Our mission at Rani is to end painful injections for the millions of patients suffering from chronic diseases.

Rani Therapeutics Fourth Quarter and Full Year Financial Results and Business Update

March 31, 2025

Forward-Looking Statements

This presentation and the accompanying oral statements contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 as contained in Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act. Forward-looking statements are based on information available at the time those statements are made or on management's good faith beliefs and assumptions as of that time with respect to future events, and are subject to risks and uncertainties that could cause actual performance or results to differ materially from those expressed in, or suggested by, the forward-looking statements. In light of these risks and uncertainties, the forward-looking events and circumstances discussed in this presentation and the accompanying oral statements may not occur and actual results could differ materially from those anticipated or implied in the forward-looking statements. These risks and uncertainties include Rani Therapeutics Holdings, Inc.'s ("Rani," "we," "us," or "our") future financial performance, including our expectations regarding our revenues, cost of revenues, operating expenses, and our ability to achieve and maintain future profitability, those risks inherent in the preclinical and clinical development process and the regulatory approval process, the risks and uncertainties in commercialization and gaining market acceptance, the commercial potential of oral biologics, our ability to complete development of the RaniPill® HC or any redesign and conduct additional preclinical and clinical studies of the RaniPill HC or any future design of the RaniPill to accommodate higher target payloads, the risks associated with protecting and defending our patents or other proprietary rights, the risk that our proprietary rights may be insufficient to protect our product candidates, the risk that we will be unable to obtain necessary capital when needed on acceptable terms or at all, our ability to enter into strategic partnerships and to achieve the potential benefits of such partnerships, competition from other products or procedures, our reliance on third-parties to conduct our clinical and non-clinical trials, our reliance on single-source third-party suppliers to manufacture clinical, non-clinical and any future commercial supplies of our product candidates, our ability to continue to scale and optimize our manufacturing processes including by expanding our use of automation, our expectations regarding the period during which we qualify as an emerging growth company under the JOBS Act, our expectations regarding customer demand for our product candidates, increased regulatory requirements and other factors that are set forth in our filings with the Securities and Exchange Commission ("SEC"), including under the caption "Risk Factors" in our Annual Report on Form 10-K and our Quarterly Reports on Form 10-Q, and our other public filings made with the SEC and available at www.sec.gov.

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Talat Imran
Chief Executive Officer,
Rani Therapeutics

- >15 years experience in Healthcare
- Venture capitalist for several Silicon Valley healthcare funds

Rani THERAPEUTICS

Today's Agenda

01 **Overview of Rani's Technology Platform and Pipeline**

02 **Corporate Update: Leveraging RaniPill Technology For Next Generation Obesity Therapies**

03 **2024 Financial Results**

Overview of Rani's Technology Platform and Pipeline

Rani THERAPEUTICS

Our mission at Rani is to end painful injections for the millions of patients suffering from chronic diseases

Rani Therapeutics
NASDAQ: RANI

Clinical-stage biotech focused on Oral Delivery of Biologic Drugs with Bioavailability Comparable to Parenteral Products

TECHNOLOGY:

- **200 µL Capacity (20-40mgs*)**
- **Liquid Drug Formulation**

PIPELINE:

High value indications in the Immunology & Obesity Space

DISCOVERY:

Broad applicability across Nanobodies, Hemophilia, Bispecific MABs, Fertility, Genetic Medicine

IP:

>450 Granted Patents and Pending Applications, >250 Granted Patents**

Rani THERAPEUTICS

*Dependent on drug concentration
** As of Feb 18, 2025

Demonstrated and Repeated Success

Preclinical

19 Molecules Assessed

antibodies, peptides, and large proteins with high bioavailability

>7,000 Capsules

tested *in vitro & in vivo*

60-Day GLP Study

completed with no clinical findings

Clinical

3 Phase 1 Studies*

completed

233 RaniPill Capsules

administered to 146 humans

Repeat Dose Study

completed

✓Clinically Tested **✓Well Tolerated** **✓Broad Applicability**

Rani THERAPEUTICS

* As of12/31/24; clinical studies with solid-dosage form

Development Pipeline

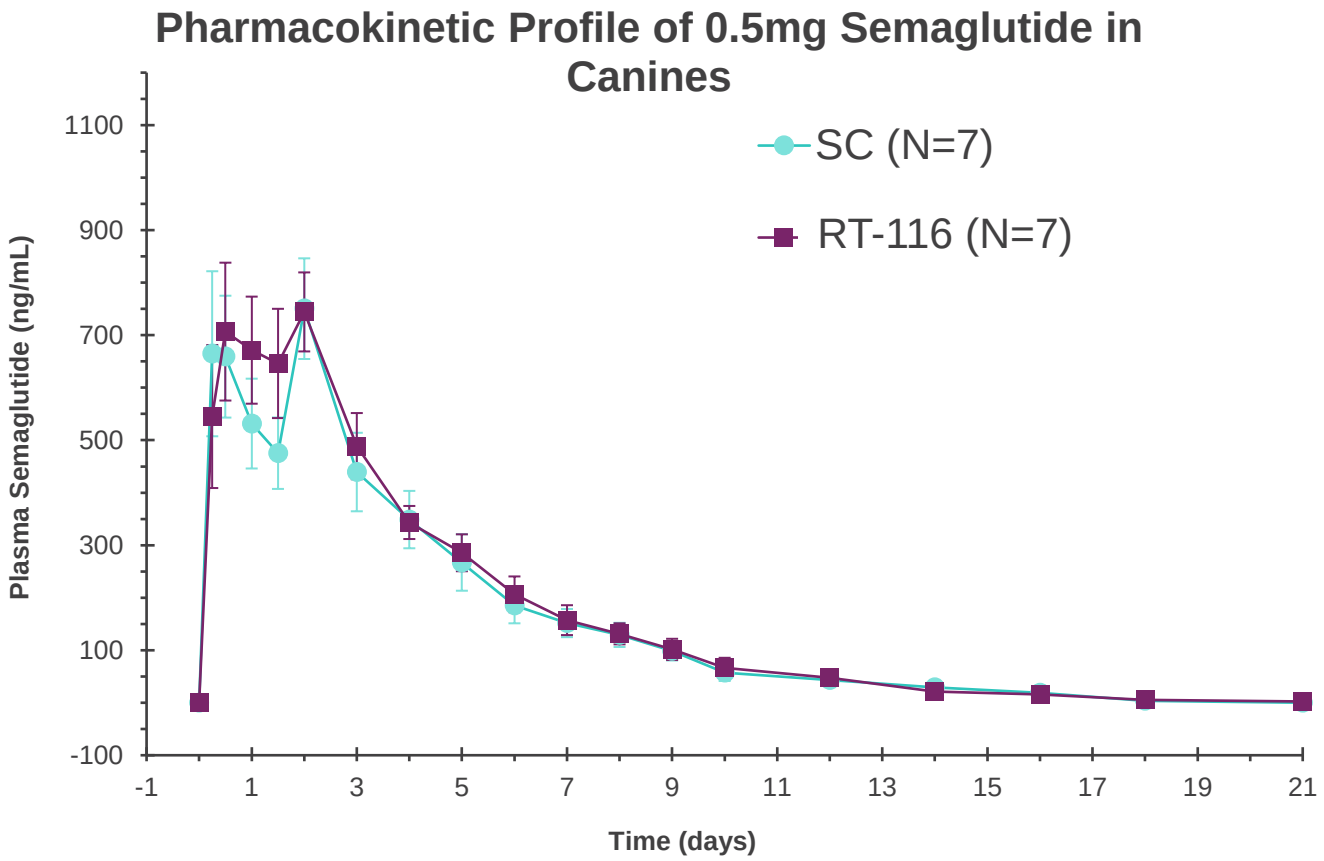
	INDICATION(S)	DISCOVERY	PRE-CLINICAL	PHASE 1	PHASE 2	PARTNER	NEXT EXPECTED KEY MILESTONE*
OBESITY PROGRAMS							
RT-114	Obesity		GLP-1/GLP-2**			ProGen	Initiate Phase 1 in mid-2025
RT-116	Obesity		Semaglutide				Continue Preclinical Discovery Work
IMMUNOLOGY PROGRAMS							
RT-105	Rheumatoid Arthritis		Adalimumab***				Initiate Phase 1
RT-111	Psoriasis		Ustekinumab***				Advance Clinical Development at Higher Doses
ENDOCRINOLOGY PROGRAMS							
RT-102	Osteoporosis		PTH-OP				Initiate Phase 2
RT-110	Hypo-parathyroidism		PTH-Hypo				Initiate Phase 1

