Corporate Presentation (RT-102 Data)

August 2022

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Forward-Looking Statements

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Corporate Summary

- Clinical-stage biotherapeutics company seeking to convert injectable biologics and drugs into pills
- **$56BN+ initial market opportunity**[1] targeting multiple markets across multiple diseases
- 5 internal development programs
- Completed single ascending dose portion of RT-102 (PTH) Phase 1 clinical trial
- Completed RT-101 (octreotide) Phase 1 clinical trial investigating platform safety, tolerability and bioavailability
- Developing new high-capacity RaniPill HC
- Established IP portfolio with 380+ patent applications filed and 220+ patents granted as of 8/1/22

[1]Includes all indications for TNFα inhibitors. Estimated cumulative addressable market for key identified pipeline candidates (octreotide, TNFα antibody, insulin, GLP-1, parathyroid hormone and human growth hormone) per third-party market analyses

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Agenda

01	RT-102 Phase I Study
02	RT-102 Rat PD Study
03	Next Steps
04	RaniPill Platform Opportunity
05	RaniPill Technology Overview

RT-102 Phase I Study Design

Study Overview

A Phase I Study to Evaluate the Pharmacokinetics of Parathyroid Hormone (1-34) (PTH) Administered Orally via RaniPill™ Capsule	
Objective	To obtain PK profiles of single doses of PTH given via RaniPill capsule (RT-102) in healthy participants at 20 and 80µg doses
Study Population	Healthy women volunteers recruited from the general population
Study Site	Single Site in Australia
End Points	PK parameters, Safety and Tolerability
Start Date	March 2022

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Study Design: Single Ascending Doses*

Control Group

- SC Forteo®**: 20µg (N=10)
- PK sampling done for 360 minutes

RT-102 Groups

- RT-102 Group 1: 20µg (N=15)
- RT-102 Group 2: 80µg (N=15)
- Transit of RaniPill capsule in the GI tract tracked via frequent fluoroscopic imaging and deployment was confirmed before starting PK sampling***
- PK sampling done for 360 minutes

* Part 1 of the Phase 1 study is single-ascending doses. Part 2, involving repeat doses, is ongoing.
** Forteo® is a registered trademark of Eli Lilly and Company.
*** Per protocol, in instances where RaniPill capsule did not exit the stomach within 7 hours, participants were excluded from the study. Based on the exclusion criteria, 3 participants were excluded from the study.1 additional subject was excluded due to vomiting the capsule intact.

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Study Results

Study Demographics

	RT-102 20µg	RT-102 80µg	Forteo SC 20µg
N	15	14	10
Mean Age, years	**31.2 (19 - 61)**	**31.2 (20 - 63)**	**32.6 (18 - 63)**
Race			
White-non-hispanic	80% (12/15)	78.6% (11/14)	50% (5/10)
Hispanic	6.7% (1/15)	0% (0/14)	10% (1/10)
Asian	6.7% (1/15)	7.1% (1/14)	20% (2/10)
Asian-Pacific Islander	0% (0/15)	14.2% (2/14)	20% (2/10)
Pacific Islander	6.7% (1/15)	0% (0/14)	0% (0/10)
Body Mass Index (kg/m^2)	23.5 ± 3.9	25 ± 3.6	23.6 ± 3.6
Height (cm)	164.3 ± 7.1	164.4 ± 6.27	162.5 ± 7.7
Weight (kg)	**63.3 ± 10.9**	**67.4 ± 10.2**	**62.4 ± 11.6**

BMI, Height and Weight data are Mean ± SD

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Incidence of Adverse Events

	Adverse Events	RT-102 20µg (N=15)	RT-102 80µg* (N=14)	Forteo SC 20µg (N=10)
	All	0	2 (14%)	5 (50%)
Drug-Related AE	Light headedness	0	0	2 (20%)
	Nausea	0	1 (7%)	3 (30%)
	Vomiting	0	1 (7%)	
RaniPill-Related AE		**0**	**0**	N/A

No RaniPill-related AEs observed in 81 subjects across two clinical studies (RT-101 Phase 1 and RT-102 Phase 1)

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* Of the excluded subjects from the RT-102 80µg group, 1 subject experienced bloating and 1 vomited the capsule intact.

Safety and Tolerability Data

- RT-102 was generally well-tolerated by all subjects
- No serious adverse events noted in the study
- No subject excluded due to difficulty swallowing the capsule
- Capsule remnants passed out in all subjects

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Device Performance

Device Versions and Study Groups

RT-102 20µg
N=15

RaniPill Version C (N=8)
RaniPill Version D (N=7)

RT-102 80µg
N=14

RaniPill Version D (N=14)

