

Preclinical Evaluation of a Long-Acting Anti-Myostatin Therapy for Obesity

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Why a Long-Acting Anti-Myostatin and Anti-GDF11 Antibody?

There is a need for muscle preservation

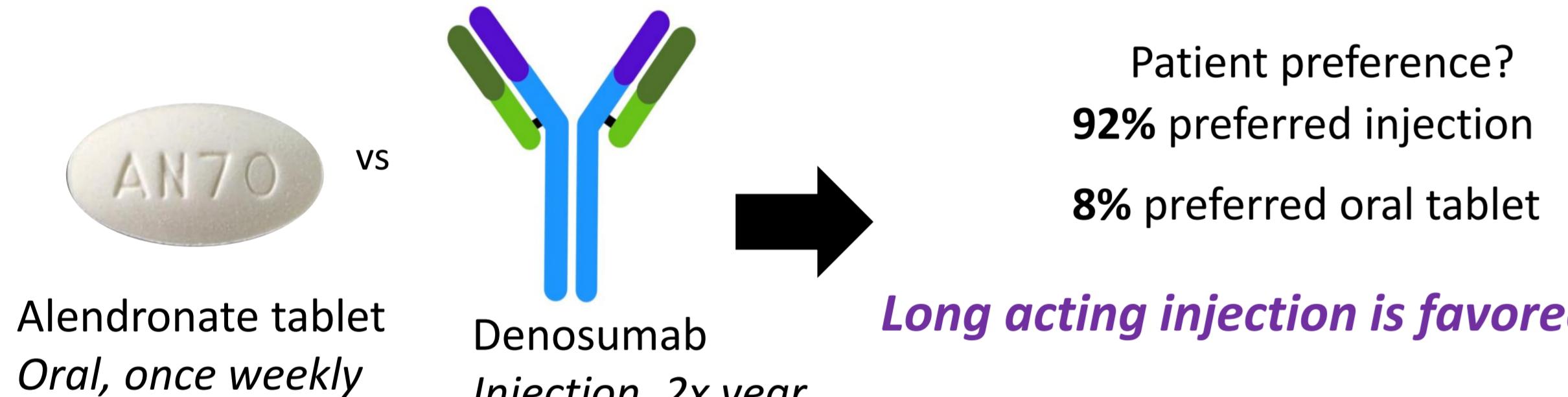
Quotes from studies looking at weight loss => regain

"For every 1 kg weight lost... 0.32 kg lean tissue was lost and for every 1 kg weight regained..., only 0.08 kg lean tissue was regained"¹

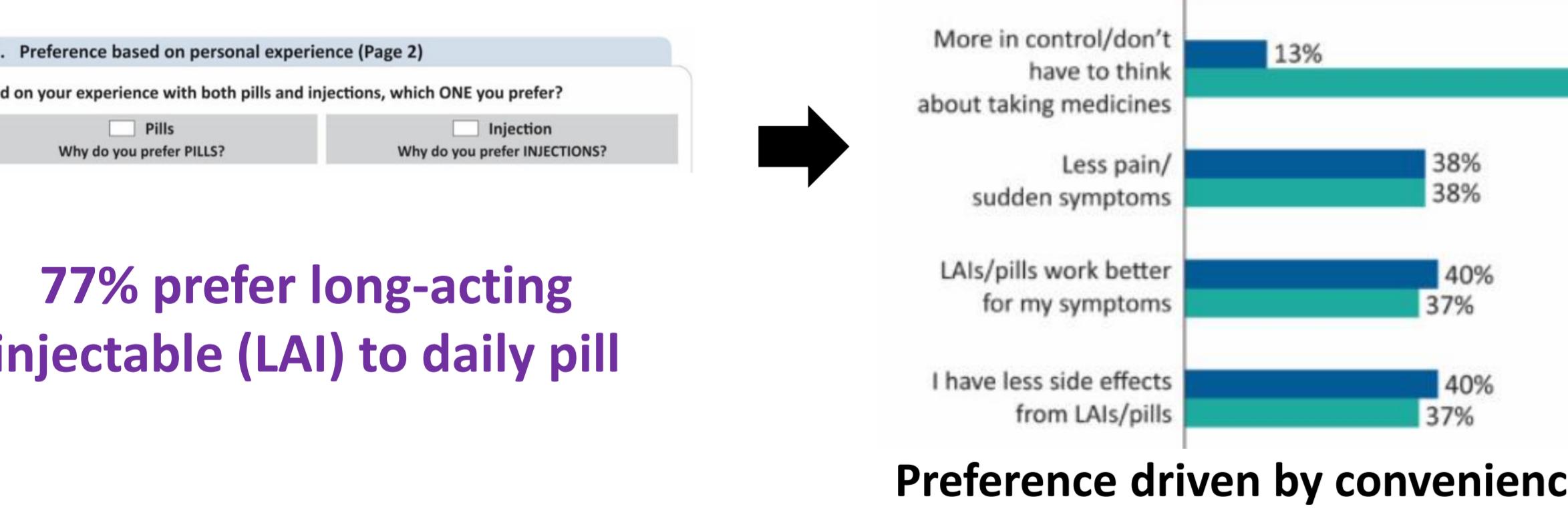
"Compared to (control) group, the [weight loss/regain] group had a statistically significant 39% increased risk of a frailty fracture"²

