PRAXIS

4Q/FY 2020

CORPORATE UPDATE

MARCH 2021

Forward-looking statements

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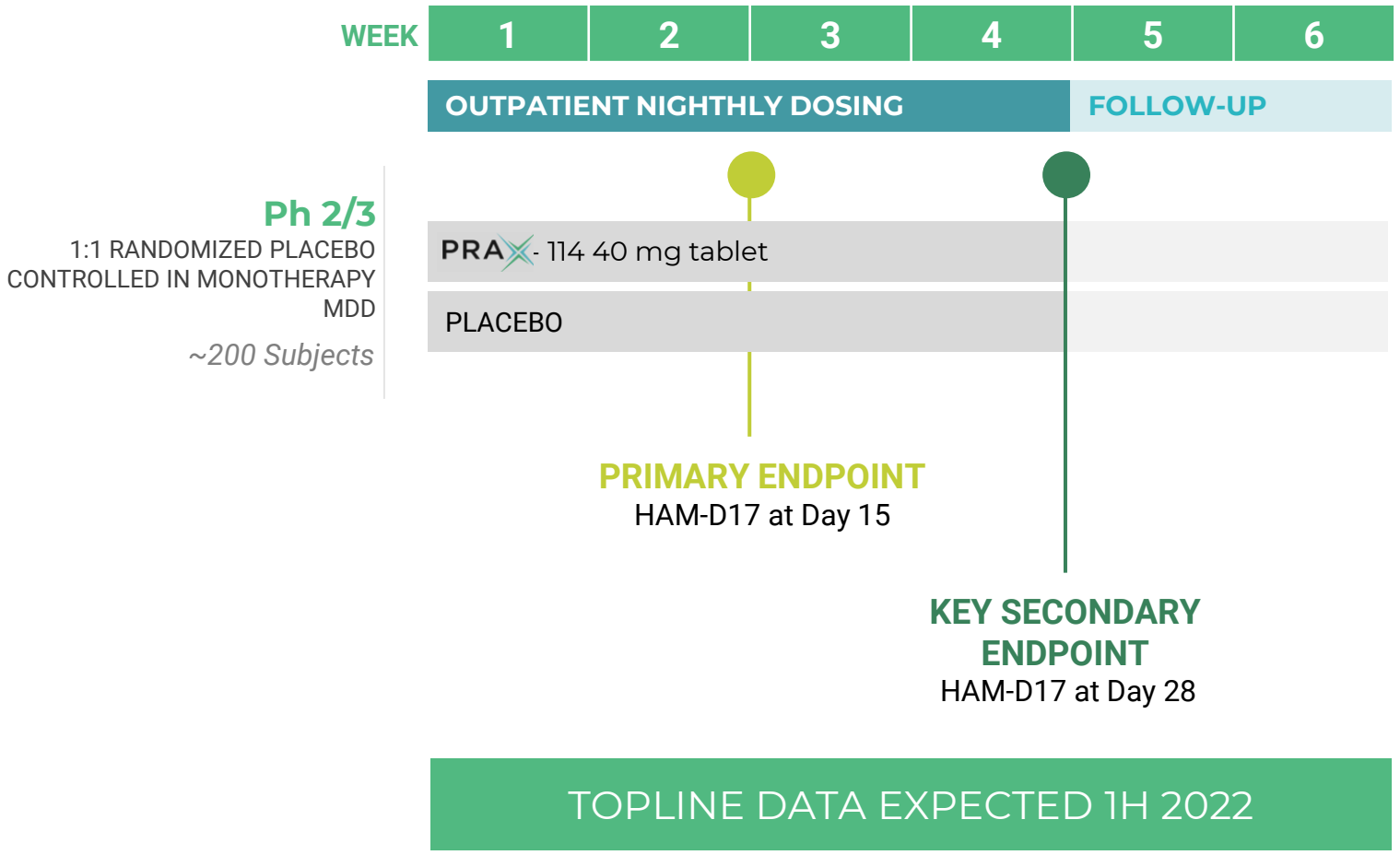
This presentation may contain "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995 relating to our business, operations, and financial conditions, including but not limited to express or implied statements regarding the current beliefs, expectations and assumptions regarding the future of our business, future plans and strategies, our development plans, our preclinical and clinical results and other future conditions. Words such as, but not limited to, "look forward to," "believe," "expect," "anticipate," "estimate," "intend," "plan," "would," "should" and "could," and similar expressions or words, identify forward-looking statements. New risks and uncertainties may emerge from time to time, and it is not possible to predict all risks and uncertainties. Any forward-looking statements in this presentation are based on management's current expectations and beliefs and are subject to a number of risks, uncertainties and important factors that may cause actual events or results to differ materially from those expressed or implied by any forward-looking statements contained in this presentation, including, without limitation, risks relating to: (i) the success and timing of our ongoing clinical trials, (ii) the success and timing of our product development activities and initiating clinical trials, (iii) the success and timing of our collaboration partners' ongoing and planned clinical trials, (iv) our ability to obtain and maintain regulatory approval of any of our product candidates, (v) our plans to research, discover and develop additional product candidates, (vi) our ability to enter into collaborations for the development of new product candidates, (vii) our ability to establish manufacturing capabilities, and our and our collaboration partners' abilities to manufacture our product candidates and scale production, (viii) our ability to meet any specific milestones set forth herein, and (ix) uncertainties and assumptions regarding the impact of the COVID-19 pandemic on Praxis' business, operations, clinical trials, supply chain, strategy, goals and anticipated timelines.

