

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MALLINCKRODT PHARMACEUTICALS IRELAND LIMITED,
PETITIONER,

v.

BIOVIE, INC.,
PATENT OWNER

CASE IPR2018-00974
PATENT 9,655,945 B2

**PETITIONER'S OPPOSITION TO
PATENT OWNER'S CONTINGENT MOTION TO AMEND**

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PETITIONER'S EXHIBIT LIST

Exhibit 1001	U.S. Patent No. 9,655,945 (“the ‘945 patent”)
Exhibit 1002	Expert Declaration of Dr. Paul Gow
Exhibit 1003	Dr. Paul Gow’s <i>curriculum vitae</i>
Exhibit 1004	Robertson, <i>et al.</i> , Continuous Outpatient Terlipressin Infusion for Hepatorenal Syndrome as a Bridge to Successful Liver Transplantation, <i>Hepatology</i> , December 2014, pp. 2125–2126 (“Robertson”)
Exhibit 1005	Angeli, Terlipressin for the Treatment of Hepatorenal Syndrome in Patients with Cirrhosis, <i>Expert Opinion on Orphan Drugs</i> , 1:3, 241-248, published online February 8, 2013 (“Angeli”)
Exhibit 1006	Fimiani, et al., The Use of Terlipressin in Cirrhotic Patients with Refractory and Normal Renal Function: A Multicentric Study, <i>European Journal of Internal Medicine</i> , 22 (6), 587-590, December 2011 (“Fimiani”)
Exhibit 1007	PharmaIN Press Release, FDA Grants Orphan-Drug Designation for Novel Terlipressin Formulation for the Treatment of Ascites, PharmaIN website, April 1, 2013, available at: http://pharmain.com/fda-grants-orphan-drug-designation-for-novel-terlipressin-formulation-for-the-treatment-of-ascites (“PharmaIN Press Release”)
Exhibit 1008	Excerpts of File Wrapper of Application No. 15/198,050, which became the ‘945 patent (“the ‘945 file wrapper”)
Exhibit 1009	U.S. Patent No. 7,160,853 to Lebrec et al. (“Lebrec”)
Exhibit 1010	Krag et al., Terlipressin Improves Renal Function in Patients with Cirrhosis and Ascites Without Hepatorenal Syndrome, <i>Hepatology</i> , December 2007, pp. 1863-1871 (“Krag”)
Exhibit 1011	Salerno et al., Diagnosis, Prevention and Treatment of Hepatorenal Syndrome in Cirrhosis. <i>Gut</i> , 2007, 56:1310-

	1318. (“Salerno”)
Exhibit 1012	Gerbes et al., Terlipressin for Hepatorenal Syndrome: Continuous Infusion as an Alternative to IV Bolus Administration, <i>Gastroenterology</i> , 2009, 137: 1179-1189 (“Gerbes”)
Exhibit 1013	Piano et al., Continuous recurrence of type 1 hepatorenal syndrome and long-term treatment with terlipressin and albumin: A new exception to MELD score in the allocation system to liver transplantation? <i>Journal of Hepatology</i> , 2011, 55: 491-496 (“Piano”)
Exhibit 1014	Wong et al., Working Party proposal for a revised classification system of renal dysfunction in patients with cirrhosis, <i>Gut</i> , 2011, 60:702-709. (“Wong”)
Exhibit 1015	Shao-Jung Hsu and Hui-Chun Huang, Management of ascites in patients with liver cirrhosis: Recent evidence and controversies, <i>Journal of the Chinese Medical Association</i> , 2013, 76:123-130 (“Hsu”)
Exhibit 1016	Transcript of deposition of Dr. Jaime Bosch taken on May 9, 2019.
Exhibit 1017	Supplemental Expert Declaration of Dr. Paul Gow
Exhibit 1018	Solanki, et. al., Beneficial effects of terlipressin in hepatorenal syndrome: A Prospective, randomized placebo-controlled clinical trial, <i>Journal of Gastroenterology and Hepatology</i> , 2003, 18, 152-156.
Exhibit 1019	Romanelli et. al., Long-term albumin infusion improves survival in patients with cirrhosis and ascites: An unblinded randomized trial, <i>World Journal of Gastroenterology</i> , 2006, 12(9):1403-1407 (“Romanelli”)
Exhibit 1020	Kalambokis et. al., Effects of terlipressin on water excretion after oral water load test in nonazotemic cirrhotic patients with ascites without hyponatremia, <i>Scandinavian Journal of Gastroenterology</i> , 2010, 45:1509-1515 (“Kalambokis 2010”)

I. INTRODUCTION

Petitioner, Mallinckrodt Pharmaceuticals Ireland Limited (“Petitioner”), provides this Opposition to BioVie Inc.’s (“Patent Owner”) Contingent Motion to Amend filed on March 7, 2019 (“PO Mot.”). *See also* Paper #14 at 1 (stipulation of due date for this Reply).

Patent Owner’s Motion to Amend largely repeats the arguments in the Patent Owner’s Response. This is because the only substantive amendment is to amend issued claim 1 to recite what Patent Owner improperly tries to read into claim 1 through claim construction – namely treating ascites. However, the Petition already addresses how the prior art renders obvious treating ascites.

In addition, the proposed amended claims are unpatentable under 35 U.S.C. 112 for lack of written description and enablement. There is no written description supporting the proposition that administering “about 1.0 mg [of telipressin]...per day to the patient for about one day” can treat ascites. In addition, the only written description for administering terlipressin to treat ascites in non-HRS or non-hospitalized patients is a research proposal which does not enable the claims reciting those limitations.

For these reasons, the Board should deny entry of Patent Owner’s Motion to Amend and find that all substitute claims 15-28 are unpatentable.

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