity, including for new uses. *See, e.g., Lowell*, 15 F. Cas. at 1019; *Howe*, 12 F. Cas. at 658.

In the 1836 Patent Act, Congress removed the statutory language regarding changes to form. *See* Patent Act of 1836, ch. 357, § 6, 5 Stat. 117, 119 (July 4, 1836). But this Court continued to construe the statute to exclude such changes and new uses. “If it is old and well known, and applied only to a new purpose, that does not make it patentable.” *Le Roy*, 55 U.S. (14 How.) at 177 (quoting *Bean v. Smallwood*, 2 F. Cas. 1142 (C.C.D. Mass. 1843) (No. 1,173)). The Court reiterated that creativity in the application, or substantial novelty, was required. *See* Edward C. Walterscheid, *Novelty and the Hotchkiss Standard*, 20 Fed. Cir. B.J. 219, 227-28 (2010) (citing cases);

Walterscheid, *Unobviousness, supra*, at 110 (citing Kenneth J. Burchfiel, *Revising the “Original” Patent Clause: Pseudohistory in Constitutional Construction*, 2 Harv. J.L. & Tech. 155, 191-95 (1989)).

In the 1870 Act, Congress did not make any relevant change to the eligibility requirements, preserving the Court’s interpretations of the limits of “invention.” See Patent Act of 1870, ch. 230, § 24, 16 Stat. 200 (July 8, 1870). The Court reiterated these requirements and articulated the non-analogous use standard for distinguishing eligible inventions from ineligible mere applications of new discoveries. See *Ansonia Brass & Copper Co.*, 144 U.S. at 18. The Court in *Funk Brothers Seed Co.* reaffirmed the ineligibility of uncreative applications of ineligible discoveries shortly before Congress adopted the 1952 Patent Act. See 333 U.S. at 130.

B. The 1952 Patent Act Preserved the Requirement for Inventive Creativity in Section 101.

In Section 101 of the Patent Act of 1952, Pub. L. No. 82-593, 66 Stat. 792 (July 19, 1952), Congress retained the structure, categories, and relevant language of the eligibility provision of the 1870 Act, with two exceptions: changing “art” to “process” and expanding the definition of a process (discussed in the

next section).¹⁵ Specifically, Section 101 provides that “[w]hoever *invents or discovers* any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.” 35 U.S.C. § 101 (2006) (emphasis added). Congress thus reiterated in Section 101 of the 1952 Patent Act that patent eligibility requires “invent[ion]s or discover[ie]s” as they were previously understood. *See Alappat*, 33 F.3d at 1553 (Archer, C.J., dissenting) (“The requirement of the patent law that an invention or discovery reside in the *application* of an abstract idea, law of nature, principle, or natural phenomenon is embodied in the language of 35 U.S.C. § 101”) (emphasis in original). The patentability criteria similarly refer to “invention[s],” which are determined under Section 101. *See* 35 U.S.C. §§ 102, 103(a), 112, para. 1 (2006).

¹⁵ *See* H.R. Rep. No. 82-1923, at 6 (1952) (the language of the 1870 Act “has been preserved except that the word ‘art’ which appears in the present statute has been changed to the word ‘process.’ . . . The definition of ‘process’ has been added in Section 100 to make it clear that ‘process or method’ is meant, and also to clarify the present law as to the patentability of certain types of processes or methods as to which some insubstantial doubts have been expressed.”); *id.* at 17 (“The remainder of the definition clarifies the status of processes or methods which involve merely the new use of a known process, machine, manufacture, composition of matter, or material; they are processes or methods under the statute and may be patented provided the conditions for patentability are satisfied.”); Pasquale J. Federico, *Commentary on the New Patent Act*, 75 J. Pat & Trademark Off. Soc’y 161, 176-78 (1993) (1954).

The legislative history also indicates that Congress intended to re-codify the law and to preserve earlier judicial constructions of it,¹⁶ making only two significant changes to the statute – *i.e.*, creation in Section 103 of a new “nonobviousness” standard (discussed further below), and changing the law on contributory infringement. *See* H.R. Rep. No. 82-1923, at 5 (“incorporating a requirement for invention in § 103”). Congress thus recognized and codified *both* in Section 101 (to distinguish ineligible discoveries and insufficiently creative applications of them) and in Section 103 (to evaluate creativity for prior art defined under Section 102, which does not include such discoveries unless previously disclosed) the historic requirement for *invention*. *See* 35 U.S.C. § 101 (“invents or discovers”); 35 U.S.C. § 103(a) (“though the *invention* is not identically disclosed or described as set forth in Section 102”) (emphasis added). In doing so, Congress codified and preserved the categorical exclusions from eligibility, their prior art treatment, and the requirement for creativity in their application.

