

BiolAmp Therapeutics

A Small Molecule Incretin Amplifier for the Treatment of Obesity

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Launch Team



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YALE VENTURES

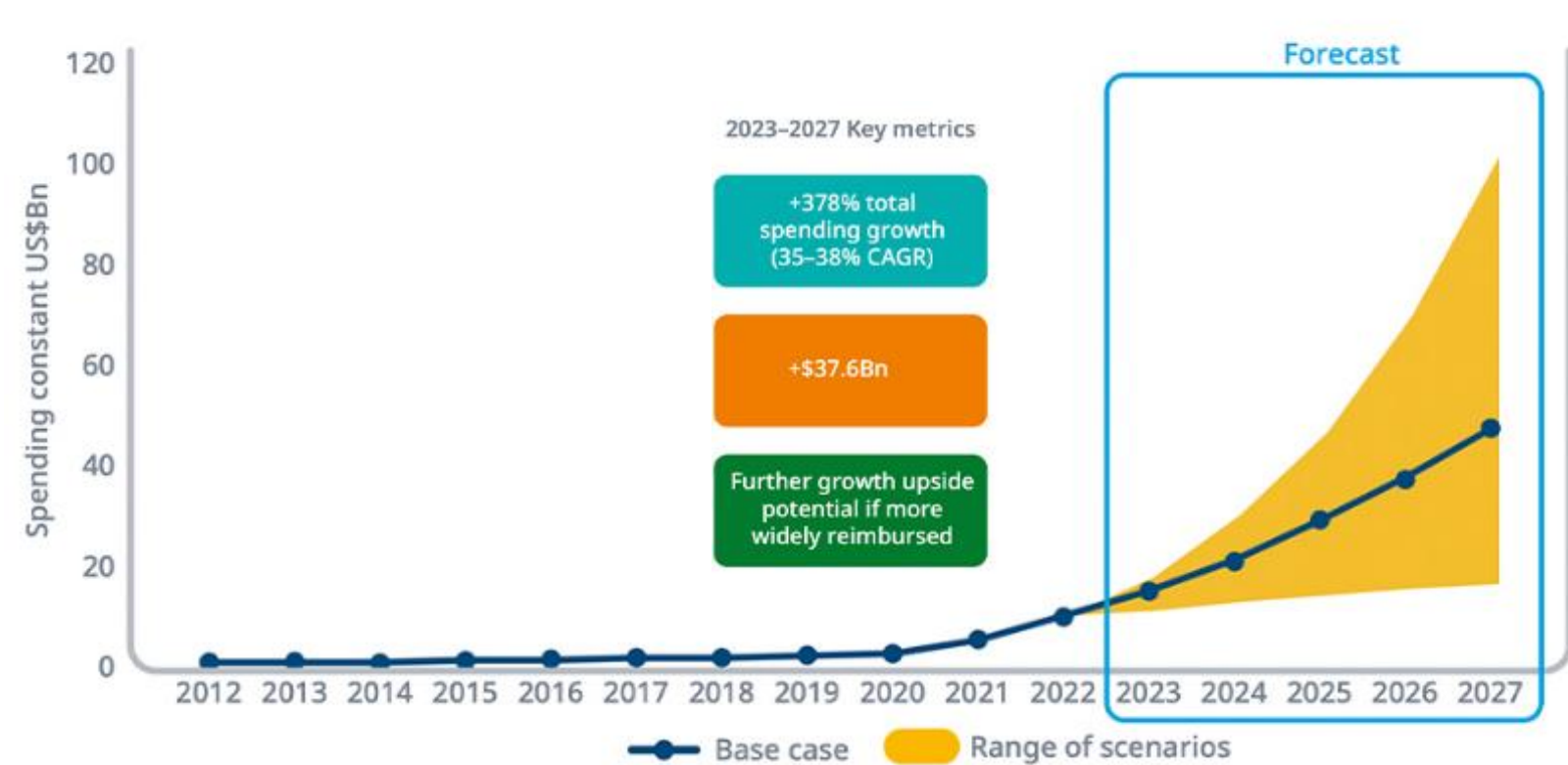
Dave Lewin, PhD, Business Development

Robert Williams, PhD, Blavatnik Fellow



Obesity and Diabetes markets are large and growing

GLP-1 therapies have transformed how we think about these diseases



> 10%

of adults have diabetes

1/4

of the population will have obesity by 2035

\$100B

Global market for diabetes and obesity therapeutics

Source: IQVIA Forecast Link, IQVIA Institute, Dec 2023 Global Use of Medicines 2024: Outlook to 2028. Report by the IQVIA Institute for Human Data Science.



