

NOTE: This disposition is nonprecedential.

**United States Court of Appeals
for the Federal Circuit**

**BAYER CROPSCIENCE AG, BAYER
CROPSCIENCE NV,**
Plaintiffs-Appellees

v.

**DOW AGROSCIENCES LLC, MYCOGEN PLANT
SCIENCE, INC., AGRIGENETICS, INC., DBA
MYCOGEN SEEDS, LLC, PHYTOGEN SEED
COMPANY, LLC,**
Defendants-Appellants

2016-1530, 2016-1623

Appeals from the United States District Court for the
Eastern District of Virginia in No. 2:12-cv-00047-RAJ-
RJK, Judge Raymond Alvin Jackson.

Decided: March 1, 2017

CHRISTOPHER JAMES GASPAR, Milbank, Tweed, Hadley
& McCloy LLP, New York, NY, argued for plaintiffs-
appellees. Also represented by RYAN HAGGLUND; ROBERT
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LLOYD LEE DAVIS, III, Andrews Kurth Kenyon LLP, Houston, TX, for amicus curiae Jeff C. Dodd.

Before MOORE, TARANTO, and CHEN, *Circuit Judges*.

TARANTO, *Circuit Judge*.

This case involves an international arbitration tribunal's decision on a contract claim, under French law, and patent-infringement claims, under U.S. law, in a dispute between Bayer CropScience NV and Bayer CropScience AG (sometimes collectively, Bayer), on one side, and Dow Agrosciences LLC, Mycogen Plant Science, Inc., Agrigenetics, Inc., and Phytogen Seed Co. (collectively, Dow), on the other. Bayer initially sued Dow for patent infringement, but the district court stayed the action pending arbitration. The arbitral tribunal awarded Bayer approximately \$455 million, including damages for breach of contract and patent infringement, and set a rate for post-award interest. The district court, in the patent-infringement case, confirmed the arbitral award. The court rejected Dow's arguments against the award and also denied Dow's motion to clarify that interest from the date of the district court's judgment would accrue at the statutory rate for post-judgment interest rather than the tribunal's higher post-award rate. Dow appeals.

We conclude that the district court correctly confirmed the award, but abused its discretion regarding post-judgment interest. We modify the judgment to state that interest from the date of the district court's judgment accrues at the federal statutory rate. We affirm the judgment as modified.

I

A

Bayer CropScience NV, a successor of Plant Genetic Systems NV, owns or co-owns the Leemans patent family, which includes U.S. Patent Nos. 5,561,236, 5,646,024, 5,648,477, 7,112,665, and RE44,962. The patents describe and claim various technologies related to the *pat* gene, which confers resistance to the herbicide glufosinate. The Leemans patents issued from continuations of U.S. Patent Application No. 07/131,140 and have similar specifications.

Bayer CropScience AG, a successor of Hoechst AG, owns the Strauch patent family, including U.S. Patent Nos. 5,273,894 and 5,276,268 (Strauch '268). Although not asserted by Bayer CropScience AG, the Strauch patents are indirectly at issue, as the basis for Dow's double-patenting challenge to the Leemans patents. Bayer CropScience AG and Bayer CropScience NV are wholly owned subsidiaries of non-party Bayer AG.

Dow AgroSciences LLC produces the Enlist E3, Enlist E3+IR, Enlist Soybean, Enlist Cotton, Widestrike, and Widestrike 3 products through its subsidiaries, Mycogen Plant Science, Inc., Agrigenetics, Inc., and Phytogen Seed Co. Each of those products contains the *pat* gene. The Enlist E3 products also contain a molecular stack of the *aad-12* and *dmmg* genes. Like the *pat* gene, the *aad-12* and *dmmg* genes confer resistances to herbicides.

In June 1992, Hoechst AG and Lubrizol Genetics, Inc., Dow's predecessor, agreed to cross-license certain technol-

ogies to which they had rights. That agreement (the 1992 Agreement) granted Lubrizol licenses to certain patents, including the Strauch and the Leemans patents. At the time of the agreement, Hoechst owned the Strauch patents and exclusively licensed the Leemans patents from Plant Genetic Systems NV.

Article 4 of the 1992 Agreement restricts the parties' use of the licensed technology:

No right or license is hereby granted, to either party, either expressly or by implication, to use any other proprietary technology owned by or available to the other in connection with the licenses granted hereunder.

Both parties are entitled to grant sublicenses or distribution rights for their Transformants. Hoechst is furthermore entitled to grant sublicenses for gene promoter constructs containing a Promoter in conjunction with any gene of which Hoechst can dispose.

J.A. 886, 4147. Article 12 states that the agreement is to be governed by and construed in accordance with French law and that all controversies or disputes are to be “decided by arbitration in accordance with the Rules of Conciliation and Arbitration of the International Chamber of Commerce.” J.A. 889, 4150.

Between 2007 and 2008, Dow and non-party MS Technologies, LLC entered into a series of agreements regarding the *pat* and *dmmg* genes. In September 2007, MS Tech granted Dow access to the *dmmg* gene, to which MS Tech had a license under a 2004 agreement with Bayer CropScience AG. In April 2008, Dow transferred soybean seed transformants containing the *aad-12*, *pat*, and *dmmg* genes to MS-Tech. Dow and MS Tech's collaboration resulted in the creation of the Enlist E3 products.

In November 2007, Bayer CropScience AG and MS Tech entered into a new agreement, which involved the *dmmg* gene and which transferred ownership of Event FG72 to MS Tech. The agreement required MS Tech to pay Bayer CropScience AG a percentage—in this case, determined to be 50%—of the net trait revenues associated with Event FG72 until 2030.

B

In January 2012, Bayer CropScience AG terminated the 1992 Agreement after accusing Dow of materially breaching Article 4. The same month, Bayer CropScience AG and Bayer CropScience NV sued Dow in the Eastern District of Virginia for infringement of the '236, '024, '477, and '665 patents. Dow moved to dismiss or stay the action based on the agreement's arbitration clause. The district court stayed the action. *See* 9 U.S.C. § 3.