¹⁶ *See* H.R. Rep. No. 82-1923, at 2, 3 (“Since the sections of the Revised Statutes relating to patents were merely a compilation of the act of July 8, 1870, our present patent law is essentially the act of 1870 with subsequent amendatory and supplemental enactments. . . . [T]he purpose of the bill is to revise and codify the laws relating to patents and enact into law title 35 of the United States Code entitled ‘patents’”).

C. Sections 100(b) and 103 Did Not Alter Section 101’s Requirement for Creativity in the Application.

In enacting a definition of “process” in Section 100(b), Congress intended to modify only one aspect of the earlier eligibility requirements for “invention,” and did so for only one of the statutory classes of invention. *See* 35 U.S.C. § 100(b) (2006) (“The term ‘process’ . . . includes a new use of a known process, machine, manufacture, composition of matter, or material.”). It could not, therefore, have intended to modify generally the requirement for invention codified in the “invents or discovers” language of Section 101. 35 U.S.C. § 101. As the legislative history noted, “[t]he definition of process has been added . . . to clarify the present law as to the patentability of *certain types of processes or methods* as to which some insubstantial doubts have been expressed.” H.R. Rep. No. 82-1923, at 6 (emphasis added). These doubts were based on *In re Thuau*, 135 F.2d 344, 347 (C.C.P.A. 1943), which had held that *no* new uses were eligible as inventions. In authorizing new uses to qualify as process inventions, Congress intended to restore the law of invention to where it had been established by this Court in *Ansonia Brass & Copper Co.*¹⁷ Had Congress intended the more fundamental

¹⁷ *See, e.g.,* Stefan A. Reisenfeld, *The New United States Patent Act in the Light of Comparative Law I*, 102 U. Penn. L. Rev. 291, 299-300 (1954) (“[T]he background of the amendment gives reason to assume that a newly discovered use for a known substance, machine or process is still only patentable if it is not

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changes of authorizing patents for all new uses, altering prior art treatment of new discoveries, and eliminating the requirement for creativity in the application, it certainly would have said so.

Similarly, Congress in 1952 adopted the new terminology of “non-obvious subject matter” in Section 103 to codify the *Hotchkiss* creativity requirement and to reverse earlier decisions by this Court regarding the kind and threshold of creativity required for invention. See H.R. Rep. No. 82-1923, at 7 (“That provision paraphrases language which has often been used in decisions of the courts, and the section is added to the statute for uniformity and definiteness. This section should have a stabilizing effect and minimize great departures which have appeared in some cases.”); *id.* at 18 (“[T]he refusal of patents by the Patent Office, and the invalidation of patents by the courts, on the ground of *lack of invention* or lack of patentable novelty has been followed since at least as early as 1850. This paragraph is added with the view that an explicit statement in the statute may have some stabilizing effect. . . .”)

merely analogous or cognate to the uses heretofore made. . . . [I]t is fair to state that in essence the new statutory definition of ‘process’ restores the broad principles of patentability flowing from a careful analysis of the exposition given by the Supreme Court in the *Ansonia* case.”); Federico, *supra*, at 177-78 (“The reference to the new use of a known machine or manufacture in the definition merely means that processes may utilize old machines or manufactures and the reference to the new use of a known process simply indicates that the procedural steps in a patentable process might be old.”).

(emphasis added). In doing so, Congress also could not have intended the much broader changes of eliminating the exclusions for discoveries, their prior art treatment, and the requirement for creativity in their application. As this Court later held in *Graham*, Congress did not seek to change the law regarding the degree of inventive creativity.

The major distinction is that Congress has emphasized “nonobviousness” as the operative test of the section, rather than the less definite “invention” language of *Hotchkiss* that Congress thought had led to “a large variety” of expressions in decisions and writings.

....

It is undisputed that this section was, for the first time, a statutory expression of an additional requirement for patentability, originally expressed in *Hotchkiss*. It also seems apparent that Congress intended by the last sentence of § 103 to abolish the test it believed this Court announced in the controversial phrase “flash of creative genius,” used in *Cuno Engineering Corp. v. Automatic Devices Corp.*, 314 U.S. 84. . . . (1941).

....

