SAGE THERAPEUTICS™

Rethinking CNS

August 7, 2018

Q2 2018 Financial Results

Agenda – Today's Speakers

- **Paul Cox**, Senior Director, Investor Relations
- **Jeff Jonas**, M.D., Chief Executive Officer
- **Steve Kanes**, M.D., Ph.D., Chief Medical Officer
- **Mike Cloonan,** Chief Business Officer
- **Kimi Iguchi**, Chief Financial Officer
- **Q&A Session** (joined by Jim Doherty, Ph.D., Chief Research Officer)

Safe Harbor Statement

The slides presented today and the accompanying oral presentations contain forward-looking statements, which may be identified by the use of words such as “may,” “might,” “will,” “should,” “expect,” “plan,” “anticipate,” “believe,” “estimate,” “project,” “intend,” “future,” “opportunity”, “potential,” or “continue,” and other similar expressions. Forward-looking statements in this presentation include statements regarding: our expectations regarding the potential for approval by the FDA of our NDA submission for brexanolone IV; our anticipated development activities and timelines; the estimated number of patients with certain disorders or diseases; our expectations regarding potential commercialization of brexanolone IV, if approved, and our commercial plans and goals; our expectations regarding EU regulatory activities and the potential for EU expansion; the potential for development of our other products candidates in various indications; other planned activities; our strategy and business outlook; and our expectations with respect to cash needs. These forward-looking statements are neither promises nor guarantees of future performance, and are subject to a variety of risks and uncertainties, many of which are beyond our control, which could cause actual results to differ materially from those contemplated in these forward-looking statements, including the risk that:

- The FDA or other regulatory authorities may, despite prior advice, decide that the clinical and nonclinical data from our brexanolone development program in postpartum depression are not sufficient to support the grant of regulatory approval, and may require additional trials, analyses or data;
- Issues may arise during inspections by regulatory authorities of our facilities, data and systems or those of our contract research organization, contract manufacturer or clinical sites that could delay or prevent us from gaining approval of brexanolone;
- Success in SAGE’s pre-clinical studies or in early stage clinical trials may not be repeated or observed in ongoing or future studies involving the same compound or other product candidates, and future pre-clinical and clinical results for SAGE’s product candidates may not support further development of the product candidate or regulatory approval;
- Even if our planned SAGE-217 development program is successful, we still may not achieve expedited review or approval of SAGE-217;
- We may experience slower than expected enrollment in our clinical trials or may encounter other delays or problems, including in analyzing data or requiring the need for additional analysis, data or patients, and such issues with any trial could cause delay in completion of the trial, availability of results and timing of future activities;
- Even if our products are successfully developed and approved, the number of patients with the diseases or disorders our products treat, and the actual market for such products may be smaller than our current estimates; or we may not achieve market acceptance or reimbursement at acceptable levels;
- We may encounter issues, delays or unexpected challenges in launching or commercializing brexanolone IV, if approved, including issues related to market acceptance and reimbursement, restrictions, limitations or conditions on sites of care that impact availability or market acceptance of options for site of administration, and challenges associated with our build, and we may not be successful in our commercialization efforts;
- We may encounter unexpected safety or tolerability issues with respect to any of our product candidates;
- We may not be able to obtain and maintain adequate intellectual property protection or other forms of data and marketing exclusivity for its products, or to defend ours patent portfolio against challenges from third parties;
- We may face competition from others developing products for similar uses as those for which our products are being developed;
- Our operating expenses may be higher than forecasted, and we may also face unexpected expenditures or decide to expand our activities, in either case which may result in the need for additional funding to support its business activities earlier than anticipated;
- Funding to support operations may not be available, when needed, on reasonable terms or at all, or may result in significant dilution to existing shareholders;
- We may not be able to establish and maintain key business relationships with third parties on We may encounter technical and other unexpected hurdles in the manufacture and development of its products.

For additional disclosure regarding these and other risks SAGE faces, see the disclosure contained in the "Risk Factors" section of our most recent quarterly report, and in our other public filings with the Securities and Exchange Commission, available on the SEC's website at http://www.sec.gov. Any forward-looking statement represent our views only as of today, and should not be relied upon as representing its views as of any subsequent date. We undertake no obligation to update or revise the information contained in this presentation, whether as a result of new information, future events or circumstances or otherwise.

