Supernus Pharmaceuticals

Jefferies Healthcare Conference

June 2022

Supernus® Pharmaceuticals

Safe Harbor Statement

This presentation and other matters discussed today or answers that may be given to questions asked include forward-looking statements within the meaning of the federal securities laws. These statements, among other things, relate to Supernus' business strategy, goals and expectations concerning its product candidates, ability to integrate the acquired portfolio into its infrastructure, future operations, prospects, plans and objectives of management. The words "anticipate", "believe", "could", "estimate", "expect", "intend", "may", "plan", "predict", "project", "will", and similar terms and phrases are used to identify forward-looking statements in this presentation. Supernus' operations involve risks and uncertainties, many of which are outside its control, including the potential impact of COVID-19, and any one of which, or a combination of which, could materially affect its results of operations and whether the forward-looking statements ultimately prove to be correct. Supernus assumes no obligation to update any forward-looking statements except as required by applicable law.

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Proven Execution in CNS & ADHD

30+ Years of CNS experience including Four Products in ADHD

Supernus® Pharmaceuticals

2005 - Present

- Qelbree® ONCE-A-DAY viloxazine extended-release capsules
- GOCOVRI® (amantadine) extended release capsules 68.5 mg | 137 mg
- Oxtellar XR® (oxcarbazepine) extended-release tablets
- APOKYN® apomorphine hydrochloride injection
- Trokendi XR® (topiramate) extended-release capsules
- XADAGO® (safinamide) tablets
- Osmolex® ER (amantadine) Extended-release Tablets
- MYOBLOC® rimabotulinumtoxinB Injection [5,000 Units/mL]

Pipeline

- SPN-830
- SPN-820
- SPN-817
- SPN-840
- SPN-443
- SPN-446
- SPN-448
- SPN-396

Shire

1997 - 2005

- ADDERALL XR® CII 5 mg, 10 mg, 15 mg, 20 mg, 25 mg, 30 mg CAPSULES (Mixed Salts of a Single-Entity Amphetamine Product) Dextroamphetamine Sulfate · Dextroamphetamine Saccharate · Amphetamine Aspartate Monohydrate · Amphetamine Sulfate
- intuniv® (guanfacine) Extended Release Tablets 1 • 2 • 3 • 4 mg
- Mydayis® CII (mixed salts of a single-entity amphetamine product) 12.5 | 25 | 37.5 | 50 mg extended-release capsules
- Carbatrol® carbamazepine EXTENDED-RELEASE capsules 100 mg · 200 mg · 300 mg

For several years, and prior to becoming independent in 2005, Supernus operated as Shire Laboratories, Inc., a division of Shire.
SPN-830, SPN-820, SPN-817, SPN-840, SPN-443, SPN-446, SPN-448, and SPN-396 are product candidates in various stages of development.
All trademarks are the property of their respective owners

Supernus® Pharmaceuticals

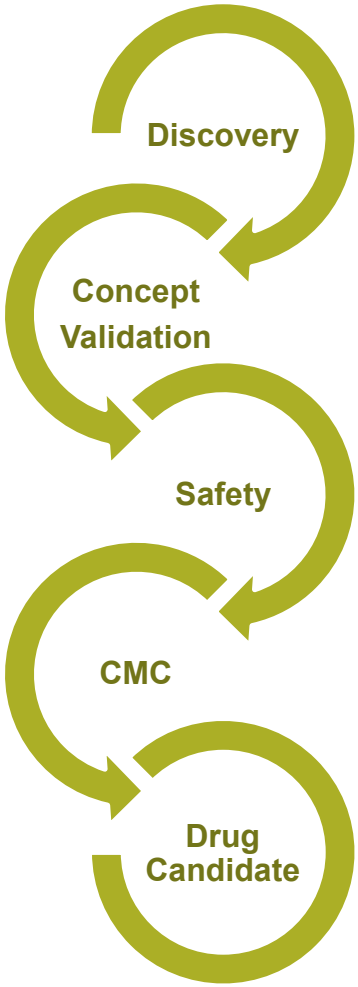
Significant Experience & Capabilities in Drug Development

Discovery Platform

Design and synthesis of new compounds based on structure, function and disease pathways