Patients prefer infrequent dosing

Osteoporosis: 2-year randomized crossover study³

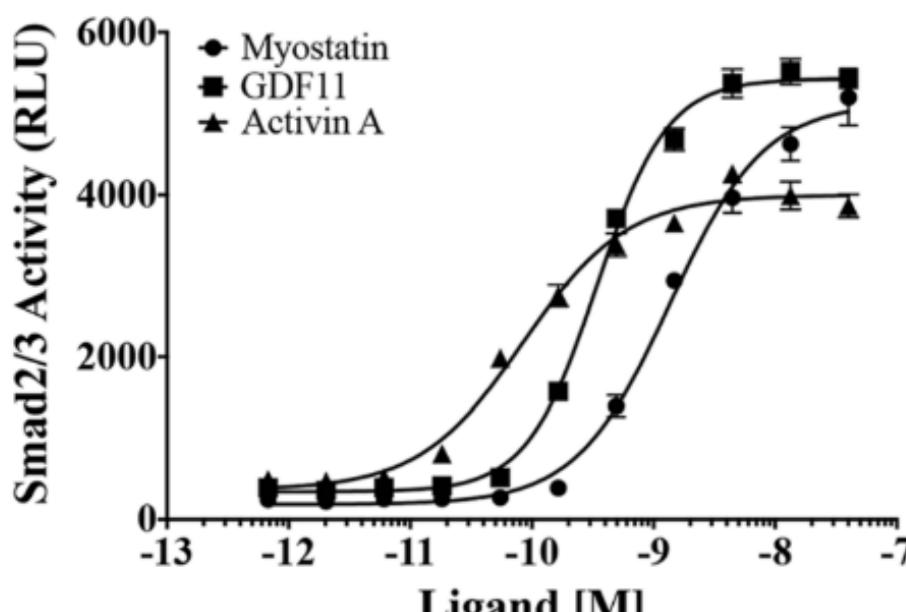


Schizophrenia: Medication Preference Questionnaire from NCT01515423⁴

