

Petitioner's Reply In Support of Petition

IPR2020-00770

U.S. Patent No. 9,604,901

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LIQUIDIA TECHNOLOGIES, INC.,

Petitioner

v.

UNITED THERAPEUTICS CORPORATION,

Patent Owner

Inter Partes Review No. IPR2020-00770

U.S. Patent No. 9,604,901

PETITIONER'S REPLY

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EXHIBITS

Exhibit No.	Description of Document
1001	U.S. Patent No. 9,604,901 to Batra, et al. (the “’901 Patent”)
1002	Declaration of Jeffrey D. Winkler, Ph.D. (“Winkler Decl.”)
1003	<i>Curriculum Vitae</i> of Dr. Jeffrey D. Winkler
1004	U.S. Patent No. 8,497,393 to Batra, et al. (the “’393 patent”)
1005	<i>SteadyMed Ltd. v. United Therapeutics Corp.</i> , IPR2016-00006, Paper 82 (PTAB March 31, 2017) (“IPR2016-00006”)
1006	Prosecution History of the ’901 Patent
1007	U.S. Patent No. 6,765,117 to Moriarty, et al. (the “’117 patent”)
1008	PCT Application No. WO 2005/007081 (“Phares”)
1009	Moriarty, R.M., et al., “The Intramolecular Asymmetric Pauson-Khand Cyclization as a Novel and General Stereoselective Route to Benzindene Prostacyclins: Synthesis of UT-15 (Trepstinil),” <i>J. Org. Chem.</i> Vol. 69, No. 6, 1890-1902 (2004) (“Moriarty”)
1010	Wiberg, K., <i>Laboratory Technique in Organic Chemistry</i> (1960), p.112 (“Wiberg”)
1011	Schoffstall, A.M. et al., <i>Microscale and Miniscale Organic Chemistry Laboratory Experiments</i> , 2d ed. (2004) pp. 200-202 (“Schoffstall”)
1012	Certified English translation of Japanese Patent App. No. 56-122328A to Kawakami, et al. (“Kawakami”)
1013	Ege, S., <i>Organic Chemistry Second Edition</i> , Ch. 14 Carboxylic Acids and Their Derivatives I. Nucleophilic Substitution Reactions at the Carbonyl Group (1989) pp. 543-547 (“Ege”)
1014	U.S. Patent No. 4,306,075 to Aristoff (the “’075 patent”)
1015	Declaration of Sylvia Hall-Ellis, Ph.D.
1016	Prosecution History of the ’393 patent
1017	Reply Declaration of Jeffrey D. Winkler, Ph.D.
1018	Deposition transcript of Rodolfo Pinal, dated February 10, 2021
1019	Gao, K., “Synthesis of A-Galceramides, (-)-Trepstinil, and Design and Synthesis of Anti-Viral Agents,” Thesis submitted as partial

EXHIBITS

Exhibit No.	Description of Document
	fulfillment of the requirements for the degree of Doctor Of Philosophy in Chemistry in the Graduate College of the University of Illinois at Chicago, 2006
1020	Parks, B.W., et al., "Convenient Synthesis of 6,6-Bicyclic Malonamides: A New Class of Conformationally Preorganized Ligands for f-Block Ion Binding," J. Org. Chem., 71:9622-27 (2006)
1021	Hanessian, S., et al., "Structure-Based Organic Synthesis of a Tricyclic <i>N</i> -Malayamycin Analogue," J. Org. Chem., 71:9807-17 (2006)
1022	Frost, J.M., et al., "Synthesis and Structure – Activity Relationships of 3,8-Diazabicyclo[4.2.0]octane Ligands, Potent Nicotinic Acetylcholine Receptor Agonists," J. Med. Chem., 49:7843-53 (2006)
1023	Regan, J., et al., "Quinol-4-ones as Steroid A-Ring Mimetics in Nonsteroidal Dissociated Glucocorticoid Agonists," J. Med. Chem., 49:7887-96 (2006)
1024	Paulekuhn, G.S., et al., "Trends in Active Pharmaceutical Ingredient Salt Selection based on Analysis of the Orange Book Database," J. Med. Chem., 50:6665-72 (2007)
1025	Mak, K.K.W., et al., "Mannich Reactions in Room Temperature Ionic Liquids (RTILs): An Advanced Undergraduate Project of Green Chemistry and Structural Elucidation," J. Chem. Ed., 83(6):943-46 (2006)
1026	Supplemental Materials to Mak, K.K.W., et al., "Mannich Reactions in Room Temperature Ionic Liquids (RTILs): An Advanced Undergraduate Project of Green Chemistry and Structural Elucidation," J. Chem. Ed., 83(6):943-46 (2006)
1027	Baar, M.R., et al., "Enantiomeric Resolution of (±)-Mandelic Acid by (1 <i>R</i> ,2 <i>S</i>)-(-)-Ephedrine," J. Chem. Ed., 82(7):1040-42 (2005)
1028	Supplemental Materials for Baar, M.R., et al., "Enantiomeric Resolution of (±)-Mandelic Acid by (1 <i>R</i> ,2 <i>S</i>)-(-)-Ephedrine," J. Chem. Ed., 82(7):1040-42 (2005)
1029	Brigandi, L.M., et al., "Synthesis and Analysis of Copper Hydroxy Double Salts," J. Chem. Educ., 82(11):1662 (2005)

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