Toxicology

Validated drug candidates



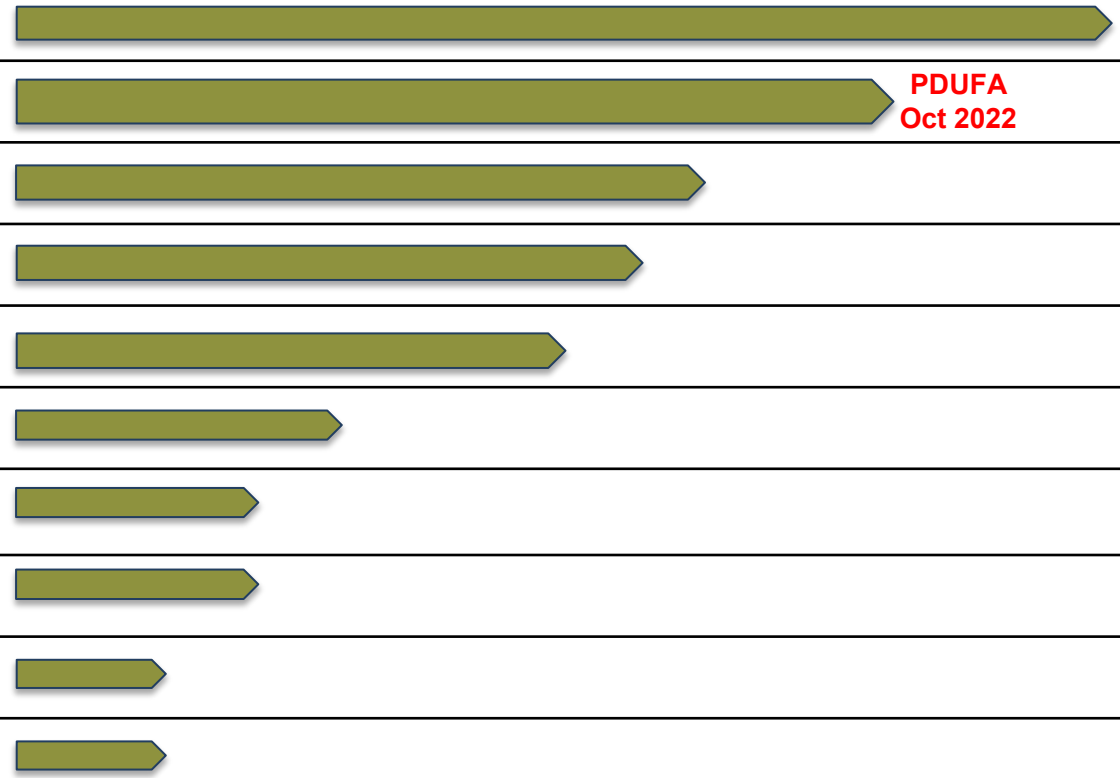
In vitro, PK, preclinical proof of concept, and stability studies

In-house CMC/drug delivery expertise & GMP manufacturing

Supernus® Pharmaceuticals

Robust CNS Pipeline to Drive Long-term Growth

Program	Indications	Discovery	Preclinical	Phase 1	Phase 2	Phase 3	NDA	Market
Qelbree (viloxazine)	ADHD- Adult							
SPN-830	PD						PDUFA Oct 2022	
SPN-840	PD							
SPN-820	TRD*							
SPN-817	Epilepsy							
SPN-845	PD							
SPN-443	ADHD							
SPN-446	CNS							
SPN-448	CNS							
SPN-396	CNS							



*TRD = Treatment Resistant Depression
PD = Parkinson's Disease

Supernus® Pharmaceuticals

Novel Non-Stimulant ADHD Product

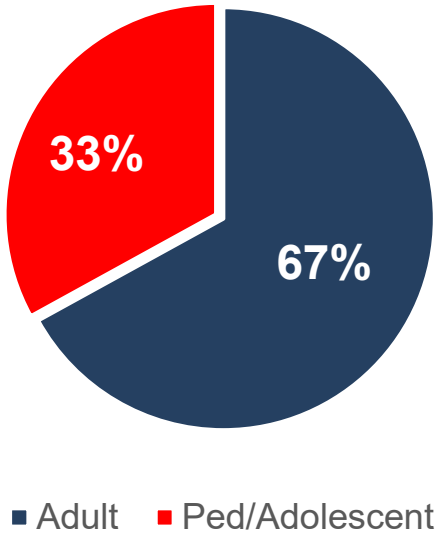
- Launched in May 2021 for patients 6 to 17 years of age
  - Sales force of approximately 195 sales representatives
  - Clinical feedback from the market in line with Phase III clinical data demonstrating a well-differentiated profile
- Launched in May 2022 for adult patients
- IP with expirations from 2029-2033
- ADHD market is significant with 80 million prescriptions/year[1]

1 - Source: IQVIA Jan – Dec 2021

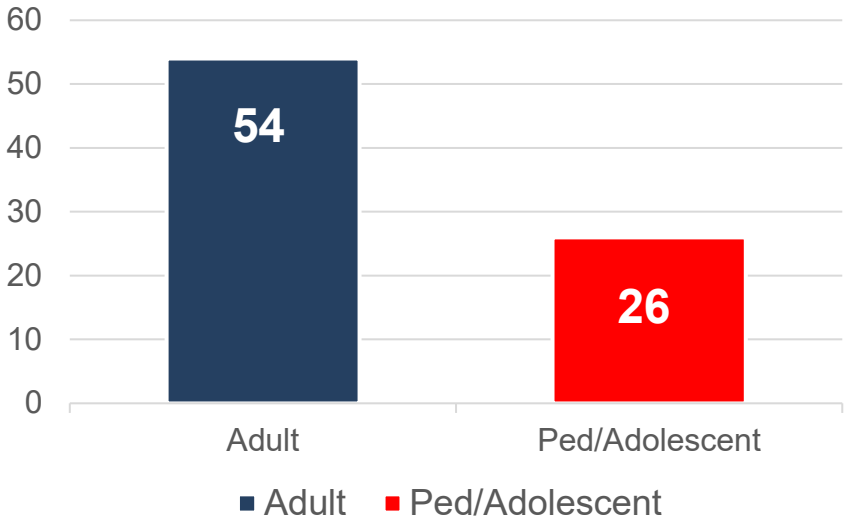
ADHD Adult Opportunity: Significant Market Segment