Forteo SC 20µg
N=10

<u>Final N by Version</u>
RaniPill Version C = 8
RaniPill Version D = 21

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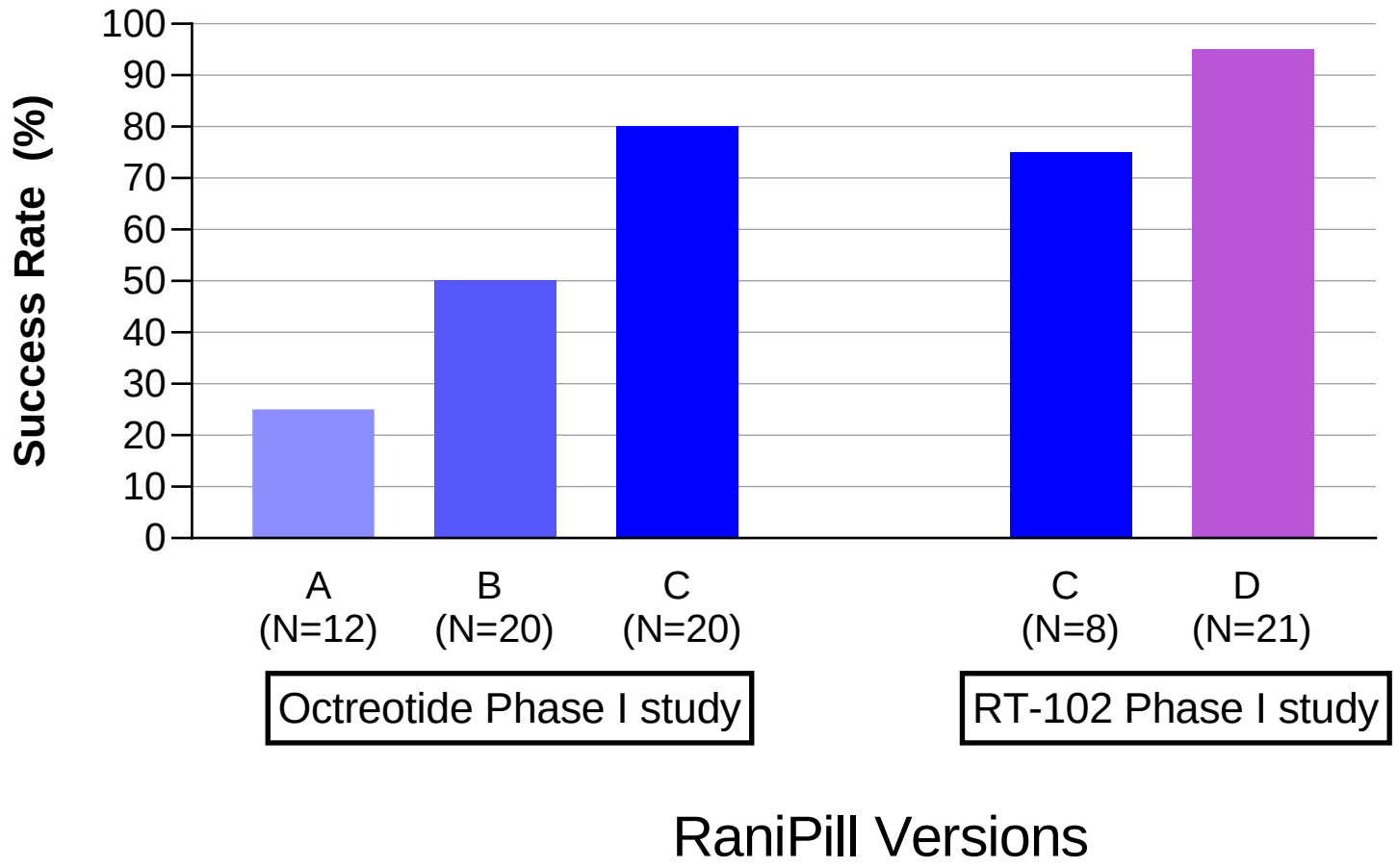
Device Performance

Group	Successful Drug Delivery (N)	Drug Delivery Success Rate
RaniPill C Previous Version	6/8	**75%**
RaniPill D New Improved Version	20/21	**95**%

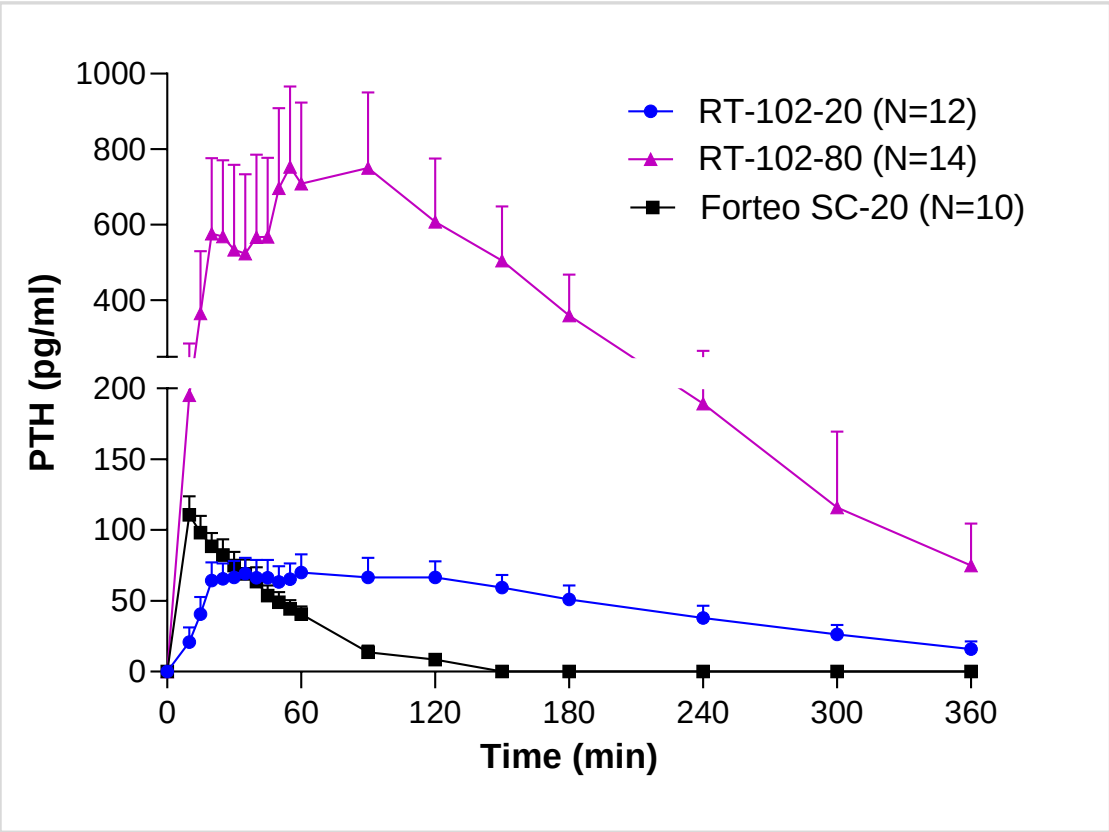
* Per protocol, in instances where RaniPill capsule did not exit the stomach within 7 hours, participants were excluded from the study. Based on the exclusion criteria, 3 participants were excluded from the study.

