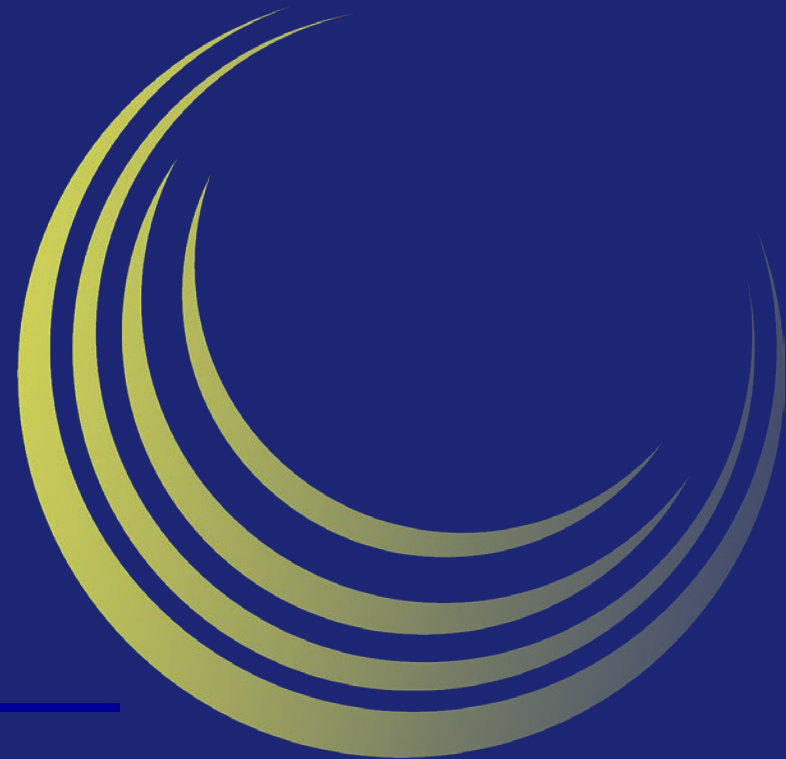


# Supernus Pharmaceuticals

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## Investor Presentation

March 2019

# Safe Harbor Statement

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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, 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, 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

## Ten Marketed Products Using Our Technologies



Carbatrol<sup>®</sup>

Adderall XR<sup>®</sup>

Equetro<sup>®</sup>

Intuniv<sup>®</sup>

Mydayis<sup>®</sup>



Oracea<sup>®</sup>



Sanctura XR<sup>®</sup>



Orenitram<sup>®</sup>



All trademarks are the property of their respective owners.

\*Prophylaxis of migraine in adolescents and adults

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# Robust Portfolio of CNS Products

Marketed	 Trokendi XR. (topiramate) extended-release capsules	Epilepsy / Migraine*		
	 Oxtellar XR. (oxcarbazepine) extended-release tablets	Epilepsy		
	Product	Indication	Development	NDA
Pipeline	SPN-812	ADHD	Phase III	2H 2019
	SPN-810	Impulsive Aggression	Phase III	2H 2020
	SPN-604	Bipolar	Phase III (2H 2019)	
	SPN-809	Depression	IND/Phase II Ready	
	SPN-817	Severe Epilepsy	Phase I	

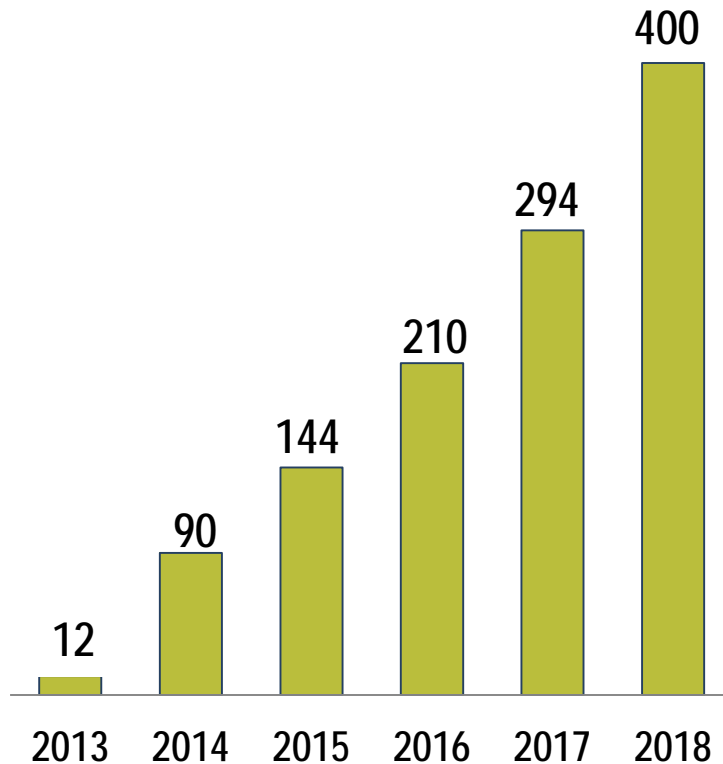
\*Prophylaxis of migraine in adolescents and adults