In September 2013, Bayer CropScience NV filed a re-issue application for the '665 patent. *See* 35 U.S.C. § 251. In its application, Bayer CropScience NV stated that reissuance was appropriate in view of the Supreme Court's decision in *Association for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107 (2013). The '665 patent reissued as the RE'962 patent, which expires in 2023. The other patents at issue expired no later than July 2014.

Between November 2014 and August 2015, Dow filed six requests for inter partes reexamination of the '236, '024, '447, and RE'962 patents. *See Ex Parte Leemans*, Control Nos. 90/013,394, 90/013,449, 90/013,452, 90/013,453, 90/013,515, 90/013,563. Dow alleged that claims 8, 9, 12, 15, 18, and 19 of the '236 patent; 1, 15, and 16 of the '024 patent; 1, 2, 15–17, and 19 of the '477 patent; and 1 and 2 of the RE'962 patent were invalid for obviousness-type double patenting over Strauch '268 and '894 and U.S. Patent No. 5,633,434. *See* Control Nos. -394, -449, -452, -453, -515. Dow also alleged that claim 2

of the RE'962 patent would have been obvious over certain prior-art references. Control No. -563. At the examiner level, the Office has issued final rejections in four proceedings, Control Nos. -394, -449, -515, -563, and non-final rejections in the others, Control Nos. -452, -453. Those proceedings remain pending in the Office and do not alter our resolution of this appeal. *See* 35 U.S.C. § 294; *Fresenius USA, Inc. v. Baxter Int'l, Inc.*, 721 F.3d 1330 (Fed. Cir. 2013).

In October 2015, an arbitral tribunal entered an award, finding, in relevant part, that (1) Dow breached the 1992 Agreement by effectively sublicensing the *pat* gene to MS Tech; (2) Dow infringed various claims of the Leemans patents by its creation and other activities involving the identified Enlist and Widestrike product—specifically, claims 8, 9, 12, and 15 of the '236 patent; claims 15 and 16 of the '024 patent; claims 15, 16, and 19 of the '447 patent; and claim 1 of the RE'962 patent; (3) the asserted claims of the '024, '236, '447, '665, and RE'962 patents were not invalid for inadequate written description or lack of enablement; and (4) the '236, '024, '447, and RE'962 patents were not invalid for obviousness-type double patenting over Strauch '268. The tribunal awarded Bayer \$455,459,187 in damages, including \$374,731,000 in lost-opportunity damages under French law for breach of contract and \$67,837,000 in reasonable-royalty damages under U.S. law for patent infringement. The tribunal also awarded Bayer pre-award interest using a rate of 8% and declared that the same rate would apply to “post-award interest.” J.A. 560, 563. Arbitrator George Berman dissented in part, disagreeing with the tribunal’s conclusion of no double patenting.

Bayer moved the district court to confirm the arbitral award. *See* 9 U.S.C. § 207. Dow cross-moved to vacate the award. The court confirmed the award. The court also denied Dow’s motion to amend the judgment to clarify that any interest for a period after the district

court's judgment would accrue at the rate specified by 28 U.S.C. § 1961(a), not at the tribunal's 8% rate for "post-award interest." Dow appeals. We conclude that we have jurisdiction, and we affirm the judgment as modified.

II

We have jurisdiction under 28 U.S.C. § 1295(a)(1), which gives us jurisdiction over any "appeal from a final decision of a district court . . . in any civil action arising under, or in any civil action in which a party has asserted a compulsory counterclaim arising under, any Act of Congress relating to patents." An action arises under the patent laws if the complaint includes a claim asserting a cause of action created by federal patent law. *Christianson v. Colt Indus. Operating Corp.*, 486 U.S. 800, 808–09 (1988). It also arises under the patent laws in certain circumstances where there is no federal cause of action. In *Christianson*, the Court stated that a state-law cause of action arises under federal patent law if "the plaintiff's right to relief necessarily depends on resolution of a substantial question of federal patent law, in that patent law is a necessary element of one of the well-pleaded claims." *Id.* More recently, in *Gunn v. Minton*, 133 S. Ct. 1059 (2013), which concerned patent-law issues involved in a state-law malpractice claim, the Court explained that "federal jurisdiction over a state law claim will lie if a federal issue is: (1) necessarily raised, (2) actually disputed, (3) substantial, and (4) capable of resolution in federal court without disrupting the federal-state balance approved by Congress." *Id.* at 1065; *see also Grable & Sons Metal Prods., Inc. v. Darue Eng'g & Mfg.*, 545 U.S. 308, 314 (2005). In 2011, before the present suit was filed, Congress amended § 1295(a)(1) to extend our jurisdiction to actions that involve compulsory counterclaims arising under the patent laws. 28 U.S.C. § 1295(a)(1); Leahy-Smith America Invents Act, Pub. L. No. 112–29, § 19(b), 125 Stat. 284, 331–32 (2011). That amendment became effective with respect to any civil action filed before Sep-

tember 16, 2011. Leahy-Smith America Invents Act § 19(e), 125 Stat. at 333; *Wawrzynski v. H.J. Heinz Co.*, 728 F.3d 1374, 1378 (Fed. Cir. 2013).

In this case, Bayer's complaint arises under the patent laws. The complaint expressly alleges multiple counts of patent infringement. The district court stayed adjudication of those claims pending arbitration, but did not dismiss the case or the patent claims. After the tribunal entered its award, the court resolved the parties' post-award motions in the same action. Bayer cites, and we are aware of, no authority establishing that the tribunal's adjudication of the patent-infringement claims altered the court's basis for jurisdiction.

The conclusion would not change even if one looked beyond the original complaint to the post-arbitral-award proceedings in the district court. When Dow turned to the court to challenge the arbitral award by way of a motion to vacate, it asserted patent law as a necessary basis for certain challenges to parts of the tribunal's award. *See Gunn*, 133 S. Ct. at 1065. In particular, Dow argued that the Convention on the Recognition and Enforcement of Foreign Arbitral Awards (New York Convention), June 10, 1958, 21 U.S.T. 2517, 330 U.N.T.S. 38, required the court to decide, among other issues, whether enforcement of the award would violate a host of patent-law requirements and policies. *See* New York Convention art. V(2)(b). Those questions were not only "necessarily raised," but also "substantial" and "disputed." *Gunn*, 133 S. Ct. at 1065. Moreover, because French law governed the contract claim, there was no basis for concern that the federal court's determination of the patent-law issues, within the strict limits of arbitral-award review, would "disrupt[] the federal-state balance." *Id.* Thus, whether viewed as a new claim or as a compulsory counterclaim to Bayer's claim for confirmation of the arbitral award, Dow's challenge comes within the *Gunn* standard.