We believe that this legislative history, as well as other sources, shows that the revision was not intended by Congress to change the general level of patentable invention.

383 U.S. at 14, 15, 17.

In sum, when adopting new terminology and creating an explicit requirement for non-obviousness in Section 103, Congress codified in rather than eliminated from Section 103 the requirement for an eligible invention as determined under Section 101. *See* 35 U.S.C. § 103(a) (“though the *invention*”) (emphasis added). Construing the statute to have eliminated the historic exclusions, their prior art treatment, or the requirement for creativity in their application would raise serious constitutional questions. These questions should be avoided. *See Gomez v. United States*, 490 U.S. 858, 864 (1989); *Ashwander v. Tennessee Valley Auth.*, 297 U.S. 288, 346-48 (1936).

Efforts by Judge Rich to recast the legislation, moreover, are simply unavailing. *See, e.g., Rich, Laying the Ghost, supra*, at 29 (“we have *not* had [the ‘requirement for invention’] for the past twenty years. Instead, we have § 103.”). But even if Judge Rich had been correct, there would be no point to preserving as *eligible* inventions under Section 101 uncreative claims applying ineligible science, nature and ideas. Given prior art treatment, such claims will *necessarily* be obvious and thus *unpatentable* under Section 103.

III. Threshold Exclusion under Section 101 Is Critical Here.

It is critically important for the Court to employ Section 101 in its traditional “threshold” role in determining whether an eligible invention has been

created, by applying prior art treatment to ineligible discoveries and by requiring creativity in their application. *Bilski*, 130 S. Ct. at 3225; see *Diehr*, 450 U.S. at 189-90 (noting that Section 101 decisions on eligibility are separate from determinations of the “conditions and requirements” of patentability, which include obviousness under Section 103). This case illustrates why. Absent prior art treatment of the new discovery at issue, the claims here might improperly survive scrutiny under patentability criteria. Given prior art treatment, threshold exclusion under Section 101 is efficient, as uncreative claims applying ineligible discoveries will necessarily fail under less efficient patentability evaluations for Section 103 obviousness. Threshold exclusion under Section 101, moreover, signals that the public domain is off-limits and thereby directs investment and activity towards creative, and potentially patentable, inventions.

A. Without Prior Art Treatment, the Claims at Issue May Improperly Survive Scrutiny Under Sections 101, 102, 103, and 112.

Without treating the new discovery of the particular, correlated levels of the metabolites at issue as prior art, the claims here might improperly survive scrutiny under Sections 101, 102, 103, and 112. First, the claims are clearly directed to physical activity (*e.g.*, “administering a drug” and “determining” a level of the drug) that would qualify as a statutory process but for the exclusion of ineligible discoveries,

prior art treatment, and the requirement for creativity in their application. U.S. Pat. No. 6,680,302, claim 1 (filed Dec. 27, 2001) (hereinafter “‘302 Patent”); *see* 35 U.S.C. § 101; *Bilski*, 130 S. Ct. at 3225-26 (interpreting “‘process’” broadly except by reference to the exclusions for science, nature, and ideas). Assuming for argument that these claims are in fact new by requiring some new, human recognition of the discovered correlation reflected in measured values,¹⁸ they also are useful, practical applications of an ineligible discovery (albeit less useful than if the claim required some action following recognition). *See* 35 U.S.C. § 101 (“new and useful . . . process”). The only novelty would then exist in the recognition step, which is clearly an uncreative application of the *scientific* creativity reflected in the ineligible biological discovery, and the other steps are insignificant, post-solution activities. Without the requirement for creativity *in the application*, the claims might improperly survive under Section 101.

¹⁸ The “wherein” steps of Claim 1 of the ‘302 patent and other claims require only that “the level” of the measured drug (or metabolite) “indicates a need.” ‘302 Patent, claim 1. The administration step and the measuring step for the particular drug were part of the prior art, as was adjusting the dosage based on measurement and recognition of some relationship between measured levels and clinical efficacy and tolerance. *See* Petition for a Writ of Certiorari, *Mayo Collaborative Servs. v. Prometheus Labs, Inc.*, No. 10-1150, at 4-5 (S. Ct. Mar. 17, 2011) (citing sources). Thus, unless “indicates” is construed to require recognition of the discovered correlation, the claims are not new, as the “indicat[ion]” existed in the prior art.

