IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AMGEN INC.,
Petitioner,

v.

ALEXION PHARMACEUTICALS,
Patent Owner.

Case IPR2019-00741
U.S. Pat. No. 9,732,149

PETITIONER'S REPLY TO PATENT OWNER'S PRELIMINARY RESPONSE

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This Reply to Patent Owner Alexion Pharmaceuticals' Preliminary Response ("POPR") was authorized in the Board's July 11, 2019 Order (Paper 12) and addresses the applicability of *Neptune Generics, LLC v. Eli Lilly and Co.*, 921 F.3d 1372 (Fed. Cir. 2019) ("*Neptune*") and *Novartis Pharms. Corp. v. West-Ward Pharms. Intl. Ltd.*, 923 F.3d 1051 (Fed. Cir. 2019) ("*West-Ward*") to this case.

I. *Neptune* supports Amgen's unpatentability arguments

As Amgen's Petition explains, Alexion admitted during prosecution of related U.S. App. No. 11/127,438 that it was well-known as early as 2002 "that eculizumab has a G2/G4 Fc portion, *i.e.*, a mutated Fc portion" and that that the antibody "*h5G1.1* … [was] well-known to one of ordinary skill in the art *as eculizumab*…." Pet., 15–16 (quoting AMG1049, 838–839). Alexion's POPR relies on *Neptune* to argue that Amgen committed "legal error" by citing Alexion's admissions because the admissions are allegedly "non-prior art statements made with hindsight." POPR, 37-38. A correct reading of *Neptune*, however, shows it actually *supports Amgen's unpatentability grounds*, not Alexion's defense.

Contrary to Alexion's characterization in the POPR, *Neptune* actually *supports* using a patent owner's post-filing admissions to assess the state of the prior art. *Neptune* directly held that "a patent owner's own disclosures to the FDA *may be considered* in assessing the state of the prior art." *Neptune*, 921 F.3d at 1377 (emphasis added). Nor does *Neptune* overturn or distinguish *Vitronics* or

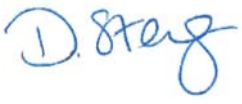
Tyler Refrigeration, cited in the Petition, which hold that a patent applicant's admissions during prosecution are binding on the applicant. Pet., 25, 30, 32, 34, 37 (citing *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996) and *Tyler Refrigeration v. Kysar Indus. Corp*., 777 F.2d 687, 690 (Fed. Cir. 1985)). Alexion's admissions to the Patent Office are highly pertinent and confirm Amgen's characterization of the cited prior art.

Further, the facts here are readily distinguishable from *Neptune* because Amgen's Petition cites Alexion's admissions only as *confirmation* of prior art teachings, and not to establish the state of the art, as was the case in *Neptune*. Pet., 13–14. For example, the Petition explains that Tacken explicitly described—*in 2005*—using "h5G1.1-mAb (5G1.1, *eculizumab*; Alexion Pharmaceuticals)" containing an "*IgG2/IgG4 constant region*." Pet., 15–16 (quoting AMG1034, 1279). Alexion's admissions merely confirm that a POSA would have known in 2005 that eculizumab contains a hybrid IgG2/IgG4 constant region. *Id.* This view of the prior art requires no "hindsight knowledge" as Alexion alleges in its POPR. If anything, Alexion uses hindsight knowledge in its attempt to portray the Thomas reference (AMG1023) as the sole prior art reference related to eculizumab's amino acid sequence, when, in fact, Thomas was merely one of Alexion's many public disclosures containing eculizumab-related amino acid sequence or structure information, all of which would have been known to a POSA.

II. Alexion misuses the *Novartis v. West-Ward* decision

Alexion relies on *West-Ward* to argue that the Petition has not shown that a POSA combining Bowdish, Evans, Bell, and Wang would have had a reasonable expectation of success. POPR, 56. But the facts in *West-Ward* are distinguishable and its holding is inapplicable here. In *West-Ward*, the Federal Circuit concluded that a POSA combining the asserted prior art references would not have had a reasonable expectation of successfully treating renal cancer with the compound of the claims. West-Ward's evidence was insufficient because it provided *no preclinical or clinical efficacy data* for the claimed compound, and because the provided phase I clinical trial safety data was for a *pharmacologically different* compound. *West-Ward*, 923 F.3d at 1054–1055, 1061. The facts here are different because Amgen's Petition cites numerous *eculizumab* clinical trial publications—*i.e.*, trials testing *the claimed antibody*. Moreover, the eculizumab clinical trials cited in the Petition disclose *efficacy* data, not just safety data. Pet., 2-6. In sum, unlike *West-Ward*, Amgen has provided an abundance of evidence that a POSA reading the asserted combinations of art would have had a reasonable expectation of successfully making and using the claimed antibody.

Respectfully submitted,



Date: July 15, 2019

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CERTIFICATE OF SERVICE (37 C.F.R. § 42.6(e))

The undersigned hereby certifies that the above-captioned "Petitioner's Reply to Patent Owner's Preliminary Response" was served in its entirety on July 15, 2019, via electronic mail upon the following counsel for Patent Owner:

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