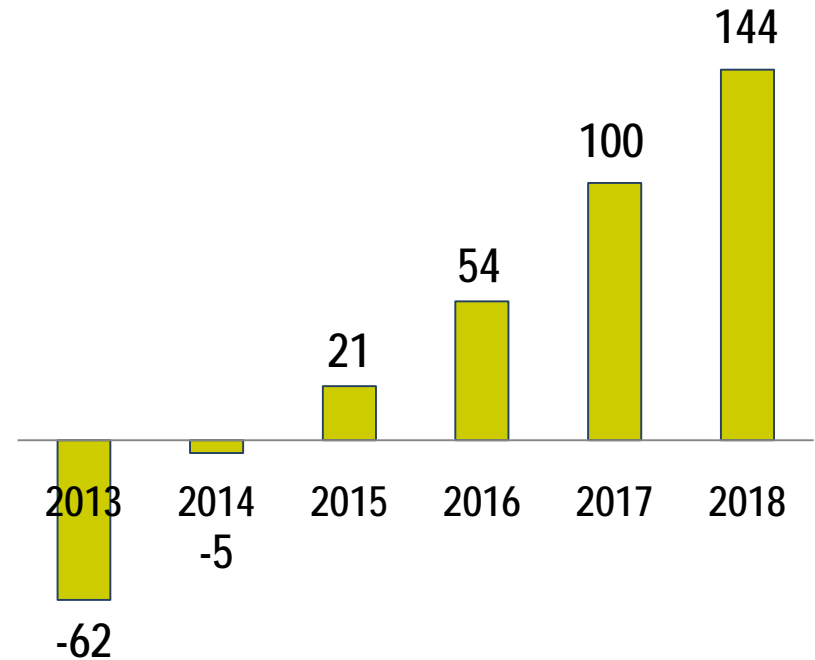
# Profitable CNS Company

## Strong Sales and Operating Earnings Growth

Total Net Product Sales (\$ Millions)

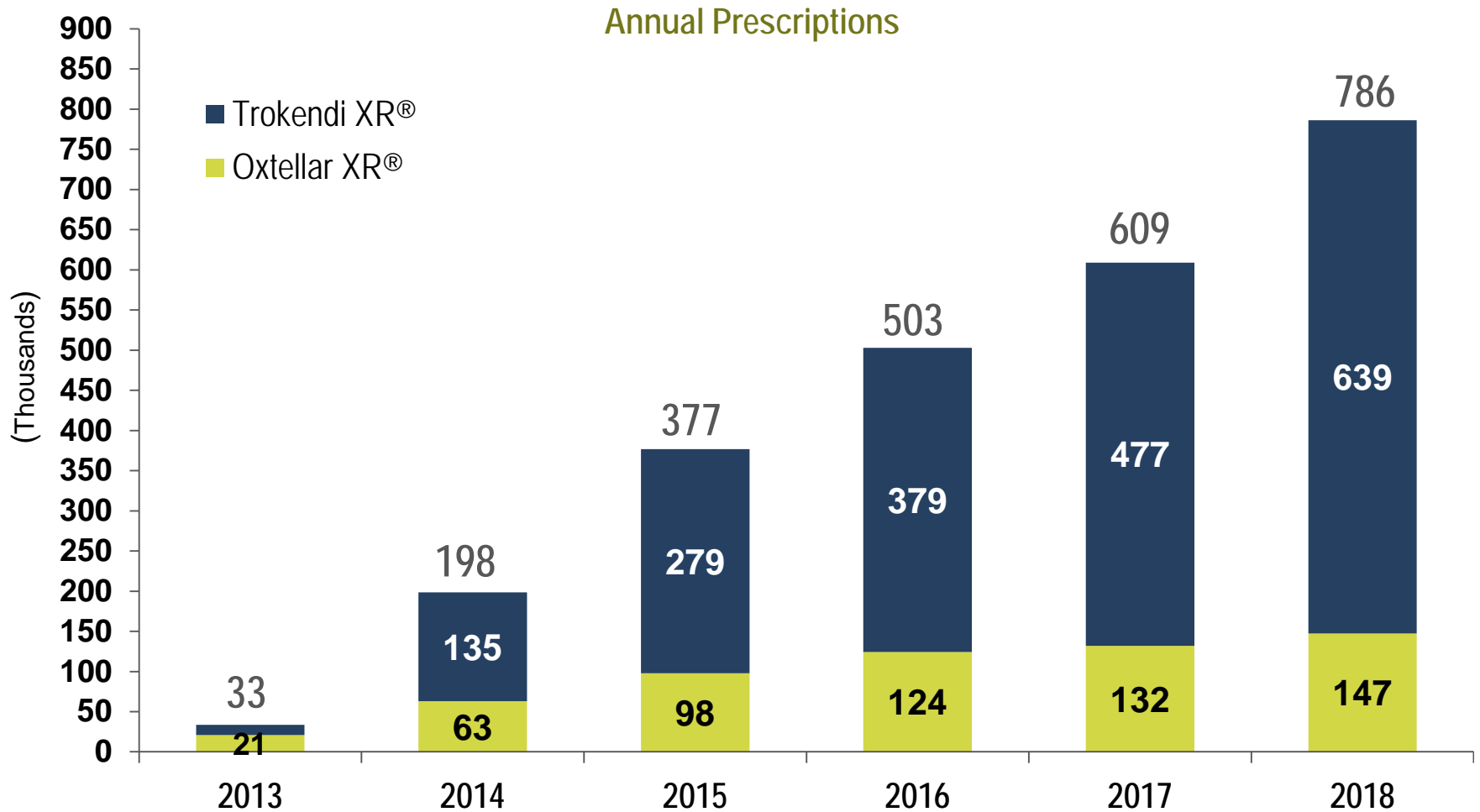


Total Operating Earnings (\$ Millions)



# Trokendi XR and Oxtellar XR

## Solid Prescription Growth Since Launch



Source: IQVIA Monthly Prescriptions - Include recent restatement for 2017 and 2018 by IQVIA

