VANDA PHARMACEUTICALS INC.

2019 CORPORATE PRESENTATION

June 4, 2019

Forward-Looking Statements

Various statements in this presentation, including, but not limited to, Vanda's financial guidance for 2019, are "forward-looking statements" under the securities laws. Forward-looking statements are based upon current expectations that involve risks, changes in circumstances, assumptions, and uncertainties. Important factors that could cause actual results to differ materially from those reflected in Vanda's forward-looking statements include, among others: Vanda's ability to continue to commercialize HETLIOZ® for the treatment of Non-24 in the U.S. and Europe; uncertainty as to Vanda's ability to increase market awareness of Non-24 and the market acceptance of HETLIOZ®; Vanda's ability to continue to generate U.S. sales of Fanapt® for the treatment of schizophrenia; Vanda's dependence on third-party manufacturers to manufacture HETLIOZ® and Fanapt® in sufficient quantities and quality; Vanda's level of success in commercializing HETLIOZ® and Fanapt® in new markets; Vanda's ability to prepare, file, prosecute, defend and enforce any patent claims and other intellectual property rights; Vanda's ability to reach agreement with the FDA regarding its regulatory strategy, preclinical animal testing requirements and proposed path to approval for tradipitant; a loss of rights to develop and commercialize Vanda's products under its license agreements; the ability to obtain and maintain regulatory approval of Vanda's products, and the labeling for any approved products; the timing and success of preclinical studies and clinical trials; a failure of Vanda's products to be demonstrably safe and effective; the size and growth of the potential markets for Vanda's products and the ability to serve those markets; Vanda's expectations regarding trends with respect to its revenues, costs, expenses, liabilities and cash, cash equivalents and marketable securities; the scope, progress, expansion, and costs of developing and commercializing Vanda's products; Vanda's failure to identify or obtain rights to new products; a loss of any of Vanda's key scientists or management personnel; limitations on Vanda's ability to utilize some or all of its prior net operating losses and orphan drug and research and development credits; the costs and effects of litigation; Vanda's ability to obtain the capital necessary to fund its research and development or commercial activities; losses incurred from product liability claims made against Vanda; use of existing cash, cash equivalents and marketable securities and other factors that are described in the "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" sections of Vanda's annual report on Form 10-K for the fiscal year ended December 31, 2018 and quarterly report on Form 10-Q for the quarter ended March 31, 2019, which are on file with the SEC and available on the SEC's website at www.sec.gov. In addition, other unknown or unpredictable factors could also affect Vanda's results. There can be no assurance that the actual results or developments anticipated by Vanda will be realized or, even if substantially realized, that they will have the expected consequences to, or effects on, Vanda. Therefore, no assurance can be given that the outcomes stated in such forward-looking statements and estimates will be achieved.

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Strategy for Long-Term Success

Hetlioz® (tasimelteon) capsules 20 mg

Fanapt® (iloperidone) tablets 1 mg, 2 mg, 4 mg, 6 mg, 8 mg, 10 mg, 12 mg

Lifecycle management and product optimization

VANDA PHARMACEUTICALS INC.

Developing and commercializing innovative therapies to address high unmet medical needs & improve the lives of patients

Expand into new geographies

Diversified pipeline in high-growth niche therapeutic markets

Marketed Assets

Circadian Rhythms

US - Non-24
EU - Non-24

Psychiatry

US - Schizophrenia

ROW - Schizophrenia
Distribution partners

Clinical Development Pipeline:

Product	Indication	Preclinical	Phase I	Phase II	Phase III	Regulatory
Hetlioz® (tasimelteon) capsules 20 mg	Jet Lag Disorder					
	Smith-Magenis Syndrome (SMS)					
	Non-24 Pediatric					
	Delayed Sleep Phase Disorder (DSPD)					*DSPD Phase II program expected to begin in Q3 2019*
Fanapt® (iloperidone) tablets 1 mg, 2 mg, 4 mg, 6 mg, 8 mg, 10 mg, 12 mg	Long Acting Injectable (LAI)	*Long Acting Injectable (LAI) and Bipolar Disorder clinical studies planned for 2019*				
	Bipolar Disorder (Oral tablets)					
Tradipitant	Atopic Dermatitis					
	Gastroparesis					*Gastroparesis Phase III program expected to begin in Q2 2019*
	Motion Sickness					
VTR-297	Hematologic Malignancies					