Conclusions from 'Obesity Week 2024' Meeting

Incretins provide benefits for multiple disease areas, but will remain in [need of amplification](#)

1. Interest in novel MOAs persists

Recent fundraises, acquisitions, or milestones:

- Cagrilintide-Semaglutide (finishing phase 3)
- Oral semaglutide (OASIS, 2023)
- Bimagrimumab (Versanis purchased by Lilly for 1.9 B\$)
- Expansion toward oral GLP1-RA

2. Benefits beyond weight loss

Heart, blood vessels, brain, and beyond...



The NEW ENGLAND
JOURNAL of MEDICINE

Tirzepatide for Obesity Treatment
and Diabetes Prevention

Jastreboff, et al., 2024

3. Incretins are in need of amplification

Viking's Oral GLP-1/GIP **"not good enough"**

Viking Therapeutics' Hot Stock Slips After Latest Obesity Drug Trial Results

Story by Aaron McDade • 1d • 2 min read

Injectable incretin-based therapies (e.g., GLP-1 RAs) suffer from major limitations:

- Still short of treatment goals
- Adverse events; e.g., muscle loss
- Expensive to manufacture/store/deliver
- Injectable
- We can't make enough to treat even 1% of patients!

There is room for improvement!

- Increased efficacy
- Beyond weight loss; e.g., muscle-sparing
- Oral administration
- Efficacy in T2DM
- Maintenance therapy

