SAGE THERAPEUTICS™

August 3, 2017

Q2 2017 Financial Results

Agenda – Today's Speakers

- **Paul Cox**, Senior Director, Investor Relations
- **Jeff Jonas**, M.D., Chief Executive Officer
- **Kimi Iguchi**, Chief Financial Officer
- **Q&A Session**

Forward-Looking Statements

The slides presented today and the accompanying oral presentation 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: the potential safety, pharmacological effect and efficacy of SAGE’s product candidates; anticipated development activities, milestones and results, including expected timing; the estimated number of patients with certain disorders or diseases; expectations regarding potential commercialization of our products, if successfully developed; the potential for expedited development and review for SAGE-547 in PPD as a result of the breakthough therapy designation; SAGE’s belief in the sufficiency of the current Phase 3 trials, if succcessful, for approval in the E.U.; potential future indications for SAGE’s product candidates; other planned activities; SAGE’s strategy and business outlook; and SAGE’s 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 SAGE’s control, which could cause actual results to differ materially from those contemplated in these forward-looking statements, including the risk that:

- SAGE may not be able to successfully demonstrate the efficacy and safety of its product candidates at each stage of development;
- success in SAGE’s pre-clinical studies or in earlier 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;
- decisions or actions of regulatory agencies may affect the initiation, timing and progress of clinical trials, or SAGE’s ability to obtain marketing approval for its product candidates, and a regulatory authority may ultimately decide that the design or results of our clinical trials are not sufficient for regulatory approval despite earlier guidance;
- we may encounter delays in enrollment or other delays or problems in the conduct and completion of our clinical trials, including in analyzing data or requiring the need for additional analysis, data or patients, and such issues with any trial could cause a delay in completion of the trial, availability of results and timing off future activities;
- even if SAGE’s 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 SAGE’s current estimates;
- SAGE 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 its patent portfolio against challenges from third parties;
- SAGE may face competition from others developing products for similar uses as those for which SAGE’s products are being developed;
- SAGE’s operating expenses may be higher than forecasted and SAGE 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;
- SAGE may not be able to establish and maintain key business relationships with third parties on whom SAGE is, or will need to be, dependent for development or manufacture of products or for future marketing, sales and distribution of products, if SAGE is successful in its development efforts;
- SAGE 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 SAGE’s our most recent Quarterly Report on Form 10-Q, and in SAGE’s 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 SAGE's views only as of today, and should not be relied upon as representing its views as of any subsequent date. SAGE undertakes 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.

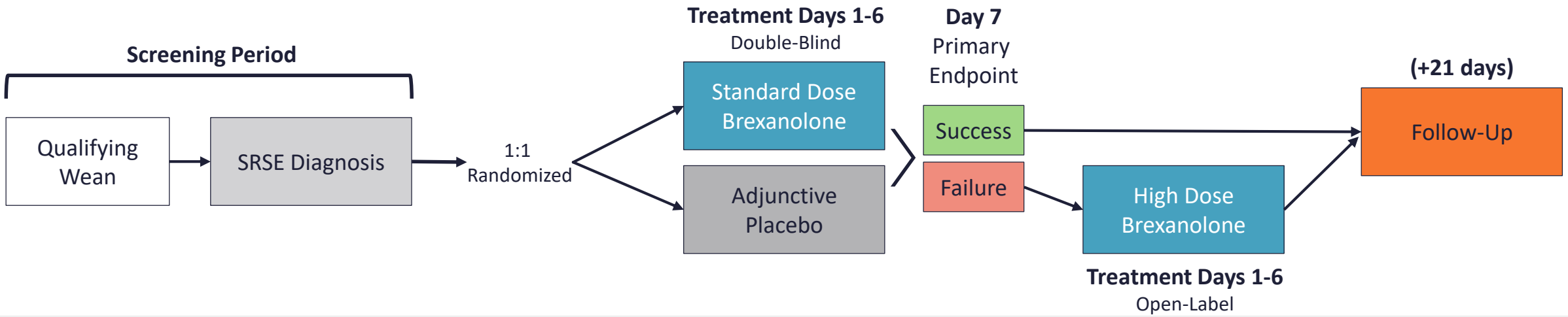
Multi-Compound Neuropsych Portfolio

Program	Compound	Indication	Preclinical	Phase 1	Phase 2	Phase 3
GABA	Brexanolone (SAGE-547)	Super-Refractory Status Epilepticus				
		Postpartum Depression				
	SAGE-217	Postpartum Depression				
		Major Depressive Disorder				
		Essential Tremor				
		Parkinson's Disease				
	SAGE-324	GABA Hypofunction				
	SAGE-689					
	SAGE-105					
NMDA	SAGE-718	Cerebrosterol Deficit Disorders				
		Anti-NMDA Receptor Encephalitis				
		NMDA Hypofunction				