Device Performance: Progression of Drug Delivery Success Rate



Pharmacokinetic Data

RaniPill Delivered PTH with Higher Bioavailability than SC



PK Parameters

	Forteo SC 20µg	RT-102 20µg	RT-102 80µg
Cmax (pg/mL)	128 ± 20	98 ± 10	971 ± 223
Tmax (hr)	0.217	1.13	0.994
AUC (h*pg/mL)	126 ± 64	342 ± 36	2600 ± 649
Relative BA (%)		~300%	~400%

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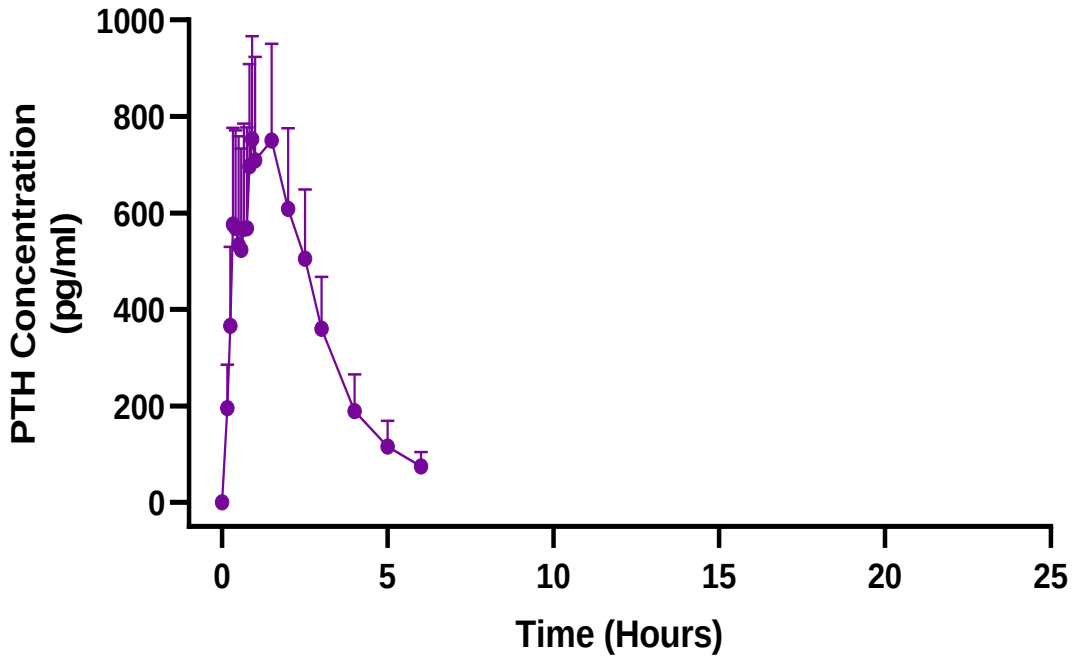
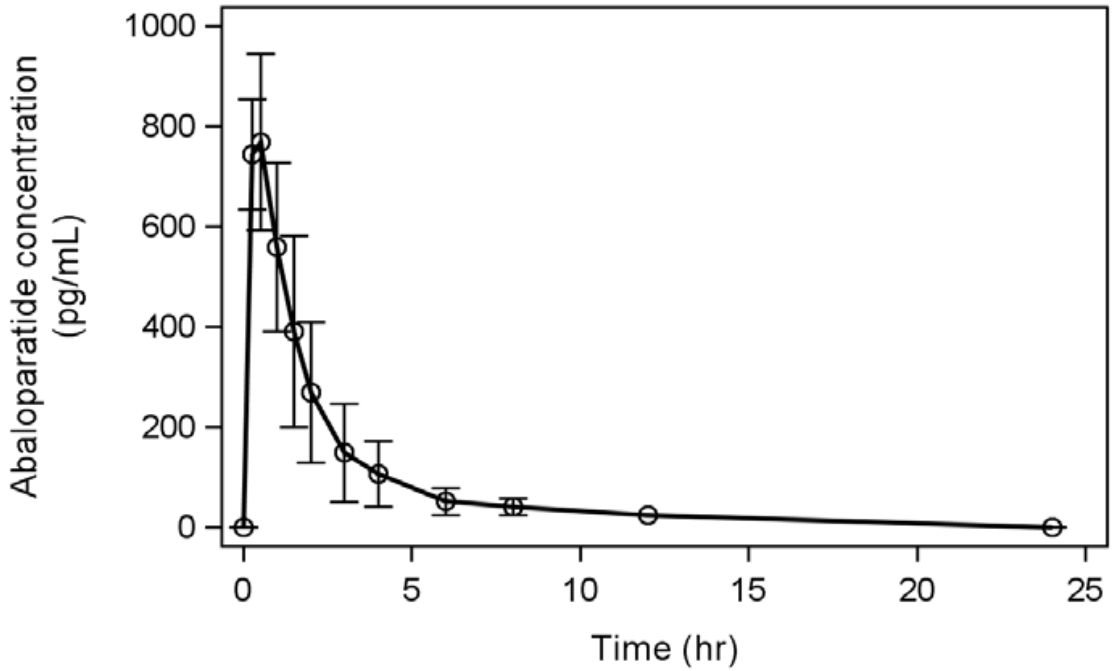
RT-102 80µg PK Profile is Similar to Tymlos®* at 80µg**

RT-102 Phase I Data
Dose 80µg



- C_{max} 971 (223) pg/mL
- AUC_{0-24} 2600 (649) pg·hr/mL

Tymlos Package Insert
Dose 80µg



- C_{max} 812 (118) pg/mL
- AUC_{0-24} 1622 (641) pg·hr/mL

80µg abaloparatide (Tymlos) showed bone mineral density improvements significantly greater than 20µg teriparatide (Forteo) at several bone sites in a Phase 3 study***

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* Tymlos® is a registered trademark of Radius Health, Inc.
** The effect of this similarity in PK profile has not been evaluated to determine effects on any clinical outcomes.
*** JAMA. 2016;316(7):722-733. doi:10.1001/jama.2016.11136.

Phase I (Part 1) Study Summary

0

Adverse events related to the RaniPill platform

95%

RaniPill platform drug delivery success rate*

>300%

RT-102 bioavailability compared to SC injection

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* Success rate of Version D of the RaniPill in the per protocol population.