Sage Today

- Building a leading CNS biotech company
- Positioned on the cusp of potential product commercialization
- Advancing a robust development pipeline of new classes of CNS therapeutics
- Executing through a strong financial position
- Sustaining and evolving a culture that is a core strength of Sage

Advancing a Leading CNS Clinical Portfolio

GABA

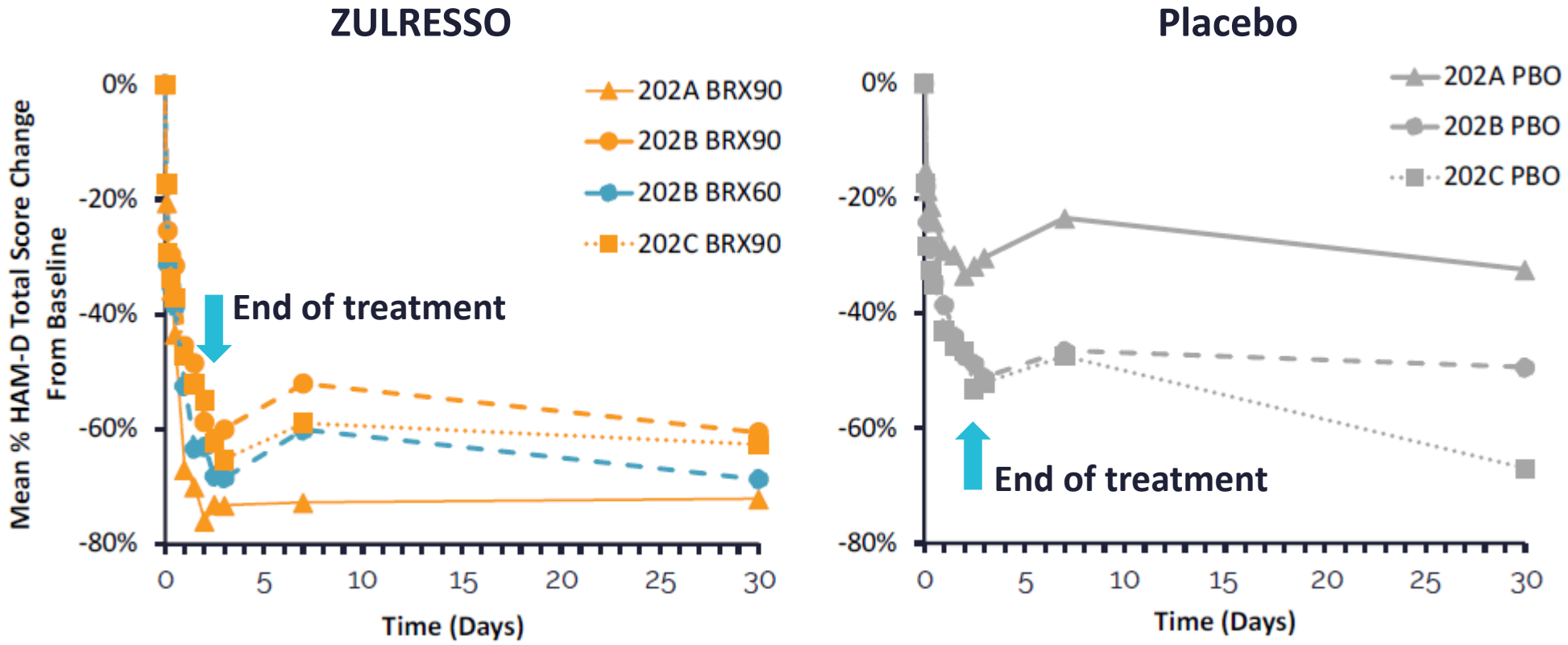
COMPOUND	INDICATION	PRECLINICAL	PHASE 1	PHASE 2	PHASE 3	REGISTRATION
ZULRESSO™ (brexanolone injection)	Postpartum Depression					
SAGE-217	Major Depressive Disorder					
	Postpartum Depression					
	Bipolar Depression					
	Insomnia					
SAGE-324	Parkinson's Disease					
	Essential Tremor					
	Epileptiform Disorders					