2021 Total ADHD U.S Market - 80 Million Prescriptions

% of Market



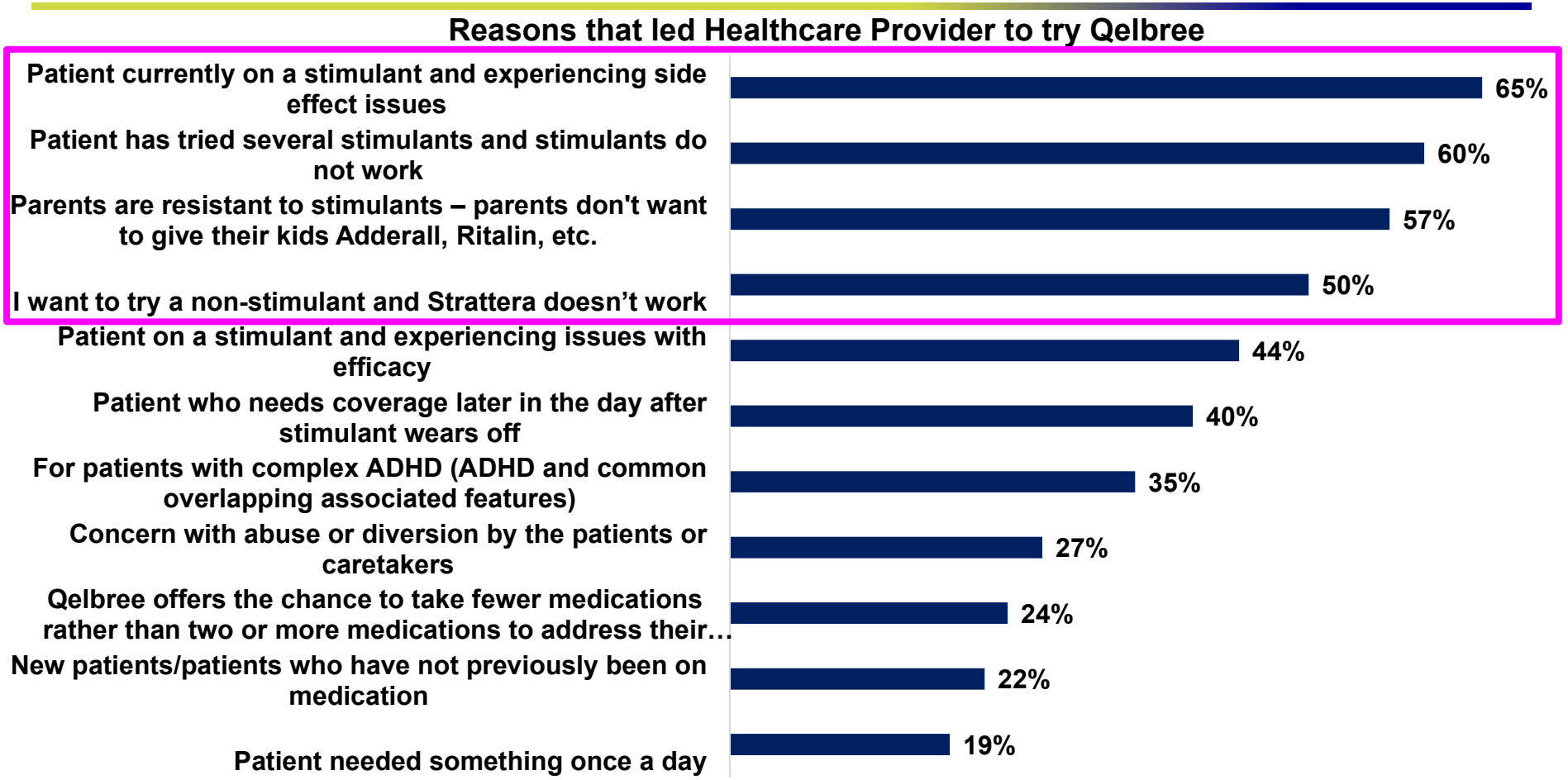
2021 Prescriptions (millions)