RT-102 Expected Next Steps

Phase I part 2: Repeat dose study in progress

Pre-IND meeting in Q4

- Briefing document in preparation
- Submit request in end of Q3

RT-102 Phase II study planned to start Q3 2023*

- Study protocol in development

* Subject to submission and FDA clearance of an IND.

Effect of RT-102 Drug Substance on Bone Growth in a Preclinical Model of Osteoporosis

Study Objectives and Rationale

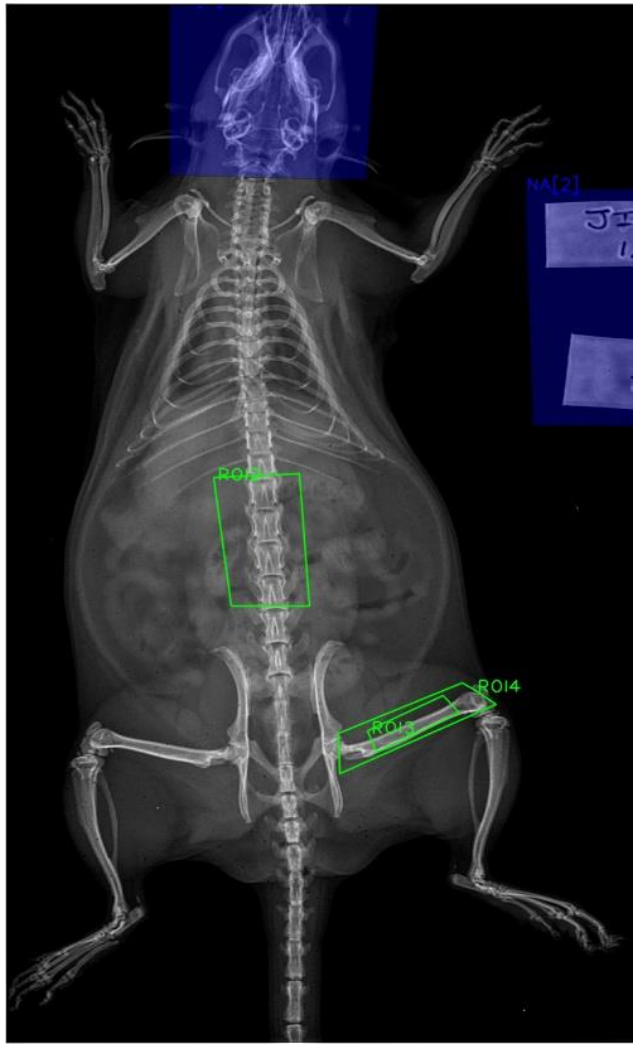
Rat Model of Osteoporosis:

- Well established model, highly predictive of human efficacy
- Ovariectomized (OVX) female rats display bone loss similar to postmenopausal human females
- OVX female rats also respond to PTH analogs and other osteoanabolic agents similarly to humans

Objective: To evaluate the effect of daily RT-102 drug substance intraperitoneal injections on bone mineral density (BMD) in a rat model of osteoporosis.

Key endpoint: Bone Mineral Density (BMD)

- determined using the same sensitive technique (DXA*) used clinically in humans



*Dual-Energy X-ray Absorptiometry

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Study Overview: A preclinical head-to-head comparison of RT-102 Drug Substance (DS) with Teriparatide (Forteo) and Abaloparatide (Tymlos)

Group/Treatment (N)	Dose level (µg/kg/day)	Human Equivalent Daily Dose
OVX-Vehicle Control (10)	0.0	n/a
OVX-RT-102, IP (10)	5.0	60µg
OVX-Teriparatide, SC (10)	5.0	60µg
OVX-Abaloparatide, SC (10)	5.0	60µg

Key endpoint: Bone mineral density (BMD) following 6 weeks of treatment with daily intraperitoneal (IP) injections

- The IP injection is designed to mimic the RaniPill route of delivery (Rani route).

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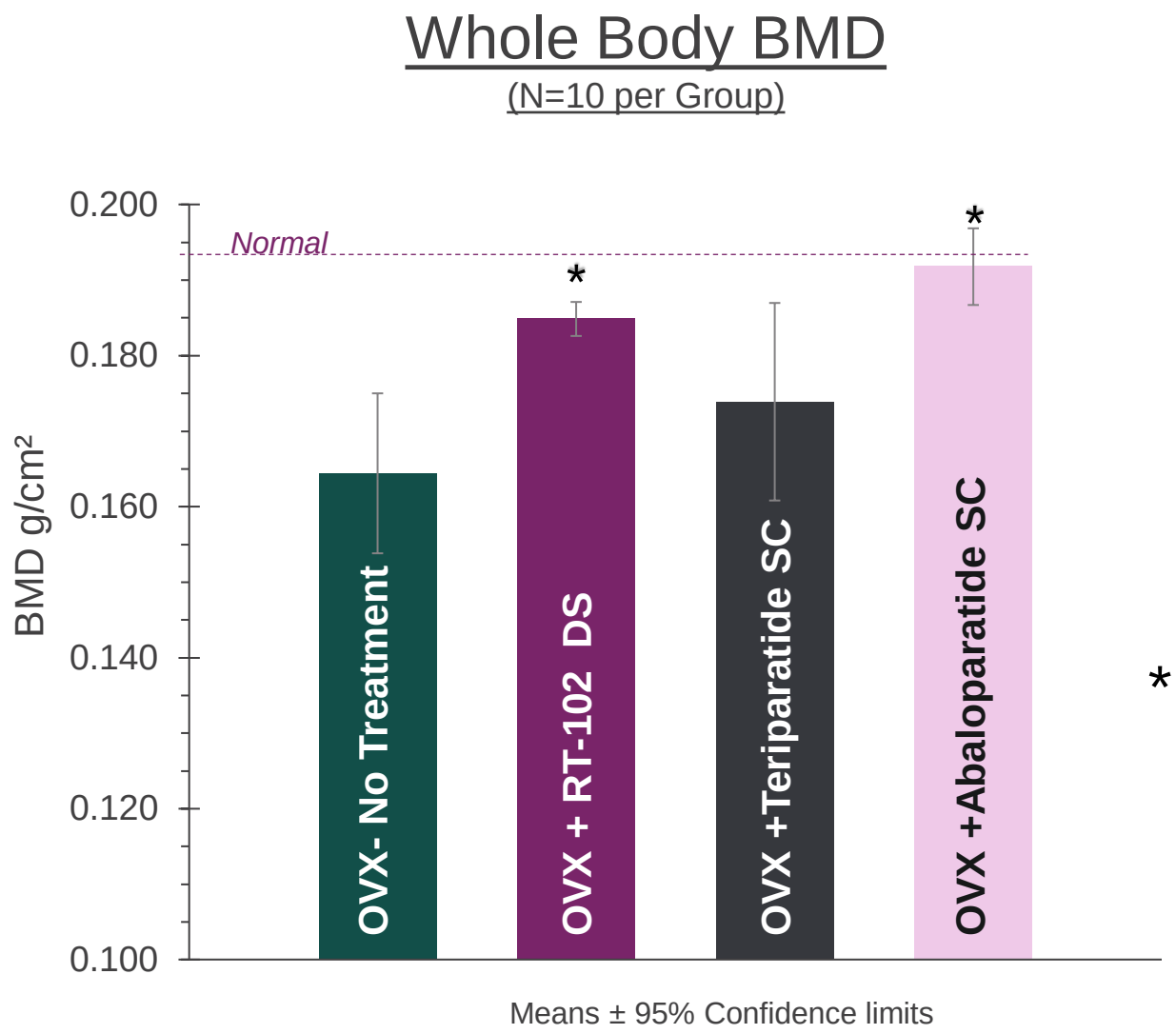
Study completed March 2022