Select Research & Development Milestones

Tradipitant

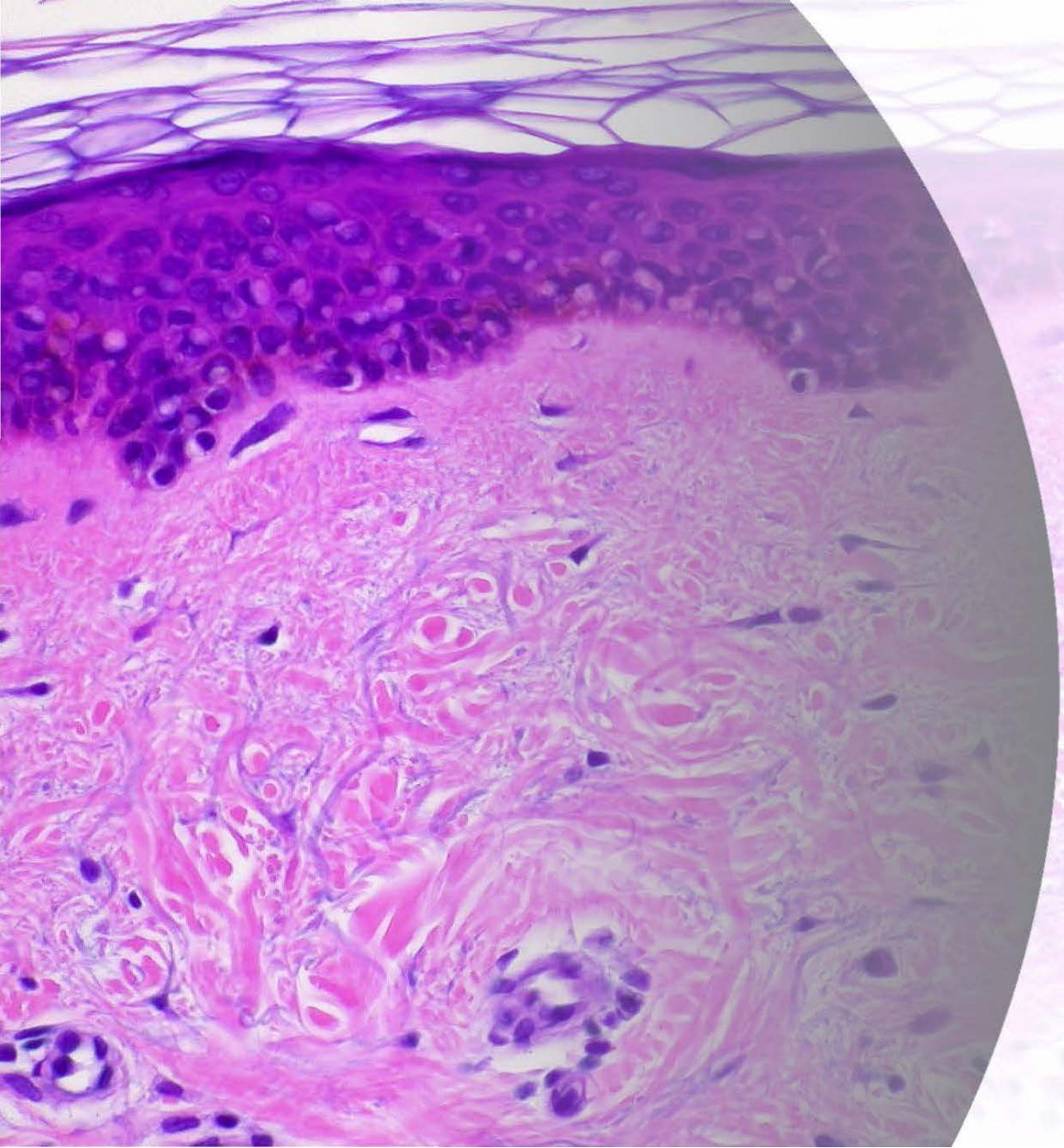
❑ Initiate a Phase III study in Gastroparesis	Q2 2019
❑ Motion Sickness Phase II clinical study results	Q3 2019
❑ Atopic Dermatitis (EPIONE) Phase III clinical study results	1H 2020
❑ Initiate a second Phase III study in Atopic Dermatitis	Q1 2020

HETLIOZ®

❑ Jet Lag Disorder sNDA PDUFA target action date	8/16/2019
❑ File SMS sNDA	Q3 2019
❑ Initiate a Phase II study in DSPD	Q3 2019

Fanapt®

❑ Initiate a Long Acting Injectable formulation clinical study	2019
❑ Initiate a clinical study in Bipolar Disorder	2019



Tradipitant

Atopic Dermatitis

Gastroparesis

Motion Sickness

Tradipitant Clinical Development Programs

Innovative approach to treating millions of patients

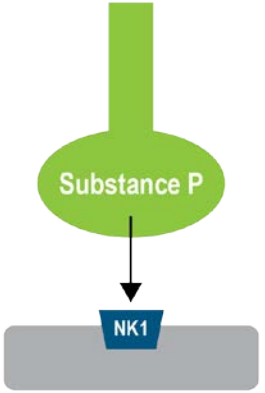
The activation of NK-1R by the natural ligand Substance P is thought to be involved in the perception of itch, pain, behavioral stress response, cravings and nausea and vomiting signaling [1,2,3,4]

Atopic Dermatitis
- Positive Phase II study results in 2017
- Phase III program ongoing

Gastroparesis
- Positive Phase II study results in 2018
- Phase III program planned for 2019

Motion Sickness
- Phase II program planned for 2019

Tradipitant: NK-1R Antagonist



NCE exp. 2024 (2029 w/HW)

Partial Clinical Hold

- Proposed 12-month safety studies currently subject to a FDA partial clinical hold and pending litigation

1. George DT et al. Neurokinin 1 receptor antagonism as a possible therapy for alcoholism. Science. 2008; 319(5869):1536-9
2. Almeida TA, et al. Tachykinins and tachykinin receptors: structure and activity relationships. Current Medicinal Chemistry. 2004;11:2045-2081.
3. Hargreaves R et al. Development of aprepitant, the first neurokinin-1 receptor antagonist for the prevention of chemotherapy-induced nausea and vomiting. Annals of the New York Academy of Sciences. 2011; 1222:40-48.
4. Stander S et al. Neurophysiological and neurochemical basis of modern pruritus treatment. Experimental Dermatology. 2007;17:161-69.