Source: IQVIA

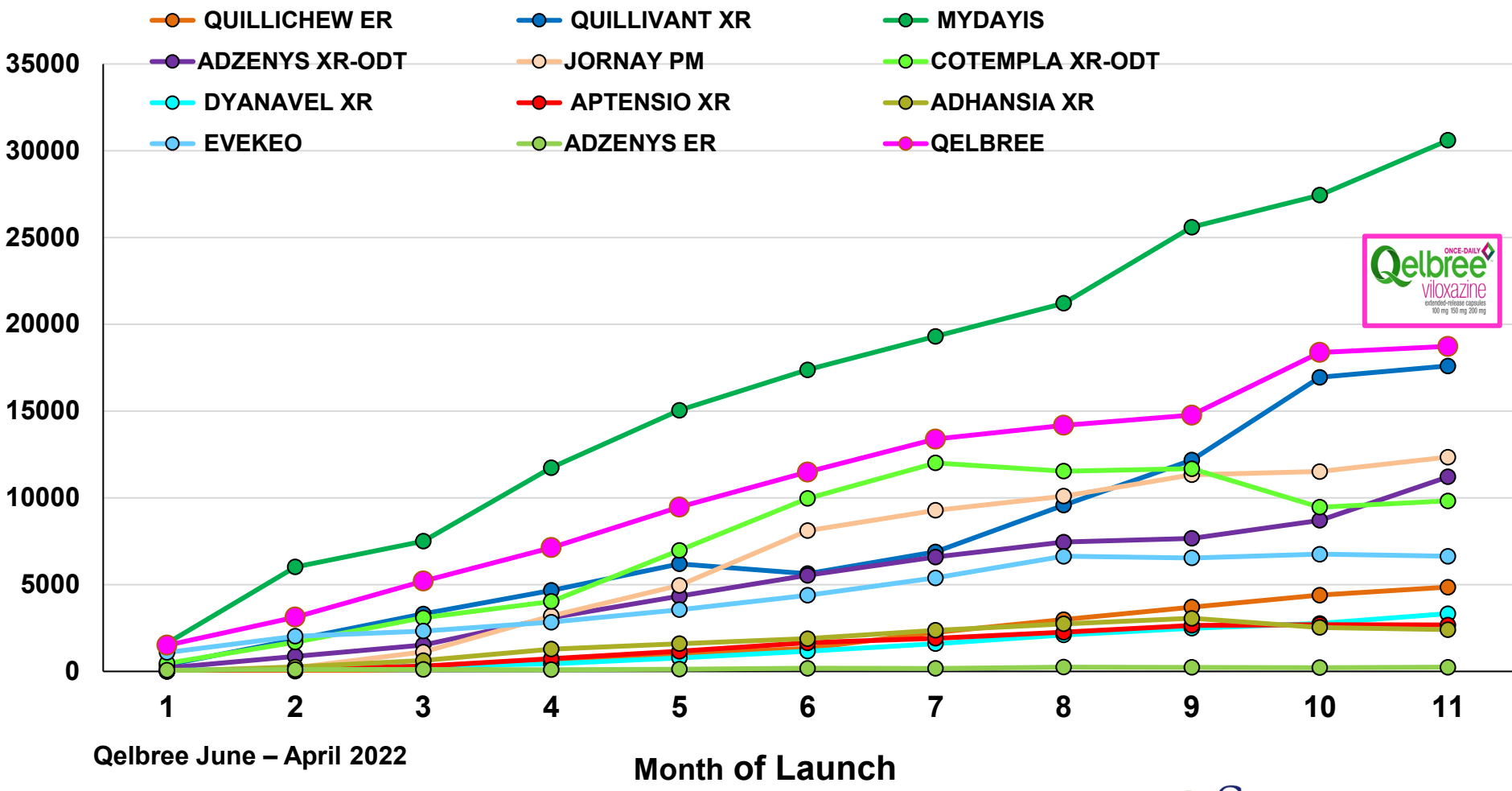
Top Reasons to Try Qelbree®

Patients Having Issues With Stimulants & Looking For a Non-Stimulant That Works



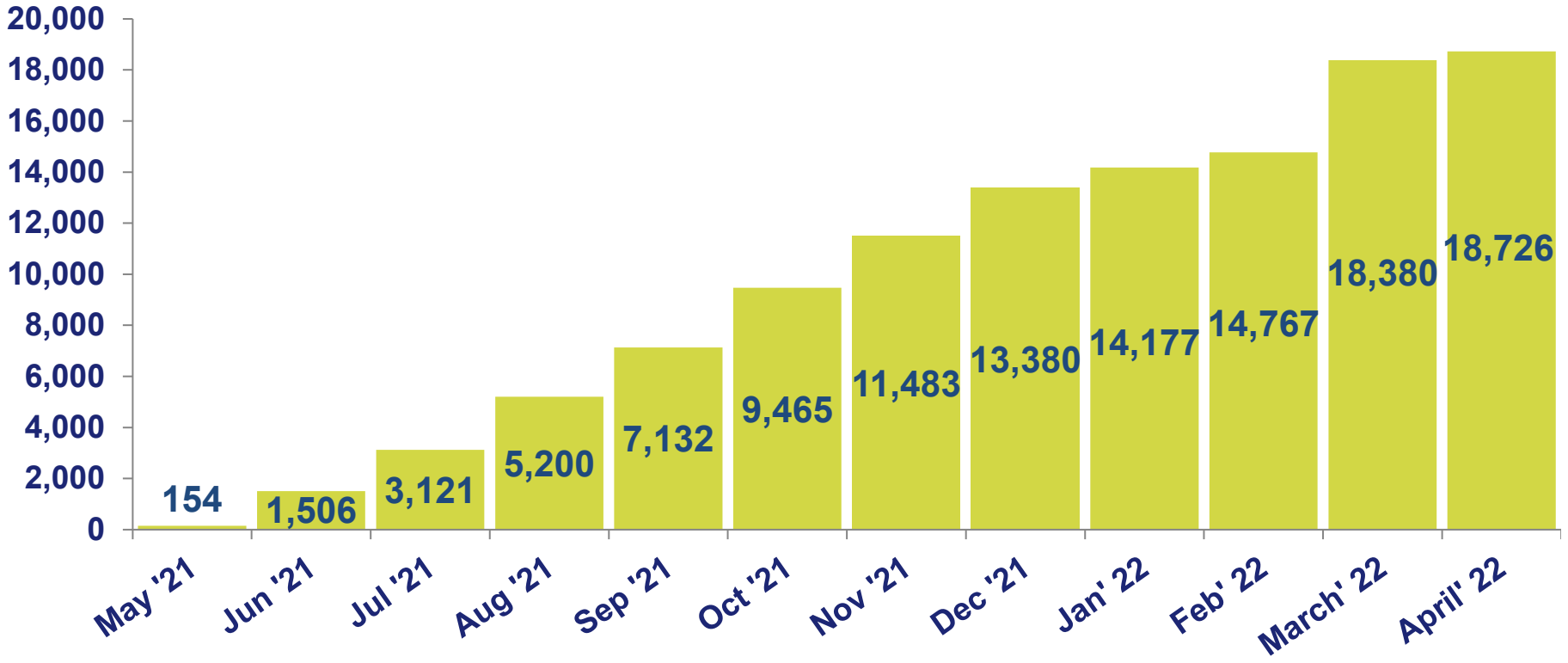
Source: Internal market research among Qelbree prescribers – n=104.
Q28. Thinking about the patients you have put on Qelbree, what medications were they on/what issues were they having that led you to try Qelbree?