SAGE-547 Phase 3 SRSE Trial Design

STATUS TRIAL

- Completed enrollment in the first-ever double-blind, placebo-controlled, randomized trial of a novel agent in SRSE
- ~180 international sites (U.S., Canada, E.U., Israel)
- FDA Special Protocol Assessment and EMA Scientific Advice
- Primary Endpoint: continued resolution of SE for 24 hours following wean of all 3rd-line agents and brexanolone/placebo



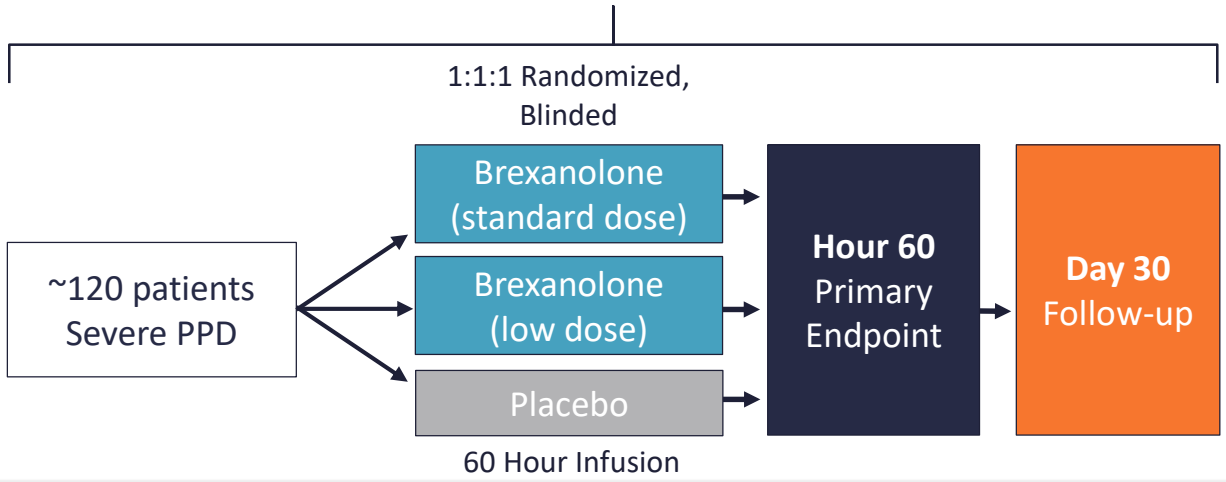
Brexanolone as a Treatment for PPD

Phase 3 HUMMINGBIRD Program

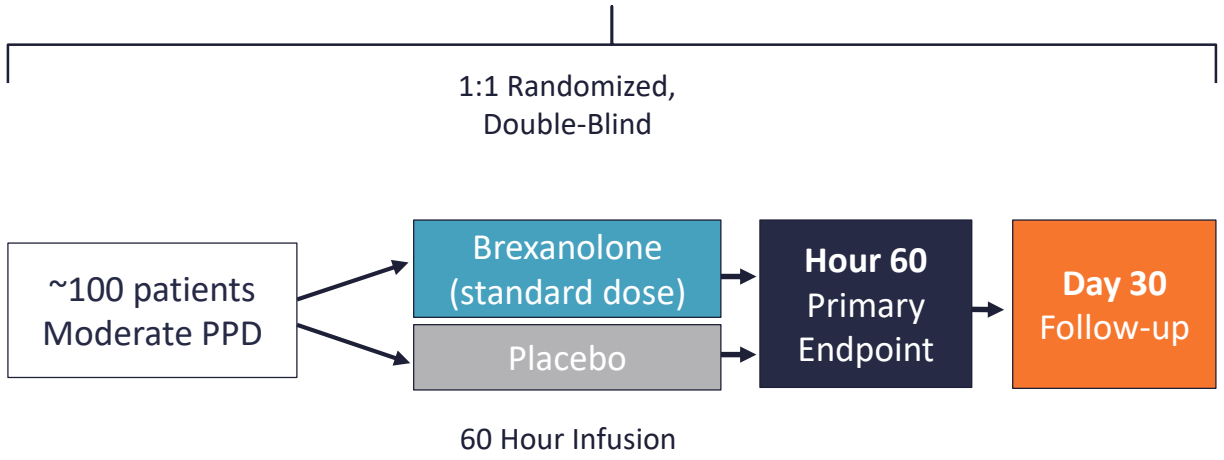
HUMMINGBIRD STUDY

Study Population	Key Endpoints
• Placebo-controlled, double-blind 1:1 randomization • Major depressive episode in 3rd trimester or within 4 weeks post-birth • HAM-D ≥26 (202B); HAM-D ≥20 and ≤25 (202C)	• Change from baseline in HAM-D total score at 60 hours compared to placebo • Safety, tolerability and pharmacokinetics