Precedent reinforces the conclusion that we have jurisdiction over this appeal. In *Flex-Foot, Inc. v. CRP, Inc.*, 238 F.3d 1362 (Fed. Cir. 2001), we exercised jurisdiction over a final district-court decision confirming an arbitral award for patent infringement. *Id.* at 1364. Additionally, in *Microchip Technology Inc. v. U.S. Philips Corp.*, 367 F.3d 1350 (Fed. Cir. 2004), we held that we had jurisdiction under § 1292(a)(1) over interlocutory orders denying motions to compel arbitration. *Id.* at 1354–55. The Third and Eighth Circuits have reached the opposite conclusion regarding our jurisdiction over *interlocutory* appeals, but neither has questioned our jurisdiction over final appeals. *Indus. Wire Prods., Inc. v. Costco Wholesale Corp.*, 576 F.3d 516, 518–20 (8th Cir. 2009); *Medtronic AVE, Inc. v. Advanced Cardiovascular Sys., Inc.*, 247 F.3d 44, 51–53 (3d Cir. 2001). To the contrary, the Third Circuit has concluded that we have jurisdiction in situations such as this. *Medtronic AVE*, 247 F.3d at 53.

We are unaware of any instance in which the regional circuits have decided an appeal involving the confirmation or vacatur of an arbitral award for patent infringement. In *DeRosa v. J.P. Walsh & J.L. Marmo Enterprises, Inc.*, 541 F. App'x 250 (4th Cir. 2013), and *Rocket Jewelry Box, Inc. v. Noble Gift Packaging, Inc.*, 157 F.3d 174 (2d Cir. 1998), the parties excluded the patent-related issues from arbitration. *DeRosa* also involved only a counterclaim for patent infringement, which did not suffice to create jurisdiction in cases, like *DeRosa*, filed before September 16, 2011. See *Holmes Grp., Inc. v. Vornado Air Circulation Sys., Inc.*, 535 U.S. 826 (2002); *DeRosa v. J.P. Walsh & J.R. Marmo Enters., Inc.*, 471 F. App'x 902 (Fed. Cir. 2012). Although *Golden v. Lim*, No. 2:15-cv-10795, 2016 WL 520302 (E.D. Mich. Feb. 10, 2016), which is discussed in Bayer's filings, might not have been distinguishable on the same grounds, the Sixth Circuit has since dismissed the appeal in that case. See *Golden v. Lim*, No. 16-1313 (6th Cir. dismissed Apr. 14, 2016).

III

On the merits, we follow the Supreme Court's and relevant regional circuit's law on issues not unique to patent law. *Flex-Foot, Inc.*, 238 F.3d at 1365–66. Nevertheless, we have been shown no reason to think that our conclusions would change under any other circuit's law on matters not squarely controlled by Supreme Court precedent. We review the district court's denial of the motion to vacate the arbitral award without deference and any underlying factual findings for clear error. *Raymond James Fin. Servs., Inc. v. Bishop*, 596 F.3d 183, 190 (4th Cir. 2010). We review the denial of the motion to amend the judgment for abuse of discretion. *Wilkins v. Montgomery*, 751 F.3d 214, 220 (4th Cir. 2014). A court necessarily abuses its discretion if it commits legal error. *Highmark, Inc. v. Allcare Health Mgmt. Sys., Inc.*, 134 S. Ct. 1744, 1748 n.2 (2014). The award of post-judgment interest is a legal question, reviewed without deference. *Hitachi Credit Am. Corp. v. Signet Bank*, 166 F.3d 614, 632–33 (4th Cir. 1999). To the extent that the parties raise issues unique to patent law, we review those issues under our law. *Flex-Foot, Inc.*, 238 F.3d at 1365–66.

A

Judicial review of the arbitral award at issue here is very limited even if, as we assume for present purposes, the standards governing both international and domestic arbitration apply. In numerous ways, the relevant federal statutes and precedents make clear that ordinary legal or factual error is not a ground for disturbing an arbitral award like the one at issue here.

The New York Convention and its enabling statute, 9 U.S.C. §§ 201–208, require that a district court confirm an award “unless it finds one of the grounds for refusal or deferral of recognition or enforcement of the award specified in the said Convention.” 9 U.S.C. § 207. One ground invoked here requires a finding that “the award deals

with a difference [*i.e.*, issue] not contemplated by or not falling within the terms of the submission to arbitration, or contains decisions on matters beyond the scope of the submission to arbitration.” New York Convention art. V(1)(c). Another requires a finding that “recognition or enforcement of the award would be contrary to the public policy” of “the country where recognition or enforcement is sought.” New York Convention art. V(2)(b).

The Federal Arbitration Act likewise strictly limits the grounds for disturbing an arbitral award. *See* 9 U.S.C. §§ 10–11; *Hall Street Assocs., L.L.C. v. Mattel, Inc.*, 552 U.S. 576, 584–89 (2008). For example, the Act permits vacatur “where the arbitrators exceeded their powers.” 9 U.S.C. § 10(a)(4). But as the Supreme Court has explained, the Act authorizes only “the limited review needed to maintain arbitration’s essential virtue of resolving disputes straightaway,” thus ensuring that arbitration not become “merely a prelude to a more cumbersome and time-consuming judicial review process.” *Hall Street Assocs.*, 552 U.S. at 588 (quoting *Kyocera Corp. v. Prudential-Bache Trade Servs., Inc.*, 341 F.3d 987, 998 (9th Cir. 2008)). The Court adhered to those principles in reviewing international arbitral awards under the Act. *BG Grp., PLC v. Republic of Argentina*, 134 S. Ct. 1198, 1206 (2014).