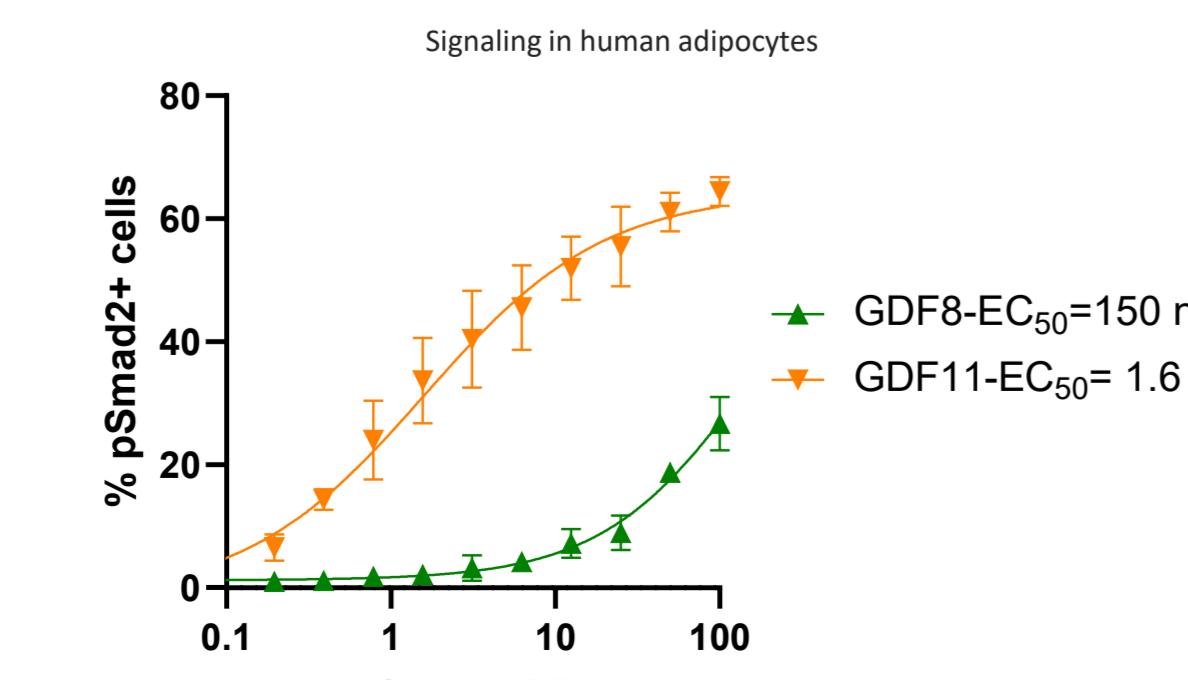


Myostatin and GDF11 impact muscle and fat

GDF11 is more potent than myostatin signaling in muscle⁵

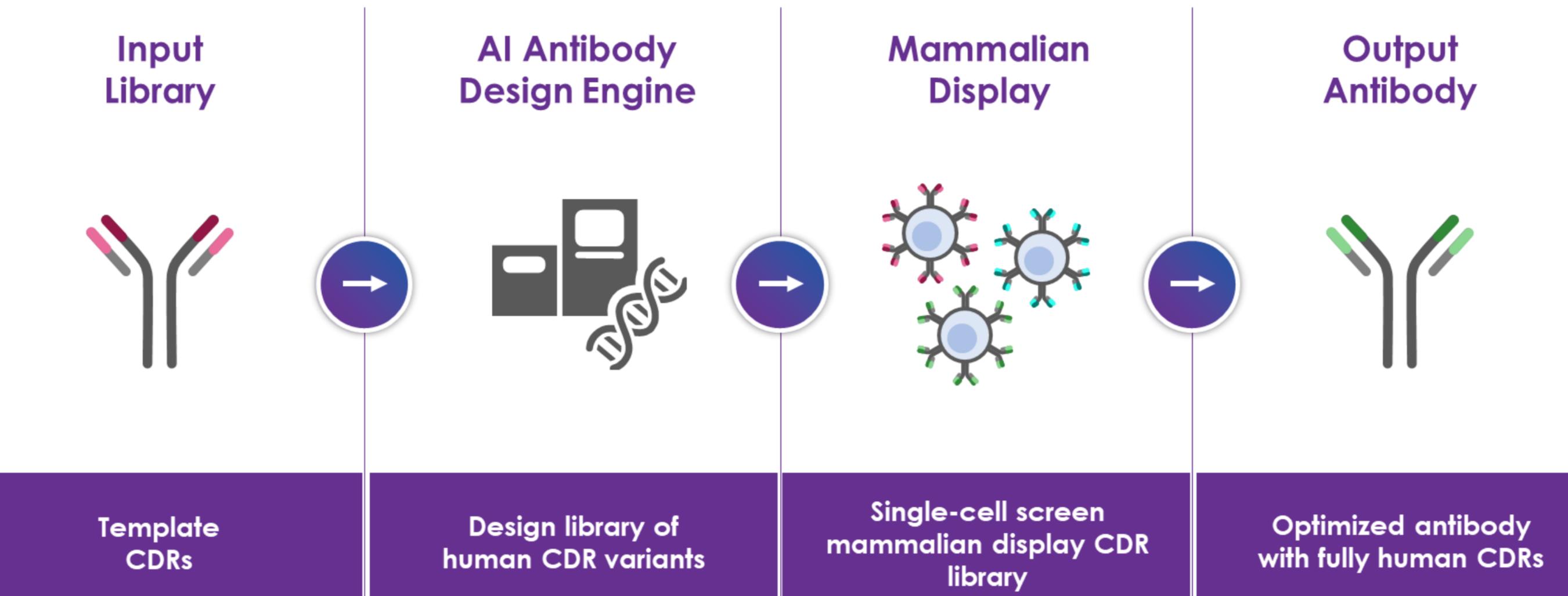