ADHD Launch-Aligned Monthly Prescriptions



Source: IQVIA NPA

Monthly Prescriptions since Launch



Source: IQVIA NPA

Major Presence in Parkinson's Disease (PD)

1 Million U.S. PD Patients - Market Expected to Grow to $6.2B by 2026 [1]

1- Global Data Parkinson's Disease Global Drug Forecast and Market Analysis 2026.

Supernus® Pharmaceuticals

GOCOVRI®
(amantadine) extended release capsules
68.5 mg | 137 mg

Significantly Decreased Dyskinesia and OFF Time, Thereby Significantly Increasing Good ON Time

GOCOVRI achieved reductions in dyskinesia & OFF episodes without having to adjust levodopa dose

Placebo-adjusted, pooled results from pivotal trials*

Primary endpoint

↓27%
DECREASE IN DYSKINESIA

10.1-point reduction in UDysRS score

(-17.7 GOCOVRI vs. -7.6 placebo)[1][2]†

Secondary endpoints

↓36%
DECREASE IN OFF TIME

1-hour decrease

(-0.6 GOCOVRI vs. 0.4 placebo)[1][2]†

↑29%
INCREASE IN GOOD ON TIME

2.4-hour increase

(3.8 GOCOVRI vs.1.4 placebo)[1][2]†

(1) Elmer LW, CNS Drugs. 2018.
(2) Data on file. Adamas Pharma LLC, Emeryville, CA.

* Pooled results from 2 independent positive, pivotal, Phase 3, randomized, placebo-controlled trials (Study 1 and Study 2) in PD patients on levodopa. Study 1, a 24-week study, was conducted in 121 PD patients with dyskinesia (GOCOVRI [n = 63], placebo [n = 58]). Study 2, a 12-week study, was conducted in 75 PD patients with dyskinesia (GOCOVRI [n = 37], placebo [n = 38]).

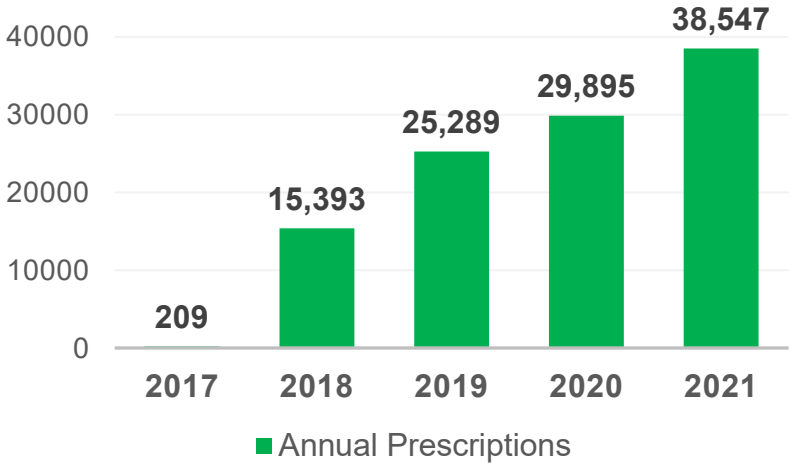
† In Study 1, GOCOVRI reduced the UDysRS total score by 15.9 points (vs 8.0 with placebo) (P = 0.0009), decreased OFF time by 0.6 hours (vs an increase of 0.3 hours with placebo) (P = 0.0171), and increased GOOD ON time by 3.6 hours (vs 0.8 hours with placebo) (P < 0.0001) from baseline. In Study 2, GOCOVRI reduced the UDysRS total score by 20.7 points (vs 6.3 with placebo) (P < 0.0001), decreased OFF time by 0.5 hours (vs an increase of 0.6 hours with placebo)

Supernus® Pharmaceuticals

GOCOVRI® (amantadine) extended release capsules 68.5 mg | 137 mg

A Key Growth Driver

- 2021 Net Sales : $87.6M, 23% growth vs. 2020
  - Supernus recorded $9.8M in 2021 net sales (acquisition closed on Nov 24, 2021)
- For the treatment of dyskinesia in patients with PD receiving levodopa-based therapy, with or without concomitant dopaminergic medications
- Adjunctive treatment to levodopa/carbidopa in patients with PD experiencing “off” episodes