The Fourth Circuit has stated that an award may be vacated if the arbitrators “manifestly disregarded” the applicable law. *Wachovia Sec., LLC v. Brand*, 671 F.3d 472, 480 (4th Cir. 2012). The court has explained that the manifest-disregard ground exists either “as an independent ground for review or as a judicial gloss on the enumerated grounds for vacatur set forth at 9 U.S.C. § 10.” *Id.* at 483 (quoting *Stolt-Nielsen S.A. v. AnimalFeeds Int’l Corp.*, 559 U.S. 662, 672 n.3 (2010)). In one formulation, the ground applies only if the tribunal was “aware of the law, understood it correctly, found it applicable to the case before them, and yet chose to ignore it in propounding

their decision.” *Three S Del., Inc. v. DataQuick Info. Sys., Inc.*, 492 F.3d 520, 529 (4th Cir. 2007) (quoting *Remmey v. PaineWebber, Inc.*, 32 F.3d 143, 149 (4th Cir. 1994)). In another, it applies only if “(1) the applicable legal principle is clearly defined and not subject to reasonable debate; and (2) the arbitrator[s] refused to heed that legal principle.” *Long John Silver’s Rests., Inc. v. Cole*, 514 F.3d 345, 349–50 (4th Cir. 2008) (quoting *Merrill Lynch, Pierce, Fenner & Smith, Inc. v. Jaros*, 70 F.3d 418, 421 (6th Cir. 1995)); *Wachovia*, 671 F.3d at 483. That “carefully circumscribed standard,” the Fourth Circuit has said, “is not an invitation to review the merits of the underlying arbitration.” *Id.* Instead, the standard has “for decades guaranteed that review for manifest disregard not grow into the kind of probing merits review that would undermine the efficiency of arbitration.” *Id.*

Additionally, although an award may be disturbed if it “fails to draw its essence” from the relevant contractual provisions, *MCI Constructors, LLC v. City of Greensboro*, 610 F.3d 849, 857 (4th Cir. 2010) (quoting *Patton v. Signator Ins. Agency, Inc.*, 441 F.3d 230, 234 (4th Cir. 2006)), it does not fail to draw its essence from those provisions merely because the arbitrators misread them, see *Oxford Health Plans LLC v. Sutter*, 133 S. Ct. 2064, 2068 (2013); *Stolt-Nielsen*, 559 U.S. at 671; *United Paperworkers Int’l Union v. Misco, Inc.*, 484 U.S. 29, 38 (1987); *Choice Hotels Int’l, Inc. v. SM Prop. Mgmt., LLC*, 519 F.3d 200, 207 (4th Cir. 2008); *Three S Del.*, 492 F.3d at 527–28. Rather, “as long as the arbitrator is even arguably construing or applying the contract and acting within the scope of his authority, that a court is convinced he committed serious error does not suffice to overturn his decision.” *United Paperworkers Int’l Union*, 484 U.S. at 38; *Choice Hotels Int’l*, 519 F.3d at 207 (quoting *U.S. Postal Serv. v. Am. Postal Workers Union, AFL-CIO*, 204 F.3d 523, 527 (4th Cir. 2000)).

A challenger must meet related, and similarly high, standards to support a refusal to confirm an award as contrary to public policy. In the domestic labor-arbitration context, the Supreme Court has said that, to justify non-enforcement, an asserted public policy “must be well defined and dominant, and is to be ascertained ‘by reference to the laws and legal precedents and not from general considerations of supposed public interests.’” *W.R. Grace & Co. v. Local Union 759, Int’l Union of United Rubber, Cork, Linoleum & Plastic Workers*, 461 U.S. 757, 766 (1983) (quoting *Muschany v. United States*, 324 U.S. 49, 66 (1945)). Relatedly, the Court has recognized the strong policy considerations that favor allowing parties to enter into international arbitral agreements. See *Vimar Seguros y Reaseguros, S.A. v. M/V Sky Reefer*, 515 U.S. 528, 537–39 (1995); *Mitsubishi Motors Corp. v. Soler Chrysler-Plymouth, Inc.*, 473 U.S. 614, 631–40 (1985); *Scherk v. Alberto-Culver Co.*, 417 U.S. 506, 517–18 (1974). Guided by those considerations, the Court has enforced an agreement to arbitrate, over a “public policy” objection that the arbitrators would not permit assertion of a U.S. statutory right, where it was not clear that such a “prospective waiver of a party’s right to pursue statutory remedies” would occur. *Vimar Seguros*, 515 U.S. at 540; see also *Mitsubishi*, 473 U.S. at 637 & n.19.

Courts of appeals have construed the New York Convention’s public-policy exception narrowly. In *Parsons & Whittemore Overseas Co. v. Société Generale De L’Industrie du Papier (RAKTA)*, 508 F.2d 969 (2d Cir. 1974), the Second Circuit stated that, in accordance with general international choice-of-law principles, the exception applies “only where enforcement would violate the forum state’s most basic notions of morality and justice.” *Id.* at 974 (citing 1 Restatement (Second) of the Conflict of Laws § 117 cmt. c, at 340 (Am. Law Inst. 1971)). Most circuits follow that approach. See *Ministry of Def. & Support for the Armed Forces of the Islamic Republic of*

Iran v. Cubic Def. Sys., Inc., 665 F.3d 1091, 1097 (9th Cir. 2011); *TermoRio S.A. E.S.P. v. Electranta S.P.*, 487 F.3d 928, 938 (D.C. Cir. 2007); *Karaha Bodas Co. v. Perusahaan Pertambangan Minyak Dan Gas Bumi Negara*, 364 F.3d 274, 306 (5th Cir. 2004); *Slaney v. Int'l. Amateur Athletic Fed'n*, 244 F.3d 580, 593 (7th Cir. 2001); *M & C Corp. v. Erwin Behr GmbH & Co., KG*, 87 F.3d 844, 851 n.2 (6th Cir. 1996). The Eleventh Circuit has applied the Supreme Court's labor-relations standard to the review of arbitral awards entered under the New York Convention, stressing the standard's strictness. *Indus. Risk Ins. v. M.A.N. Gutehoffnungshutte GmbH*, 141 F.3d 1434, 1445 (11th Cir. 1998). For the purposes of this appeal, any differences between the various approaches are immaterial: under any approach, an asserted policy must be clearly established to justify non-enforcement of an arbitral award. See *W.R. Grace & Co.*, 461 U.S. at 766; *Indus. Risk Ins.*, 141 F.3d at 1445; *Parsons & Whittemore Overseas Co.*, 508 F.2d at 974.