GDF11 is more potent than GDF8 signaling in human fat cells



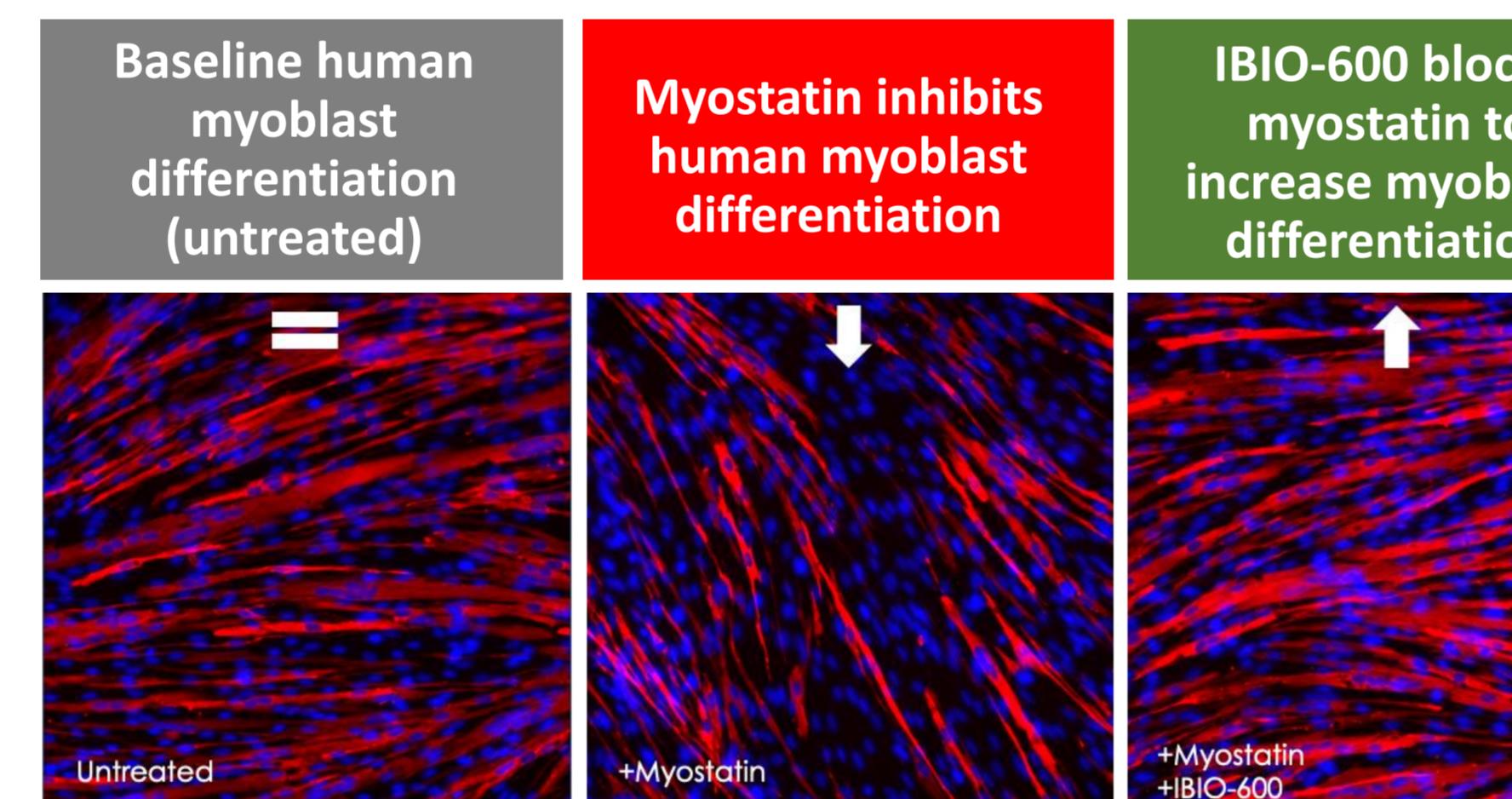
Discovery and Development of IBIO-600

Leverage AI-enabled platform and myostatin literature