Phase 3 Study 202B



Phase 3 Study 202C



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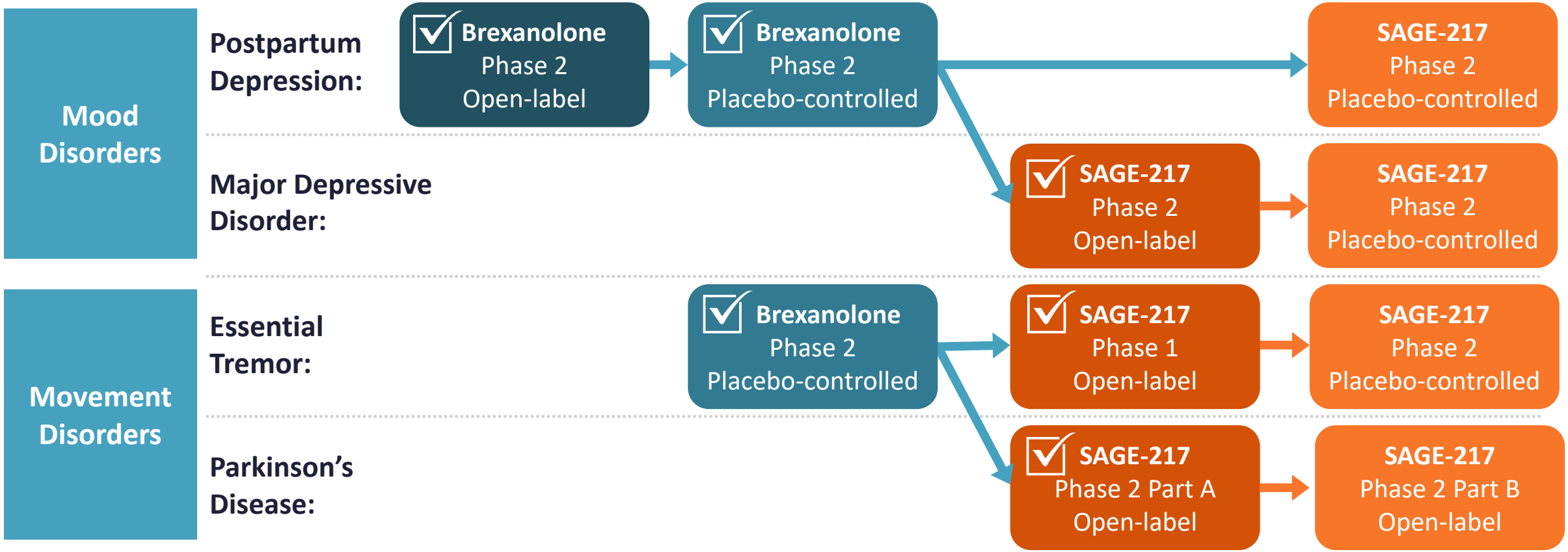
SAGE-217 Clinical Development Strategy

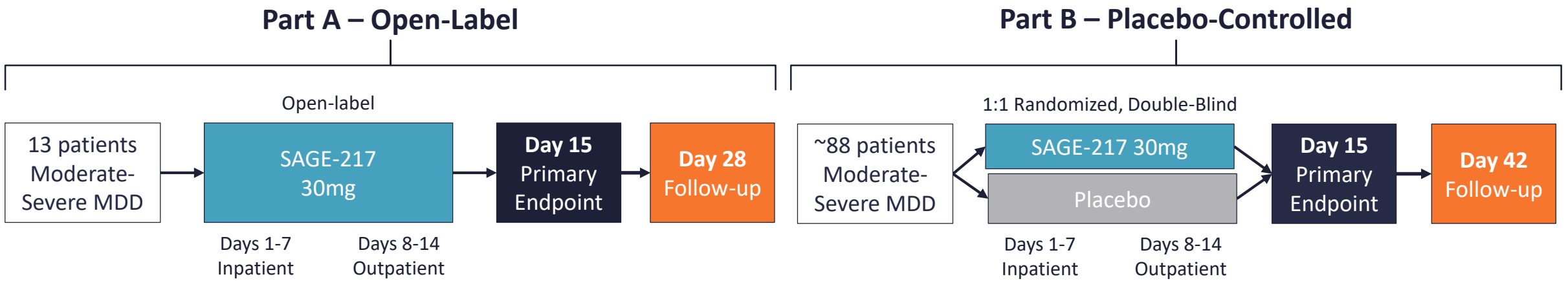
Positive Data Drive Incremental De-Risking