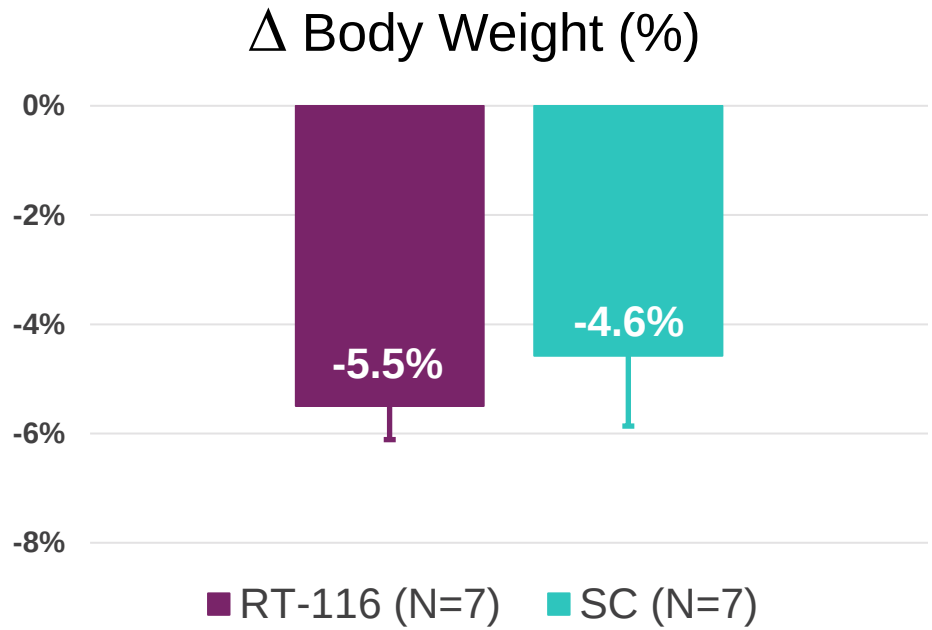
* Clinical timelines are subject to potential regulatory agency review delays
** RT-114 is the subject of a worldwide collaboration with ProGen Co, Ltd.
*** Ustekinumab and adalimumab biosimilars are supplied by Celltrion, Inc. Celltrion grants Rani a license and drug suppl for each drug.

Rani THERAPEUTICS

Leveraging RaniPill Technology For Next Generation Obesity Therapies

Semaglutide Delivered Orally via RaniPill Capsule Demonstrated Comparable Pharmacokinetics and Weight Loss to SC Route