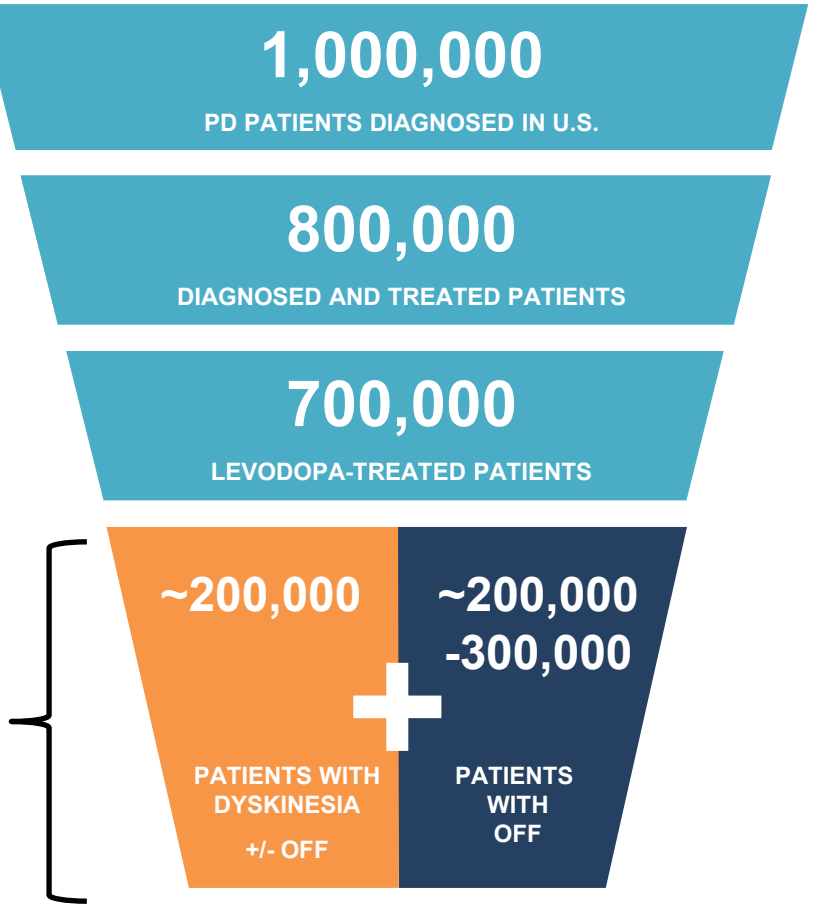
Source: Company Records

Supernus® Pharmaceuticals

GOCOVRI®
(amantadine) extended release capsules
68.5 mg | 137 mg

Significant Target Patient Population

Over 50% of people with PD experience OFF episodes, dyskinesia or both within 5 years, and up to 100% after 10 years (1)(2)



GOCOVRI potential addressable U.S. patient population

400,000 to 500,000 patients(3)

(1) Kim H-J, et al., Mov Disord, 2020.

(2) Mizuno Y et al., Journal of Neural Transmission, 2018

(3) Estimated based on market research.

Supernus® Pharmaceuticals

SPN-830
Novel Apomorphine Subcutaneous Injection Device

- Non-invasive dopaminergic stimulation therapy for continuous treatment of ON-OFF episodes in PD
- Potentially first non-surgical continuous dopaminergic stimulation device
- Currently available options
  - Gastro-intestinal surgically implanted levodopa/carbidopa infusion
  - Deep brain stimulation
- Could be eligible for Orphan Drug Designation and 7-year exclusivity
- NDA filing accepted by FDA with early October 2022 PDUFA

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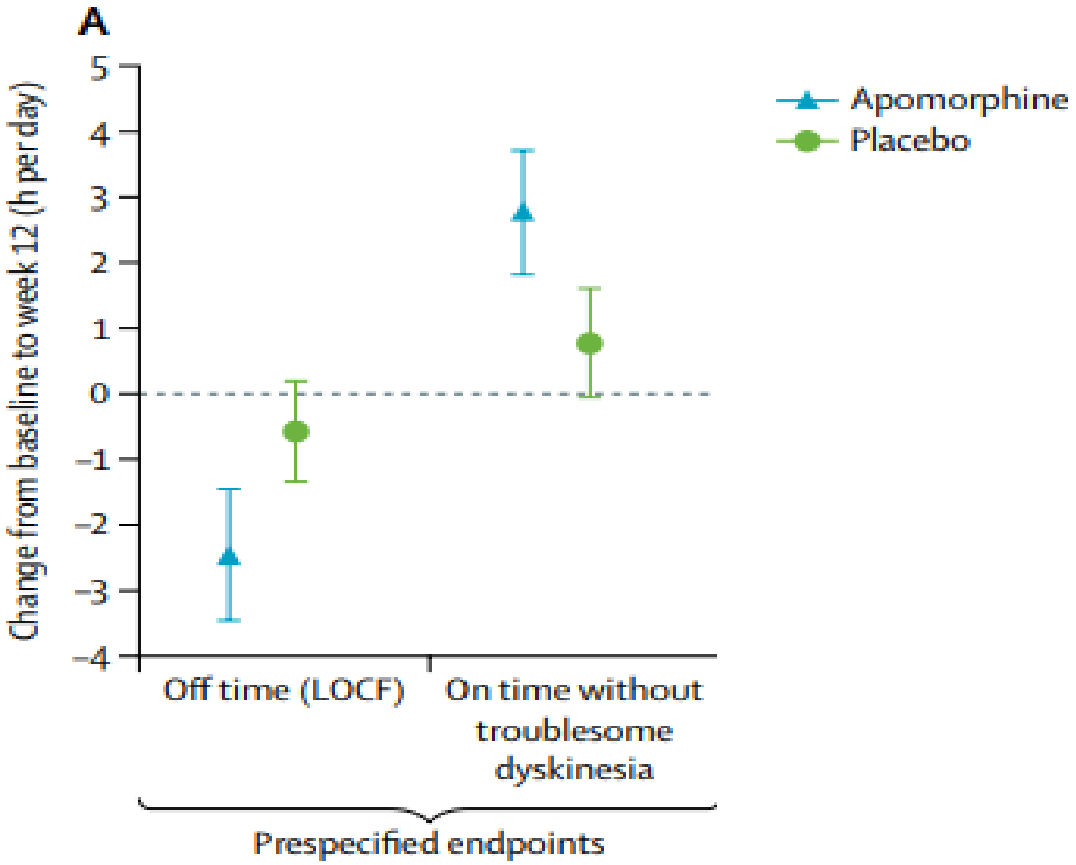
SPN-830
Novel Apomorphine Subcutaneous Injection Device