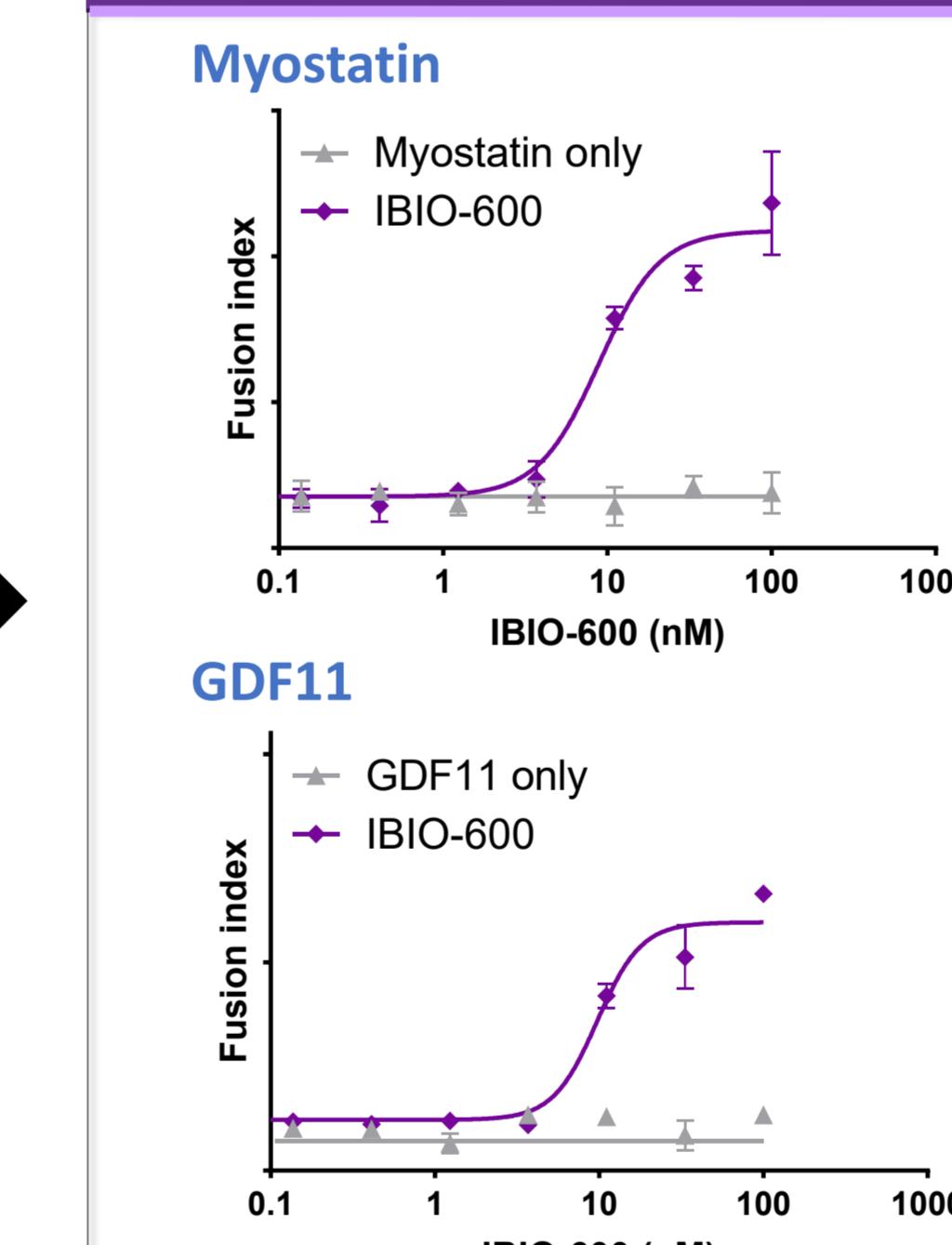


Potent function in human muscle cell assay

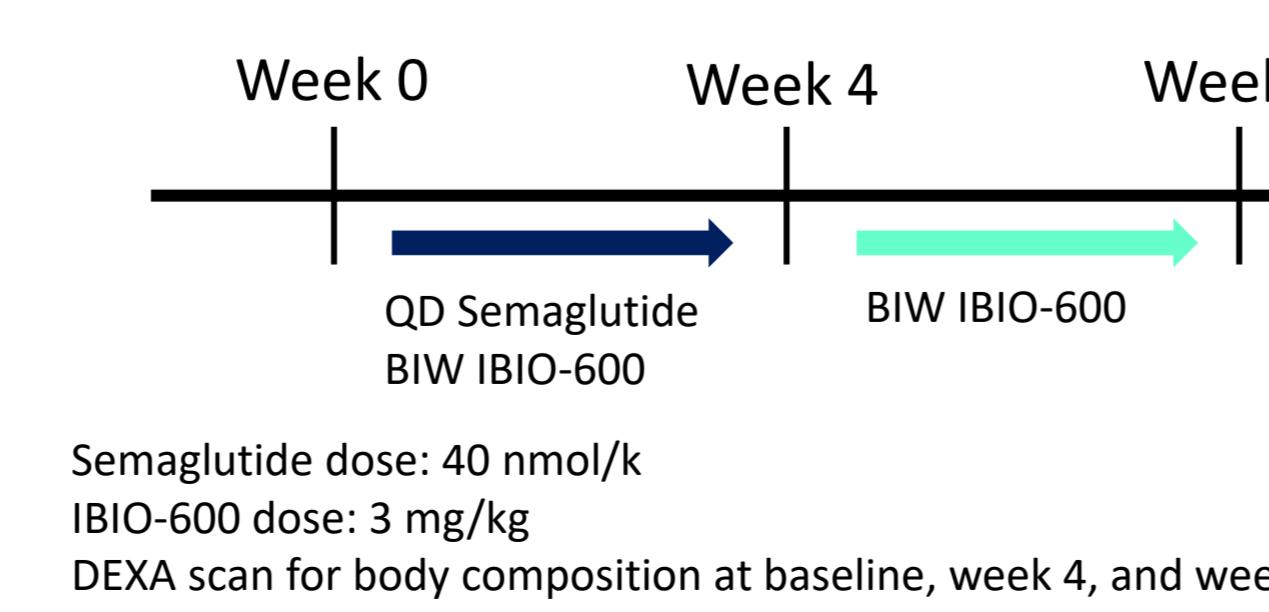
Human Myoblast differentiation as translational in vitro model for muscle in humans