B

Dow's first set of arguments attack parts of the arbitral award as counter to U.S. law or policies governing double patenting and post-patent-expiration royalties. We reject Dow's arguments.

1

The tribunal's rejection of Dow's double-patenting defense to patent infringement does not justify non-enforcement of the award. Dow argued to the tribunal that the Leemans patents were invalid for obviousness-type double patenting in light of *Strauch '268*, contending that the patents were commonly owned by Bayer AG, the parent company of Bayer CropScience AG (owner of the *Strauch* patents) and Bayer CropScience NV (owner or co-owner of the Leemans patents). The tribunal carefully scrutinized Dow's argument, accepted the premise that the Leemans and *Strauch* patents did not claim patent-

bly distinct inventions, but nevertheless rejected the challenge. It concluded that the patents were not commonly owned because Bayer CropScience AG and Bayer CropScience NV were different entities and Dow had not provided sufficient evidence to pierce the corporate veil separating them. We cannot say that the tribunal's conclusion is contrary to public policy or reflects a manifest disregard of the law under the strict standards governing such challenges.¹

It suffices to say that the tribunal's conclusion did not contravene any well-defined, established law applicable to the situation presented here. Dow does not challenge the tribunal's conclusion that, with no common inventors, common ownership of the patents was required for the double-patenting bar to apply. To support its position on common ownership, Dow relies on Manual of Patent Examining Practice (MPEP) § 706.02, which states that patents owned by wholly owned subsidiaries of the same parent company are commonly owned for purposes of deciding what qualifies as prior art under 35 U.S.C. § 103(c). *See* MPEP § 706.02(l)(2)(I), at 700-74. But the MPEP does not have the force of law. *See Ethicon, Inc. v. Quigg*, 849 F.2d 1422, 1425 (Fed. Cir. 1988). And in any event, the MPEP passage is not addressed to double-patenting doctrine.

As we have explained, obviousness-type (or “non-statutory”) double patenting is a judicially-created corollary to “statutory” double patenting, which is itself a judicial gloss on § 101. *See Geneva Pharm., Inc. v. GlaxoSmithKline PLC*, 349 F.3d 1373, 1377–78 (Fed. Cir. 2003). The authoritative source of law in this area is therefore judicial precedent. But while the courts may

¹ The tribunal separately found no common ownership on the ground that Biogen is a co-owner of the Lee-mans patents. We need not address that ground.

someday reach the present situation, they have not yet done so.² The Leemans and Strauch patents, having originated from separate inventors and unrelated companies (Hoechst AG and Plant Genetic Systems), are now held by sibling companies. The tribunal concluded that Dow had not established that the corporate veil separating the companies could be pierced. No precedent cited to the tribunal, or to us, considers and resolves in Dow's favor the doctrinal questions presented by this situation, including those addressed to the policies that underlie the doctrine—the unjustified extension of exclusivity rights against the public and the potential for separate assignee suits enforcing the same rights. *See id.* at 1378; *In re Hubbell*, 709 F.3d 1140, 1145 (Fed. Cir. 2013). With the doctrinal question as unsettled as it is for the present circumstances, the tribunal's rejection of Dow's double-patenting challenge cannot be declared a manifest disregard of law or contrary to public policy.

2

We reach the same conclusion with respect to Dow's argument that the tribunal's contract-damages award is partially unenforceable because it violates U.S. patent-law limits on the recovery of post-expiration royalties for practicing a patent. In *Brulotte v. Thys Co.*, 379 U.S. 29 (1964), the Supreme Court held unenforceable a licensing agreement that required the licensee to pay royalties after the expiration of the patent. Recently, the Court declined to overrule that precedent. *See Kimble v. Marvel Entm't., LLC*, 135 S. Ct. 2401 (2015). Under the standards for public-policy and manifest-disregard challenges, we

² A district-court decision concerning terminal-disclaimer law supports Bayer, not Dow, on this issue. *Email Link Corp. v. Treasure Island, LLC*, No. 2:11-cv-1433-ECR-GWF, 2012 WL 4482576 (D. Nev. Sept. 25, 2012).

conclude, Dow has not established that the contract award—more precisely, the portion of the award reaching past the 2023 expiration of the RE'962 reissue patent—must be vacated based on *Brulotte*.

The tribunal awarded contract damages to compensate Bayer CropScience AG for certain revenues that it would have earned had Dow not breached the 1992 Agreement's restriction on sublicensing certain rights it obtained from Bayer. At the time of the breach, Dow and MS Tech were considering two alternatives, which the parties refer to as "Option B" and "Option C." Although Dow and MS Tech chose Option C, which resulted in the Enlist E3 products, the tribunal found that, in the absence of breach, Option C would have been unavailable, and Dow and MS Tech would have chosen Option B. That option would have required MS Tech to pay licensing revenues to Bayer CropScience AG under the 2007 Bayer-MS Tech agreement, which the tribunal determined to be 50% of net trait revenues associated with Event FG72. The tribunal calculated contract damages based on the revenues that Bayer CropScience AG would have received under that agreement until it expired, in 2030. Although Dow argues that the tribunal misconstrued the amount that Bayer CropScience AG would have received under the 2007 Bayer-MS Tech agreement, *see infra* pp. 22–23, it does not dispute the tribunal's conclusion that the agreement entitled Bayer CropScience AG to at least some revenues.