SAGE-217 in MDD

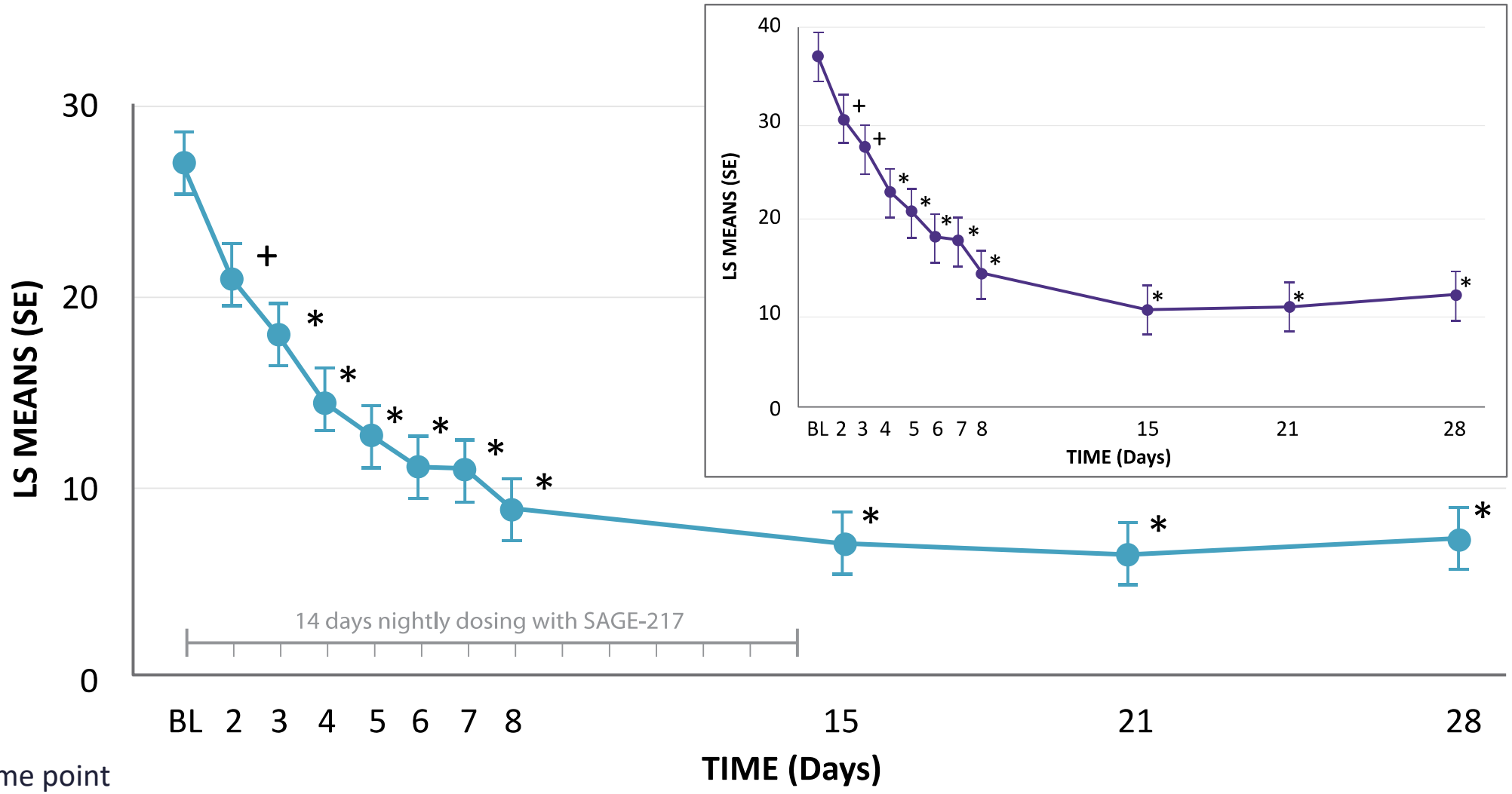
Phase 2 Clinical Program

Study Population	Key Endpoints
• Patients with MDD present for 4-week period • HAM-D ≥22 • 13 patients (Part A); ~88 patients (Part B)	• Safety, tolerability and pharmacokinetics • Change from baseline in HAM-D total score