Results: Effects on Bone Mineral Density Following 6 Weeks of Treatment



* = Significant, p<0.05 vs OVX group

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Rat PD Study Summary

1. RT-102 DS increased BMD in a rat model of osteoporosis

2. RT-102 DS delivered via the Rani Route was biologically active comparable to SC injected PTH analogs

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RT-102 Program Summary

RT-102 Studies*: Key Take-aways

- PK data from Phase I study showed robust and reproducible PK profiles of PTH delivered via the RaniPill
- Bioavailability of PTH delivered by RaniPill was greater than that of SC injection
- PD data from rat study demonstrated that RT-102 drug substance was biologically active
- The PK data combined with PD data from the rat study suggest that RT-102 has the potential to deliver PTH at levels required for osteoporosis treatment

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* The Phase 1 single-ascending dose study of RT-102 and rat pharmacodynamic study.

RaniPill Platform Opportunity

RaniPill Capsule Development Pipeline

	INDICATION(S)	FORMULATION	PRE-CLINICAL	PHASE 1	PHASE 2	PHASE 3	NEXT EXPECTED MILESTONE
CORE PROGRAMS							
RT-101	**NETs / Acromegaly***	**Octreotide**					Repeat Dose Platform Study in 2022
RT-102	**Osteoporosis**	**PTH-OP**					Complete Phase 1 Part 2 repeat dose study
RT-105	**Psoriatic Arthritis**	**Anti TNF-α Antibody**					Initiate Phase 1 in 2023***
RT-109**	**GH Deficiency**	**hGH**					Initiate Phase 1 in 2022***
RT-110	**Hypo-parathyroidism**	**PTH-Hypo**					Initiate Phase 1 in 2023***
COLLABORATION OPPORTUNITIES							
RT-103	**T2 Diabetes**	**GLP-1 Mimetic**					
RT-106	**T2 Diabetes**	**Basal Insulin**					

RT-XXX refers to the RaniPill capsule containing a biologic or drug in a proprietary Rani formulation
* Each of these indications will require separate trials
** CCHN will have limited opportunity to negotiate for rights within China
***Timelines are subject to regulatory agency review and feedback, which may result in delays

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The RaniPill is a Platform Technology with 90+ Eligible Drug Candidates

PLATFORM DEVICE	CAPACITY	POTENTIAL # OF DRUGS ENABLED	SELECT POTENTIAL DRUGS
RaniPill GO (original)	Up to 3 mg	>40	• Octreotide • Parathyroid hormone for osteoporosis • Parathyroid hormone for hypo • Anti TNF-α antibody
RaniPill HC* (High-Capacity)	Up to 20 mg	**>50**	• Pembrolizumab / Keytruda® • Dupilumab / Dupixent® • Trastuzumab / Herceptin® • Secukinumab / Cosentyx®

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* Numbers for RraniPill HC are estimates..

Patients Prefer Pills

	LANTUS insulin glargine injection 100 Units/mL	HUMIRA adalimumab	Simponi golimumab	EVENITY	Cosentyx (secukinumab)	Entyvio vedolizumab	Stelara (ustekinumab)	prolia
Injection Frequency	Daily	Every 2 weeks	Every month	Every month	Every month	Every 2 months	Every 3 months	Every 6 months
% Prefer to Take Daily Pill Over Current Injectable Regimen	**87%**	**88%**	**74%**	**73%**	**75%**	**77%**	**64%**	**76%**

*Data for Entyvio, Simponi, Evenity, Cosentyx, Stelara, and Prolia obtained from an independent third-party survey commissioned by Rani in the second quarter of 2021 to investigate U.S. patient preference for a daily oral drug alternative versus injections. Patients surveyed (n=611) were aged 18 years or older and presently used an injectable biologic to treat a condition. Six patient groups each included 100-103 patients with current primary treatment being injections of Simponi, Entyvio, Stelara, Prolio, Evenity, or Cosentyx.

*Data for Lantus and Humira obtained from an independent third-party survey commissioned by Rani in 2017 to investigate U.S. patient preference for a daily oral alternative. Patients surveyed were aged 18 years or older. Two patient groups included 501 patients taking Humira for the treatment of an inflammatory condition and 577 patients taking basal insulin for the treatment of diabetes.