NMDA

COMPOUND	INDICATION	PRECLINICAL	PHASE 1	PHASE 2	PHASE 3	REGISTRATION
SAGE-718	NMDA Hypofunction					

ZULRESSO™ (brexanolone injection) in PPD

Consistent Rapid Antidepressant Effect in Three Placebo-Controlled Trials

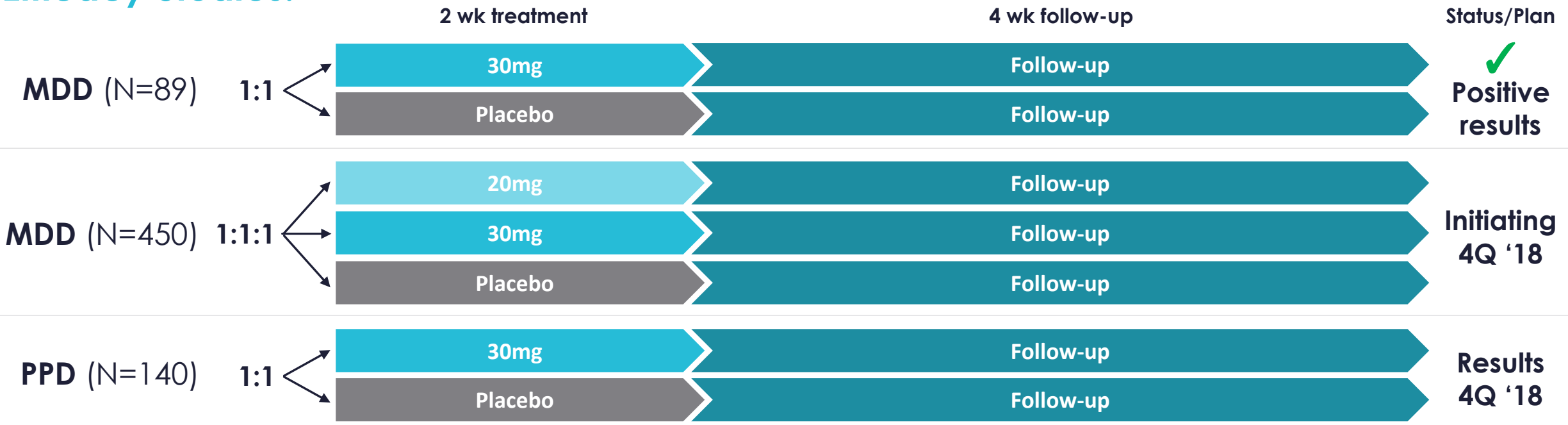


ZULRESSO™ was generally well tolerated in all three studies. The most common AEs were headache, somnolence/sedation and dizziness/vertigo. The most common adverse events leading to dose reduction or interruption were related to sedation or the infusion site.

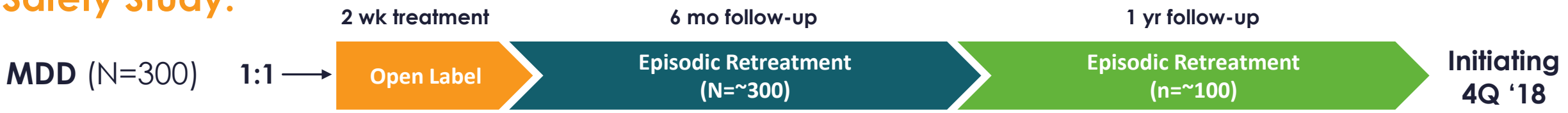
SAGE-217 Pivotal Depression Program Design

Expedited Development Plan Evaluating the Novel Concept of Episodic Dosing

Efficacy Studies:

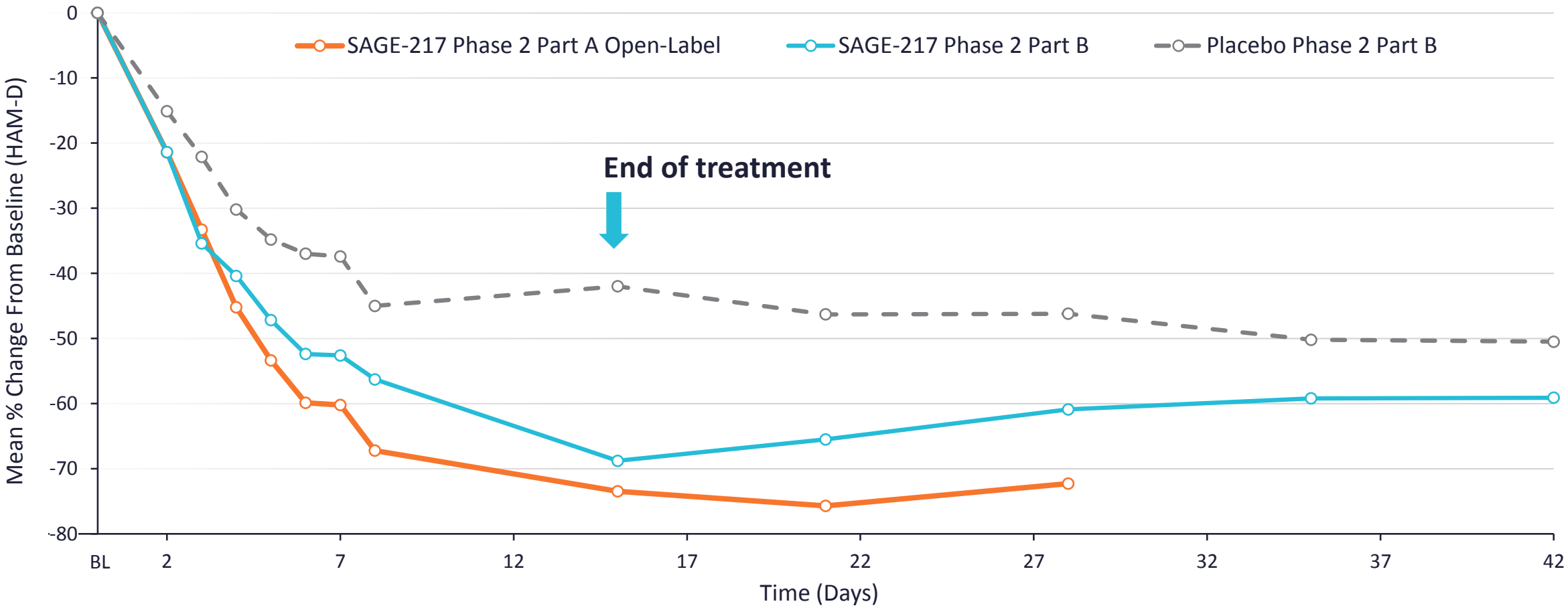


Safety Study:



SAGE-217: Potential 1st Line Treatment for MDD

Positive Placebo-Controlled Results Demonstrate Potential in Depressive Disorders



SAGE-217 was generally well-tolerated in both studies. The most common adverse events in both trials included headache, dizziness, nausea and somnolence, and in Part A, also included myalgia.

Positive Phase 1/2 Results for SAGE-217 in Insomnia Model in Healthy Volunteers

Efficacy Summary:

- Met improved Sleep Efficiency primary endpoint
- Secondary endpoint measures demonstrated statistically significant dose response
- No evidence of significant adverse effects on next day cognitive performance, though there was not a significant impact on Latency to Persistent Sleep

Safety and Tolerability Summary:

- SAGE-217 was generally well tolerated
- AE rates were low across all dose groups and all AEs were mild
- No serious AEs or AEs leading to discontinuation