Tradipitant: Atopic Dermatitis

Atopic Dermatitis (AD): US Market

Estimated US Prevalence[1]

17,800,000

- Approximately 9.8M diagnosed and 6.4M drug-treated AD patients[2]
- Management of pruritus is a key treatment goal for patients[3]

Atopic Dermatitis: High Unmet Medical Need

Tradipitant has the potential to become a first line pharmacological option for patients with pruritus in atopic dermatitis in need of systemic treatment

Atopic Dermatitis Treatment Options

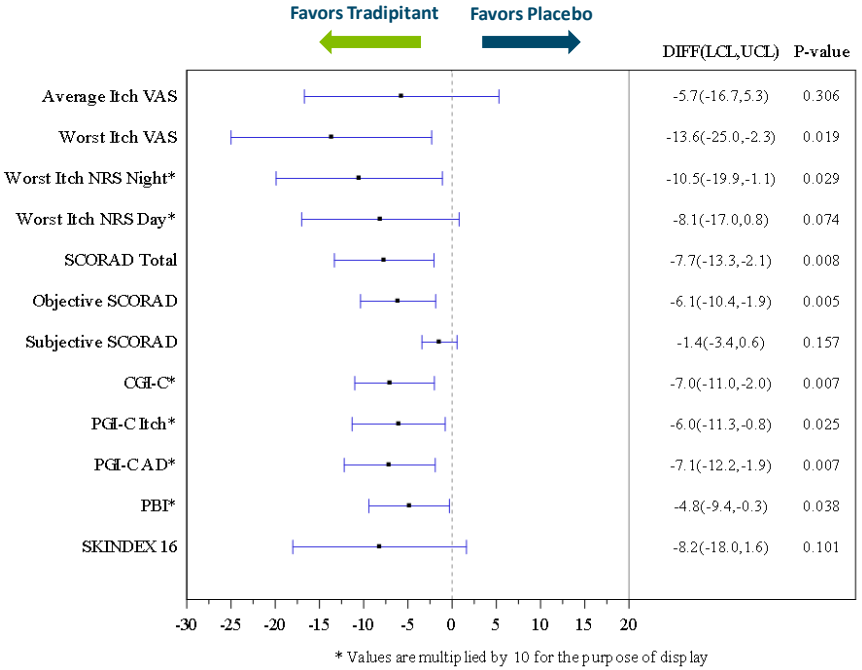
Local Administration (topical agents)	Systemic Administration (by mouth or injectable)
Antibiotics	Antibiotics
Antihistamines	Antihistamines
Corticosteroids	Corticosteroids
Calcineurin inhibitors	Cyclosporin
Eucrisa (crisaborole)	Dupixent (dupilumab)
Moisturizers / Emollients	Immunomodulators

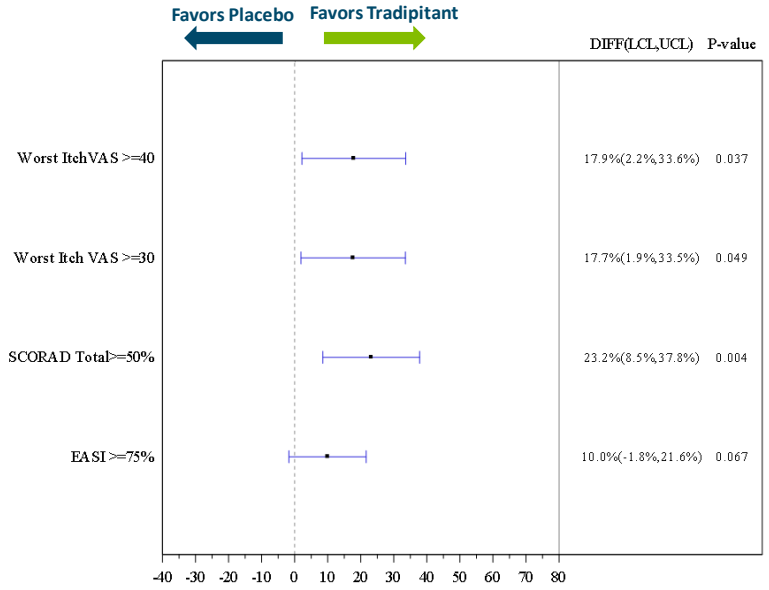
1. National Eczema Association (2017).
2. Decision Resource Group, Atopic Dermatitis Landscape and Forecast (November 2015).
3. Adelphi – Atopic dermatitis Disease Specific Program – US 2014.

Tradipitant Phase II Study (2102): Atopic Dermatitis

Results reported in September 2017

Tradipitant treated patients showed clinically meaningful improvement in both worst itch and atopic dermatitis severity





Tradipitant Phase II Study (2102) results

- Primary endpoint of average itch VAS did not show significance due to high placebo effect and lack of sensitivity of this measure
- Significant improvements also shown in Clinical Global Impression scale (CGI-C), Patient Global Impression scale (PGI-C) and Patient Benefit Index (PBI)

Results presented at recent scientific and medical meetings

- World Congress on Itch (October 2017)
- American Academy of Dermatology (February 2018)
- Georg Rajka International Symposium of Atopic Dermatitis (April 2018)
- European Academy of Dermatology and Venereology Congress (September 2018)
- American Society of Human Genetics (October 2018)
- American Academy of Dermatology (March 2019)

Tradipitant Phase III Study (EPIONE): Atopic Dermatitis

Phase III study currently enrolling patients

Study Design	8 weeks double-masked treatment Tradipitant 85mg BID versus placebo
Sites	65 in the United States
Enrollment	Randomized Subjects = 500
Population	Atopic dermatitis patients with significant chronic pruritus Refractory to conventional treatments (antihistamine/steroid treatments)
Assessments	Change in Worst Itch as measured by a Numerical Rating Scale (NRS) Change in measures of lesion severity including SCORAD, EASI, and IGA

Study results expected in 1H 2020

Tradipitant: Gastroparesis

Gastroparesis: US Market

Up to 600,000 diagnosed[1]

Estimated US Prevalence
6,000,000 (1.8%)[2]

Gastroparesis and chronic unexplained nausea and vomiting share symptomatology[1]

12,000,000

Delayed Gastric Emptying

Symptoms

Previous treatments focused on prokinetic MOA (improving delayed gastric emptying):

- metoclopramide
- cisapride
- domperidone

Future treatment focus is on patient reported symptoms:

- Nausea
- Vomiting
- Postprandial fullness
- Early satiety
- Abdominal pain

Significant unmet medical need

FDA released clinical development guidance in July 2015

1. Hasler 2007; Hejazi 2012; GpCRC 2011 Advanced Breath Diagnostics 2015; Pasricha 2015.
2. Rey et al J Neurogastroenterol Motil, Jan 2012.