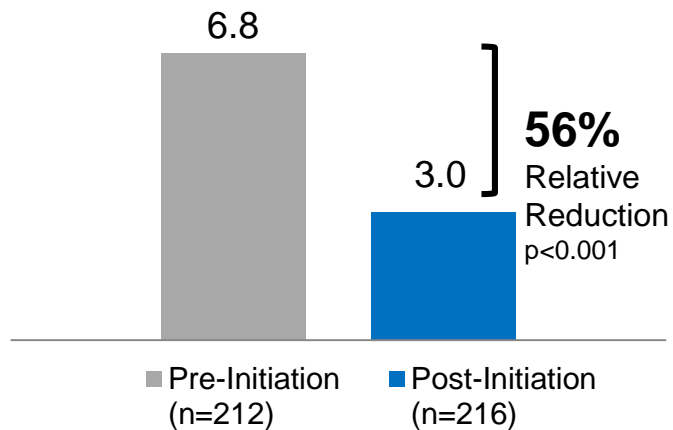
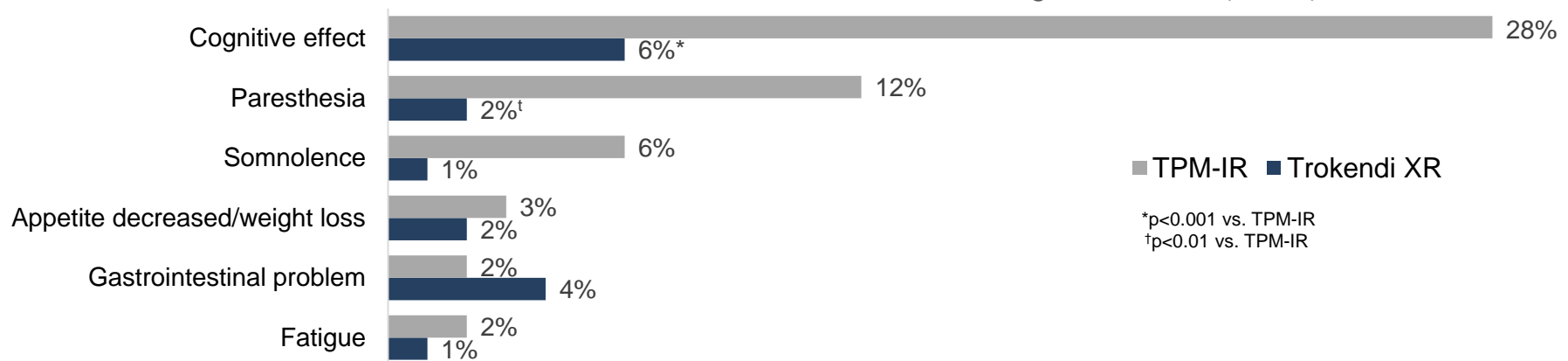
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# Trokendi XR

## More Favorable Clinical Outcomes Compared to TPM-IR<sup>1</sup>

Side Effects with Trokendi XR vs. TPM-IR in Migraine Cohort (n=124)



Median Monthly Migraine Frequency  
 Pre- vs. Post-Initiation of Trokendi XR

<sup>1</sup> O'Neal W et al. Cognitive tolerability and health outcomes with Trokendi XR (extended-release topiramate) in migraineurs. J Pain 2017; 18(4): S67. Retrospective Medical Chart Review

TPM-IR = Topiramate immediate release



# Trokendi XR

## Use in Clinical Practice – A Pragmatic Assessment<sup>1</sup>

Responder Rate	% of Patients
≥ 50% Reduction	55
≥ 75% Reduction	41
100% Reduction	24

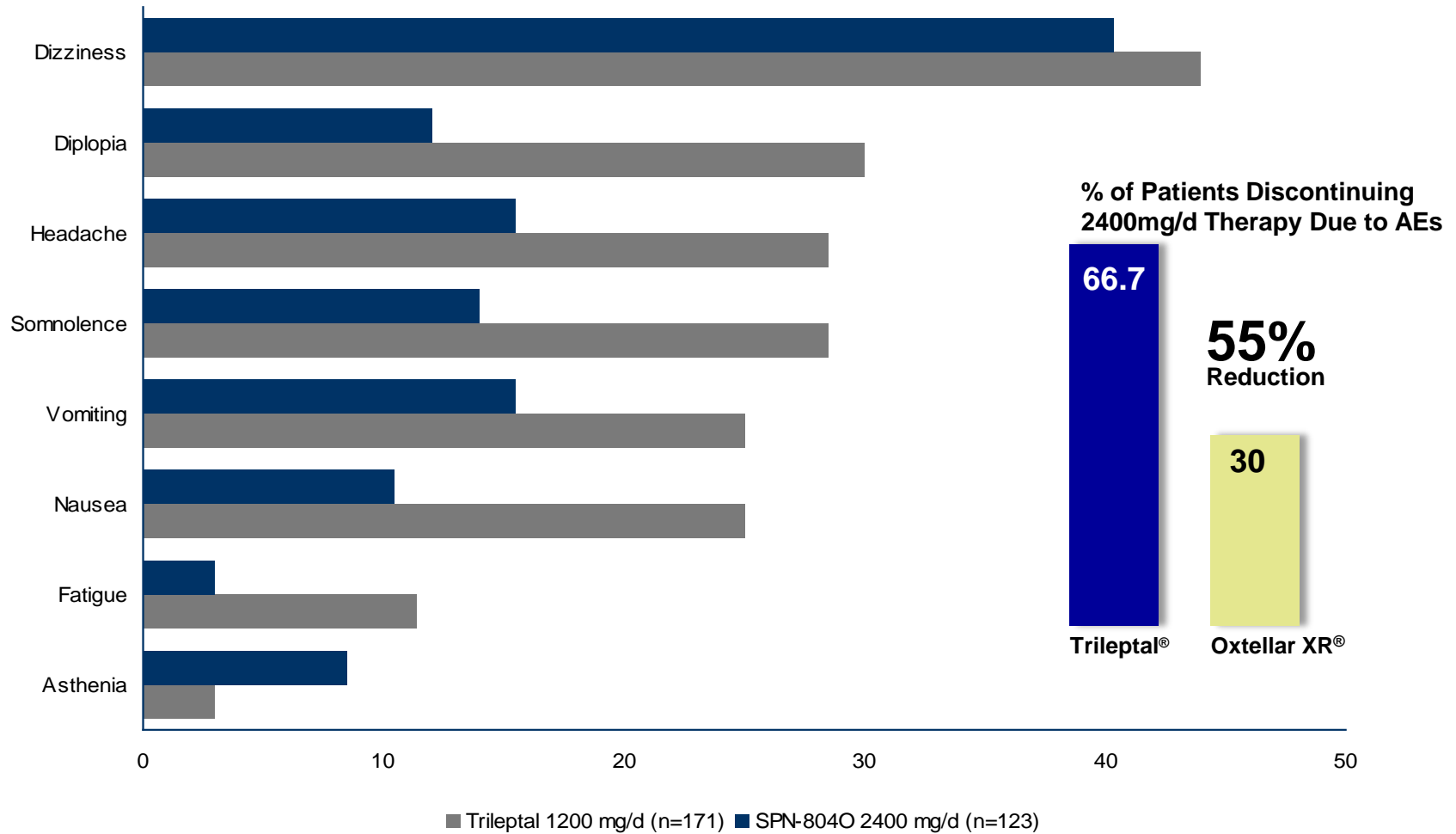
\* Responder Rate: percent change from pre-index migraine frequency associated with Trokendi XR treatment (n=159)