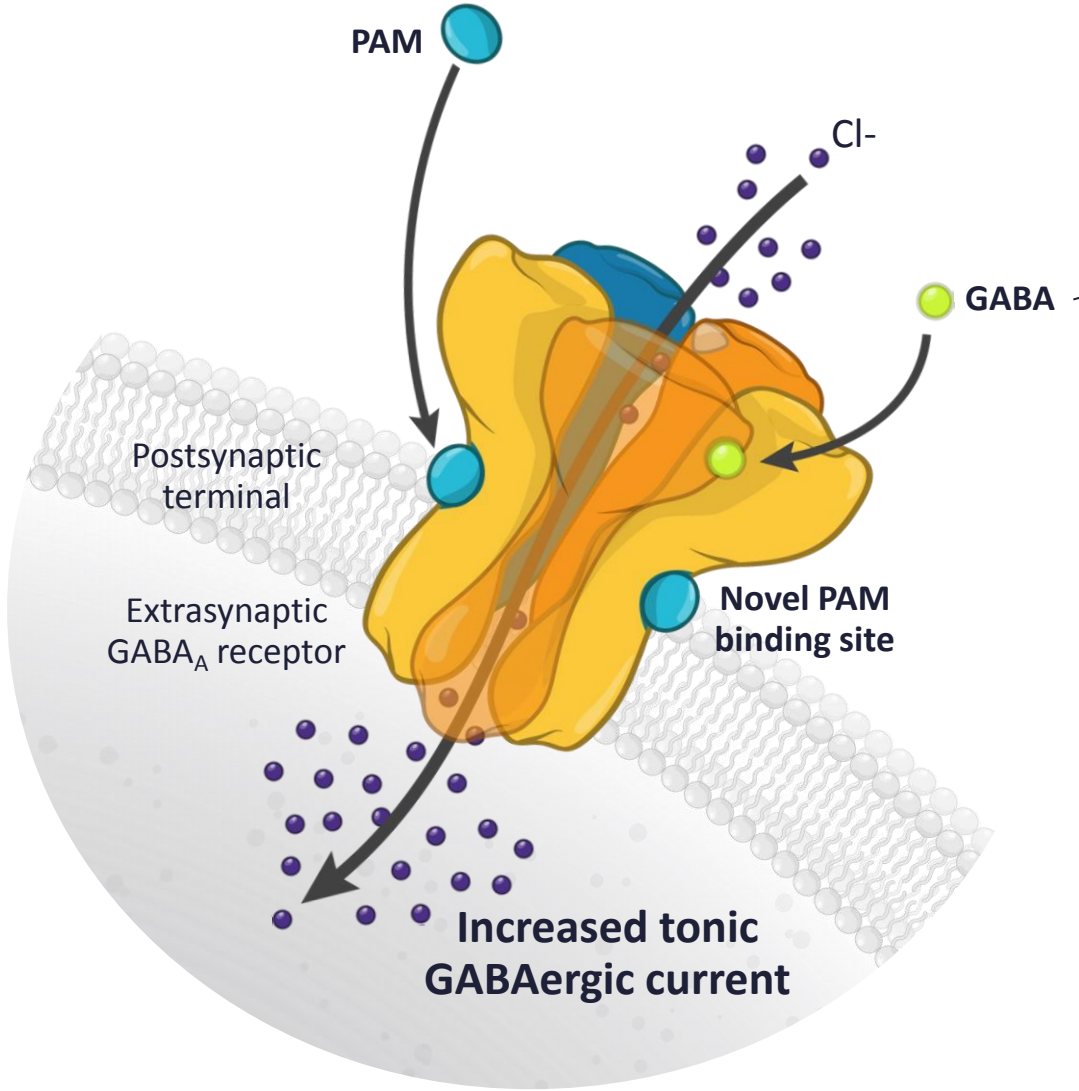
Efficacy Results*

	Primary Endpoint	Secondary Endpoints			
	Sleep Efficiency	Wake After Sleep Onset	Total Sleep Time	Sleep Architecture	Latency to Persistent Sleep
SAGE-217 45 mg	88% (p<0.0001)	42.5 mins (p<0.0001)	420 mins (p<0.0001)	**Stage 2:** 267 mins (p<0.001) **Stage 3**: 75 mins (p<0.001)	SAGE-217 did not have a significant impact (p=0.7049) with either dose
SAGE-217 30 mg	85% (p<0.0001)	55 mins (p<0.0001)	406 mins (p<0.0001)	**Stage 2:** 258 mins (p<0.001) **Stage 3:** 68 mins (p<0.004)	
Placebo	73%	113 mins	350 mins	**Stage 2:** 192 mins **Stage 3:** 56 mins	