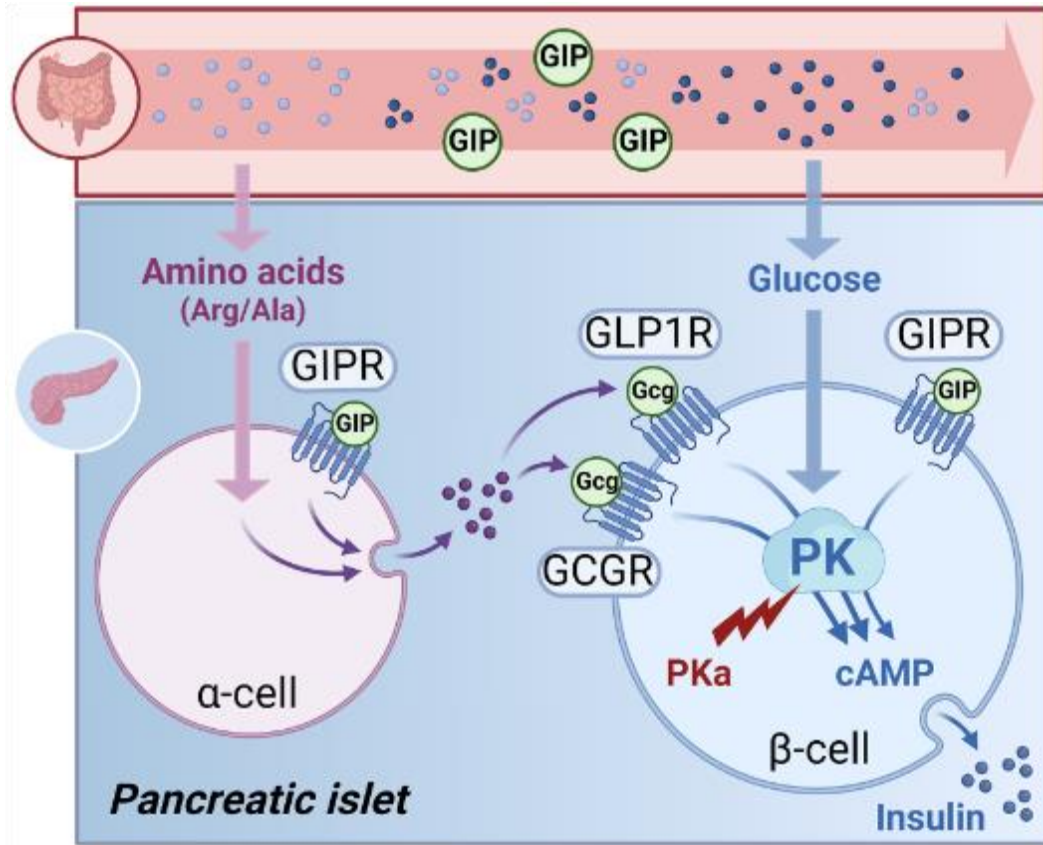


BiolAmp's Solution: **Mitochondrial Satiety**

We Identified An Amplifier Downstream of GLP1R

GLP-1 signaling is dependent on **mitochondrial satiety**

Activating a specific Pyruvate Kinase isoform **induces mitochondrial satiety**



In preclinical in vivo models, our small molecule PK isoform activator:

- Improves islet function
- Improves islet health
- Decreases glucose and lipids
- Decreases hepatic lipids
- Improves glucose tolerance
- **Improves GLP-1 efficacy**

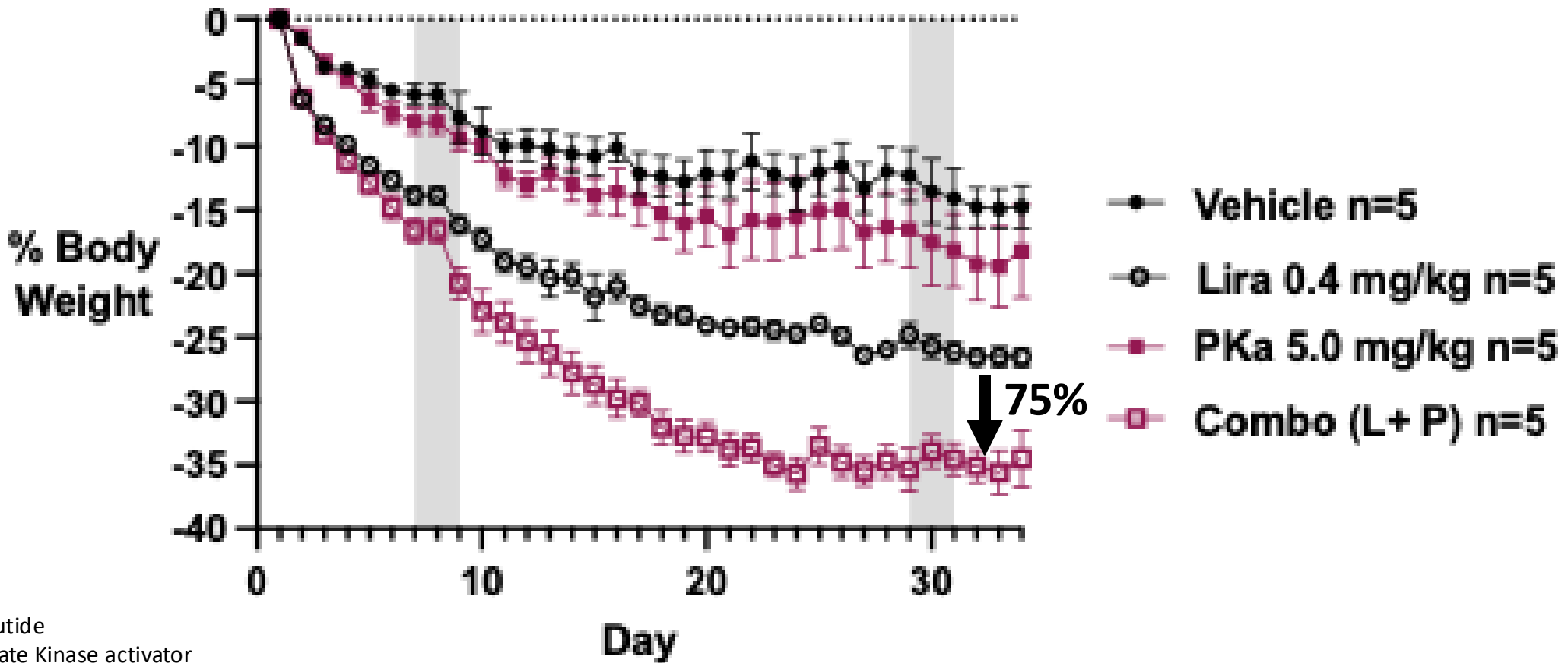
Importantly, activation is known to be well-tolerated in humans