IBIO-600 Increases Myoblast Differentiation



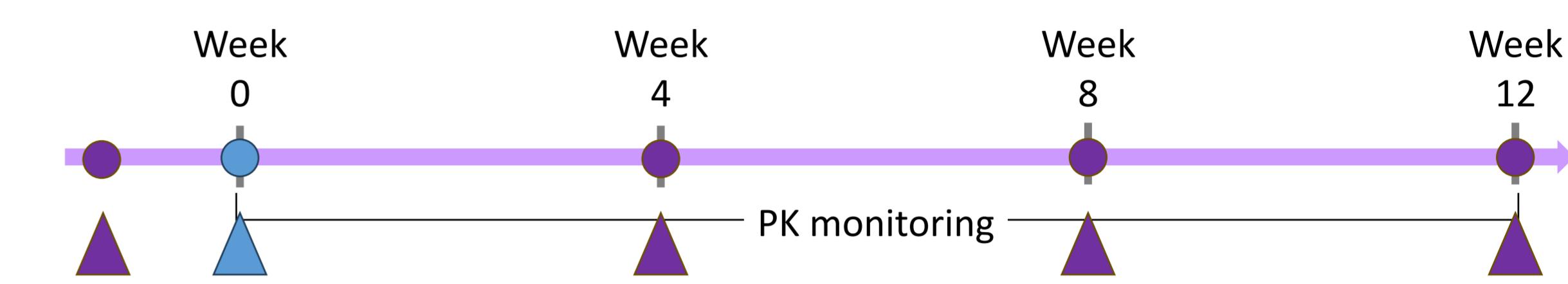
Diet-Induced obesity mouse study – IBIO-600 + GLP-1



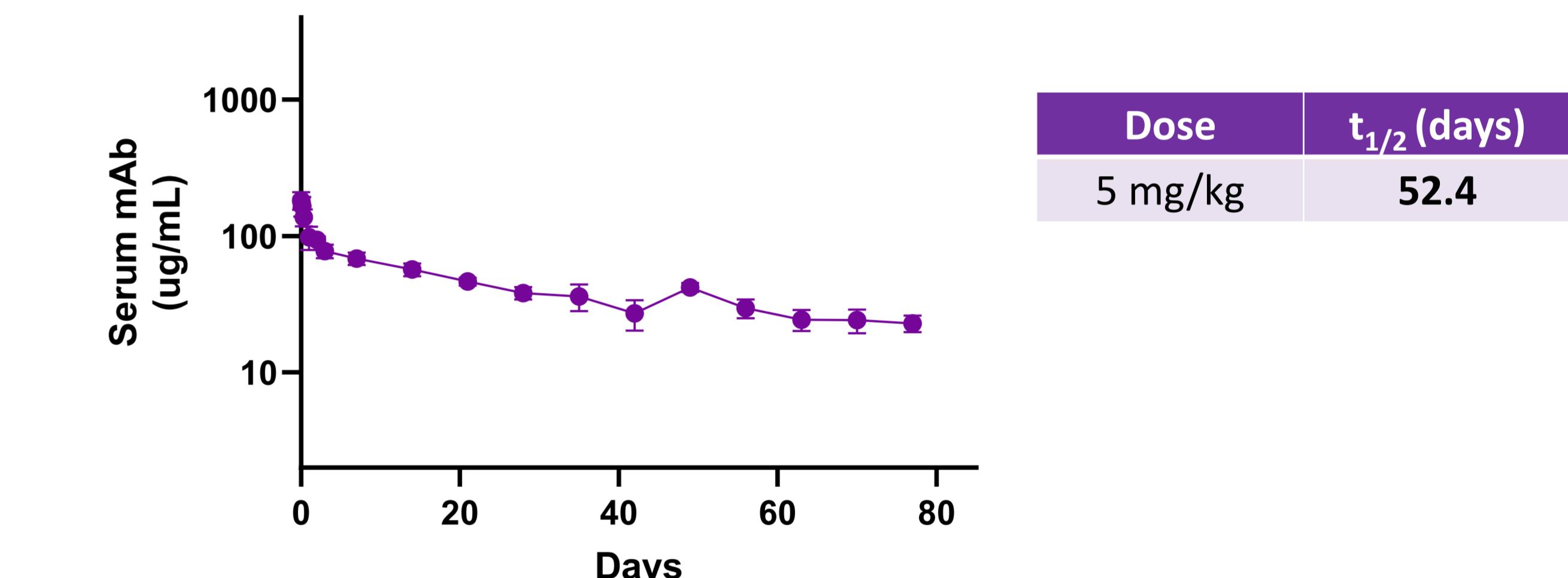
IBIO-600 increases lean mass during and after GLP-1-induced weight loss in diet-induced obesity mouse model