Similarly, without prior art treatment of the ineligible discovered correlation, the claims might improperly be found to be novel inventions under Section 102. The correlation itself would be inherent to any prior art measurements of the metabolite levels, but *recognition* of the correlation (and the benefits that might flow from recognition) may not have occurred before the discovery. *See, e.g.*, Dan L. Burk & Mark A. Lemley, *Inherency*, 47 Wm. & Mary L. Rev. 371, 374-81 (2005) (discussing the requirement of public benefit for finding inherency).

Without prior art treatment, the claims also might improperly be found non-obvious under Section 103. Nothing in the prior art may have provided a “teaching, suggestion, or motivation” to discover and recognize the *specific* correlation. *KSR Int’l. Co. v. Teleflex, Inc.*, 550 U.S. 398, 418 (2007). Biology is unpredictable and it may not have been obvious to try to discover and apply the correlation. *See id.* at 419-21. Nevertheless, a general relationship between dose, efficacy, and tolerance has been known since Paracelsus. *See, e.g.*, W. Norman Aldridge, *Mechanisms and Concepts in Toxicology* 137 (1996). And once the discovered correlation is treated as prior art, recognizing what it indicates is truly trivial.

Finally, the claims might improperly be found to be adequately described and enabled. *See* 35 U.S.C. § 112, para. 1. The specification discloses the newly discovered correlation, the present benefits of applying it in the process, and the method of performing the process in a manner that those skilled in the art

(and probably those who are not) can readily perform.¹⁹ The claims may therefore be found patentable, while lacking any *inventive* creativity. Further, the claims are specific and concrete applications of the discovery, and may not overreach the applicant's *scientific* contribution to the art. *Cf. Ariad*, 598 F.3d at 1353-54 (written description “‘ensure[s] that the scope of the right to exclude . . . does not overreach the scope of the *inventor*'s contribution to the field of art. . . .’”) (citation omitted and emphasis added). But the claims may preempt all practical applications of the ineligible discovery.

Even if the claims preempted only a limited range of uncreative applications, they would constrict the public domain of such discoveries. When disclosed in the patent's specification, discoveries like the correlation at issue are supposed to become public domain information, freely available for immediate use (even without regard to prior art treatment). *See, e.g., Ariad*, 598 F.3d at 1359 (Newman, J., additional views) (“The written description is the way by which the scientific/technologic information embodied in

¹⁹ *See, e.g., Consolidated Electric Light Co. v. McKeesport Light Co.*, 159 U.S. 465, 474 (1895) (“independent experiment” standard for lack of enablement); *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1350-52 (Fed. Cir. 2010) (en banc) (“possession,” “actually invented,” or “‘visualize or recognize’” standard for adequate written description) (citation omitted); *cf. In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988) (“undue experimentation” standard for lack of enablement).

patented inventions is disseminated to the public, for addition to the body of knowledge and for use in further understanding and advance.”). But such claims to uncreative applications only restrict the use of discoveries for further understanding, invention, and benefit.

In sum, without prior art treatment of ineligible discoveries and the requirement for creativity in their application, the claims at issue might improperly be found eligible and patentable and would constrict the public domain.

B. With Prior Art Treatment, The Claims At Issue Will Necessarily Fail Both Section 101 Eligibility Analysis and Less Efficient Section 103 Patentability Analysis.

By its own terms, Section 103 requires a non-obvious “invention,” as defined under Section 101. *See* 35 U.S.C. § 103. There is no inventive creativity in merely applying the new discovery using the prior art method. The correlation at issue requires these conventional, preparatory steps for its recognition; they are merely “token, post-solution components” in the claimed process. *Bilski*, 130 S.Ct. at 3231. *See In re Grams*, 888 F.2d 835, 839 (Fed. Cir. 1989) (given the ineligibility of algorithms, “it follows that the addition of the old and necessary antecedent steps of establishing values for the variables in the equation cannot convert the unpatentable method to

patentable subject matter.”) (quoting *In re Christensen*, 478 F.2d 1392, 1394 (C.C.P.A. 1973)).²⁰ The claims are ineligible, and without invention are unpatentable.

Even if Section 103 did not require “invention,” with prior art treatment such uncreative claims applying ineligible discoveries will *necessarily* be obvious and thus unpatentable under Section 103. *See, e.g., Dann v. Johnston*, 425 U.S. 219, 220 (1976) (reiterating the need to evaluate the differences between the prior art and the claim). The ineligible discovery itself “teach[es], suggest[s], or motivat[es]” the combination with these preparatory steps. *KSR Int’l. Co.*, 550 U.S. at 418, 420.

