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CORPORATE PRESENTATION

September 2021



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We cannot assure you that we will realize the results, benefits or developments that we expect or anticipate or, even if substantially realized, that they will result in the consequences or affect us or our business in the way expected. Forward-looking statements are not historical facts, and reflect our current views with respect to future events. Given the significant uncertainties, you should evaluate all forward-looking statements made in this presentation in the context of these risks and uncertainties and not place undue reliance on these forward-looking statements as predictions of future events. All forward-looking statements in this presentation apply only as of the date made and are expressly qualified in their entirety by the cautionary statements included in this presentation. We disclaim any intent to publicly update or revise any forward-looking statements to reflect subsequent events or circumstances, except as required by law.

Industry and Market Data: We obtained the industry, market, and competitive position data used throughout this Presentation from our own internal estimates and research, as well as from industry and general publications, and research, surveys, and studies conducted by third parties. Internal estimates are derived from publicly available information released by industry analysts and third-party sources, our internal research and our industry experience, and are based on assumptions made by us based on such data and our knowledge of the industry and market, which we believe to be reasonable. In addition, while we believe the industry, market, and competitive position data included in this prospectus is reliable and based on reasonable assumptions, we have not independently verified any third-party information, and all such data involve risks and uncertainties and are subject to change based on various factors. These and other factors could cause results to differ materially from those expressed in the estimates made by the independent parties and by us.

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A biotechnology company developing innovative therapeutics and diagnostics programs in women's health, gastrointestinal health and oral biotherapeutics.

ORAL BIOTHERAPEUTICS		GASTROINTESTINAL HEALTH		WOMEN'S HEALT
systemic therapeutics		GI-targeted therapeutics		preeclampsia rule-
PGN-OB1	PGN-OB2	PGN-600	PGN-001	preecludia™
Adalimumab + OBDS	GLP-1 agonist + OBDS	Tofacitinib + DDS	Adalimumab + DDS	laboratory-developed tes
Ionis Pharmaceuticals Antisense therapy + OBDS	Large Pharma 1 Drug + OBDS Large Pharma 2	<i>delivery system</i> DDS Drug delivery system		preecludia™ in vitro diagnostic
delivery system	Drug + OBDS	diagnostics		non-sequencing, si
OBDS Oral biotherapeutics delivery system		PIL Dx ingestible fluorescent technology	RSS sampling + preservation technology	NIPT Single-molecule NIPT







A MULTIBILLION DOLLAR OPPORTUNITY

Our platforms, products, and product candidates address markets valued at >100 billion with significant growth potential



TOTAL ADDRESSABLE MARKETS (BILLIONS)

Sources: Statistica, Global Data, Fortune Business Insights, Market size estimates do not include all applications for individual platforms.

1. Estimated market size in 2025 based on market size for NASH in 2025; does not include market size for other potential applications such as NIPT, oncology, or gastroenterology.

2. Biologics Global Market Opportunities and Strategies to 2030: COVID-19 Impact and Recovery. Research and Markets; 2020. Report no. 5232536.

3. Monoclonal Antibody Therapy Market Size, Share & Industry Analysis, By Type, By Application, By Distribution Channel, and Regional Forecast, 2020-2027. Fortune Business Insights; 2020. Report no. FBI102734.

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NEAR-TERM POTENTIAL CATALYSTS





OBDS Initiate first clinical PK/PD studies



INNOVATION PIPELINE

POTENTIALLY DISRUPTIVE PLATFORM & ROBUST PIPELINE

Focus on diagnosing and treating GI diseases at the site of disease

UNMET MEDICAL NEED

Diseases involving the GI tract affect hundreds of millions of people worldwide

TREATMENT CHALLENGES

- Systemic delivery of medication: achieving therapeutic drug levels can be difficult due to safety concerns
- **Delivery of protein-based therapies:** injection is difficult, expensive, and both patients and physicians prefer oral medications over injections

DIAGNOSTIC CHALLENGES

Current diagnostic modalities are either **invasive** (e.g. endoscopy, surgery, biopsy) or **imprecise** (e.g. breath and fecal testing)

OPPORTUNITY



Noninvasive, direct access to GI tract could help to:

Replace systemic drug therapy with TARGETED, DIRECT-TO-SITE DRUG THERAPIES DESIGNED TO IMPROVE EFFICACY AND SAFETY

BETTER DIAGNOSE GI DISEASES

DISCOVER NOVEL BIOMARKERS AND DRUG TARGETS





THERAPEUTICS PIPELINE

Oral Biotherapeutics (OBDS)In developmentGI-Targeted Therapeutics (DDS)In development

OBDS: ORAL BIOTHERAPEUTICS DELIVERY SYSTEM

Oral delivery of monoclonal antibodies and biologics has been elusive



UNMET NEED

Challenges with existing delivery methods for biotherapeutics

- Large molecules/proteins cannot survive stomach acids
- Currently delivered by injection only

OPPORTUNITY

- Rise of biosimilars; Need for differentiation
- Oral delivery solutions could expand the biotherapeutics market to other therapeutic classes/indications

OBJECTIVES

- Oral delivery
- ► Targeted liquid jet release in small intestine for optimal systemic uptake
- ► No injections; needle-free



1. <u>Biologics Global Market Opportunities and Strategies to 2030: COVID-19 Impact and Recovery</u>. Research and Markets; 2020. Report no. 5232536.