Tradipitant Phase II Study (2301): Gastroparesis

Tradipitant has the potential to become a first line treatment for patients with gastroparesis & the first new treatment option in almost 40 years[1]

Results reported in December 2018

ITT Population (n=141)			
	Tradipitant n=73	Placebo n=68	p-value
Primary End Point			
DD-Nausea	-1.25	-0.73	0.0099
Secondary End Points			
DD-% Nausea Free Days	28.8	15.0	0.0160
GCSI	-0.93	-0.58	0.0223
PAGI-SYM	-0.93	-0.65	0.0497
CGI-S	-1.13	-0.74	0.0207
PGI-C	2.66	3.06	0.0429

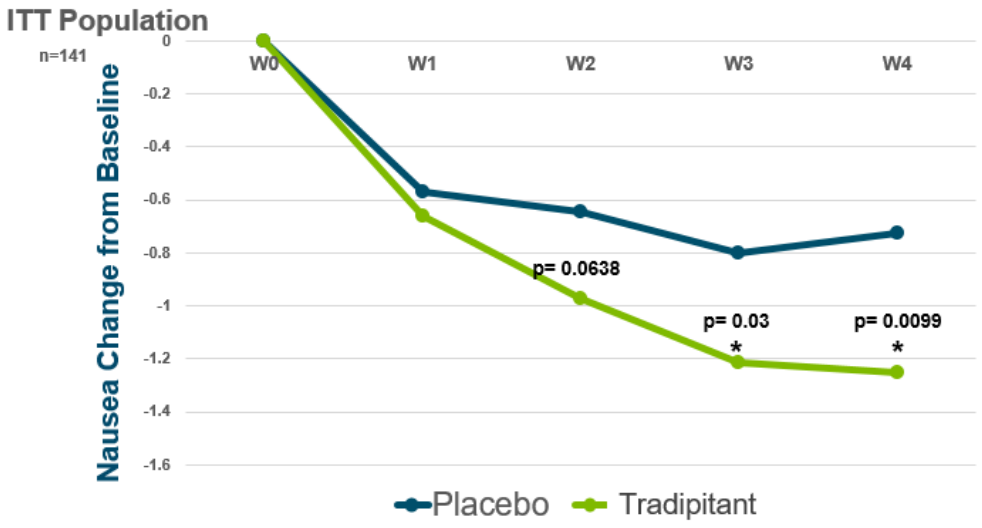
*For DD-Nausea, DD-% Nausea Free Days, GCSI, PAGI-SYM and CGI-S, the values shown are changes from baseline.

Abbreviations
DD-Nausea: Daily Diary Nausea score (0-5)
DD-% Nausea Free Days: Daily Diary Nausea Free Days percent (0-100)
ITT: Intent To Treat
GCSI: Gastroparesis Cardinal Symptom Index
PAGI-SYM: Patient Assessment of Gastrointestinal Disorders – Symptoms
CGI-S: Clinician Global Impression of Severity
PGI-C: Patient Global Impression of Change