MDD Phase 2 Part A Study: Efficacy

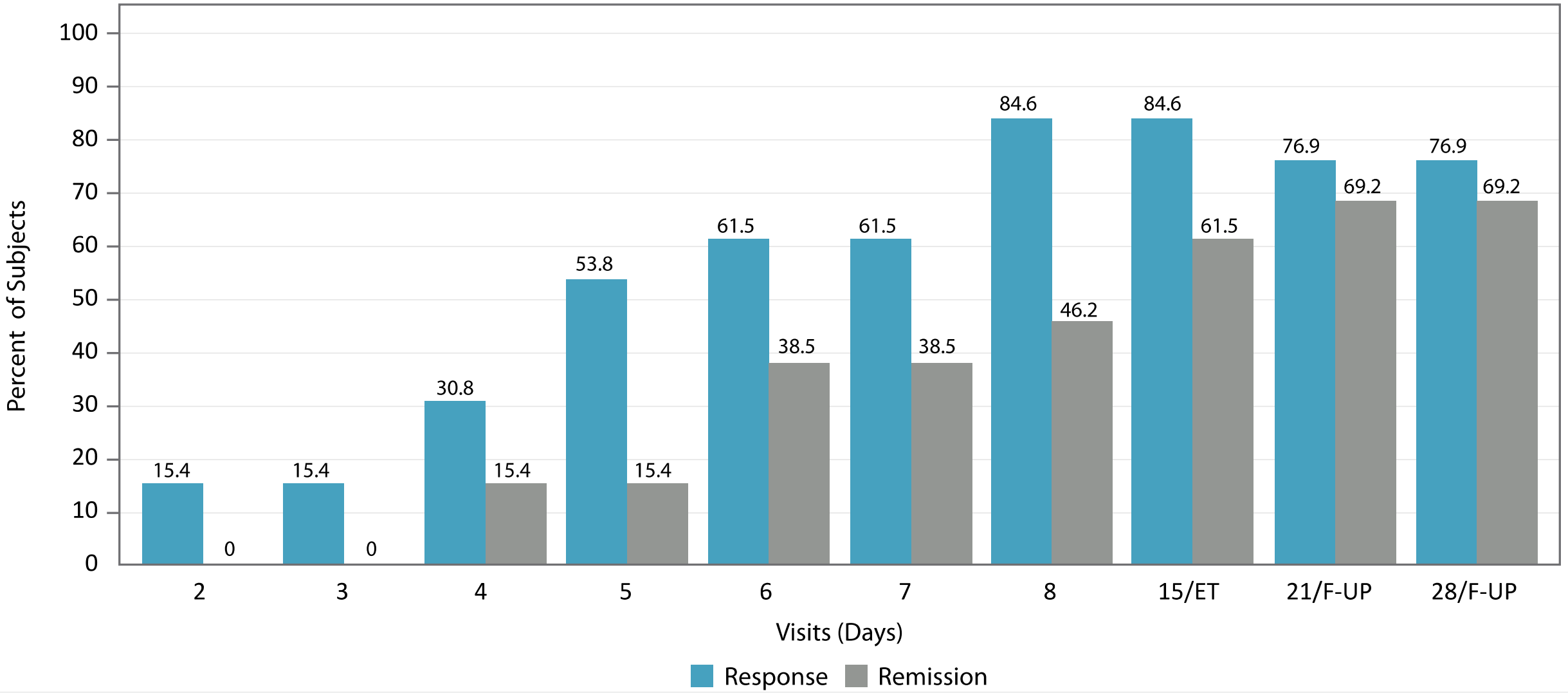
HAM-D and MADRS (inset) Total Score Over Time



+p<0.05
*p<0.0001
BL = Baseline
N=13 each time point

MDD Phase 2 Part A Study: Efficacy

HAM-D Response Rate (≥50% reduction from baseline) / Remitter Rate (≤7 pts HAM-D)