<sup>1</sup> O'Neal W et al. Pragmatic assessment of Trokendi XR (extended-release topiramate) in migraine prevention. Poster presented at 59<sup>th</sup> Annual Scientific Meeting of the American Headache Society, June 2017



# Oxtellar XR

## Improved Adverse Event Profile at Double the Dose of Trileptal®



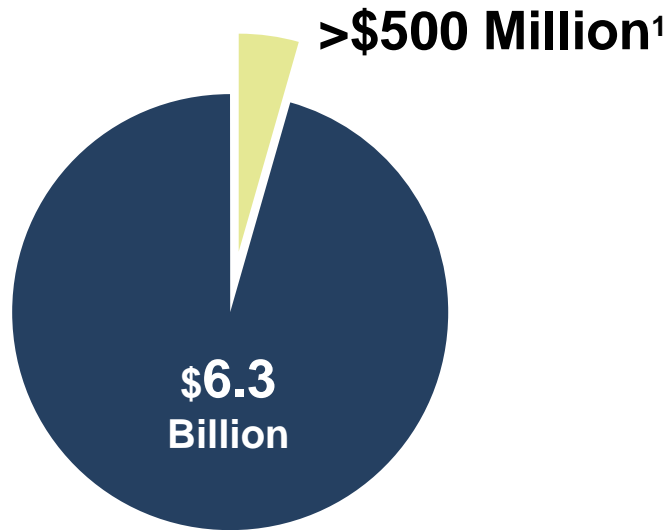
Based on comparison of Oxtellar XR (SPN-804O) Phase III vs. Trileptal PI (adjunctive therapy study in adults); differences in trial design exist between the two studies. Dizziness includes vertigo in Trileptal group because of change in the MedDRA system



# Trokendi XR and Oxtellar XR

Combined Target Markets Opportunity in Neurology of \$6.3 Billion

*Potential Peak Sales - Oxtellar XR and Trokendi XR >\$500 Million*



## Epilepsy and Migraine Opportunity Oxtellar XR and Trokendi XR

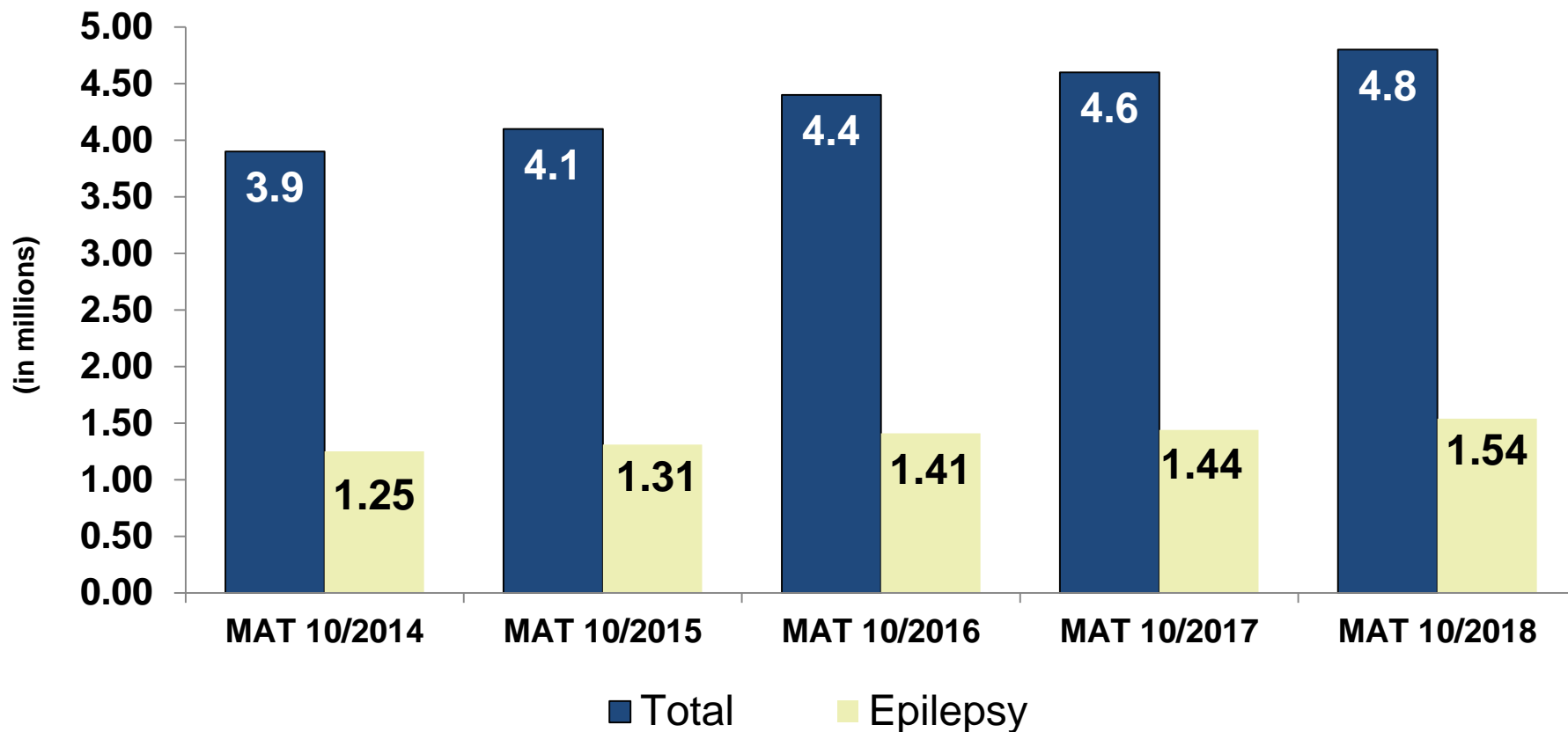
1- Combined annual prescriptions of topiramate and oxcarbazepine of 14 million excluding psychiatry. Average net price per prescription of \$450. Peak share of ~8%. Above figures represent management's estimates that are subject to several factors that are beyond our control and actual results may be significantly different from our estimates