1. Reglan (metoclopramide) initial FDA approval 1979.

Tradipitant Phase II Study (2301): Gastroparesis

Vomiting subpopulation showed greater improvements in average daily nausea score

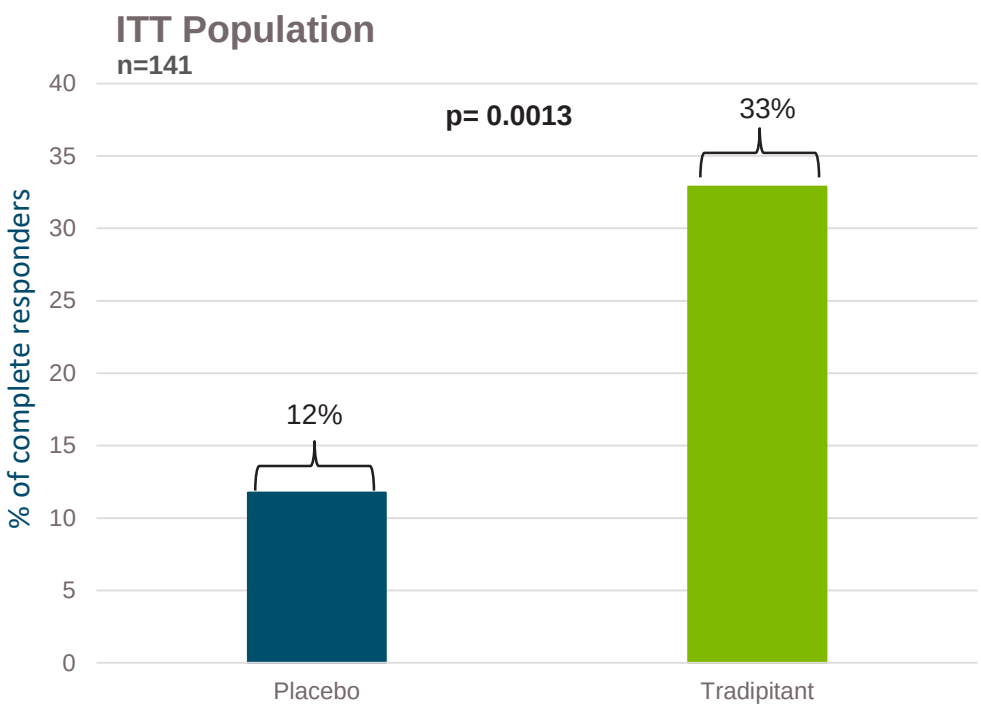


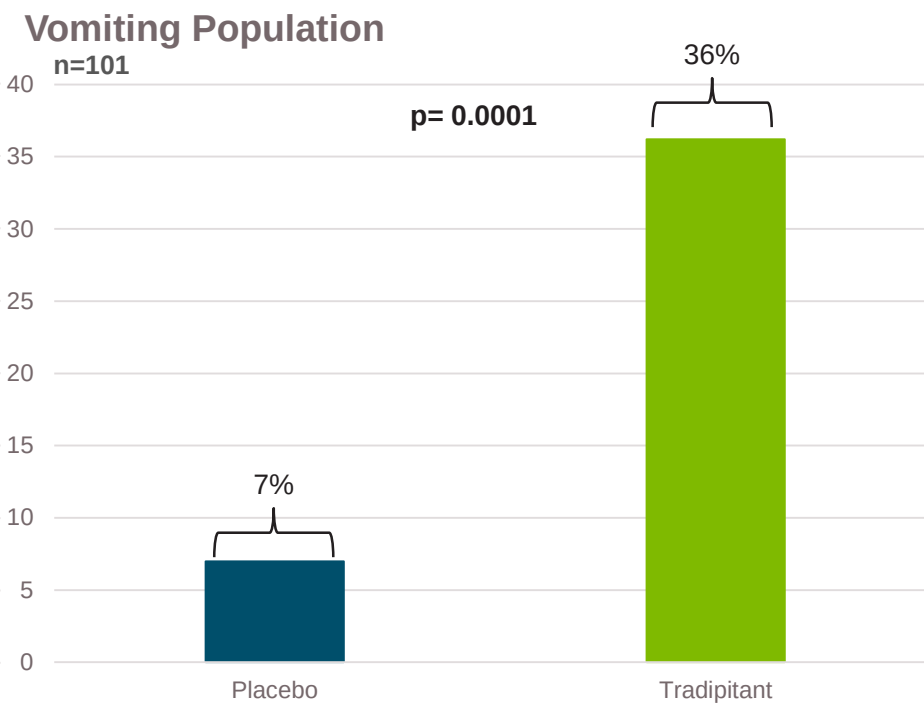
Subpopulation analysis based on screening vomiting score on GSC-Daily Diary

- Vomiting score average > 0 (at least 1 vomiting episode)
- 101/141 of patient population (~70%)

Tradipitant Phase II Study (2301): Gastroparesis

Complete Responder Analysis





Complete responder defined as nausea severity score ≤1 at week 4

- Nausea severity scale is 0-5

Tradipitant: Gastroparesis

2019 Gastroparesis Program Activities

- Phase II gastroparesis study results presented at Digestive Disease Week® in May 2019
- Held an end of Phase II meeting with FDA in May 2019
- Vanda plans to initiate a Phase III study in June 2019

Tradipitant Phase II Study: Motion Sickness

Phase II study currently enrolling patients

Study Design	1 day study, double-masked treatment Tradipitant versus placebo
Sites	1 site in the United States
Enrollment	Randomized Subjects – up to 150
Population	Adults 18-75 years old
Assessments	Changes in motion sickness parameters such as severity as measured by a questionnaire

Study results expected in Q3 2019

Circadian Rhythms

Circadian Rhythms

Hetlioz®
(tasimelteon) capsules
20 mg

1	Drive sales growth for existing indication	Marketed in the US for the treatment of Non-24 in adults since 2014
2	Add new indications	Jet Lag Disorder Smith-Magenis Syndrome Non-24 Pediatric Delayed Sleep Phase Disorder
3	Launch in new geographies	Marketed in Germany for the treatment of Non-24 in adults since 2016

Non-24 is a Serious Circadian Rhythm Disorder

Key demographics

Blind individuals with Non-24

~70% totally blind have Non-24[1]

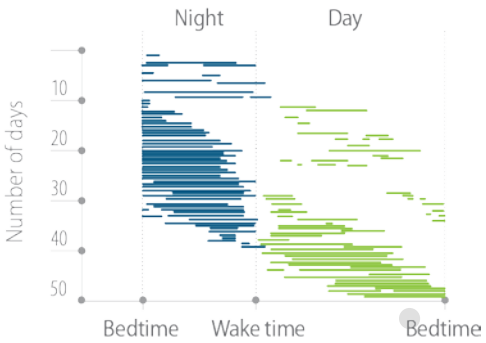
1:4000 in US (~80,000)[2]

Sighted individuals with Non-24

Non-24 is comorbid with depressive and bipolar disorders[3]

Prevalence of Non-24 in the general population is unclear but appears rare in sighted individuals[3]