TOLEDO Phase III Study Results



Primary Endpoint

SPN-830 demonstrated a 2.47 hours per day reduction in OFF time compared to placebo (0.58); p= 0.0025

Regina Katzenschlager et al, The Lancet Neurology. 2018;Vol 17(9):749-759

Supernus® Pharmaceuticals

SPN-820

Novel MOA for Treatment-Resistant Depression (TRD)

- First-in-class selective brain mTORC1 activator
  - Directly activates mTORC1 enhancing synaptic activity and cellular metabolism in the brain
- Early efficacy signal on HAMD-6 scale in TRD patients
  - Rapid onset of action (signal at 2 hours)
  - Meaningful effect sizes (>0.4 through 3 days on 1 dose)
- Multiple ascending dose (MAD) study demonstrated:
  - drug penetration and target engagement
  - favorable safety/tolerability profile across broad range of doses
- Initiated Phase II clinical trial in TRD
- Significant market opportunity
  - Major depressive disorder (MDD) affects approximately 17.3M U.S. adults[1]
  - ~30% of MDD patients are treatment resistant[2]

1- National Institute of Mental Health, 2017 National Survey on Drug Use and health
2- Rush AJ Et al.(2006) Acute and Longer-Term Outcomes in Depressed Outpatients Requiring One or Several Treatment Steps: A STAR*D Report. The American Journal of Psychiatry,163(11), 1905-1917

Supernus® Pharmaceuticals

SPN-820
Multiple Ascending Dose Study

- Healthy subjects, placebo-controlled pharmacokinetic study
  - 5 Cohorts: 400 mg, 800 mg, 1600 mg, 2400 mg and 3000 mg
- Plasma & cerebrospinal fluid (CSF) drug concentration
  - 400 mg – 2400 mg dose levels
  - Single dose, at Day 1
  - Multiple doses, at Day 7
- Metabolomic biomarkers of mTORC1 activation
  - Concentrations measured in CSF for 400 mg – 2400 mg dose levels
  - N-acetylmethionine
  - N-formylmethionine
  - Orotic acid

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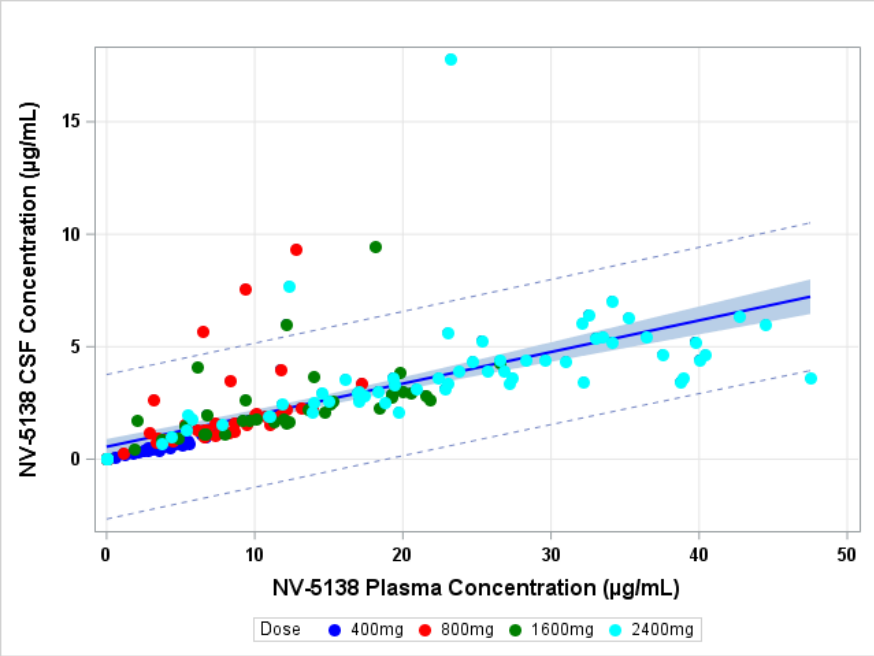
SPN-820 CSF Concentration vs. Plasma Concentration



SPN-820/NV-5138 CSF concentrations significantly increase with the increase in plasma concentrations ($p < 0.0001$)

Dots represent the observed data, the solid line represent the model predicted curve, the shaded area represent the 95% confidence interval on the predicted curve, and the dotted lines delimit the 95% prediction interval.