No established law declares that result prohibited under the *Brulotte* rule. The 1992 Agreement established obligations entirely within the patent period: unless breached earlier, the agreement was to terminate upon expiration of the last covered patent—2023, as relevant here. The pertinent condition set by the Agreement on Dow's use of the *pat* gene—namely, the restriction on sublicensing it to others—neither extends beyond the patent period nor violates any other identified law or

policy. If Dow's predecessor had simply refused to accept the no-sublicensing condition, instead of accepting and then breaching it, Bayer's predecessor could have refused to grant the patent license. In that scenario, according to the tribunal's findings, Dow and MS Tech would have turned to Option B. If they had done so Bayer then would have earned the licensing revenues under the 2007 Bayer-MS Tech agreement that the tribunal awarded here as contract damages under French law. Dow does not allege that the 2007 Bayer-MS Tech agreement, to which Dow is not a party, violates *Brulotte*.

Bayer has not shown why the facts of the present case are materially different from the foregoing scenario. More generally, it has not shown why the contract-damages award is prohibited by sufficiently established legal authority, whether *Brulotte* or its successors, to make the award contrary to public policy or manifestly in disregard of the law. We therefore reject the *Brulotte*-based challenge without deciding whether the *Brulotte* rule involves the kind of public policy that would, where violated, undercut an arbitral award.³

C

Dow presents a number of additional arguments for vacating the arbitral award. It argues that the tribunal exceeded its powers or manifestly disregarded applicable law (or committed some error that would justify vacatur)

³ Dow's invocation of the Constitution's patent clause, U.S. Const. art. I, § 8, cl. 8, does not bolster its argument. If judicial precedent and statutory provisions do not forbid the contract-breach damages here under the limited standards of review of arbitral awards, neither does the Constitution's "limited Times" language, which is no more self-defining, or fundamental, than the language limiting patents to "Inventors" and their "Discoveries."

by (1) rejecting Dow's written description and enablement defenses, (2) ruling on the RE'962 patent, (3) misconstruing the relevant contract provisions, and (4) imposing an 8% rate for pre-award interest. We reject these contentions.

1

Dow challenges the tribunal's rejection of its written-description defense, J.A. 379–95, but its arguments amount to no more than allegations of ordinary legal error. For example, Dow accuses the tribunal of conducting its written-description analysis backwards, by first adopting a claim construction that, according to Dow, improperly narrowed the relevant genus based on the specification's disclosures and then asking whether the narrowed genus was sufficiently disclosed. Similarly, Dow argues invalidity on the ground that the specification directly disclosed only two of the four members of the relevant genus. Dow's assertions do not meet the demanding standards for showing that arbitrators exceeded their powers or manifestly disregard the law. *See Oxford Health Plans*, 133 S. Ct. at 2068; *Stolt-Nielsen*, 559 U.S. at 671; *Hall Street*, 552 U.S. at 584–85; *Wachovia*, 671 F.3d at 481; *Long John Silver's Rests.*, 514 F.3d at 349–50; *Remmey*, 32 F.3d at 149.

The same is true of Dow's challenge to the tribunal's rejection of its enablement defense. J.A. 395–96. In its Phase II submissions, Dow argued to the tribunal that the asserted claims of the '024 and '447 patents were invalid because the specification did not enable monocots. The tribunal rejected that argument because it concluded that the claims did not cover monocots. In doing so, the tribunal properly considered *Plant Genetic Systems, N.V. v. DeKalb Genetics Corp.*, 315 F.3d 1335 (Fed. Cir. 2003), in which this court affirmed the district court's conclusion that certain claims of the '236 patent excluded monocots because they were limited to plants "susceptible to infec-

tion and transformation by *Agrobacterium* and capable of regeneration thereafter.” *Id.* at 1345. After considering *Plant Genetic Systems*, the tribunal in the present matter concluded that the asserted claims were expressly or implicitly limited to *Agrobacterium* transformation. The tribunal’s analysis shows no manifest disregard of law or other error meeting the standards for rejection of arbitral determinations.

2

Dow’s argument that the tribunal exceeded the scope of its powers by including the RE’962 patent in the proceeding, *see* J.A. 325–31, is similarly without merit. The RE’962 patent is a reissue of the ’665 patent, which Bayer asserted earlier in the arbitration.⁴ In its opening Phase II Memorial—filed after the Office allowed the reissue application on April 25, 2014, but before the reissue patent issued on June 24, 2014—Bayer asserted claim 1 of the RE’962 patent. In its Phase II Reply, Dow argued that Article 23(4) of the Rules of Arbitration of the International Chamber of Commerce prohibited parties from raising new claims outside the Terms of Reference without the tribunal’s authorization. The tribunal determined that Bayer’s RE’962 patent-infringement claim was not a “new claim” within the meaning of Article 23(4). J.A. 325,

⁴ The ’665 and RE’962 patents recite only two claims: one specifying an amino-acid sequence; the other, a codon sequence. Where ’665 claim 1 states that amino acid X “is Met or Val,” RE’962 claim 1 limits X to Met and also requires the codon for X to be ATG. ’665 patent, col. 51, lines 44–45; RE’962 patent, col. 51, lines 41–42. Where ’665 claim 2 allows ATG or GTG at a specified place in the codon sequence, RE’962 claim 2 limits that codon to ATG. ’665 patent, col. 52, line 45; RE’962 patent, col. 52, line 41.

330. We see no reason to vacate the arbitral award based on that determination.

The tribunal concluded that whether Bayer's RE'962 patent-infringement claim was a "new claim" under Article 23(4) depended on considerations of "procedural integrity and fairness." J.A. 330. Dow presents no meaningful argument against that aspect of the tribunal's determination: although Dow suggests that the "new claim" standard must mirror U.S. patent law's standard for whether a reissue claim supports intervening rights, it provides no persuasive reason that Article 23(4), a procedural provision governing international arbitration, must follow that standard. Given those considerations, the tribunal determined that Bayer's RE'962 patent-infringement claim was not a new claim because: (1) claim 1 of the RE'962 patent was "fully included in the asserted claim of the '665 patent"; (2) the RE'962 patent "was fully briefed"; and (3) if the RE'962 patent were excluded, it would need "to be dealt with in another proceeding." J.A. 330.