**All data presented are median values*

SAGE-324

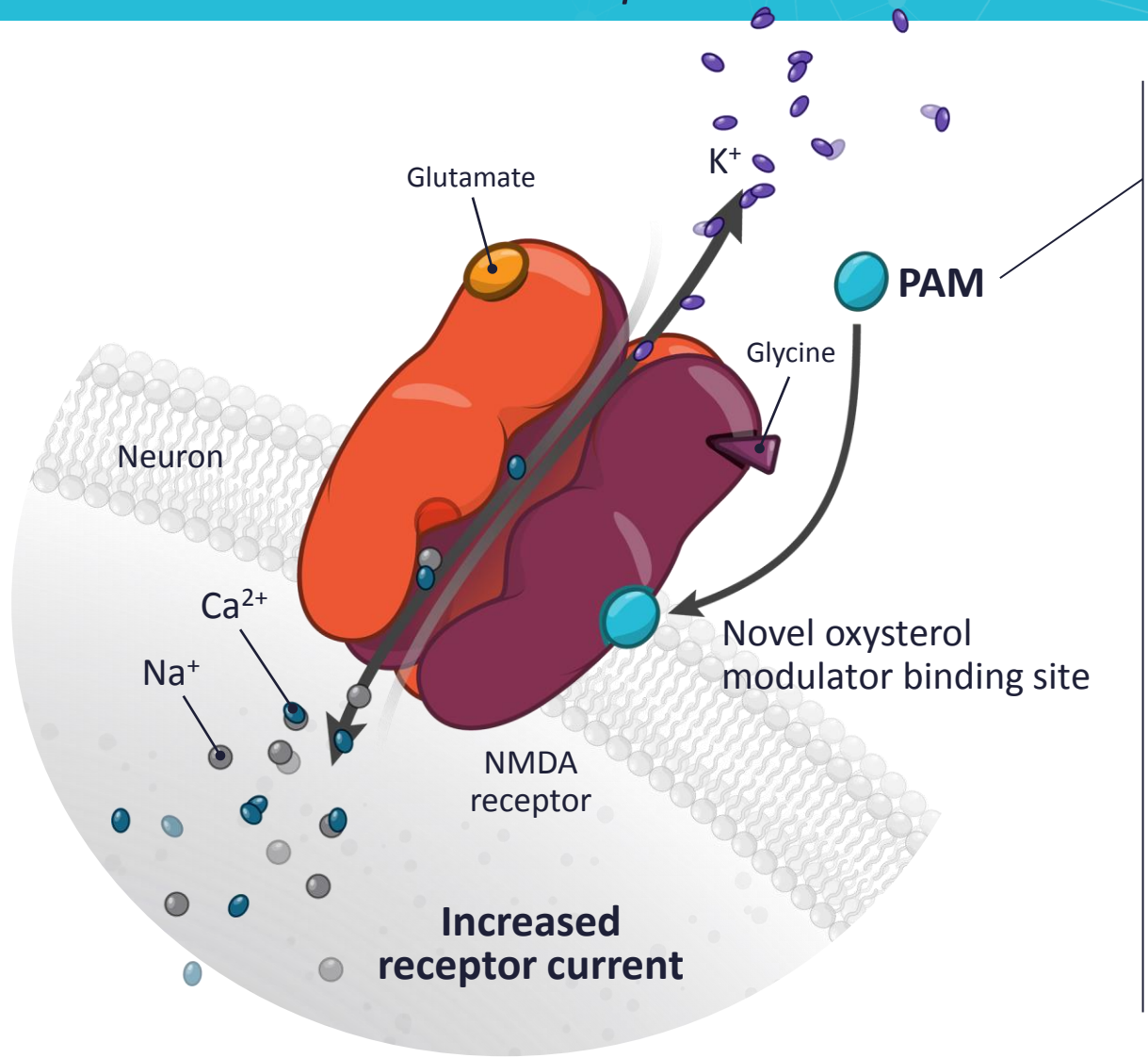
Next Generation Oral $GABA_A$ Receptor PAM