MDD Phase 2 Part A Study: Safety

Adverse Events Summary

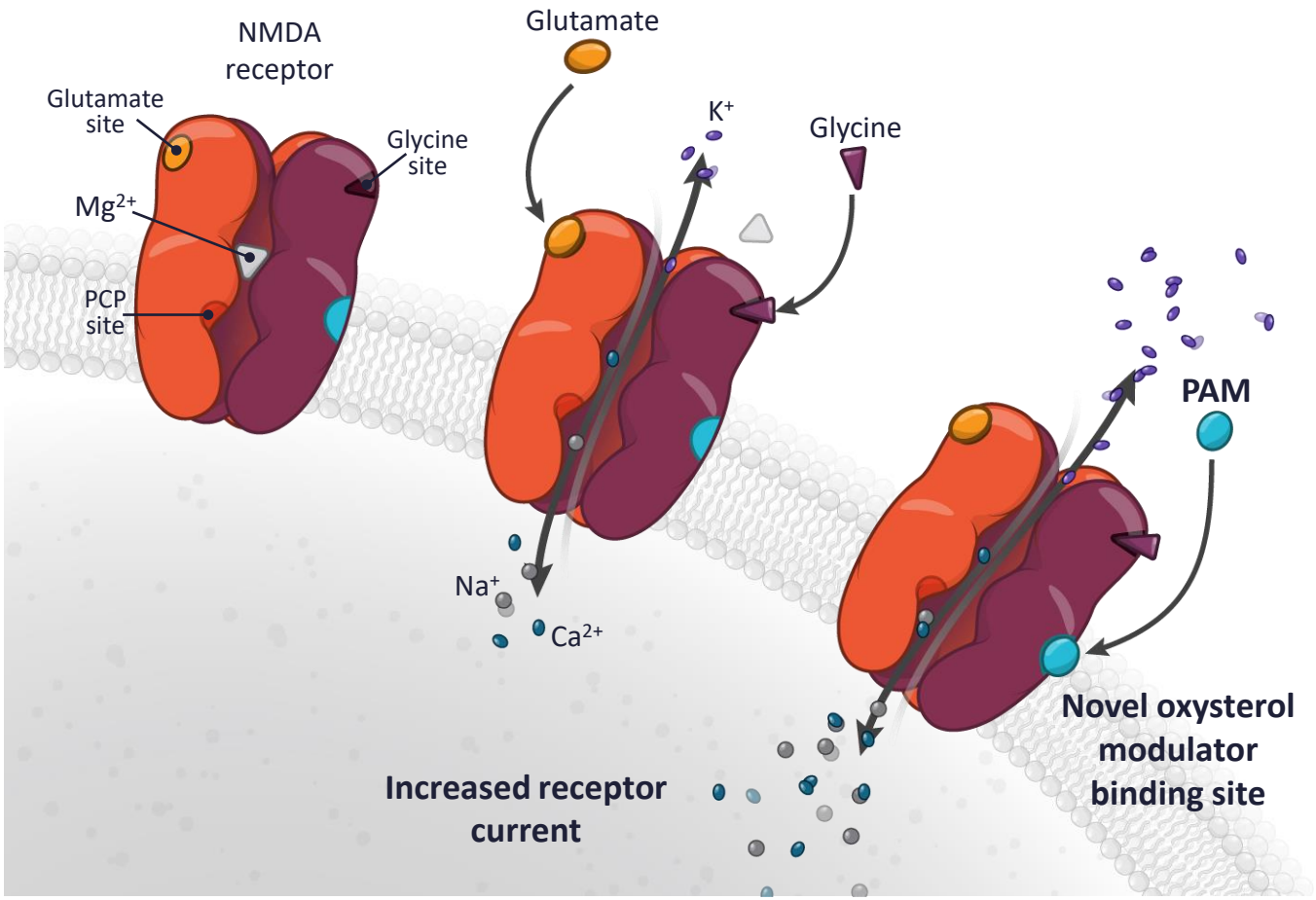
- No deaths, SAEs, or discontinuations due to AEs.
- Most AEs were considered related to study drug by the investigator.
- Most common AEs (in ≥2 subjects) included sedation, headache, dizziness, somnolence, myalgia.
- No subjects had a response of "yes" to any Columbia suicide severity rating scale (C-SSRS) suicidal ideation item.
- There were no meaningful changes in other safety parameters assessed.

	SAGE-217 (N=13)
Overall Summary	
At Least One AE	12 (92.3%)
Drug-related AE	11 (84.6%)
Severe AE	0
Serious AE	0
AE leading to drug discontinuation	0
AE leading to death	0
AEs in at Least 2 Subjects	
Sedation	6 (46.2%)
Headache	4 (30.8%)
Dizziness	3 (23.1%)
Somnolence	3 (23.1%)
Myalgia	3 (23.1%)
Nasal Congestion	2 (15.4%)

SAGE-718: First-in-Class NMDA Receptor Modulator

Currently in Phase 1 Clinical Development

- NMDA receptor system plays a critical role in brain network balance and plasticity
- Loss of NMDA function may have significant impact on neuropsych disorders
- SAGE-718 is a novel, oral, first-in-class, oxysterol-based positive allosteric modulator (PAM) of the NMDA receptor
- Good oral pharmacokinetic profile in animal models