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# Monotherapy Epilepsy Market Opportunity

## Oxcarbazepine Prescriptions By Disease Area



Source - IMS NPA

MAT=Moving Annual Total

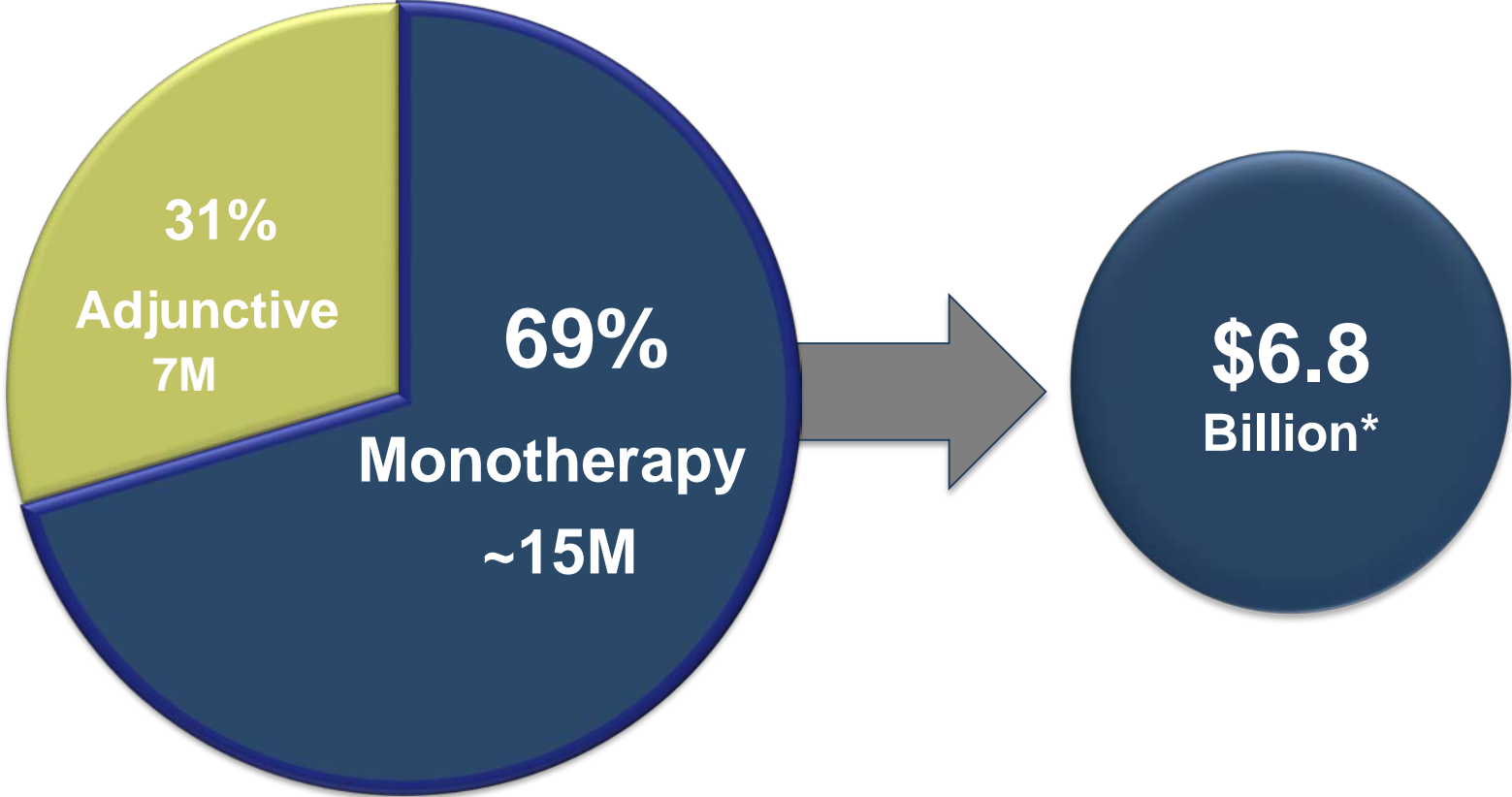
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# Monotherapy Epilepsy Market Opportunity

## 69% of Partial Seizure TRx's Are For Monotherapy

Partial Seizure TRx's 22M Annually



IMS NDTI MAT12 months  
\* Using a branded TRx at \$450 Net

# Oxcarbazepine – Studied in Monotherapy with 8 Positive Clinical Trials

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## Oxcarbazepine (Trileptal®)