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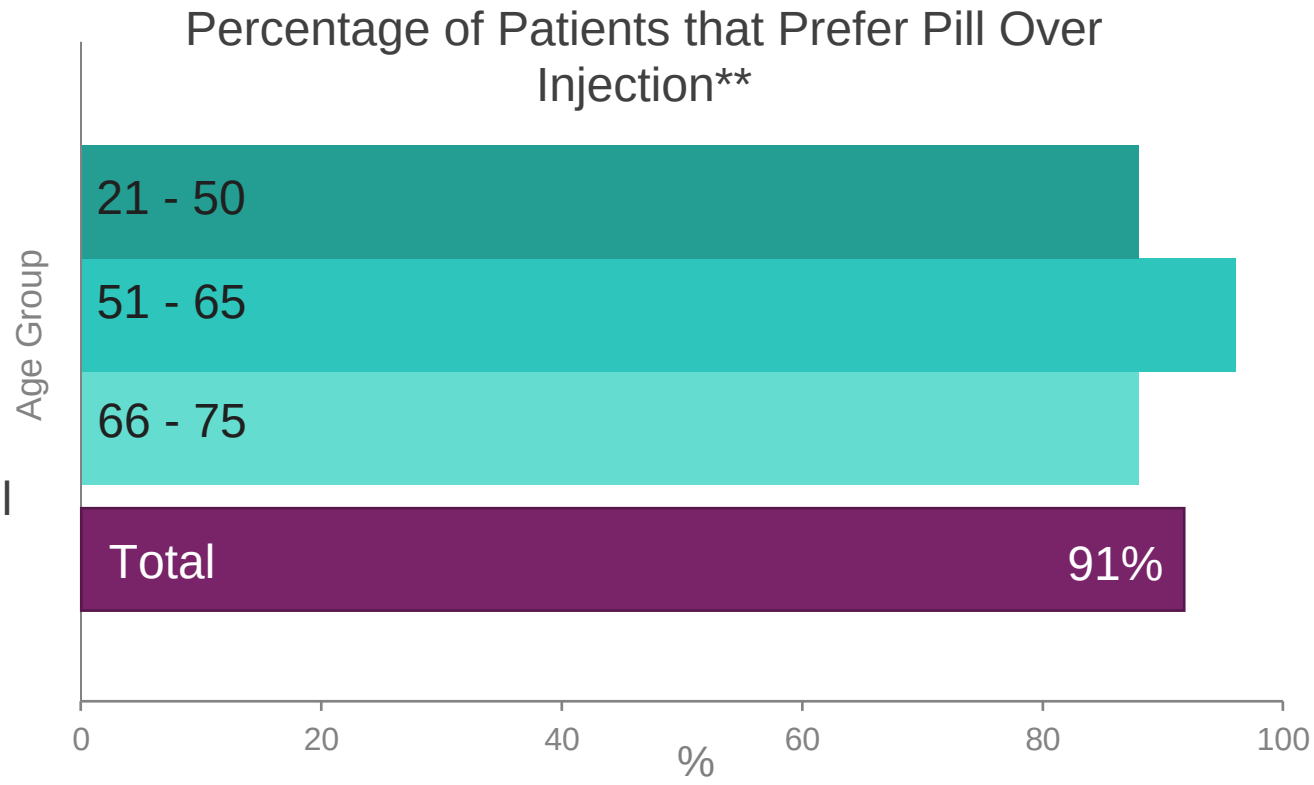
Mock-RaniPill* Swallow Study Overview

Study Objective

To evaluate the ease of swallowability of a mock-RaniPill by patients of different ages (N=50 per arm)

Key End Points

- Swallowability and palatability of the mock-RaniPill
- Participants' preference to choose a pill instead of their current injection therapy



- ❖ 100% of patients successfully swallowed mock-RaniPill
- ❖ 84% indicated pill was easy or somewhat easy to swallow

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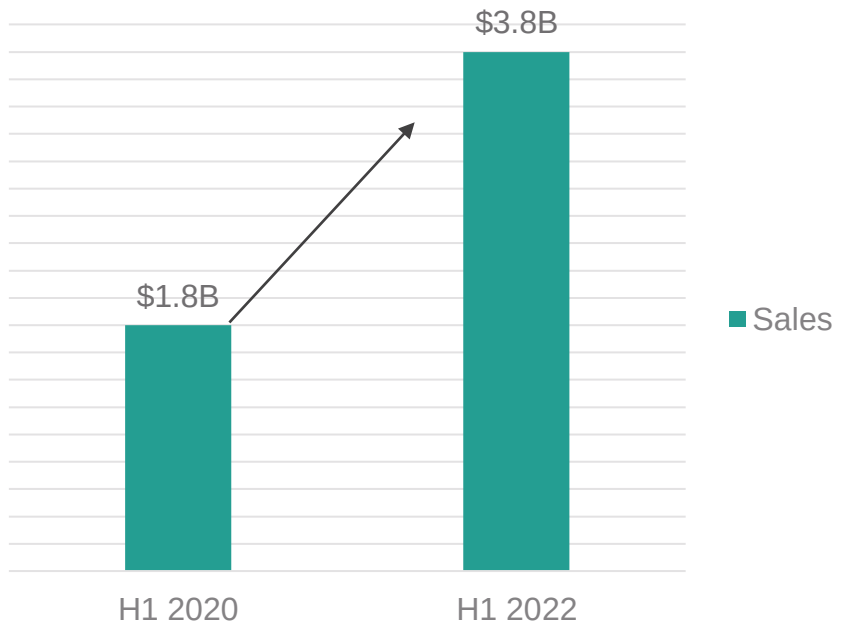
* Mock-RaniPill was a capsule shell with similar shape, size, texture and weight of the RaniPill capsule, not containing a needle or drug..