Except as required by applicable law, we do not plan to publicly update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise. Although we believe the expectations reflected in such forward-looking statements are reasonable, we can give no assurance that such expectations will prove to be correct. Accordingly, readers are cautioned not to place undue reliance on these forward-looking statements.

For further information regarding the risks, uncertainties and other factors that may cause differences between Praxis' expectations and actual results, you should review the "Risk Factors" section of our filings with the Securities and Exchange Commission, which are available at www.sec.gov.

Certain information contained in this presentation relates to or is based on studies, publications, surveys and other data obtained from third-party sources and our own internal estimates and research. While Praxis believes these third-party sources to be reliable as of the date of this presentation, we have not independently verified, and make no representation as to the adequacy, fairness, accuracy or completeness of, any information obtained from third-party sources. In addition, all of the market data included in this presentation involves a number of assumptions and limitations, and there can be no guarantee as to the accuracy or reliability of such assumptions. Finally, while we believe our own internal research is reliable, such research has not been verified by any independent source.

PRAX-114 Phase 2/3 monotherapy MDD trial to start March 2021



PHASE 2/3

First of two registrational trials for monotherapy MDD

KEY INCLUSION CRITERIA

Ages 18-65
HAM-D17 ≥ 23
At least one prior episode of MDD

KEY EXCLUSION CRITERIA

Treatment-resistant depression
Current antidepressant treatment

PRAX-114 clinical program leverages best practices in conduct of MDD trials

Key Operational Controls

RIGOROUS PATIENT SELECTION

- Enrollment of patients with at least one prior episode of MDD (associated with a lower placebo response rate) [1]
- Two-level subject & data quality procedure using the SAFER independent clinical interview to confirm eligibility [2]

HIGH QUALITY SITE SELECTION

- Enrollment of sites with a known track-record of high-quality data generation
- Experienced raters, adequate resources, low frequency of operational issues and proven performance in running studies successfully during the pandemic