Mitochondrial Satiety

(PK activator) amplifies GLP-1RA weight loss

BLAVATNIK ACCELERATOR
DATA



Lira = Liraglutide
PKa = Pyruvate Kinase activator

PKa amplifies GLP-1 weight loss in DIO mice

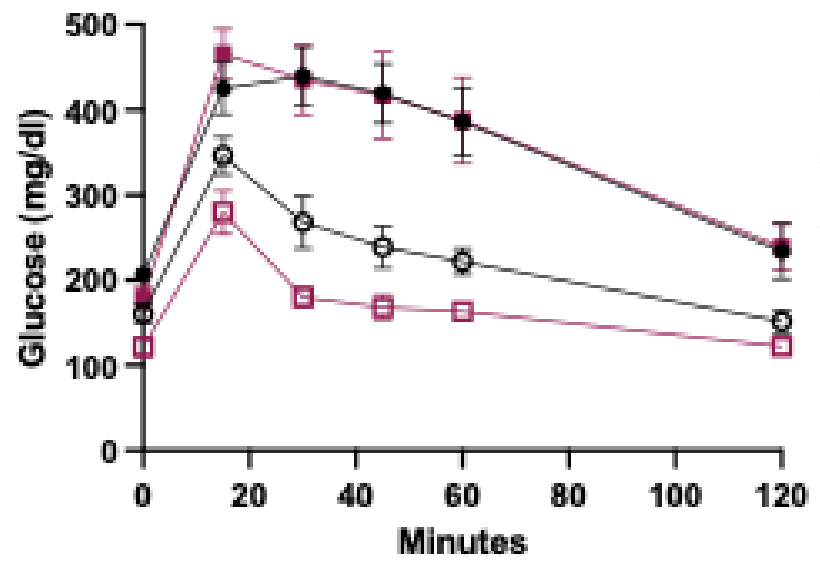
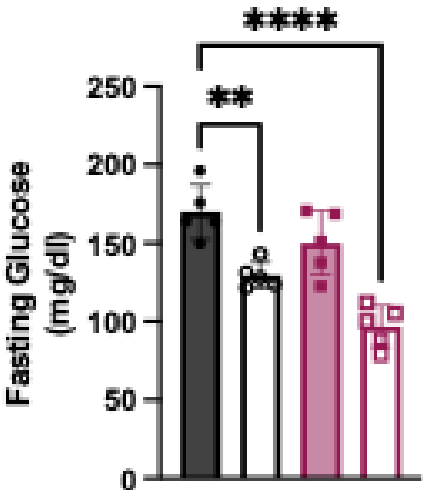