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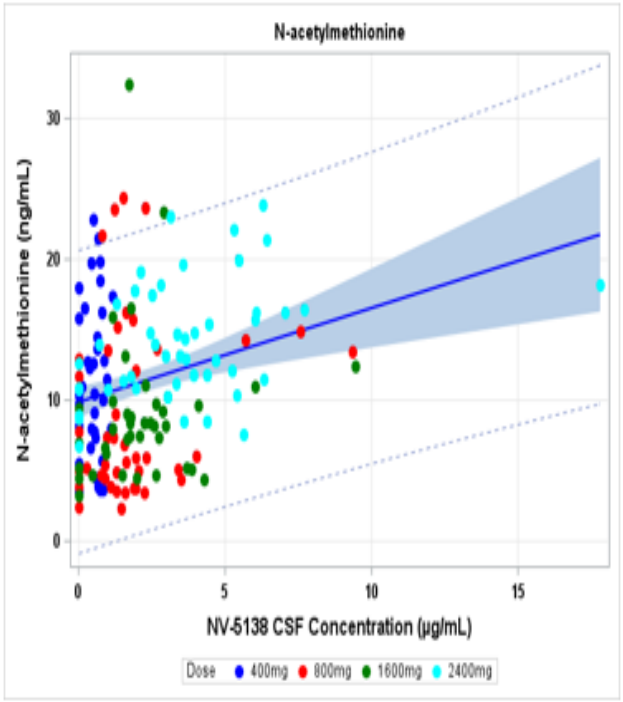
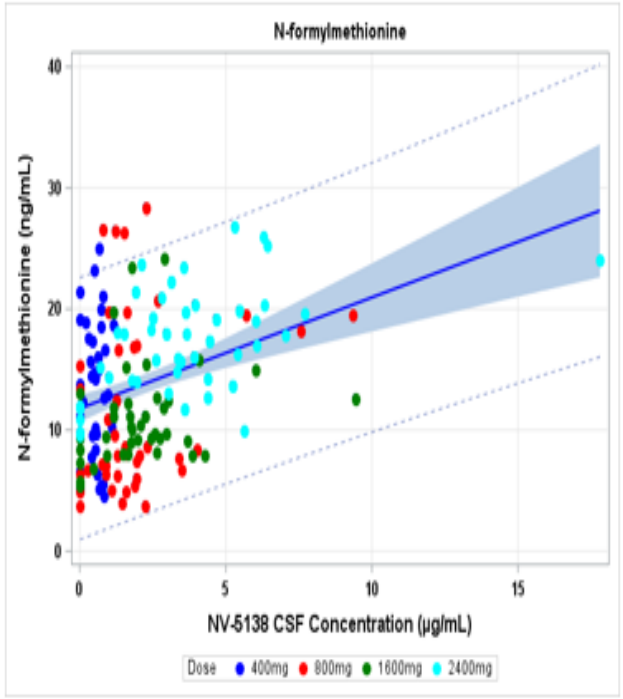
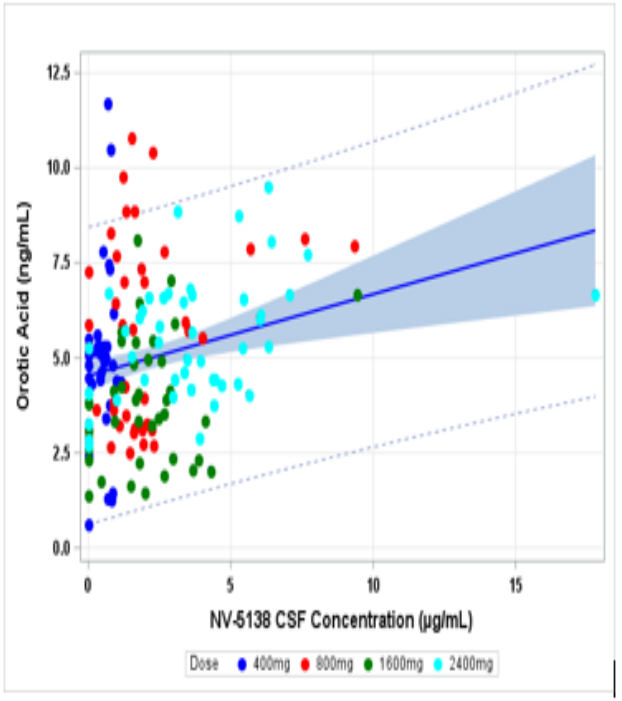
Biomarker Concentrations vs. SPN-820 CSF Concentrations







Dots represent the observed data, the solid line represent the model predicted curve, the shaded area represent the 95% confidence interval on the predicted curve, and the dotted lines delimit the 95% prediction interval.

Biomarker concentrations significantly increase with the increase of SPN-820/NV-5138 CSF concentrations

Financial Summary and Guidance

1Q 2022 Financial Results[1]

- Total revenues of $152.5 million, up 16% over 1Q 2021
- Net earnings and diluted earnings per share (GAAP) of $25.6 million and $0.43, respectively
- Operating income (GAAP) of $2.0 million; operating income (non-GAAP) of $28.0 million
- Cash, cash equivalents, and investments at $437.5 million as of March 31, 2022

[1] Reported on May 9, 2022, including reconciliation of GAAP vs Non-GAAP

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Financial Summary and Guidance

Full Year 2022 Financial Guidance[1]

	($ millions)
Total Revenues	**$640 - $680**
Combined R&D and SG&A expenses	**$460 - $490**
Operating Earnings - GAAP	**$20 - $40**
Adjustments:	
Amortization of intangible assets	$80 - $85
Share-based compensation	$20 - $25
Contingent consideration	$8 - $12
Depreciation	$2 - $3
Operating Earnings - non-GAAP	**$130 - $165**

[1] Guidance as confirmed on May 9, 2022

Supernus® Pharmaceuticals

Positioned For Long-Term Growth

Diversified CNS Portfolio

Qelbree®, Oxtellar XR® , Trokendi XR® , APOKYN®, GOCOVRI®, XADAGO®, MYOBLOC®

Innovative Pipeline in CNS

Qelbree®	ADHD (Adult)
SPN-830	PD
SPN-820	TRD
SPN-840/845	PD
SPN-817	Epilepsy
SPN-443	ADHD
SPN-446/448/396	CNS

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