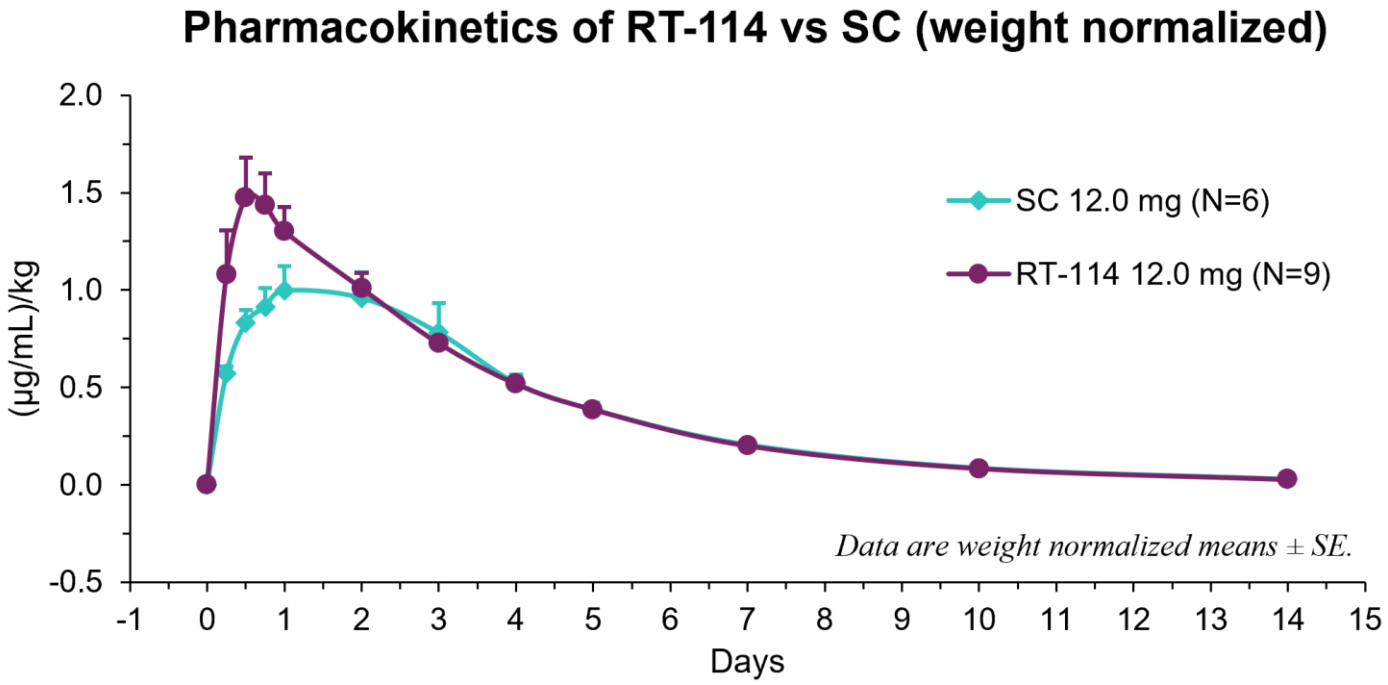


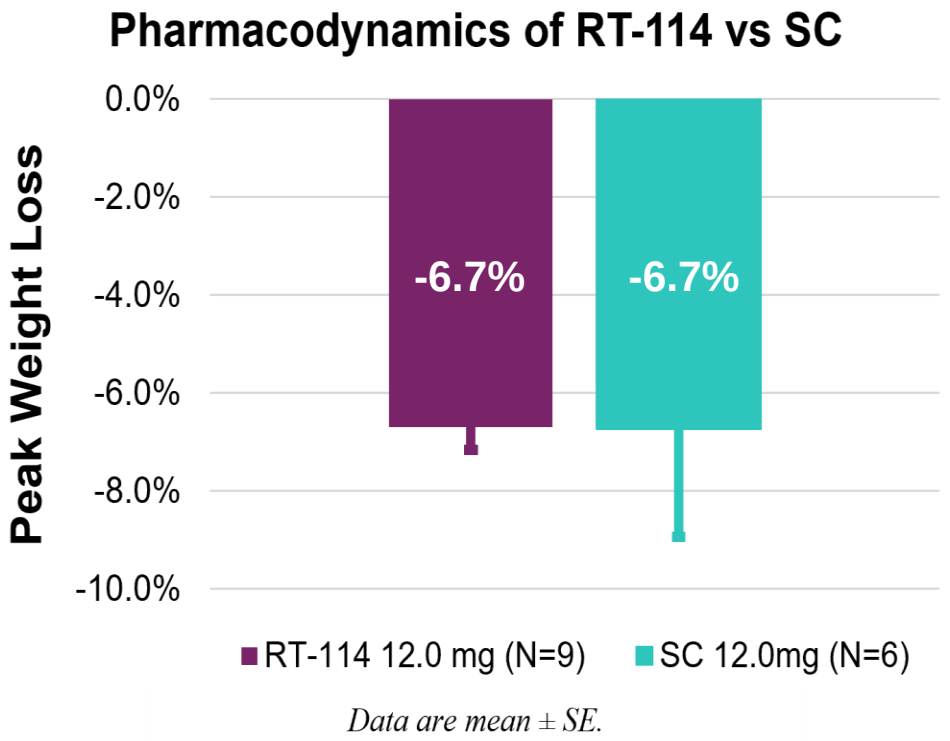


107% Estimated Bioavailability Relative to SC

All data is mean ± standard error.
SC means subcutaneous.

RT-114 Delivered Orally via RaniPill Capsule Demonstrated Bioequivalence to SC PG-102