Preserving the eligibility of such claims under Section 101 only to reject them later under more complex Section 103 patentability evaluations is inefficient. Obviousness decisions under Section 103 are supposed to be made after searching for prior art under Section 102 and by engaging in extensive factual investigations that consider the ability of

²⁰ This would be true even if the preparatory steps were not part of the prior art, or if the claims were to require someone to take action after recognizing the correlation. The fact that the claims would require or result in physical transformations would not supply eligibility and would not prevent the claims from being obvious, as even lay patients would have the common sense to perform the preparatory steps. *See, e.g., Lab. Corp. of Am. Holdings*, 548 U.S. at 138 (noting both restrictions on claim scope and physical transformations required to perform the challenged process); *KSR Int’l. Co.*, 550 U.S. at 418.

skilled persons in the relevant art. *See* 35 U.S.C. § 103(a); *Graham*, 383 U.S. at 17-18. In contrast, ineligibility decisions under Section 101 should be apparent on the face of the patent, as the new discovery and how it is being applied will normally be described by the applicant (and may need to be described to meet the requirements of Section 112, paragraph 1). *See* 35 U.S.C. §§ 101, 112, para. 1. It will be comparatively easy to make a threshold eligibility determination of what (if any) *inventive* creativity is reflected in the claims beyond mere application of a new discovery. *Cf. Diehr*, 450 U.S. at 188-89; *id.* at 213 (Stevens, J., dissenting). Preserving uncreative claims for further evaluation under Section 103 only wastes scarce administrative resources. *Cf. Michael J. Meurer, Patent Examination Priorities*, 51 Wm. & Mary L. Rev. 675, 704 (2009) (suggesting four ways to tailor scarce examination resources).

Worse yet, preserving the eligibility of such claims under Section 101 invites administrative errors under Section 103. Such claims erroneously may be found non-obvious absent prior art treatment. *See supra*. So far, there is no explicit precedent for prior art treatment of ineligible discoveries under Section 103, although “invention” is required. Further, before this Court’s decision in *KSR Int’l. Co.*, even with prior art treatment such claims may wrongly have been found to be non-obvious. New discoveries may not themselves provide an *explicit* teaching, suggestion, or motivation for their own uncreative, limited applications. *See* 550 U.S. at 418.

Here, the discovery of the correlation would not explicitly suggest combining the “wherein . . . indicates” step reflecting the newly discovered correlation with the prior art administering and determining steps, although no creativity is required to do so. ‘302 Patent, claim 1. Even after *KSR International Co.*, mistakes regarding obviousness still happen all too frequently. See, e.g., Yi-Chen Su, *What About Know-How: Heightened Obviousness and Lowered Disclosure is Not a Panacea to the American Patent System for Biotechnology Medication and Pharmaceutical Inventions in the Post-KSR Era*, 14 Marq. Intell. Prop. L. Rev. 321, 363 (2010).

So long as the discovery continues to be treated as prior art, claims like those at issue here will be ineligible and will necessarily be obvious. This Court should bar such claims at the threshold under Section 101.

C. Threshold Exclusion under Section 101 Signals that the Public Domain is Off Limits to the Patent System.

As recognized by Justice Breyer in *Laboratory Corp. of America Holdings*, allowing patents for uncreative applications of science, nature, and fundamental information imposes severe social costs. See 548 U.S. at 128. Threshold exclusion under Section 101 makes clear that such basic information is part of the public domain and is off-limits to patenting. The patent system exists to reward inventive creativity,

not creative claim drafting that restricts free access to pre-existing or fundamental information and things.

Signaling these limits on the patent system has numerous social benefits. The exclusions for science, nature, and ideas under Section 101 identify the need for public funding of scientific discovery. The eligibility requirement for creativity in the application (and the prohibition on claiming insignificant post-solution activity) helps to avoid futile patent applications and signals to investors and inventors that they should direct their funds and activity towards more creative applications of new scientific, natural, and abstract discoveries. *Cf., e.g.,* John H. Barton, *Non-Obviousness*, 43 IDEA 475, 492 (2003) (“at least up to a point, the dynamic benefits of strengthening the non-obviousness standards outweigh the static costs”). Affirming and clarifying these requirements will enhance these benefits.



CONCLUSION

For the foregoing reasons, the Court should affirm the District Court's rejection of the patent claims at issue, hold that prior art treatment of ineligible discoveries of science, nature, or ideas is a constitutional requirement, and reaffirm that patent eligibility ("invention") requires creativity in the application of any such discoveries.

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