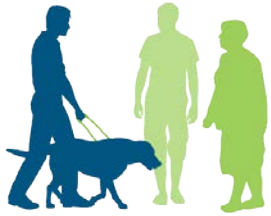
Misaligned circadian timing system



Clinical characteristics

Disrupted nighttime sleep

Excessive daytime sleepiness



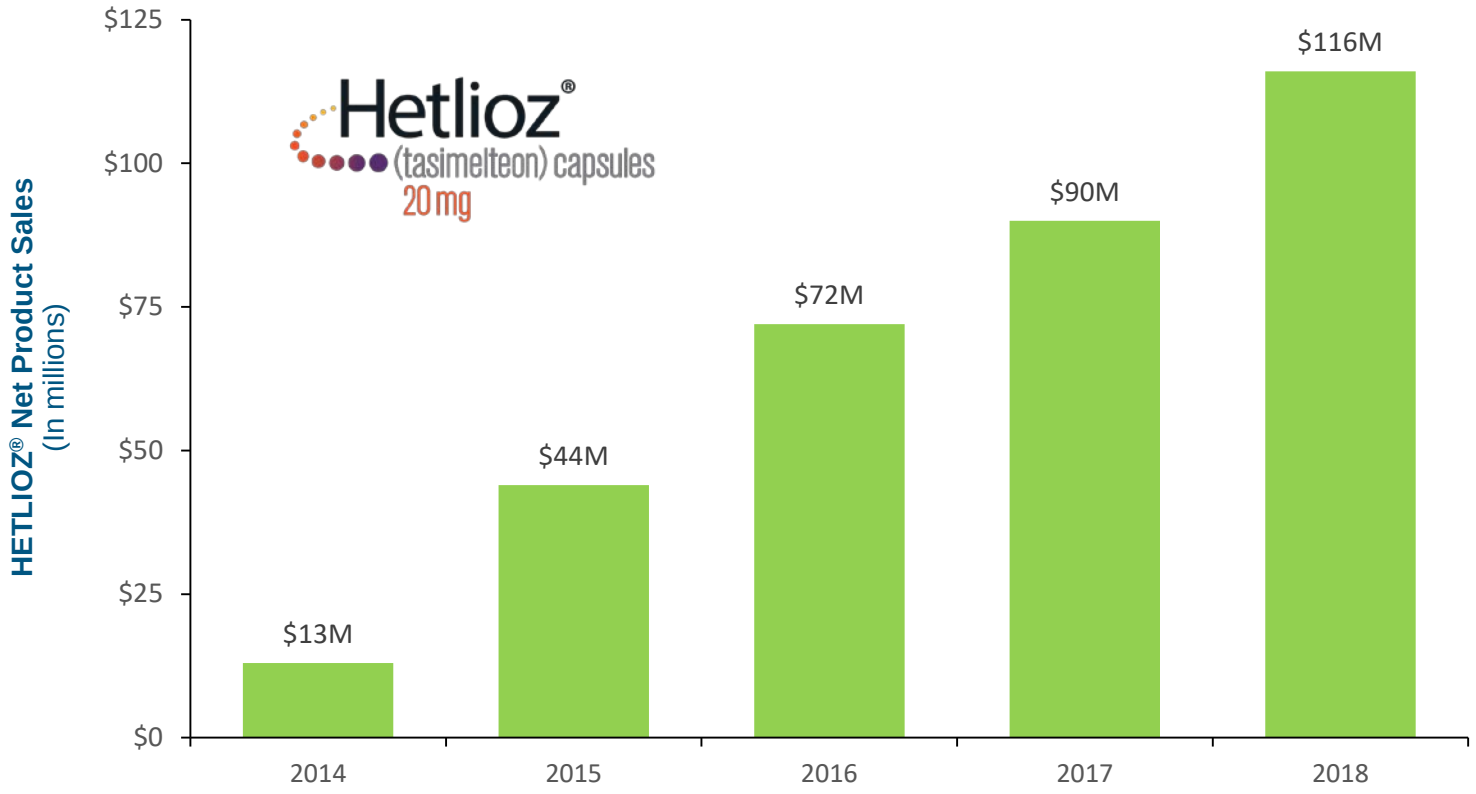
Poor social and occupational functioning

1. *Dressman et al. Seventy Percent of Totally Blind People with Sleep Complaints Are Not Entrained to the 24 Hour Clock. SLEEP Conference 2012. Vanda Pharmaceuticals Inc. June 2012.*
2. *Vanda estimate.*
3. *Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5), American Psychiatric Association, March 2013, page 396-397.*

HETLIOZ® Net Product Sales

Robust growth since launch

Full year 2019 global net product sales guidance of $137 to $143 million



HETLIOZ® European Non-24 Market

- Approximately 130,000 totally blind individuals in Europe have Non-24[1]

EU Non-24 Market

- Similar prevalence to US market
- No approved circadian regulators in EU

Ongoing Activities

- Engagement with blind advocacy groups
- Reimbursement & marketing preparations

2019 Priorities

- Germany: Ongoing launch activities including Non-24 awareness campaign
- EU 5: Pricing dossier and strategy preparations for the 5 largest EU markets
- EU 6-28: Explore distribution partners for select remaining 23 EU markets

1. *Vanda estimate.*

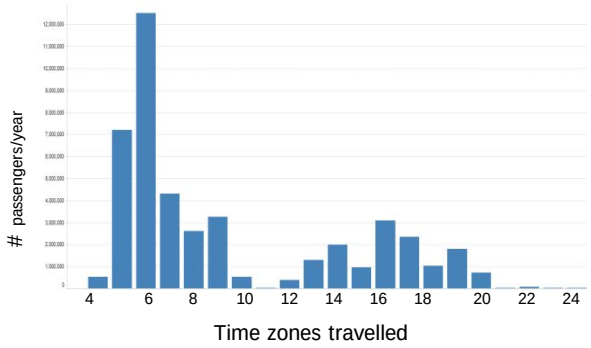
Jet Lag Disorder Market

US Travelers demographics

Over 20 million US residents travel to destinations in Europe, the Middle East and Asia each year[1]

80% of US passengers traveling 5-8 time zones pass through 10 airports[2]

35% through JFK and Newark[2]



Misaligned Circadian Timing System

78% of transmeridan travelers experience sleep disturbances[3]

Clinical Characteristics[4]

