

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MYLAN PHARMACEUTICALS INC., DR. REDDY'S LABORATORIES, INC.,
and DR. REDDY'S LABORATORIES, LTD.,

Petitioner,

v.

NOVO NORDISK A/S,

Patent Owner.

IPR2023-00724¹

Patent 10,335,462 B2

Reply Declaration of Dr. Allen Spiegel

¹ IPR2024-00009 (Dr. Reddy's Laboratories) has been joined with this proceeding.

TABLE OF CONTENTS

I.	Qualifications and Background	11
A.	Education and Experience; Prior Testimony.....	11
B.	Basis of Opinions and Materials Considered.....	14
C.	Retention and Compensation	15
II.	Summary of Opinions.....	15
III.	Legal Standards	16
IV.	Person of Ordinary Skill in the Art.....	22
V.	Relevant Novo Nordisk Patents and Claims	24
A.	Challenged Patent - U.S. Patent No. 10,335,462	25
B.	U.S. Patent No. 8,129,343.....	29
C.	U.S. Patent No. 8,536,122	33
D.	U.S. Patent No. 8,114,833.....	36
VI.	Claim Constructions	38
VII.	Technical Background and Prior Art.....	39
A.	Diabetes, generally	39
B.	Diabetes treatments	42
C.	GLP-1 receptor agonists and class-wide treatment effects	47
1.	Early GLP-1 receptor agonists.....	49
2.	GLP-1 receptor agonists as a class were understood to reduce HbA1c and body weight.....	50
3.	Liraglutide (Victoza® and Saxenda®).....	52
4.	Semaglutide (Ozempic®)	56
D.	Patent Owner’s related patent and approved product to reduce body weight.....	60
1.	U.S. Patent No. 9,764,003	60
2.	Wegovy®.....	63
E.	The SUSTAIN Trials	65
VIII.	Secondary Considerations Opinions.....	69

TABLE OF CONTENTS

A.	General deficiencies in the Goland Declaration’s opinions.....	69
1.	The Goland Declaration failed to compare the ’462 patent’s claimed semaglutide once weekly 1.0 mg dosing regimen to the closest prior art.....	70
2.	The Goland Declaration failed to support much of its reasoning	72
3.	The Goland Declaration erroneously suggested that the use of Ozempic® according to its label has a nexus with the ’462 patent’s claimed semaglutide once weekly 1.0 mg dosing regimen.....	74
B.	The Goland Declaration did not establish any secondary considerations to support a finding of nonobviousness.....	81
1.	The Goland Declaration failed to establish with relevant evidence that the inventions claimed in the ’462 patent yielded unexpected results	81
2.	The Goland Declaration failed to establish with relevant evidence that the inventions claimed in the ’462 patent satisfied a long-felt but unmet need in the art	98
3.	The Goland Declaration failed to establish with relevant evidence that the inventions claimed in the ’462 patent have been the subject of praise	103
4.	The Goland Declaration failed to establish with relevant evidence that there was skepticism toward the inventions claimed in the ’462 patent.....	110
IX.	Reservation of Rights	114

TABLE OF ABBREVIATIONS

Full Name of Cited Reference	Abbreviation
U.S. Patent No. 9,764,003	'003 patent (EX2002)
U.S. Patent No. 8,536,122	'122 patent (EX1067)
U.S. Patent No. 8,129,343	'343 patent (EX1068)
U.S. Patent No. 10,335,462	'462 patent (EX1001)
U.S. Patent No. 8,114,833	'833 patent (EX1121)
American Diabetes Association, <i>Pharmacologic Approaches to Glycemic Treatment: Standards of Care in Diabetes-2023</i> , 46 DIABETES CARE S140 (2023)	ADA Standards 2023 (EX1122)
Astrup et al., <i>Effects of Liraglutide in the Treatment of Obesity: A Randomised, Double-Blind, Placebo-Controlled Study</i> , 374 LANCET 1606 (2009)	Astrup (EX1096)
Bhansali et al., <i>Historical Overview of Incretin Based Therapies</i> , 58 SUPPL. TO JAPI 10 (2010)	Bhansali (EX1137)
Buse et al., <i>Liraglutide Once a Day Versus Exenatide Twice a Day for Type 2 Diabetes: A 26-Week Randomised, Parallel-Group, Multinational, Open-Label Trial (LEAD-6)</i> , 374 LANCET 39 (2009)	Buse (EX1114)
Highlights of Prescribing Information: Byetta, Rev. 1/2012	Bydureon label (EX1020)
Highlights of Prescribing Information: Byetta, Rev. 10/2009	Byetta label (EX1021)
Centers for Disease Control and Prevention National Diabetes Statistics Report https://www.cdc.gov/diabetes/data/statistics-report/index.html (last accessed May 1, 2024)	CDC Report (EX1115)

TABLE OF ABBREVIATIONS

Full Name of Cited Reference	Abbreviation
CECIL TEXTBOOK OF MEDICINE, Chapters 233 (Obesity) and 242 (Diabetes Mellitus) (Goldman et al. eds., 22nd ed. 2004)	Cecil (EX1129)
Applah, <i>My Best Friends Are Taking Ozempic. Can I Share My Disapproval?</i> , New York Times (June 28, 2023)	Disapproval (EX1117)
Drab, <i>Incretin-Based Therapies for Type 2 Diabetes Mellitus: Current Status and Future Prospects</i> , 30 PHARMACOTHERAPY 609 (2010)	Drab (EX1022)
Garber et al., <i>Liraglutide Versus Glimpiride Monotherapy for Type 2 Diabetes (LEAD-3 Mono): A Randomised, 52-Week, Phase III, Double-Blind, Parallel-Treatment Trial</i> , 373 LANCET 473 (2009)	Garber 2009 (EX1097)
Garber et al., <i>Liraglutide, A Once-Daily Human Glucagon-Like Peptide 1 Analogue, Provides Sustained Improvements in Glycaemic Control and Weight for 2 Years as Monotherapy Compared with Glimpiride in Patients with Type 2 Diabetes</i> , 13 DIABETES OBESITY & METABOLISM 348 (2011)	Garber 2011a (EX1098)
Garber, <i>Long-Acting Glucagon-Like Peptide 1 Receptor Agonists</i> , 34 DIABETES CARE S279 (2011)	Garber 2011b (EX1099)
Transcript of the April 9, 2024 Deposition of Robin S. Goland, M.D.	Goland Dep. (EX1140)
GRADE Research Study Group, <i>Glycemia Reduction in Type 2 Diabetes — Glycemic Outcomes</i> , 387 NEW ENG. J. MED. 1063 (2022)	GRADE (EX1124)
Grunberger et al., <i>Monotherapy with the Once-Weekly GLP-1 Analogue Dulaglutide for 12 Weeks in Patients with Type 2 Diabetes: Dose-Dependent Effects on Glycaemic Control in a Randomized, Double-Blind, Placebo-Controlled Study</i> , 29 DIABETIC MEDICINE 1260 (2012)	Grunberger (EX1109)

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.