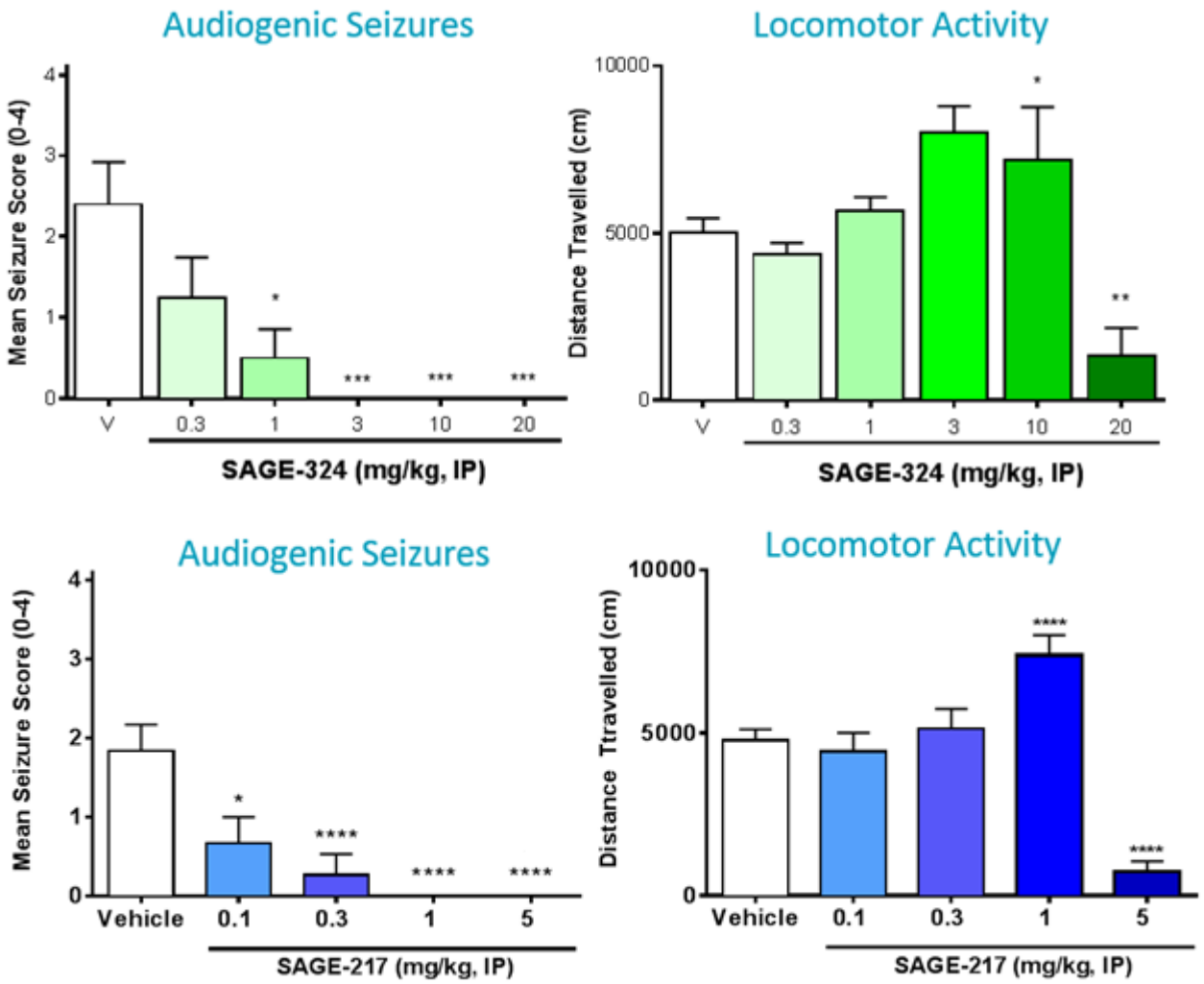
SAGE-324: Next Generation Oral $GABA_A$ Receptor PAM

Progressing in IND-Enabling Studies

- Potent anti-seizure activity in preclinical models
- Wider dose range before locomotor impairment in animals (compared with SAGE-217)

SAGE-324 activity in Fmr1 Knockout Mice

SAGE-217 activity in Fmr1 Knockout Mice



Solid Financial Position to Advance Programs

Q2 2017 Financial Results (as of 6/30/2017)

	Q2 '17	Q4 '16
Cash and Marketable Securities	$285.9M	$397.5M

	Q2 '17	Q2 '16
Research & Development	$55.9M	$26.1M
General & Administrative	$15.0M	$8.9M
Net Loss	$70.2M	$34.7M