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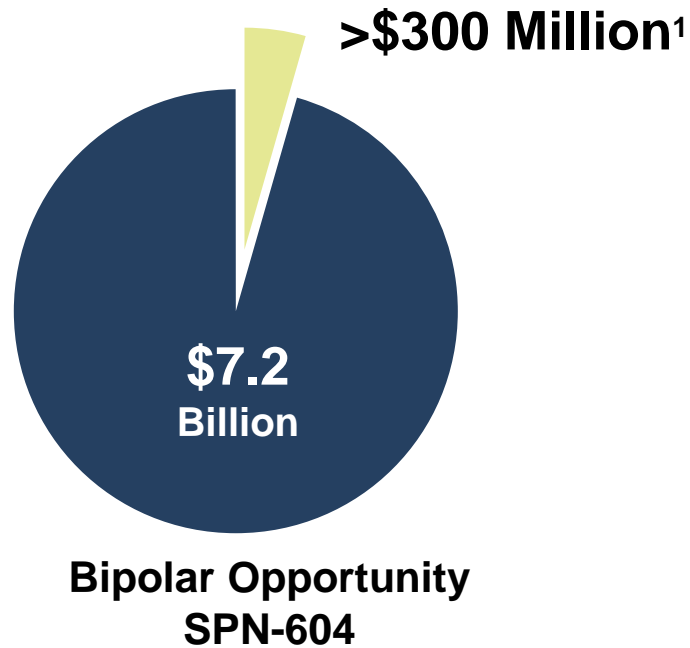
Comparative (new onset partial seizures)	4
Low-dose vs high-dose (refractory partial seizures)	2
Placebo-controlled (recent onset)	1
Placebo-controlled (presurgical)	1
<b>Total Number of Studies</b>	<b>8</b>

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# SPN-604

## Target Market Opportunity in Psychiatry of \$7.2 Billion

**Potential Peak Sales - SPN-604 >\$300 Million**



1- Anti-epileptic drugs represent 34% of 53 million prescriptions for bipolar (IQVIA). Average net price per prescription of \$400. Peak share of ~5%. Above figures represent management's estimates that are subject to several factors that are beyond our control and actual results may be significantly different from our estimates

# SPN-604

## Novel Product Candidate for Bipolar

**50%** Use of Oxcarbazepine  
in Psychiatry

**1<sup>st</sup>** Expected to be Only  
Oxcarbazepine Product  
Approved to Treat Bipolar

**2019** Phase 3 Trials Planned  
2H 2019

SSRI = Selective serotonin reuptake inhibitor  
SNRI = Serotonin & norepinephrine reuptake inhibitor

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Market Opportunity  
+53 Million Prescriptions

Class of Drugs	% of Prescriptions
Antiepileptics	34
Antipsychotics	29
SSRI's	15
SNRI's	6
Antimania	6
Other Antidepressants	6
Benzodiazepines	4
Total	100

Source: IQVIA 2016



# SPN-812

## Novel Non-Stimulant ADHD Product Candidate

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- Viloxazine hydrochloride
  - Serotonin Modulating Norepinephrine Reuptake Inhibitor
  - New Chemical Entity (NCE) with five year market exclusivity
  - Previously marketed outside the US as an antidepressant
- Building strong IP with expirations from 2029-2033
- NDA Filing targeted for 2H 2019
- Three positive Phase III trials in patients 6-17 years old



# SPN-812

## Phase III Studies Status

	<b>P301 N = 477</b>	<b>P303 N = 313</b>	<b>P302 N = 310</b>	<b>P304 N = 300</b>
<b>ADHD Patients</b>	6-11 years	6-11 years	12-17 years	12-17 years
<b>Daily Doses</b>	100mg 200mg	200mg 400mg	200mg 400mg	400mg 600mg
<b>Status</b>	<b>Completed</b>	<b>Completed</b>	<b>Completed</b>	<b>Topline Data 1Q 2019</b>

# SPN-812 Phase III Study Design

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- Randomized, double-blind, placebo-controlled, multicenter, parallel group, monotherapy for ADHD
- Primary Endpoint
  - Change from baseline on ADHD-RS-5 scale compared to placebo
- Secondary Endpoints
  - Clinical Global Impression - Improvement (CGI-I) scale
  - Conners 3rd edition - parent, composite T-score
  - Weiss Functional Impairment Rating Scale - parent report (WFIRS-P)
- Evaluate safety & tolerability

# SPN-812 Phase III Studies: Met Primary Endpoint

## Primary Analysis of ADHD-RS-5 based on MMRM (ITT Population)

<b>P301</b>	<b>Statistics</b>	<b>Placebo (N=155)</b>	<b>100 mg (N=147)</b>	<b>200 mg (N=158)</b>
Week 6 (EOS)	LS Mean	-10.9	-16.6	-17.7
	<b>p-value</b>		<b>0.0004</b>	<b>&lt;.0001</b>
<b>P302</b>	<b>Statistics</b>	<b>Placebo (N=104)</b>	<b>200 mg (N=94)</b>	<b>400 mg (N=103)</b>
Week 6 (EOS)	LS Mean	-11.4	-16.0	-16.5
	<b>p-value</b>		<b>0.0232</b>	<b>0.0091</b>
<b>P303</b>	<b>Statistics</b>	<b>Placebo (N=97)</b>	<b>200 mg (N=107)</b>	<b>400 mg (N=97)</b>
Week 8 (EOS)	LS Mean	-11.7	-17.6	-17.5
	<b>p-value</b>		<b>0.0038</b>	<b>0.0063</b>

MMRM = Mixed Model for Repeated Measure

ITT = Intent to Treat

EOS = End of Study



# SPN-812 Phase III Data: Fast Onset of Action

## Efficacy Starting in Week 1

Visit	Statistics	Placebo (N=356)	100 mg (N=147)	200 mg (N=359)	400 mg (N=200)
Baseline	Mean	42.7	45.0	42.9	42.1
Week 1	p-value		<.0001	0.0003	0.0053
Week 2	p-value		<.0001	<.0001	<.0001
Week 3	p-value		<.0001	<.0001	<.0001
Week 4	p-value		<.0001	<.0001	<.0001
Week 5	p-value		<.0001	<.0001	<.0001
Week 6	LS Mean	-11.5	-16.7	-17.3	-17.2
	p-value		0.0002	<.0001	<.0001
Week 7	p-value		NA	<.0001	0.0011
Week 8	LS Mean	-11.0	NA	-17.8	-17.2
	p-value		NA	<.0001	<.0001

Phase III data from P301 and P303 studies in children, and P302 study in adolescents  
 Primary Endpoint Primary Analysis of ADHD-RS-5 in Intent to Treat Population  
 NA= not applicable to 100mg where week 6 was the end of the P301 study.