Insomnia associated with reduction in total sleep time

Daytime Sleepiness

Daytime functional impairment, general malaise, GI disturbance

1. *US Department of Commerce, International Trade Administration, National Travel & Tourism Office. Profile of U.S. Residents Travelers Visiting Overseas Destinations: 2015 Outbound.*
2. *Bureau of Transportation Statistics. Air Carriers: T-100 International Market (all carriers). August 2017.*
3. *Cho K, Ennaceur A, Cole C, Suh C. Chronic jet lag produces cognitive deficits. J Neuroscience 20:RC66 (2000).*
4. *International Classification of Sleep Disorders 3rd Edition (2014).*

HETLIOZ® Jet Lag Disorder – JET8 Study

Phase III study (3107) results were reported in March 2018

The magnitude of the total sleep time benefit of 85 minutes improvement over placebo is significant and clinically meaningful

The demonstration of benefits in measurements of next day alertness on both KSS and VAS is meaningful and it underscores the ability of HETLIOZ® to address both nighttime and daytime symptoms of jet lag disorder

Assessment	Endpoint	HETLIOZ®	Placebo	Difference	p-value Summary	p-value Detail
PSG	$TST_{2/3}$*	216.4	156.1	60.3	p<0.0001	3.29E-12
(minutes)	TST_{full}	315.8	230.3	85.5	p<0.0001	3.74E-14
	LPS	21.8	36.8	-15.1	p<0.01	8.08E-03
	WASO	144.6	219.1	-74.6	p<0.0001	3.41E-12
KSS (1-9)	average	4.0	4.5	-0.5	p<0.01	8.28E-03
VAS (0-100)	average	60.8	54.2	6.6	p<0.01	9.89E-03

*Primary Endpoint

Abbreviations

PSG	Polysomnography
TST	Total Sleep Time
LPS	Latency to Persistent Sleep
WASO	Wake After Sleep Onset
KSS	Karolinska Sleepiness Scale
VAS	Visual Analog Scale

JET8 Study
8 Hour Circadian Challenge

This challenge is equivalent to eastward travel across 8 time zones, for example

Los Angeles	to	London
DC	to	Moscow
Paris	to	Tokyo
London	to	Singapore

HETLIOZ® Jet Lag Disorder

A HETLIOZ® sNDA is under review by the FDA with a PDUFA action date of August 16, 2019

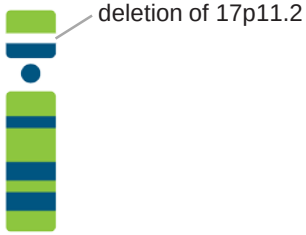
HETLIOZ® clinical data and safety profile support potential as treatment option for jet lag disorder

4 Positive Clinical Studies		
Clinical Studies	**Patients (N)**	**Design**
JET8 (3107)	318	Circadian challenge of an 8 hour advance to a subject's usual bedtime
JET5 (3101)[1]	411	Circadian challenge of a 5 hour advance to a subject's usual bedtime
JET	25	A two-phase transatlantic travel study, with an observational travel phase (baseline) followed by a treatment phase
2101 study[1]	39	HETLIOZ® shifted circadian rhythms on the first night

1. *Rajaratnum et al, The Lancet Vol. 373; No 9662 February 2009.*

Smith-Magenis Syndrome

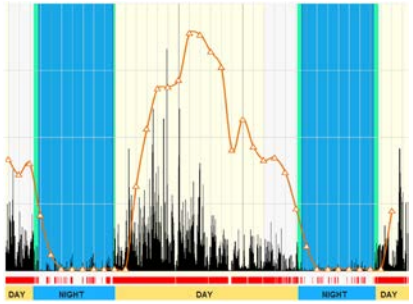
- 1/15,000-25,000 births in the U.S.[1]
- 5.3/100,000 in Europe[2]



- Chromosomal deletion of 17p11.2
- Rare mutations of the retinoic acid 1 (*RAI1*) gene

- Major physical, developmental & behavioral features

Severe sleep disorder:
Strongest predictor of maladaptive behavior



- Daytime melatonin secretion

No approved treatment

1. Orphanet ORPHA number 819.
2. Smith et al. GeneReviews. 2001.

HETLIOZ® Smith-Magenis Syndrome

VEC-162-2401 is the largest placebo controlled study ever conducted demonstrating significant sleep improvements in patients with SMS

Study results reported in December 2018

Endpoints	Description	HETLIOZ® (n=25)	Placebo (n=25)	Difference p-value
Subjective				
Sleep Quality	DDSQ Worst 50%*	0.67	0.27	0.0139
(Scale 1-5)	DDSQ Overall	0.55	0.22	0.0155
Sleep Duration	DDTST Worst 50%*	36.1	17.6	0.0556
(minutes)	DDTST Best 50%	46.6	23.4	0.0052
	DDTST Overall	40.9	19.8	0.0134
Objective				
Sleep Duration	Actigraphy TST Worst 50%	22.3	2.4	0.0309
(minutes)	Actigraphy TST Overall	20.1	1.9	0.0218

*Primary endpoint

For DDSQ, DDTST, Actigraphy TST, the values shown are changes from baseline.