Dow has not presented any persuasive argument justifying judicial reversal of the tribunal's conclusion. Significantly, although Dow broadly asserted to the tribunal that including the RE'962 patent in the arbitration would be fundamentally unfair, it did not present any evidence of concrete prejudice. As far as Dow has shown in this court, it did not identify to the tribunal any particular argument or evidence that it needed greater opportunity to develop and present or that it would have presented if it had known earlier that the RE'962 patent (rather than the '665 patent) would be at issue. *See* J.A. 3049–52. At a minimum, Dow did not identify such an argument in its opening brief in this court. *See SmithKline Beecham Corp. v. Apotex Corp.*, 439 F.3d 1312, 1319 (Fed. Cir. 2006) ("Our law is well established that arguments not raised in the opening brief are waived.").

Dow suggests that we review the tribunal's determination regarding inclusion of the RE'962 patent without deference. But Dow provides no convincing basis for our departing from the established approach to judicial review of whether domestic arbitrators have exceeded their powers in construing the scope of arbitration agreements. In those circumstances, the Supreme Court has applied the same deferential standard that it applies to their determination of other issues. *See Oxford Health Plans*, 133 S. Ct. at 2068; *Stolt-Nielsen*, 559 U.S. at 671. In any event, for the reasons given above, we have been shown no error in the tribunal's construction or application of the "new claim" standard of Article 23(4) to support inclusion of RE'962 in this arbitration.

3

Dow also contends that the tribunal, in calculating lost-opportunity contract damages, misconstrued relevant contract provisions. In particular, Dow challenges the tribunal's reliance on the 50%-revenue provision of § 5.1.1(a)(i) of the 2007 Bayer-MS Tech Agreement instead of § 5.1.1(a)(x). *See* J.A. 448–68. But Dow forfeited this argument by not making it to the tribunal. In its Phase III submissions, Dow argued that Bayer's evidence did not establish harm, causation, or foreseeability. Dow also objected to Bayer's lost-profits theory on due-process grounds. Dow did not present the contract argument it now makes about Bayer's prospective revenues under Option B. We see no basis for excusing Dow's failure to raise this argument and now requiring the arbitral panel to redo its application of contract provisions clearly within its authority to interpret.⁵ We conclude, therefore, that

⁵ Dow's new argument involves the interpretation of contract provisions clearly within the arbitral tribunal's authority to interpret. In this respect, Dow's challenge is quite different from the challenge at issue in *Stolt-*

Dow cannot raise the issue at this juncture. *See Nat'l Wrecking Co. v. Int'l Bhd. of Teamsters, Local 731*, 990 F.2d 957, 960 (7th Cir. 1993) (“Failure to present an issue before an arbitrator waives the issue in an enforcement proceeding.”); *United Food & Commercial Workers Local 100A, AFL-CIO v. John Hofmeister & Son, Inc.*, 950 F.2d 1340, 1343–45 (7th Cir. 1991).

4

For similar reasons, the tribunal did not manifestly disregard Indiana law governing pre-judgment interest. Based on the evidence submitted by the parties, the tribunal found it highly likely that Dow and MS Tech would have pursued Option B if they had not breached the 1992 Hoechst-Lubrizol Agreement. J.A. 464–68, 515–16. The tribunal calculated contract damages based on the amount that Bayer would have received under the 2007 Bayer-MS Tech agreement and awarded pre-award interest based on that amount. The parties agree that Indiana law governs the pre-judgment interest award.

Nielsen, in which the Supreme Court held that an arbitrator exceeded his powers, *i.e.*, acted without a contractual basis, by concluding that the arbitration agreement authorized class arbitration when the parties had stipulated that the contract was silent on the issue. 559 U.S. at 665–65; *see Oxford Health Plans*, 133 S. Ct. at 2069. This case likewise differs from *Bankers Life & Casualty Insurance Co. v. CBRE, Inc.*, 830 F.3d 729 (7th Cir. 2016), in which the Seventh Circuit disapproved the arbitration panel’s reliance on a disclaimer that was outside the scope of the agreement submitted to arbitration. *Id.* at 730–33. *See also Dewan v. Walia*, 544 F. App’x 240, 245–48 (4th Cir. 2013) (arbitrator found release clause enforceable, but nevertheless refused to enforce it).

Dow argues that Indiana law allows pre-judgment interest to be awarded only when “the amount of the claim rests upon a simple calculation and the terms of the contract make such a claim ascertainable.” *Kummerer v. Marshall*, 971 N.E.2d 198, 201 (Ind. Ct. App. 2012) (quoting *Olcott Int’l & Co. v. Micro Data Base Sys., Inc.*, 793 N.E.2d 1063, 1078 (Ind. Ct. App. 2003)). Indiana practice may not be as uniform as Dow suggests. See James P. Nehf, *Contract Damages as Substitute for Full Performance*, 32 Ind. L. Rev. 765, 783, (1999) (“In practice, however, Indiana courts have awarded prejudgment interest even when the terms of the contract did not make the amount of the claim readily ascertainable by mere computation.”). But the tribunal carefully considered and applied Indiana law in evaluating the parties’ arguments regarding pre-award interest. Dow’s challenge amounts to no more than an assertion that the tribunal misapplied the law, which is not enough. See *Long John Silver’s Rests.*, 514 F.3d at 349–50; *Remmey*, 32 F.3d at 149. We therefore decline to vacate the tribunal’s award of pre-award interest.

D

Although we affirm the district court’s decision to confirm the arbitral award, we conclude that the court abused its discretion in denying Dow’s motion to amend the judgment to use the federal statutory rate for post-judgment interest for the period beginning with the entry of the district court’s judgment. 28 U.S.C. § 1961(a) provides that “interest shall be calculated from the date of the entry of the judgment, at a rate equal to the weekly average 1-year constant maturity Treasury yield, as published by the Board of Governors of the Federal Reserve System, for the calendar week preceding the date of the judgment.” Dow argues that the court was obligated to replace the tribunal’s “post-award” interest rate with the statutory post-judgment rate for time after the district court’s judgment. We agree on the facts of this case.