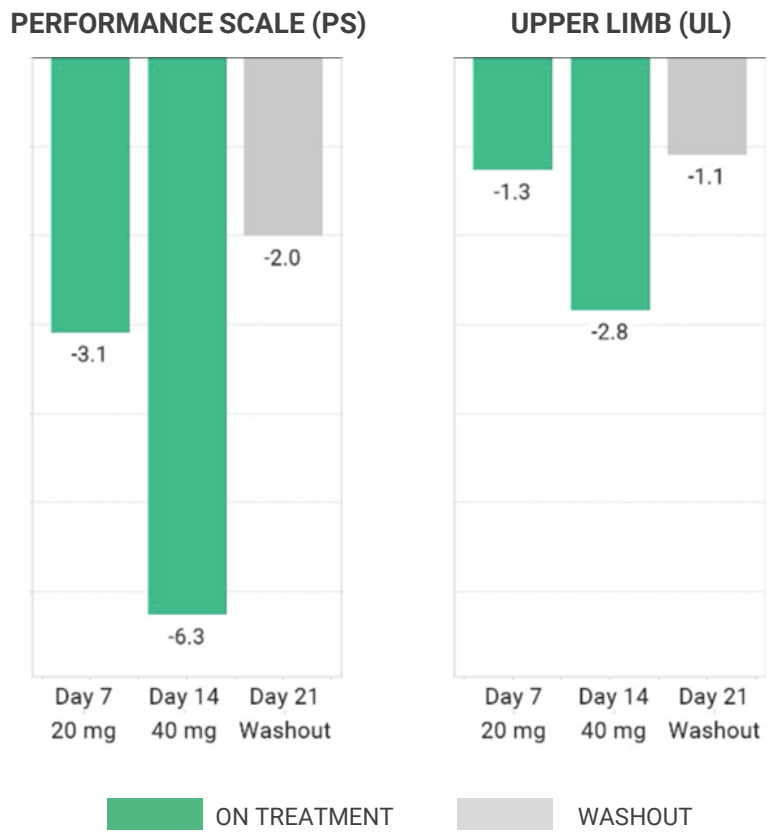
OPTIMIZED TRIAL DESIGN & EXECUTION

- Integration of a placebo control reminder script for patients at every visit
- Inclusion of the AiCure smartphone-based adherence monitoring system with structured site intervention [3]

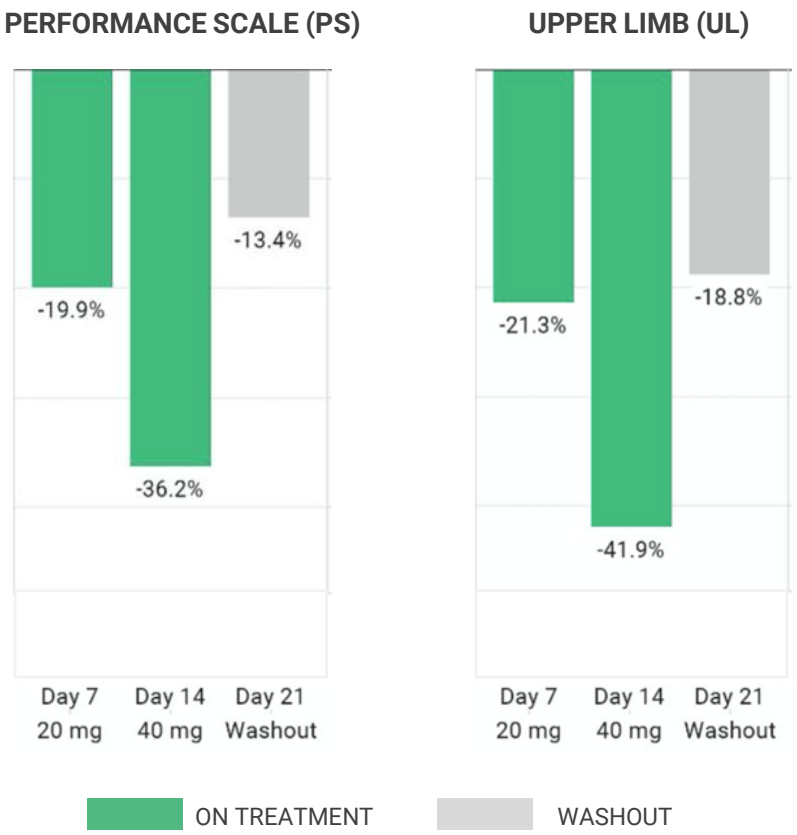
1: Sonawalla SB, Rosenbaum JF. Placebo response in depression. Dialogues Clin Neurosci. Mar 2002;4(1):105-13.
2: Freeman MP, Pooley J, Flynn MJ, et al. Guarding the Gate: Remote Structured Assessments to Enhance Enrollment Precision in Depression Trials. J Clin Psychopharmacol. Apr 2017;37(2):176-181. doi:10.1097/JCP.0000000000000669
3: https://aicure.com/