Mitochondrial Satiety

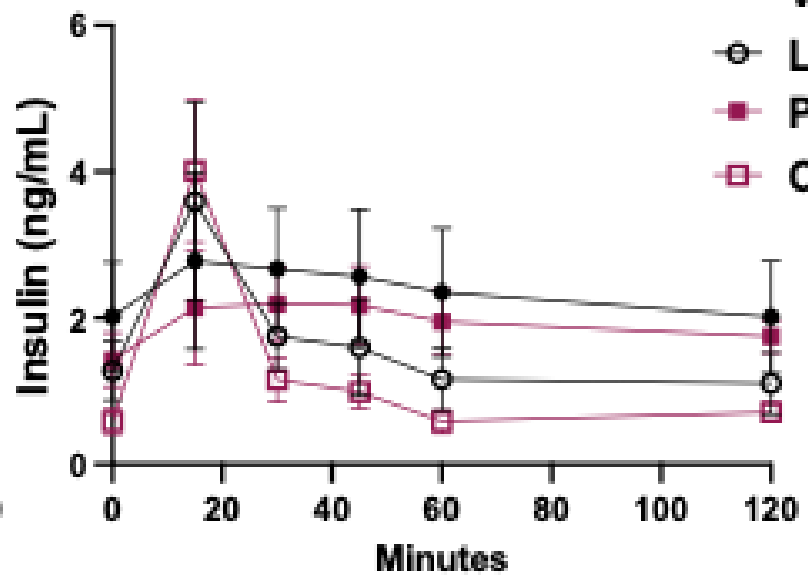
Small Molecule PK activator + GLP-1

BLAVATNIK ACCELERATOR
DATA

GLUCOSE



INSULIN



- Vehicle n=5
- Lira 0.4 mg/kg n=5
- PKa 5.0 mg/kg n=5
- Combination n=5

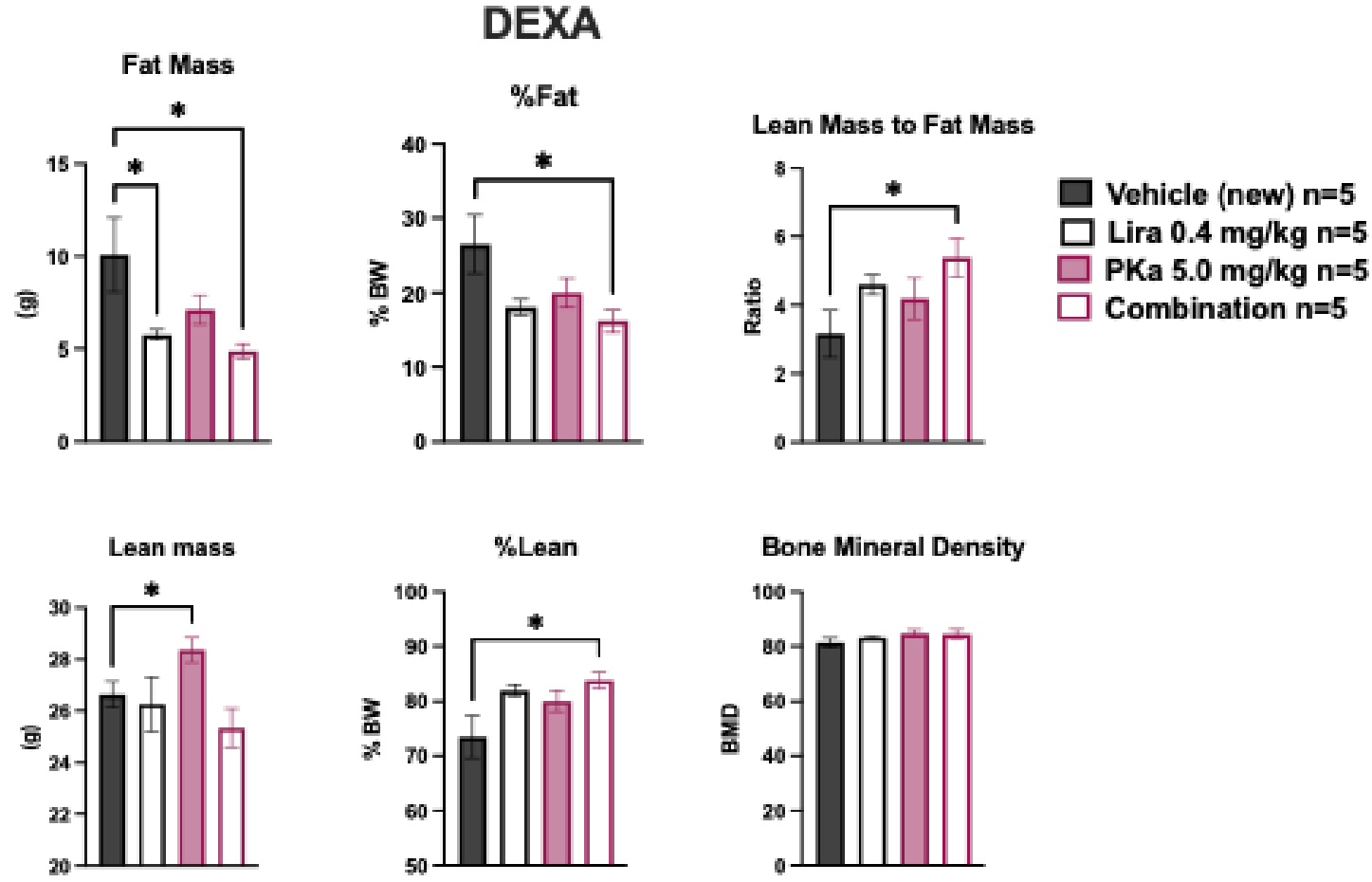
Daily (4 week) PKa + GLP-1 improves glucose tolerance in DIO mice