- Potent anti-seizure activity in preclinical models
- Differentiated preclinical profile (less sedative, potential for BID dosing)
- Targeted in Parkinson's disease, essential tremor and epileptiform disorders
- Phase 1 single ascending dose trial initiated

SAGE-718

First-in-Class NMDA Receptor Modulator



- Novel, proprietary, oral, first-in-class, oxysterol-based positive allosteric modulator (PAM) of the NMDA receptor
- Strong preclinical basis for role of NMDA receptor system in cognition
- Multiple disease entities associated with low NMDA function, including Huntington's, ADHD, and Alzheimer's
- Currently in Phase 1 clinical development

Goals for ZULRESSO™ (brexanolone injection) Launch and Rethinking How Care is Delivered

Taking on the stigma of PPD ►	Establishing knowledge base of PPD as a medical complication of childbirth
Establishing clear pathways to care ►	OB/GYN and Psychiatrist engagement, ACOG leadership
Delivering family-centric support model ►	Potential multiple site of care options (in-patient, supervised home care, other), subject to FDA approval of each option and agreement on final ZULRESSO label
Ensuring strong access and supply ►	Payer engagement strategy, value story, supply chain readiness
Expanding the footprint ►	Potential EU expansion, disciplined evaluation of other markets
Growing the team ►	Field teams, increased depth in core functions, patient/family centric culture

Strategic SAGE-217 Collaboration with Shionogi

Potential to Accelerate Development and Commercialization of SAGE-217 in Key Asian Markets

Expansion of Global Footprint

- Goal of collaboration to accelerate development of a potentially groundbreaking medicine to patients in key Asian markets
- Sage maintains exclusive rights to develop and commercialize SAGE-217 outside of those geographies

Expert Partner

- Shionogi is responsible for clinical development and commercialization of SAGE-217 in Japan, Taiwan, and South Korea
- Shionogi has strong presence in Asia in developing & commercializing therapeutics for CNS disorders

Attractive Terms

- Sage to receive tiered royalties on sales averaging in the greater than 20% range, if commercialized
- Shionogi has also granted Sage certain rights to co-promote SAGE-217 in Japan across all indications

SAGE THERAPEUTICS

SHIONOGI

$90 M
Upfront payment

$485 M
Potential development & commercial milestones

Q2 2018 Financial Results

	Q2 '18	Q4 '17
Cash and Marketable Securities	$1.1 B	$518.8 M

	Q2 '18	Q2 '17
Collaboration Revenue	$90.0 M	-
Research & Development	$69.0 M	$55.9 M
General & Administrative	$43.2 M	$15.0 M
Net Loss	$17.0 M	$70.2 M

Continued Momentum in 2018 and Beyond

ANTICIPATED TIMELINE	EVENTS
4Q 2018	SAGE-217 in PPD Phase 3 placebo-controlled data
4Q 2018	SAGE-324 Phase 1 data from single ascending dose trial
4Q 2018	SAGE-718 Phase 1 data from multiple ascending dose trial
4Q 2018	SAGE-217 in MDD Phase 3 placebo-controlled trial initiation
4Q 2018	SAGE-217 PSG in MDD with co-morbid insomnia Phase 3 placebo-controlled trial initiation
4Q 2018	SAGE-217 in bipolar depression Phase 2 trial initiation
4Q 2018	EMA Scientific Advice for brexanolone in PPD
Nov. 2, 2018	FDA planned Advisory Committee Meeting for ZULRESSO™ (brexanolone injection) in PPD
Dec. 19, 2018	ZULRESSO™ in PPD PDUFA target date
1H 2019	ZULRESSO™ in PPD commercial launch in U.S., if approved

RETHINKING treatment of brain disorders.

ORIGINATING differentiated medicines.

INNOVATING with a purpose for patient benefit.