Non-Human Primate (NHP) Testing

Pharmacokinetics – Extended half-life



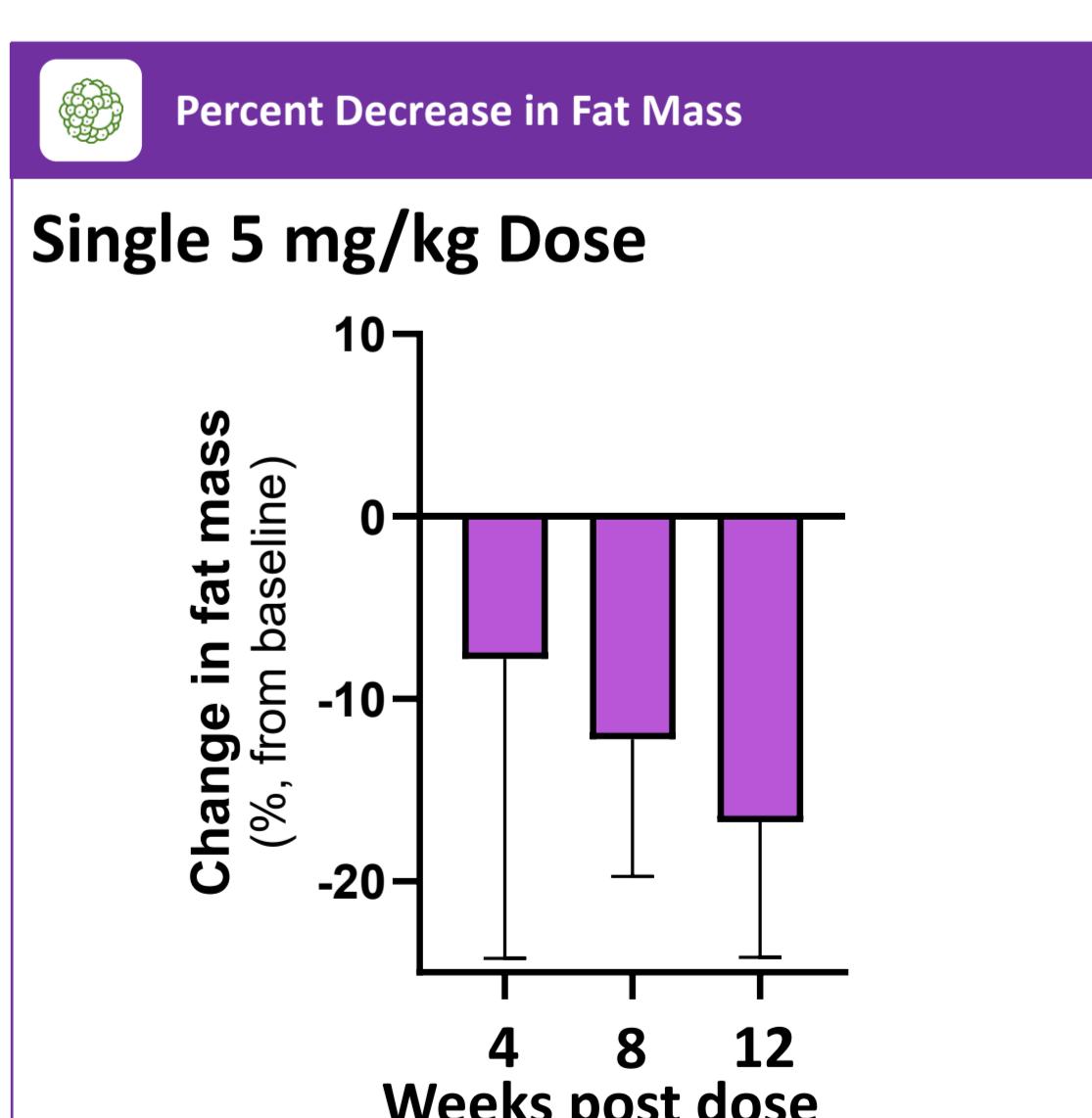
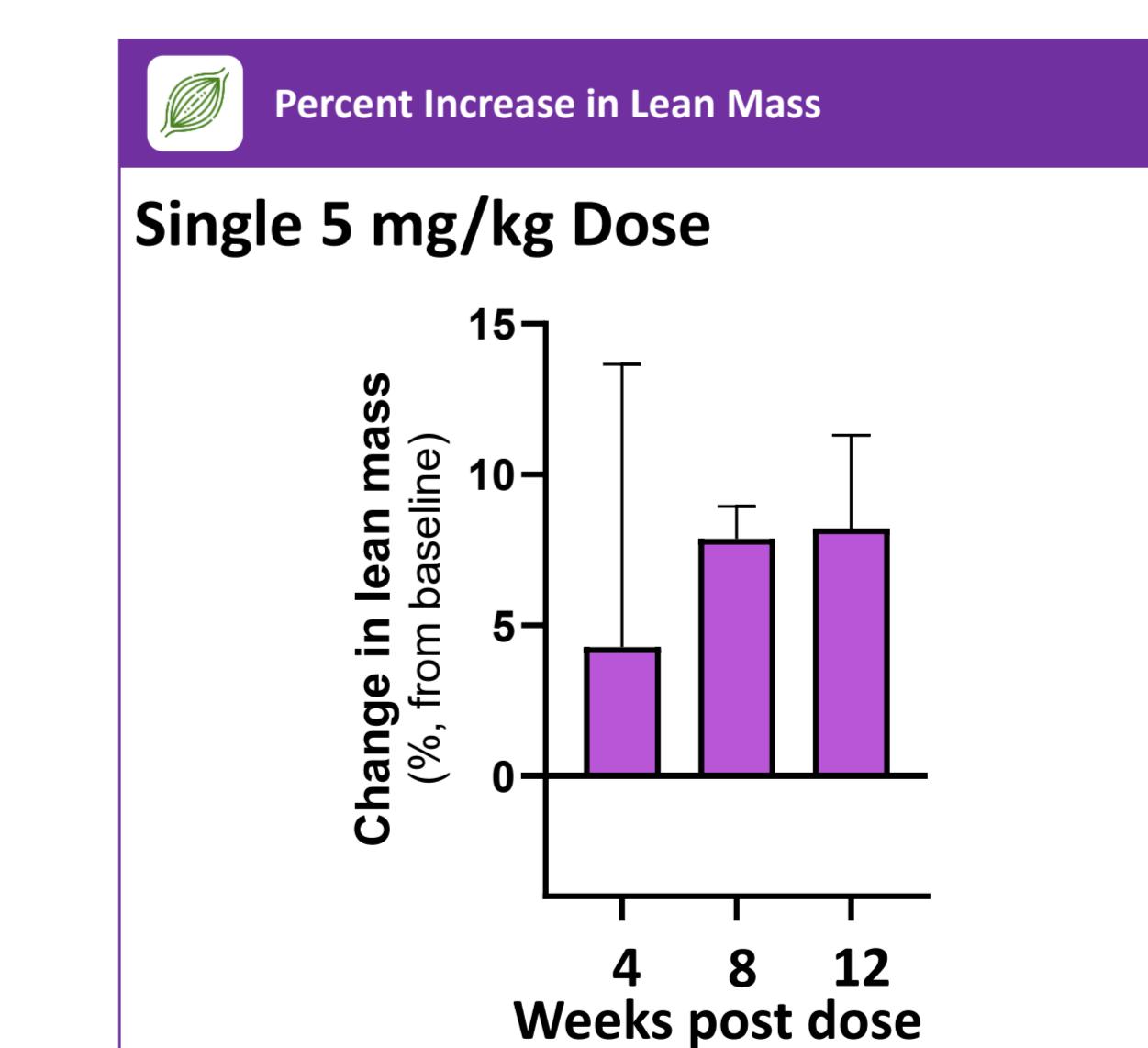
Single I.V. dose at 5 mg/kg
Aged, obese NHPs (n=3 per group)



Allometric scaling to predict human half-life^{6,7}

Dose	NHP t _{1/2} (actual)	Human t _{1/2} (predicted)
5 mg/kg	52.4	74-147 days

Increased lean mass and decreased fat mass



Data supports that IBIO-600 has an extended half-life and provides benefits on both fat and lean mass in aged, obese NHPs