Abbreviations
TST: Total Sleep Time
SQ: Sleep Quality
DDTST: Daily Diary Total Sleep Time
DDSQ: Daily Diary Sleep Quality

- The US Food and Drug Administration has granted orphan drug designation for HETLIOZ® for the treatment of SMS
- Vanda intends to meet with regulatory authorities and seek marketing authorization for the treatment of SMS patients with HETLIOZ®

Psychiatry

Psychiatry

1. Drive sales growth for existing indication

Marketed in the US for the treatment of Schizophrenia since 2010

2. Add new indications

Clinical studies planned for 2019
- Bipolar Depression
- Long Acting Injectable

3. Launch in new geographies

Partnered in select non-US markets

Schizophrenia: Fanapt®

- About 1% of adult population worldwide is diagnosed with schizophrenia[1]
- About 3 million people in the US live with schizophrenia

- Patients frequently switch antipsychotic treatments due to side effects[2]
- Side effects include metabolic, weight and movement disorders

Akathisia

Frequently seen with antipsychotics

- Up to 25% of patients treated with some antipsychotics experience akathisia

Fanapt® (iloperidone) tablets
1 mg, 2 mg, 4 mg, 6 mg, 8 mg, 10 mg, 12 mg

- Fanapt® is a second-line treatment for schizophrenia

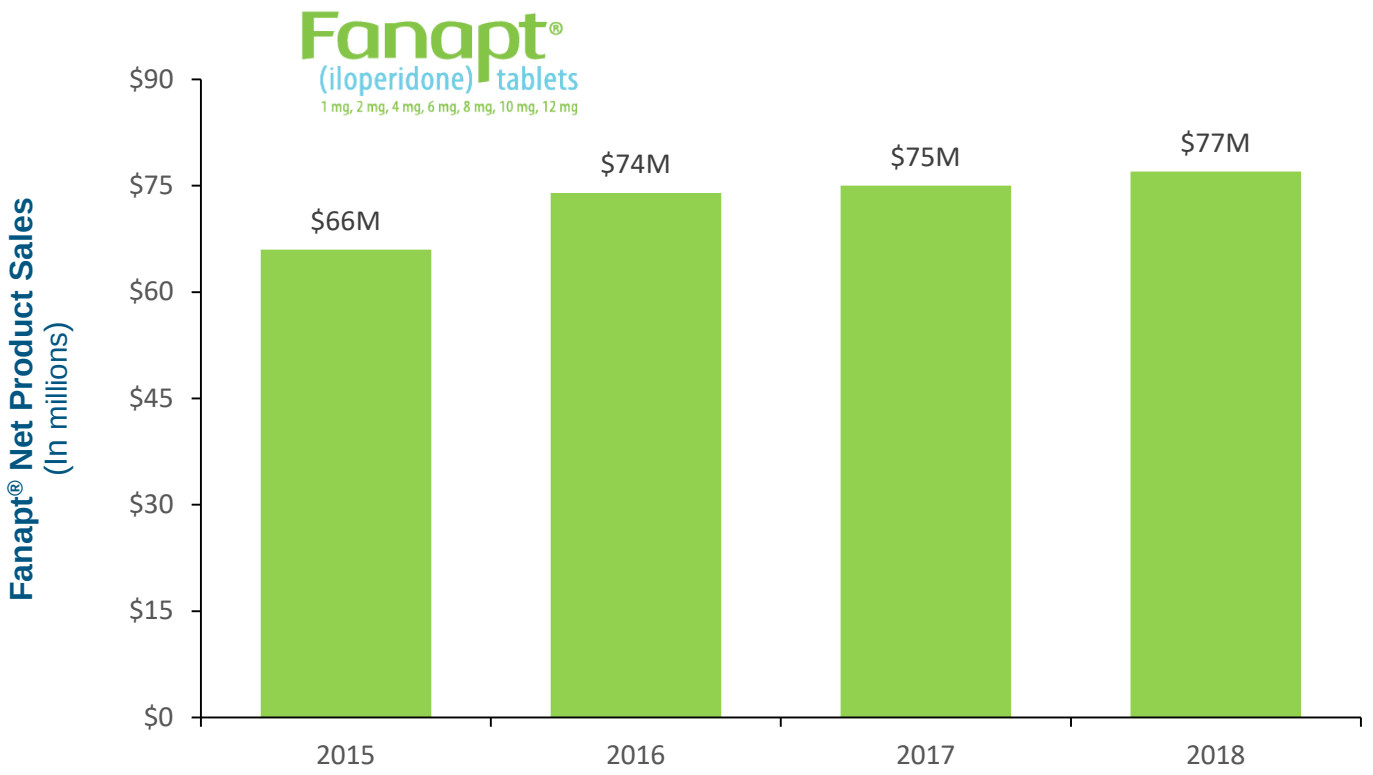
- Vanda owns global rights for Fanapt®
- Commercialized outside the US through partners

1. NIMH.
2. Prescribing Information for leading brands.

Fanapt® Net Product Sales

Vanda initiated Fanapt® US promotion in April 2015

Full year 2019 global net product sales guidance of $78 to $82 million



Financials – First Quarter 2019 Results

	3/31/2019
HETLIOZ® Net Product Sales	$29.0M
Fanapt® Net Product Sales	$18.8M
Total Revenue	$47.7M
Cost of Goods Sold	$5.1M
Research & Development	$13.3M
General & Administrative	$31.0M
Intangible Asset Amortization	$0.4M
Operating Expense	$49.8M
Net Income	($0.6M)
Cash[1]	$267.8M

1. Cash, cash equivalents and marketable securities

Financials – Full Year 2019 Guidance[1]

Vanda expects to achieve the following financial objectives in 2019:

Financial Objectives	2019 Guidance
Combined net product sales from both HETLIOZ® and Fanapt®	$215 to $225 million
HETLIOZ® net product sales	$137 to $143 million
Fanapt® net product sales	$78 to $82 million
Year end 2019 Cash[2]	Greater than $260 million

1. Guidance provided by Vanda on and as of May 1, 2019, Vanda undertakes no duty to update this guidance, and actual results may differ.

2. Cash, cash equivalents and marketable securities.

For more information on HETLIOZ®, please visit www.HETLIOZ.com

For more information on FANAPT®, please visit www.FANAPT.com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