# SPN-812 Phase III Data

## Significant Reduction in Hyperactivity and Inattention

### Analysis in ADHD-RS-5 Inattention and Hyperactivity/Impulsivity Subscales

P301 Week 6 (EOS)	Statistics	100 mg (N=147)	200 mg (N=158)
Hyperactivity/Impulsivity	<b>p-value</b>	<b>0.0026</b>	<b>&lt;.0001</b>
Inattention	<b>p-value</b>	<b>0.0006</b>	<b>&lt;.0001</b>

P302 Week 6 (EOS)	Statistics	200 mg (N=94)	400 mg (N=103)
Hyperactivity/Impulsivity	<b>p-value</b>	<b>0.0069</b>	<b>0.0005</b>
Inattention	<b>p-value</b>	<b>0.0424</b>	<b>0.0390</b>

P303 Week 8 (EOS)	Statistics	200 mg (N=107)	400 mg (N=97)
Hyperactivity/Impulsivity	<b>p-value</b>	<b>0.0020</b>	<b>0.0039</b>
Inattention	<b>p-value</b>	<b>0.0087</b>	<b>0.0248</b>

EOS = End of Study



# SPN-812 Phase III Studies: Met Secondary Endpoint

## Analysis of Observed Global Improvement Score (CGI-I) at EOS

<b>P301</b>	<b>Statistics</b>	<b>Placebo (N=155)</b>	<b>100 mg (N=147)</b>	<b>200 mg (N=158)</b>
Week 6 (EOS)	LS Mean	3.1	2.7	2.6
	<b>p-value</b>		<b>0.0020</b>	<b>&lt;.0001</b>
<b>P302</b>	<b>Statistics</b>	<b>Placebo (N=104)</b>	<b>200 mg (N=94)</b>	<b>400 mg (N=103)</b>
Week 6 (EOS)	LS Mean	3.0	2.5	2.4
	<b>p-value</b>		<b>0.0042</b>	<b>0.0003</b>
<b>P303</b>	<b>Statistics</b>	<b>Placebo (N=97)</b>	<b>200 mg (N=107)</b>	<b>400 mg (N=97)</b>
Week 8 (EOS)	LS Mean	3.1	2.6	2.6
	<b>p-value</b>		<b>0.0028</b>	<b>0.0099</b>

EOS = End of Study



# SPN-812 P301

## Well Tolerated

### Number (%) of Patients - Treatment Related AEs with $\geq 5\%$ incidence

	Placebo (N=159)	100 mg (N=154)	200 mg (N=161)
Somnolence	3 ( 1.9)	14 ( 9.1)	14 ( 8.7)
Headache	3 ( 1.9)	7 ( 4.5)	10 ( 6.2)
Decreased appetite	0	7 ( 4.5)	12 ( 7.5)
<b>Discontinuation Due to AE's</b>	<b>2 ( 1.3)</b>	<b>5 ( 3.2)</b>	<b>2 ( 1.2)</b>

# SPN-812 P302

## Well Tolerated

### Number (%) of Patients - Treatment Related AEs with $\geq 5\%$ incidence

	Placebo (N=104)	200 mg (N=99)	400 mg (N=105)
Somnolence	7 (6.7)	13 (13.1)	15 (14.3)
Decreased appetite	0	5 (5.1)	9 (8.6)
Fatigue	1 (1.0)	4 (4.0)	6 (5.7)
Headache	7 (6.7)	3 (3.0)	7 (6.7)
Nausea	3 (2.9)	5 (5.1)	5 (4.8)
<b>Discontinuation Due to AE's</b>	<b>0</b>	<b>4 (4.1)</b>	<b>2 (1.9)</b>



# SPN-812 P303

## Well Tolerated

### Number (%) of Patients - Treatment Related AEs with $\geq 5\%$ incidence

	Placebo (N=103)	200 mg (N=107)	400 mg (N=100)
Somnolence	1 (1.0)	15 (14.0)	14 (14.0)
Decreased appetite	0	8 (7.5)	8 (8.0)
Fatigue	5 (4.9)	8 (7.5)	7 (7.0)
Headache	1 (1.0)	9 (8.4)	5 (5.0)
Upper abdominal pain	2 (1.9)	4 (3.7)	6 (6.0)
<b>Discontinuation Due to AE's</b>	<b>3 (2.9)</b>	<b>6 (5.6)</b>	<b>4 (4.0)</b>

# SPN-812 Phase III Data Summary

## Novel Non-Stimulant ADHD Product Candidate

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- Three positive phase III trials in children/adolescents
- Well- differentiated clinical profile
  - Consistent and predictable efficacy with robust statistical significance
  - Fast onset of action – First week
  - No titration or one week titration
  - Robust broad spectrum efficacy
    - Hyperactivity/Impulsivity
    - Inattention
  - Favorable safety and tolerability profile

# SPN-812

## Significant Market Opportunity

	Percent	Estimated Prescriptions in Peak Year
<b>ADHD Market Prescriptions</b>		<b>89 - 100 Million</b>
	Peak Market Share	SPN-812 Potential Prescriptions
<b>SPN-812 Peak Demand</b>	<b>5 - 10%</b>	<b>4.5 - 10.0 Million</b>