111%

Estimated Bioavailability Relative to SC

Rani THERAPEUTICS

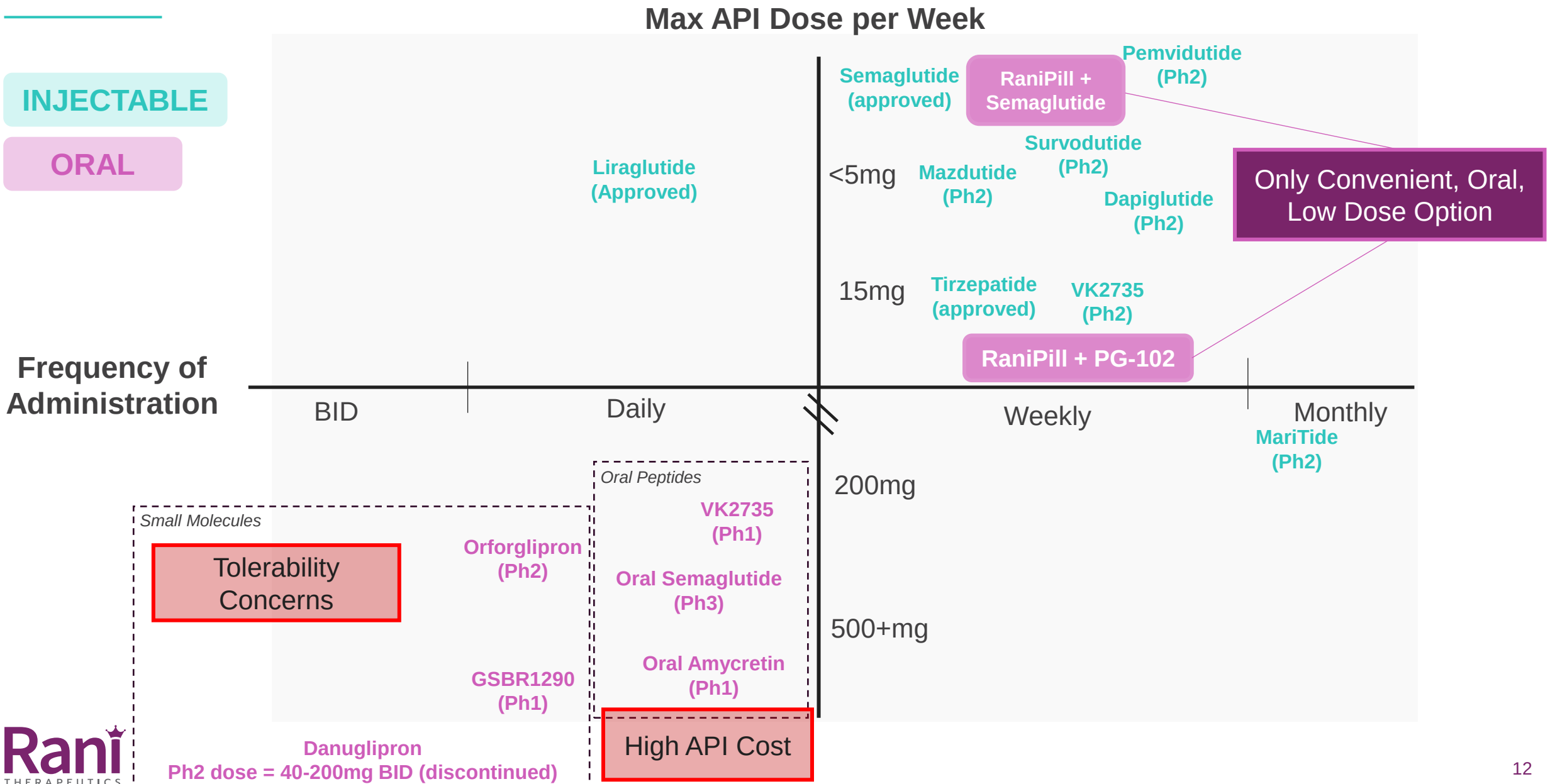
Rani's GLP-1/ GLP-2 Program (RT-114) Has Multiple Potential Competitive Differentiators

Rani THERAPEUTICS RaniPill + ProGen **PG-102** *GLP-1/GLP-2*

Potential Key Advantages:

- ✓ **Weight loss** comparable to approved products
- ✓ Improved **tolerability**
- ✓ Better **lean mass preservation** & improved nutrient absorption
- ✓ Shorter dose titration period
- ✓ **No painful injections**
- ✓ **Dose equivalent** to injectables
- ✓ Weekly oral dosing

Clear Opportunity in Obesity Landscape for RaniPill Products



Svai Sanford
Chief Financial Officer, Rani Therapeutics

>25 years of accounting, finance and management experience in the biopharmaceutical and medical device industries for both public and private companies

Rani THERAPEUTICS

Today's Agenda

01 Overview of Rani's Technology Platform and Pipeline Update

02 Update on RT-114, a GLP-1/GLP-2 Dual Agonist (PG-102)

03 **2024 Financial Results**

Q & A