** Represents answers by respondents after swallowing the mock RaniPill capsule.

Patient Preference Drives Sales & Growth

85% of J&J's IV Darzalex converted to subcutaneous formulation



Introduction of subcutaneous administration increased Darzalex sales by 111%

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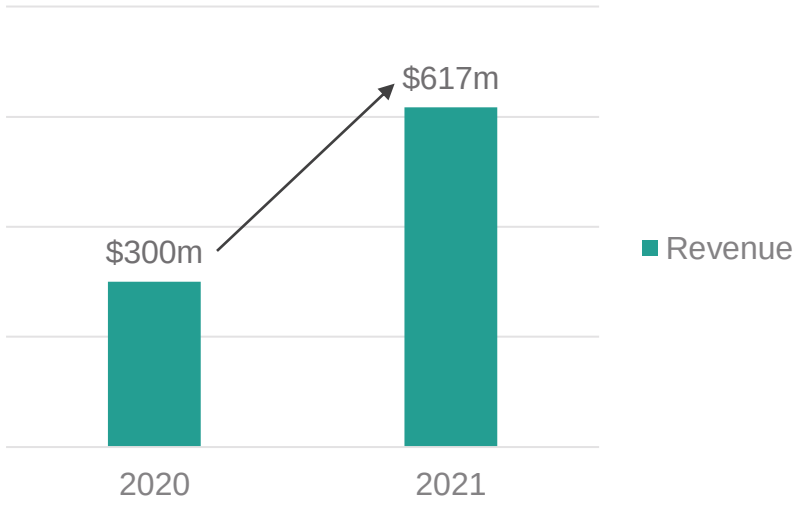
Examples of Oral Therapies as Growth Drivers

Novo Nordisk's oral semaglutide for diabetes

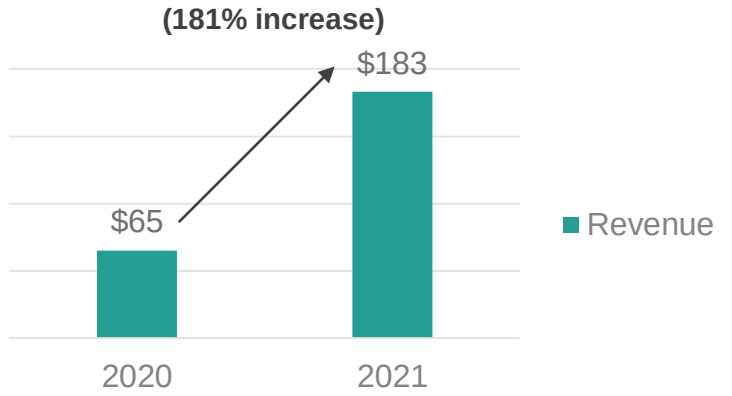
- Launched in Q4 2019



Oral CGRP vs. Injectable CGRP for migraine

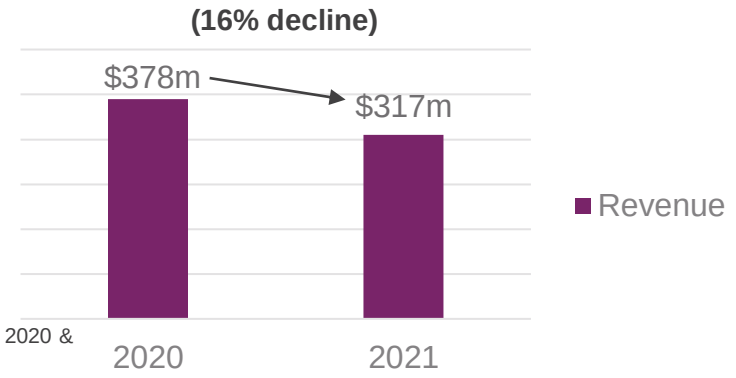
Allergan's Ubrelvy® (oral CGRP)

- Launched in 2020



Amgen's Aimovig® (injectable CGRP)