Under the doctrine of merger, when “a valid and final judgment for the payment of money is rendered in favor of the plaintiff, the original claim of the plaintiff is extinguished and a new cause of action on the judgment is substituted for it.” Restatement (Second) of Judgments § 47. Reflecting that notion, numerous circuits have concluded that once a federal court confirms an arbitral award, the award merges into the judgment and the federal rate for post-judgment interest presumptively applies. See *Tricon Energy Ltd. v. Vinmar Int’l, Ltd.*, 718 F.3d 448, 456–460 (5th Cir. 2013); *Newmont U.S.A. Ltd. v. Ins. Co. of N. Am.*, 615 F.3d 1268, 1275–77 (10th Cir. 2010); *Fid. Fed. Bank, FSB v. Durga Ma Corp.*, 387 F.3d 1021, 1023–24 (9th Cir. 2004); *Carte Blanche (Sing.) Pte., Ltd. v. Carte Blanche Int’l, Ltd.*, 888 F.2d 260, 268–70 (2d Cir. 1989); *Parsons & Whittemore Ala. Mach. & Servs. Corp. v. Yeargin Constr. Co.*, 744 F.2d 1482, 1484 (11th Cir. 1984). To overcome this presumption, courts have required the parties or arbitrators to unambiguously express their intent to replace the federal rate for the post-judgment period. See *Tricon Energy*, 718 F.3d at 456–60; *Newmont U.S.A.*, 615 F.3d at 1275–77; *Fid. Fed. Bank*, 387 F.3d at 1023–24; *Westinghouse Credit Corp. v. D’Urso*, 371 F.3d 96, 101–02 (2d Cir. 2004).

We think that the Fourth Circuit would follow the approach taken by its sister circuits and apply the federal post-judgment interest rate in the absence of unambiguous evidence of the parties’ or arbitrators’ contrary intent. In a non-precedential opinion, the Fourth Circuit has applied the same rule to determine whether a contractual interest rate replaced the federal rate. See *Kanawha-Gauley Coal & Coke Co. v. Pittston Minerals Grp., Inc.*, 501 F. App’x 247, 254–55 (4th Cir. 2012) (per curiam). Bayer does not identify any reason that the Fourth Circuit would not apply the same rule to arbitral awards. We are also unaware of any instance in which a federal

court has allowed an interest rate specified in an award to replace the federal rate based on less than clear evidence.

In this case, there is insufficiently clear evidence to displace the federal statutory rate. Here, the tribunal granted “post-award interest” “at the rate of 8% from the date of this Award until full payment.” J.A. 560, 563. And it is undisputed that the tribunal’s attention was not called to the distinction between the time from award to confirmation judgment and the time after confirmation judgment. We see no basis on which to distinguish these circumstances from other grants found to be insufficiently clear to displace the statutory post-judgment rate. See *Tricon Energy*, 718 F.3d at 456–60; *Fid. Fed. Bank*, 387 F.3d at 1023–24; *Westinghouse Credit*, 371 F.3d at 101–02.

The Fifth Circuit’s decision in *Tricon Energy* is especially instructive. There, arbitrators awarded Tricon contract damages and “post-award interest” “at the rate of 8.5% per annum . . . [from] the date of th[e] award, until paid.” 718 F.3d at 459 (alterations in original). The district court awarded post-judgment interest at the statutory rate. *Id.* at 452. The Fifth Circuit affirmed, explaining that, because the “panel did not use the words ‘postjudgment interest,’ it is far from clear that it meant to award postjudgment interest.” *Id.* at 459. The court also rejected Tricon’s contention that because the panel awarded interest “until paid,” the arbitrators meant to replace the federal rate. *Id.* We do not see how this case, in which the tribunal awarded 8% interest “until full payment,” is materially different from the *Tricon Energy* arbitrators’ award of 8.5% interest “until paid.”

Mobil Cerro Negro, Ltd. v. Bolivarian Republic of Venezuela, No. 14 Civ. 8163 (PAE), 2015 WL 926011 (S.D.N.Y. Mar. 4, 2015), is not to the contrary. There, the district court held that the federal post-judgment interest rate did not apply to post-judgment interest awarded

under the Convention on the Settlement of Investment Disputes Between States and Nationals of Other States (ICSID Convention), Mar. 18, 1965, 17 U.S.T. 1271, 575 U.N.T.S. 159. *Id.* at *1–3. In reaching that conclusion, however, the court relied on reasoning that applies to the ICSID Convention, but not the New York Convention. For example, the court noted that the Federal Arbitration Act’s enforcement provisions do not apply to the ICSID Convention. *See* 22 U.S.C. § 1650a. By contrast, the New York Convention’s enabling statute contains no such prohibition. *See* 9 U.S.C. § 208. The court also made specific factual findings regarding the language of the award.

Under 28 U.S.C. § 2106, a federal appellate court “may affirm, modify, vacate, set aside or reverse any judgment, decree, or order of a court lawfully brought before it for review.” In exercising our discretion under that provision, we modify the district court’s judgment to include the relief requested by Dow’s motion to amend. *See Bayer CropScience AG*, No. 2:12-cv-47-RAJ-RJK (E.D. Va. Jan. 21, 2016), ECF Nos. 209–10. Specifically, we modify the district court’s judgment to provide that post-award interest, as set forth in the arbitral award, shall accrue through January 15, 2015, the date on which the court entered judgment, and post-judgment interest shall accrue thereafter at the rate established in § 1961. We affirm the judgment as modified. Like the Fourth Circuit, we believe that this approach is appropriate because the resolution of the parties’ dispute requires only the correction of the relevant interest rates. *See Martin v. Harris*, 560 F.3d 210, 219–22 (4th Cir. 2009); *First Fed. Sav. & Loan Ass’n of S.C. v. Chrysler Credit Corp.*, 981 F.2d 127, 135–36 (4th Cir. 1992). Remand for further proceedings would cause the parties to suffer additional delay and expense with no change in outcome.

IV

For the foregoing reasons, we affirm the district court's decision to confirm the arbitral award. We vacate the court's decision denying Dow's motion to amend the judgment. We modify the court's judgment to provide that post-award interest accrued at the tribunal-set rate through January 15, 2015, and thereafter post-judgment interest shall accrue at the rate established in 28 U.S.C. § 1961. We affirm the judgment as modified.

Costs awarded to Bayer.

AFFIRMED AS MODIFIED