PRAX-944 Phase 2a low dose cohort tremor reduction data compares favorably with standard-of-care

Change from Baseline in TETRAS Score

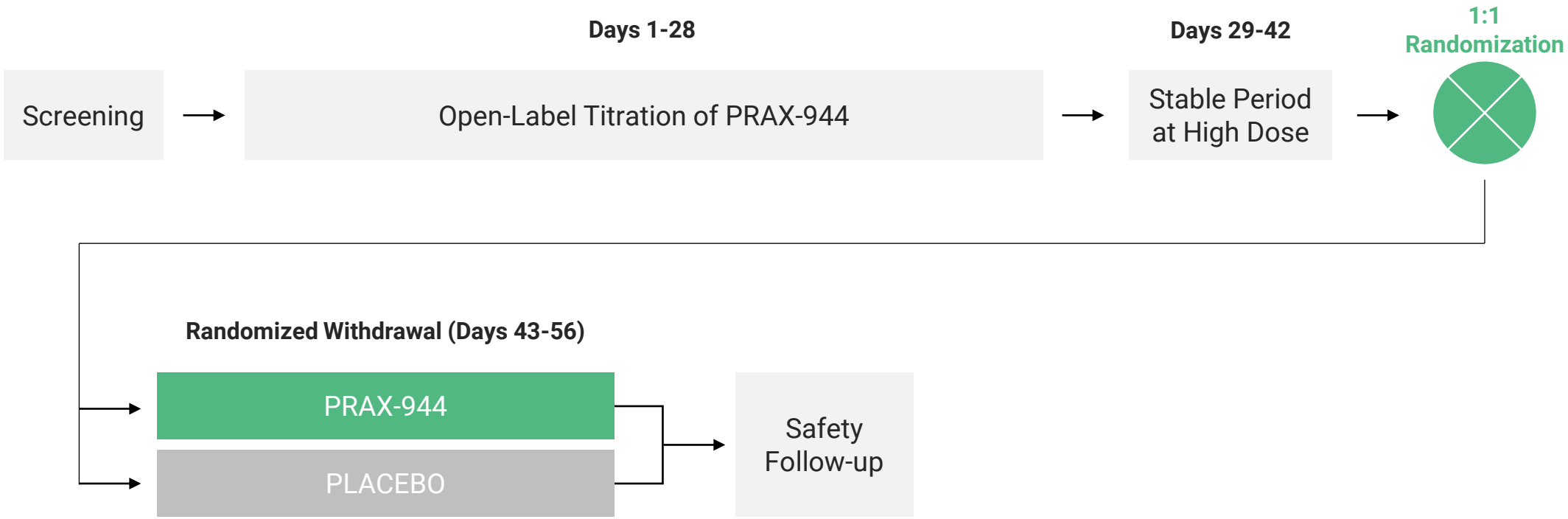


Percent Change in Tremor Amplitude



PRAX-944 Phase 2a high dose cohort clinical trial design

PART B: Open-Label Titration & Randomized Withdrawal Study — Up to 12 patients, up to 120 mg



Substantial potential for value creation across the portfolio

Mood Disorders | Movement Disorders | Rare Diseases

PRAX-114
Depression

$GABA_A$ receptor PAM

Phase 2/3 for Monotherapy MDD

Phase 2 for Adjunctive MDD

1H 2022
TOPLINE

PRAX-944
Essential Tremor

T-type calcium channel blocker

Phase 2a High Dose Cohort for ET

Initiation of Phase 2b randomized control

Mid 2021
PH 2A TOPLINE

PRAX-562
Rare Diseases

Selective persistent sodium current blocker

Adult Cephalgias including SUNCT, SUNA and Trigeminal Neuralgia

2H 2021
PH 2 INITIATION

Preclinical
Genetically Defined Epilepsies

Antisense oligonucleotide (ASO)

PRAX-222 for SCN2A gain-of-function mutations

Early 2022
IND

Indication Expansion

Multiple indication expansion opportunities across the portfolio

MULTIPLE POTENTIAL VALUE-CREATING MILESTONES
EXPECTED WITHIN THE NEXT 12+ MONTHS