Mitochondrial Satiety

Small Molecule PK activator + GLP-1

BLAVATNIK ACCELERATOR DATA



Lira = Liraglutide
PKa = Pyruvate Kinase activator

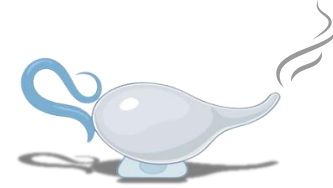
PKa improves body composition in DIO mice



PK activator landscape (others are not viable obesity therapeutics)

CNS penetrance and isoform specificity are critical for obesity efficacy

	LAMP-001	Novo Nordisk	Agios Mitapivat	Agios Tebapivat	Sitryx
PK Isoform Selectivity	Obesity selective	Non-selective	Non-selective	Non-selective	PKM2 selective
CNS Penetrance	High	low	low	low	None (topical)
Disease area	Obesity Diabetes MAFLD etc.	Sickle Cell Disease (Development)	PKR deficiency (Approved)	Sickle Cell Disease (Development)	Atopic Dermatitis (Preclinical)



Robust IP Estate based on 10+ years of collaboration

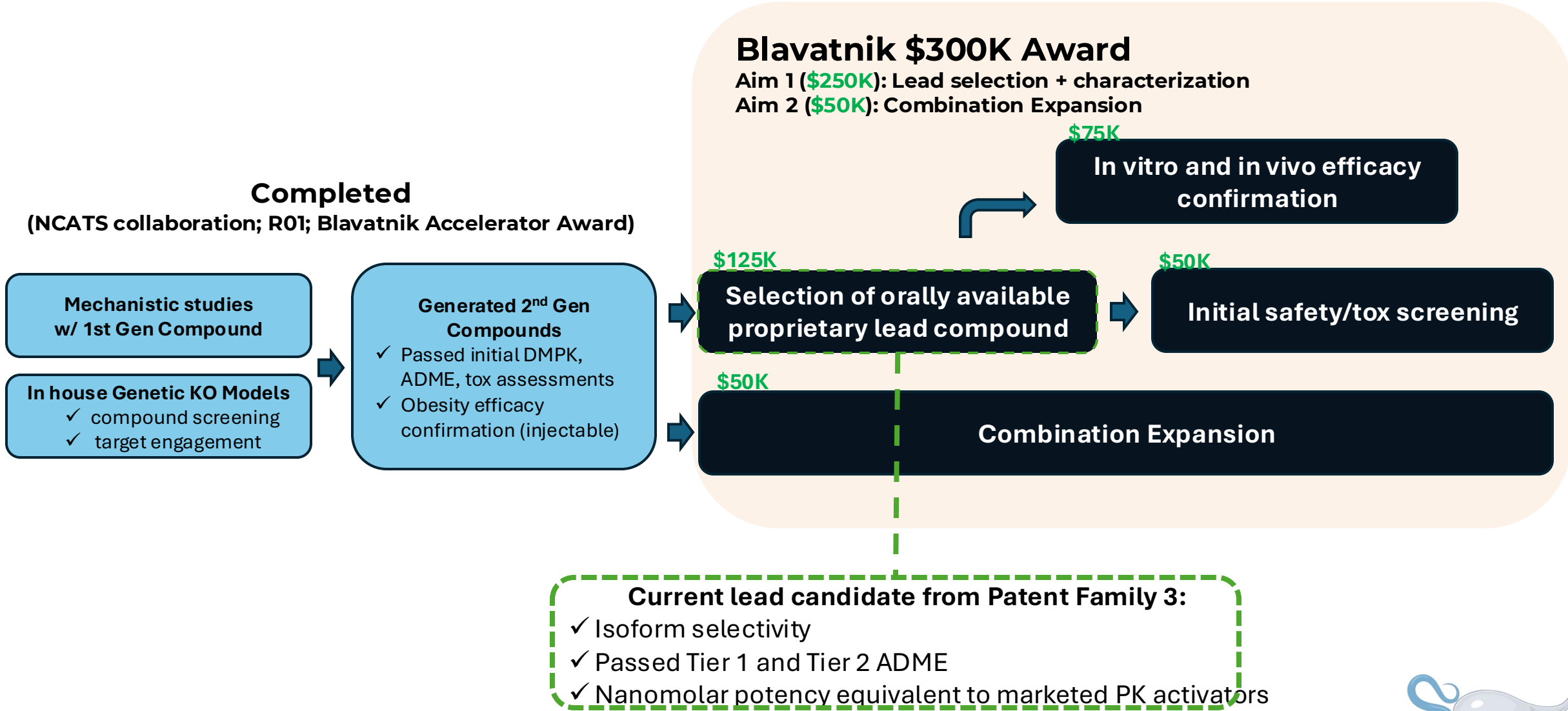
Patent Family 1 (*Issued Background IP of NCATS*):
Novel Compositions of Matter (Small Mol PK Activators)