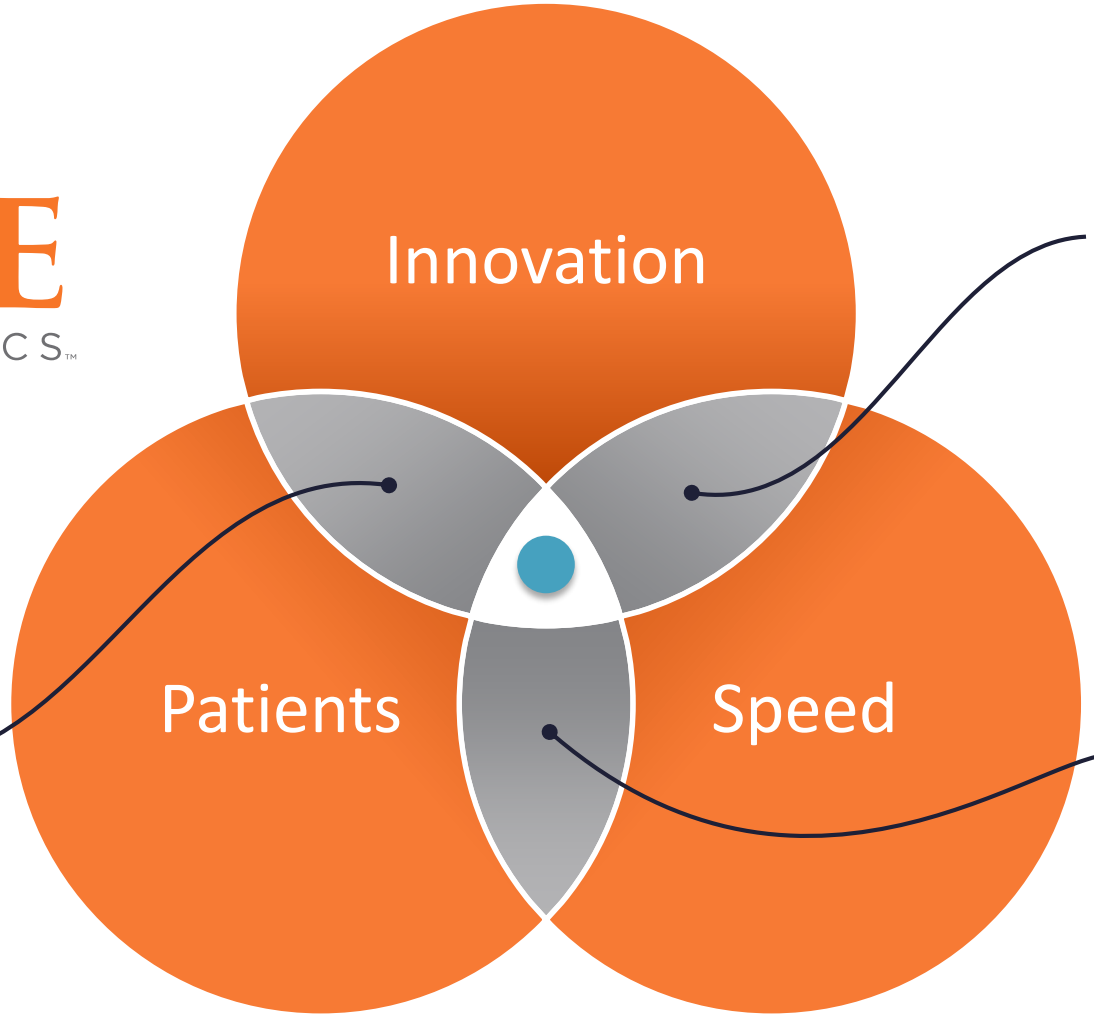
Guidance:

- Based on current operating plans, expect existing cash and marketable securities will be sufficient to fund operations into Q2 2018

Recent and Expected Milestones

Program	Compound	Indication	1H 2017	2H 2017
GABA	Brexanolone (SAGE-547)	Super-Refractory Status Epilepticus		○ Phase 3 top-line data (Q3)
		Postpartum Depression		✓ EMA scientific advice ○ Phase 3 top-line data ▪ 202B - Severe ▪ 202C - Moderate
	SAGE-217	Postpartum Depression		○ Phase 2 top-line data
		Major Depressive Disorder	✓ Phase 2 open-label data ✓ Initiate Phase 2 Part B ✓ Fast Track Designation	○ Phase 2 Part B top-line data
		Essential Tremor		○ Phase 2 top-line data
		Parkinson's Disease	✓ Phase 2 Part A initiation ✓ Phase 2 Part A data	✓ Phase 2 Part B initiation ○ Phase 2 Part B top-line data
NMDA	SAGE-718	Cerebrosterol Deficit Disorders	✓ Phase 1 SAD initiation	○ Phase 1 SAD data
		Anti-NMDA Receptor Encephalitis		
		NMDA Hypofunction		

Positioned for Leadership in CNS



Advancing novel medicines through deliberate, stepwise and data-driven development

Tackling the **innovation** gap in CNS

Responsibly pursuing **expedited pathways** to deliver new treatments

SAGE THERAPEUTICS™

RETHINKING CNS