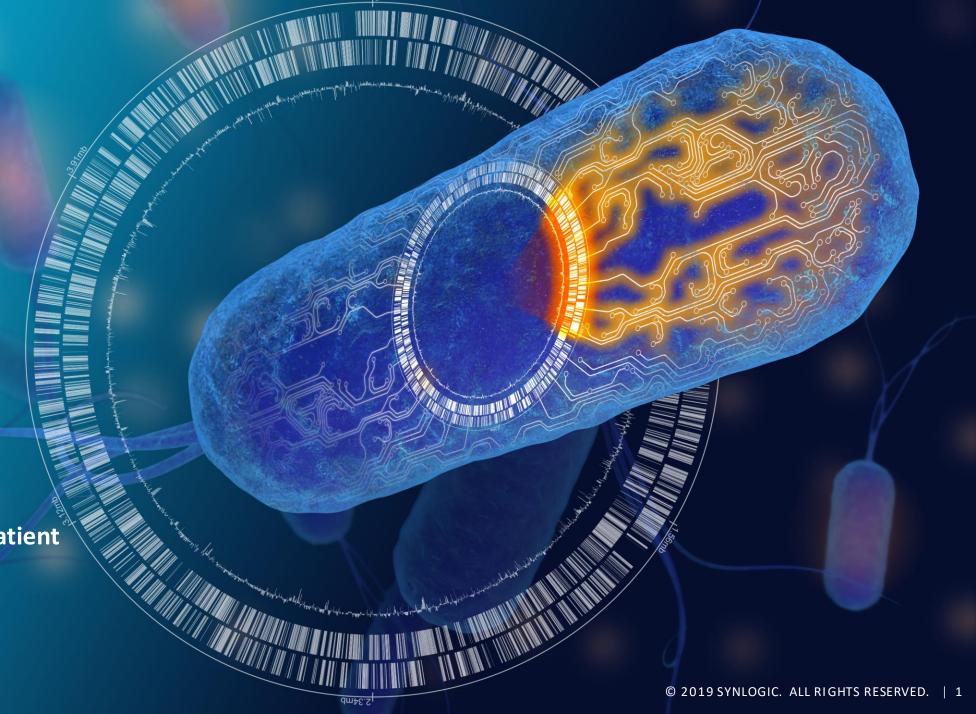
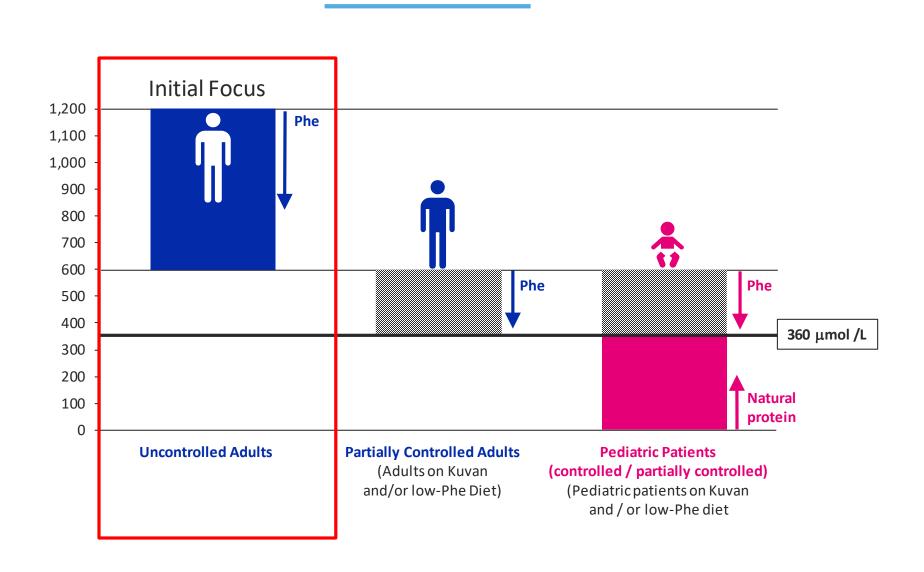


DESIGNED FOR LIFE

SYNB1618
Phase1/2a Clinical Trial
Topline Data from PKU Patient
Cohorts
July 15th, 2019

