UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PROGENICS PHARMACEUTICALS, INC., Petitioner,

v.

MAX-PLANCK-GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. AND UNIVERSITAT ZU KOLN, Patent Owners.

PGR2019-00052 Patent 10,112,974 B2

Before GEORGIANNA W. BRADEN, J. JOHN LEE, and MICHAEL A. VALEK, *Administrative Patent Judges*.

VALEK, Administrative Patent Judge.

DECISION Granting Institution of Post-Grant Review 35 U.S.C. § 324

I. INTRODUCTION

Progenics Pharmaceuticals, Inc. ("Petitioner") filed a Petition to institute a post-grant review of claims 1–15 and 31 of U.S. Patent No. 10,112,974 B2 (Ex. 1001, "the '974 patent"). Paper 2 ("Pet."). Max-Plank-Gesellschaft Zur Foerderung Der Wissenschaften E.V. and Universitat Zu Koln, (collectively "Patent Owner") did not file a Preliminary Response to the Petition.

We have authority to determine whether to institute a post-grant review under 35 U.S.C. § 324, which provides that a post-grant review may not be instituted unless the information presented in the petition, if "not rebutted, would demonstrate that it is more likely than not that at least 1 of the claims challenged in the petition is unpatentable." 35 U.S.C. § 324(a). Upon considering the Petition, and based on the current record, we determine Petitioner has demonstrated that it is more likely than not that at least one of the claims challenged in the Petition is unpatentable. Accordingly, we institute a post-grant review of all challenged claims based upon all grounds raised in the Petition.

A. Related Proceedings

Both parties represent they are "not aware of any other judicial or administrative proceedings involving the '974 patent." Pet. 94; *see* Paper 6, 2.

B. The '974 Patent

1. Eligibility for Post-Grant Review

Petitioner certifies that the '974 patent is available for post-grant review. Pet. 95. We agree. Post-grant review is available for patents "described in section 3(n)(1)" of the Leahy-Smith America Invents Act

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("AIA"), Pub L. No. 112-29, 125 Stat. 284 (2011). AIA § 6(f)(2)(A).¹ Those are patents that issue from applications "that contain[] or contained at any time . . . a claim to a claimed invention that has an effective filing date as defined in section 100(i) of title 35, United States Code, that is on or after" "the expiration of the 18-month period beginning on the date of the enactment of" the AIA. *See* AIA § 3(n)(1). The AIA was enacted on September 16, 2011; therefore, post-grant review is available for patents that, at one point, contained at least one claim with an effective filing date, as defined by 35 U.S.C. § 100(i), on or after March 16, 2013. The '974 patent claims priority to a PCT application filed August 24, 2015, as well as two foreign applications filed August 24, 2014 and September 4, 2014. *See* Ex. 1001, 1. Accordingly, the '974 patent is eligible for post-grant review.

2. Patent Disclosure

The '974 patent describes methods and chemical precursors for making "¹⁸F-labelled active esters via nucleophilic substitution of the corresponding onium precursors with ¹⁸F⁻..." Ex. 1001, Abstr. The Specification indicates that such compounds are "useful for positron emission tomography (PET) imaging, especially imaging prostate tumor." *Id.* at 1:14–18. According to the Specification,

In recent years imaging of prostate carcinoma (PCa) with PET isotope labelled PSMA ligands has become of considerable importance in clinical diagnosis. This can mainly be attributed

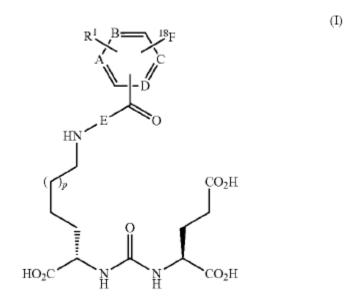
¹ The AIA also requires the petition to be filed within nine months of the issue date of the challenged patent. 35 U.S.C. § 321(c). The '974 patent issued on October 30, 2018. Ex. 1001. The Petition has been accorded a filing date of July 29, 2019, Paper 3, 1, which is within the nine-month window. Thus, Petitioner has timely filed the Petition.

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to the high expression of the extracellular localized prostate specific membrane antigen (PSMA) in PCa. Ligands bearing the syL-C(O)-Glu-binding motif exhibit high binding affinity to PSMA.

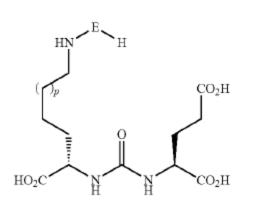
Id. at 5:60–66.

The ¹⁸F-labelled compounds taught in the Specification exhibit a "syL-C(O)-Glu" motif and correspond to general formula (I), which is reproduced below.



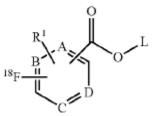
Id. at 7:40–55.² The compounds in formula (II) and formula (III), shown below, are described in the Specification as precursors used to make compounds of formula (I) according to the methods therein.

² The Specification's descriptions for the variables depicted in formulas (I), (II), and (III) are not reproduced here for sake of brevity.

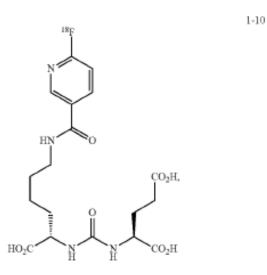


(III)

(II)



The Specification provides numerous examples of compounds corresponding to general formula (I) that may be made with the disclosed methods. *See generally id.* at 26:11–28:10; 45:45–59:60 (listing compounds). One of these examples "[¹⁸F]DCFPyL" or compound 1-10 in the Specification is shown below.



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