Patent Family 2 (*Provisional Filed Yale/UW*):
Methods of Use – PK Activators for the treatment of Metabolic Disorders and Obesity
Includes compositions in Patent Family 1 and existing PK Activators

Patent Family 3 (*Foreground IP under RCA with Yale/NCATS/UW*):
Novel Compositions of Matter + Methods of Use



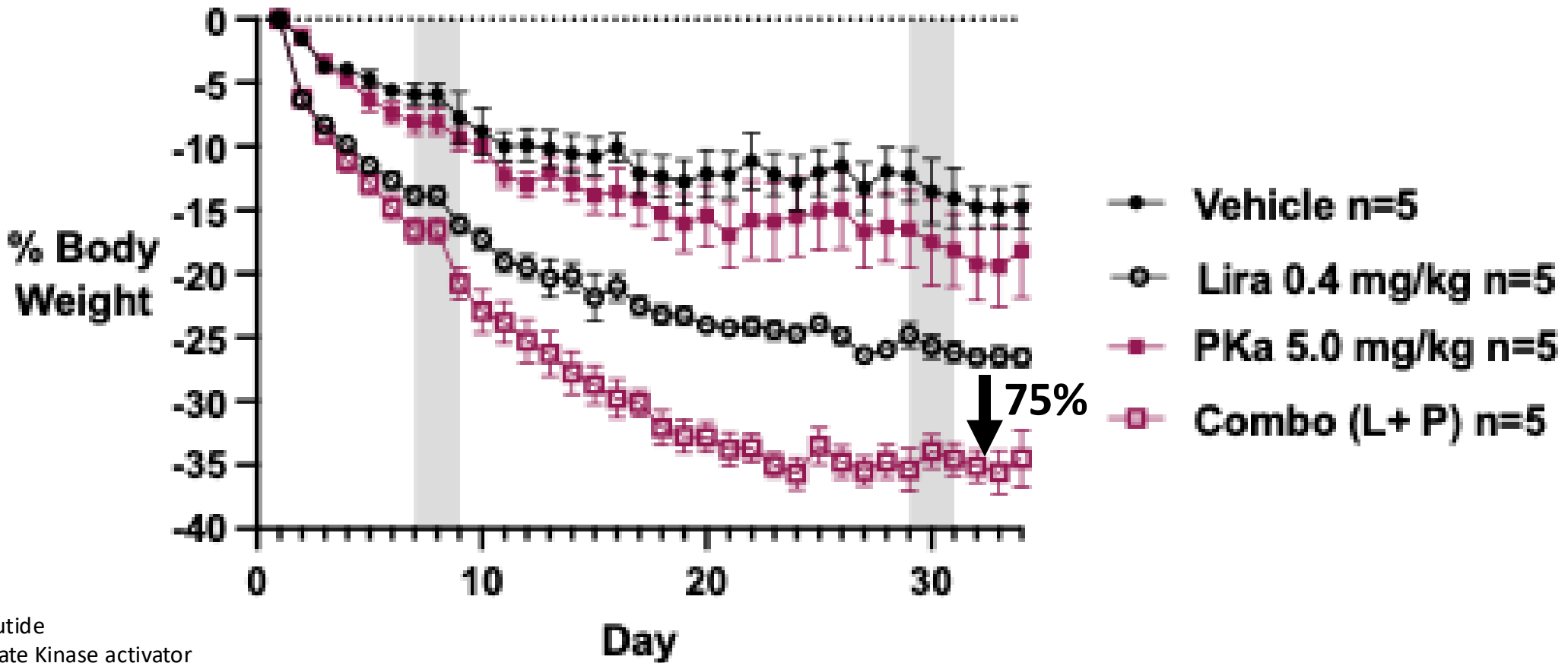
\$300K advances towards IND-enabling studies and NewCo founding



Mitochondrial Satiety

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