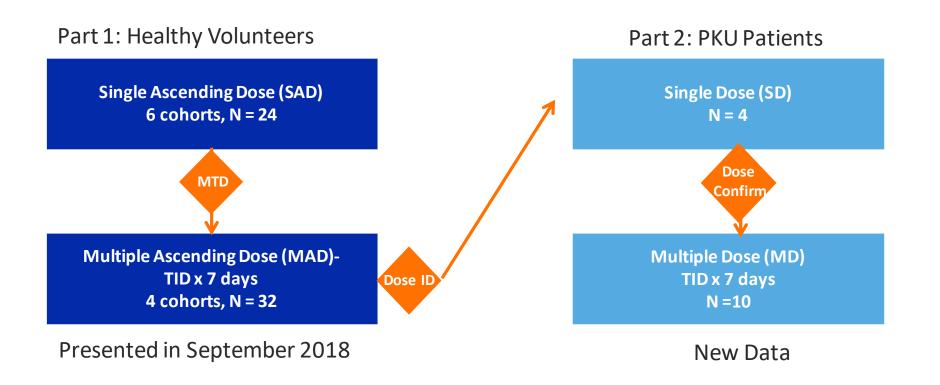


SYNB1618 Potential to Address Unmet Need Across Patient Groups





SYNB1618 Phase 1/2a Study Design



PKU Clinical Trial Design

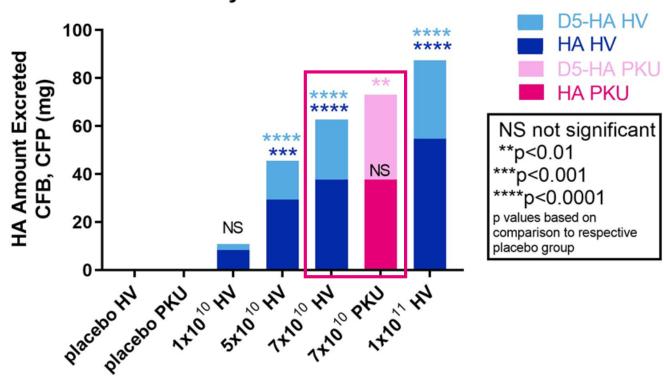
- Randomized, double-blind placebo-controlled study at multiple sites in the US
- Primary outcome: establish safety/tolerability following single and multiple doses in HV and PKU patients
- Secondary outcome: SYNB1618 kinetics in feces
- Exploratory: change from baseline in plasma and urinary biomarkers of Phe metabolism



SYNB1618 Activity Biomarkers Indicate Significant Phe Consumption

Similar activity in HVs and PKU Patients

Urinary HA and D5 HA

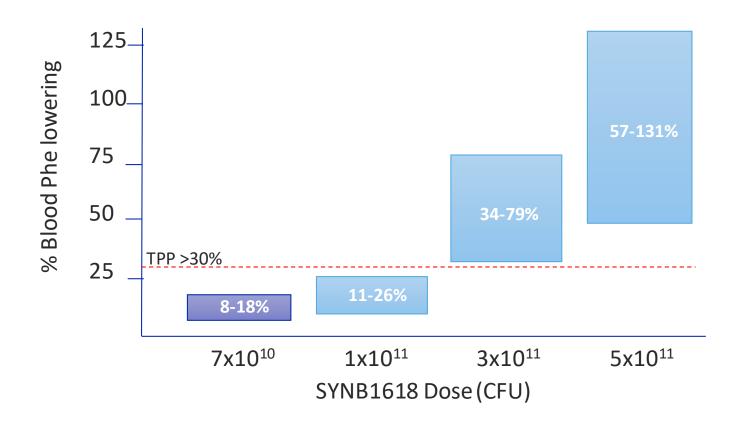


Dose of Cells (CFU)

HA=hippurate, D5-HA= labeled HA, CFB=change from baseline, CFP=change from placebo HV=healthy volunteer PKU=phenylketonuria patient



Modeling: Potential For Phe Reduction in PKU Patients



Ranges represent

- Low: PAL mechanism only (conservative)
- High: PAL + LAAD activity (estimates maximum with both pathways)



Upcoming Milestones and Path Forward

Established new solid formulation and manufacturing process



Completed EPO1 interactions with FDA to align on program plans (clinical, manufacturing, toxicology)



Completed Phase 1/2a study (healthy volunteers and PKU patients)



Initiate bridging study with solid formulation in Q3 2019

Phase 2 study in PKU patients to assess Phe lowering to start in 1H 2020