- Launched in 2018

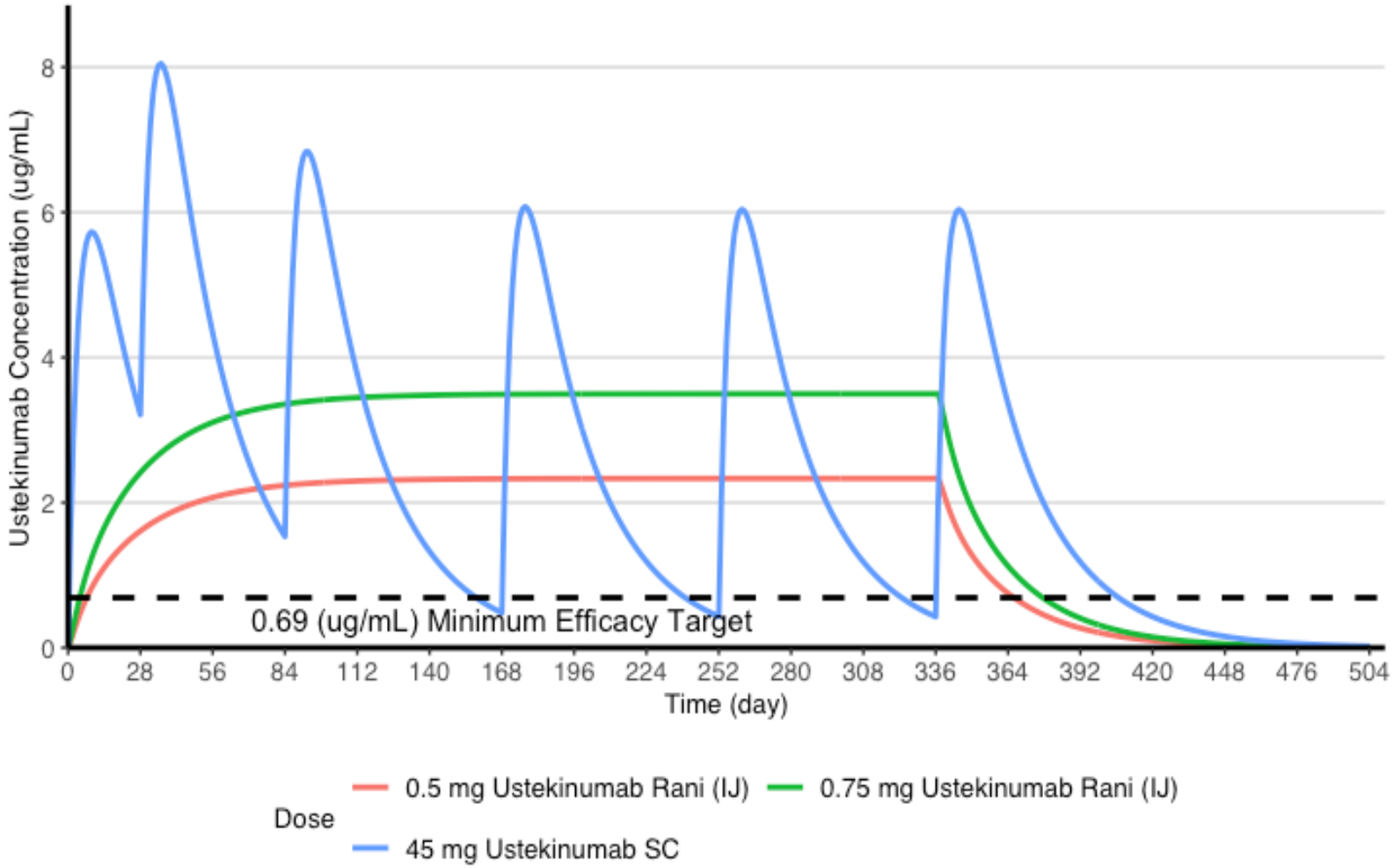


* Sales as reported by Novo Nordisk Annual Report for 2021
Ubrelvy® and Aimovig® are registered trademarks of Allergan and Amgen, respectively.

* Sales as reported by Abbvie and Amgen 2020 & 2021 annual reports

The Potential Power of Daily Dosing

Steady State PK simulations of Ustekinumab
(45 mg SC quarterly vs. Rani 0.5 and 0.75 mg oral daily)



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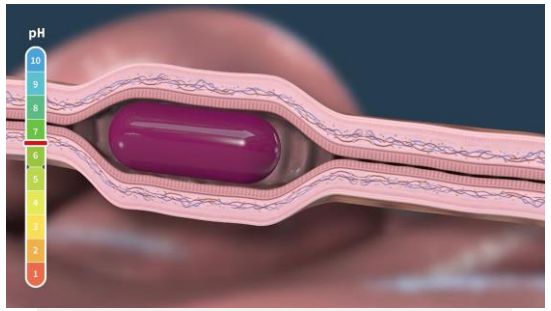
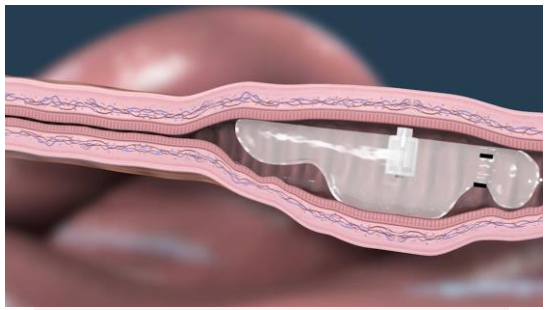
RaniPill Technology Overview

Rani's Technology

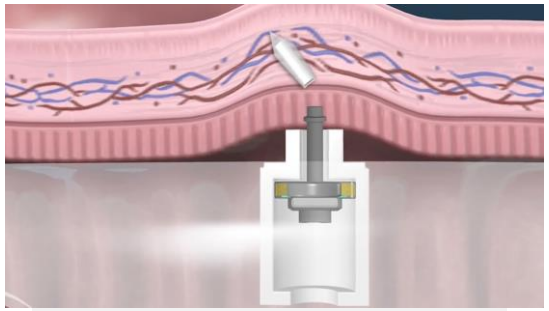
Cross Section of Intestinal Wall Illustrating Deployment of the RaniPill Capsule



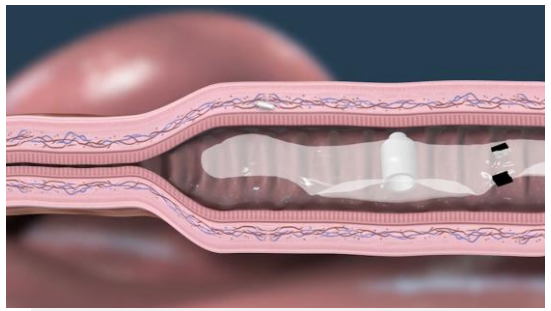
A: RaniPill capsule with protective coating in intestine.



B: Outer shell dissolves and the balloon starts to inflate as the reaction begins.



C: Pressure in the balloon pushes the microneedle into the intestinal wall.



D: Balloon deflates and passes on.

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Rani's Development Approach

- **Designed for minimal discomfort**
  No small intestine pain receptors
- **Designed for absorption similar to injections**
  Upon deployment
- **Agnostic to payload**
  Designed to accommodate peptides, proteins and antibodies
- **Strong patent position**
  Covering both the platform and drugs in combination with the platform
- **Scalable design**
  Designed to achieve low cost, high volume manufacturing

The RaniPill capsule is similar in size to a fish oil or calcium pill

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Our Goal is to Become *The* First-Line Biologics Company

INDICATION	STARTING THERAPIES		STANDARD INJECTABLES	
Type 2 Diabetes	Metformin (oral)	DPP-4 (oral)	Basal Insulin & GLP-1 (injections)	
Osteoporosis	Bisphosphonates (oral)		Teriparatide (injection)	Denosumab (injection)
Hypoparathyroidism	Calcitrol (oral)		PTH(1-84) (injection)	
Rheumatoid Arthritis	Methotrexate (oral)	JAK inhibitors (oral)	TNF-α (injection)	
High Cholesterol	Statins (oral)		PCSK-9 Inhibitors (injection)	
Crohn's Disease	Steroids & 5-aminosalicylates (oral)		TNF-α, α4-Integrin (injection)	IL-12/23 (injection)
Psoriasis / Psoriatic Arthritis	JAK inhibitors (oral)		IL-17 (injection)	TNF-α (injection)

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Oral RaniPill® Biologics

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Thank you

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