Source: IMS NPA, Company Research and Estimates – Assumes peak at 3-7 years post launch  
Figures in the table above represent management's estimates that are subject to several factors that are beyond our control and actual results may be significantly different from our estimates

# SPN-810

## Novel Product Candidate for Impulsive Aggression (IA)

IA occurs across multiple disorders including ADHD, autism, bipolar disorder, PTSD



**Granted Fast Track Designation**

**1<sup>st</sup>**

**Expected to be First Product Approved to Treat IA**



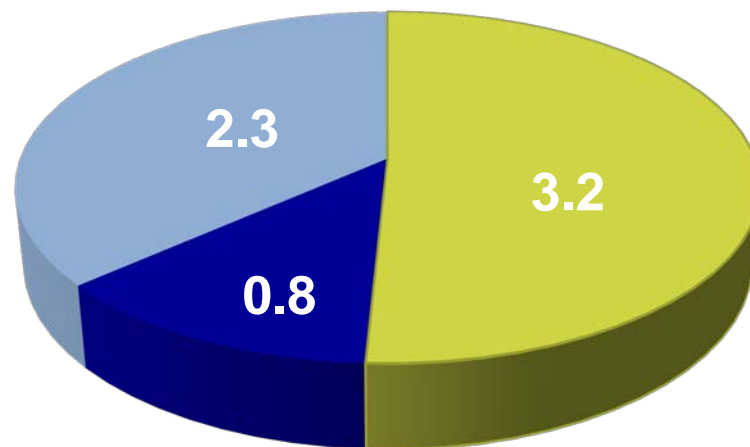
**Building Strong IP with Expirations 2029-2033**

**2019**

**Three Ongoing Phase III Trials**



**Market Opportunity<sup>1</sup>  
+\$6.3B**



■ ADHD ■ Autism ■ PTSD/Bipolar

<sup>1</sup> Initial indication in ADHD population with potential to expand into areas such as Autism and PTSD.

CDC/US Census; IMS; Qualitative Opportunity Assessment Research 2014; \* Assumes quantitative research in ADHD is applicable to Autism, PTSD and Bipolar Disorder. Does not account for IA in other CNS areas. Company Research and Estimates

Above figures represent management's estimates that are subject to several factors that are beyond our control and actual results may be significantly different from our estimates

# SPN-810

## Phase III Studies

Study	Population	Primary Objective*	Study Duration	Treatment Duration	Dose	No. of Subjects	Data Expected
<b>P301</b>	Pediatric (6-12 years)	Efficacy	10 weeks	6 weeks	Placebo 36mg	300+	<b>2H 2019</b>
<b>P302</b>	Pediatric (6-12 years)	Efficacy	10 weeks	6 weeks	Placebo 36mg	300	<b>2H 2019</b>
<b>P503</b>	Adolescents (12–17 years)	Efficacy	10 weeks	6 weeks	Placebo 36mg 54mg	300	<b>2020</b>

\*Primary Endpoint : Change in IA behavior frequency

# Financial Summary and Guidance

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## Full Year 2018 Financial Results

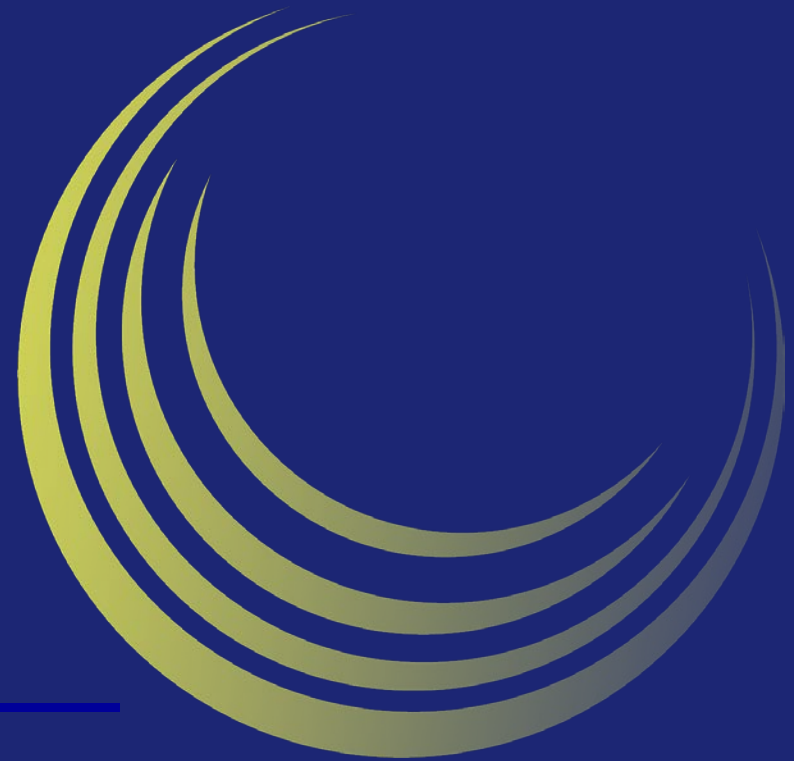
- Net product sales of \$400 million, up 36% over 2017
- Operating earnings of \$144 million, up 45% over 2017
- Cash, cash equivalents, & investments at \$775 million as of Dec 31, 2018

## Full Year 2019 Financial Guidance<sup>1</sup>

- Net product sales: \$435 million - \$455 million
- Operating earnings: \$160 million - \$180 million
  - R&D expenses: \$70 million - \$80 million

<sup>1</sup> Guidance as provided on February 26, 2019, and which has not been updated.

# Positioned For Continued Strong Growth



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## Growth Potential for Existing Products

Potential Peak Sales for Oxtellar XR<sup>®</sup> and Trokendi XR<sup>®</sup> >\$500M

## Innovative Late Stage Portfolio in Psychiatry

SPN-810	First Product to be Developed for Impulsive Aggression
SPN-812	Well Differentiated Novel Non-Stimulant
SPN-604	Novel Product for Bipolar Disorder