Oral Biotherapeutics

TARGET MOLECULE CLASSES

- Monoclonal
 - antibodies
- ► Peptides
- Nucleic acids

GLOBAL MARKET SIZE

- ▶ Biologics \$250B¹
 - Monoclonal antibodies \$123B²



^{2.} Monoclonal Antibody Therapy Market Size, Share & Industry Analysis, By Type, By Application, By Distribution Channel, and Regional Forecast, 2020-2027. Fortune Business Insights; 2020. Report no. FBI102734

ORAL BIOTHERAPEUTICS

Goal: needle-free, oral delivery of large molecules

PGN-OB1

Adalimumab + OBDS

PGN-OB2

GLP-1 agonist + OBDS

Ionis Pharmaceuticals

Antisense therapy + OBDS

Large Pharma 1

Drug + OBDS

Large Pharma 2

Drug + OBDS

DRUG-DEVICE COMBINATION PRODUCT CANDIDATES

- PGN-OB1 Adalimumab + OBDS
 - Proprietary formulation of adalimumab designed for

systemic uptake with delivery by OBDS

- PGN-OB2 GLP-1 Agonist (Liraglutide) + OBDS
 - Proprietary formulation of a GLP-1 agonist designed
 - for systemic uptake with delivery by OBDS

PHARMA PARTNERSHIPS

- Ionis Pharmaceuticals: delivery of antisense therapies
- ► Large Pharma 1
- Large Pharma 2

KEY DATA

- - Recently observed avg. single dose¹

MILESTONES

- Preclinical studies of fully initiated in O1 2021
- Anticipate 2H 2022 delivered with OBDS

Robust preclinical data across multiple molecule classes in swine models

> bioavailability levels of approx. 15% and maximum levels up to 44% of IV for adalimumab following a

autonomous integrated device

initiation of first clinical study evaluating PK of a therapeutic

progenity

GI-TARGETED THERAPEUTICS + DDS DELIVERY SYSTEM

Developing proprietary drug-device combinations designed to deliver therapeutics to the site of disease



DDS Drug delivery system

PGN-600

Tofacitinib + DDS

PGN-001

Adalimumab + DDS

OBJECTIVES

► Localized, topical delivery to the colon in Inflammatory Bowel Disease (IBD) with the goal of:

- Rapid induction
- Superior clinical remission rate
- Improved safety profile
- Progenity-owned investigational formulations of approved drugs
 - Adalimumab
 - Tofacitinib

PROPOSED LEAD INDICATION

▶ IBD: 1.8 million patients in U.S. alone

UNMET NEED

Less than ideal efficacy with existing therapeutics due to insufficient drug at disease site

KEY DATA

- Clinical study completed demonstrating the ability of the DDS to identify entry into the colon and release liquid payload
- Preclinical study with PGN-600 demonstrated significantly higher tissue levels than with equivalent oral dose

ANTICIPATED MILESTONES

- ▶ Q4 2021: Topline results from clinical PK/PD study of adalimumab in ulcerative colitis patients
- 1H 2022: Initiate first clinical study evaluating PK/PD of therapeutic delivered with DDS
- Recipient of Crohn's and Colitis Foundation IBD Ventures development grant

OUR DELIVERY SYSTEM IS DESIGNED TO PROVIDE THE FOLLOWING BENEFITS:



DEVELOPMENT RISK by using approved drugs





Less drug delivered systemically may lead to IMPROVED SAFETY PROFILE

Gastrointestinal Health

Therapeutics



progenity



DIAGNOSTICS PIPELINE

PIL Dx In development RSS In development

PIL Dx: PROGENITY INGESTIBLE LAB

Ingestible fluorescent laboratory



PIL Dx

ingestible fluorescent technology

LOCALIZE SAMPLE **ANALYZE IN SITU TRANSMIT RESULTS**

OBJECTIVES

- Provide "point-of-care" ingestible diagnostic: locate, sample, measure, report
- Support fluorescent assays measuring bacteria, proteins, drugs, etc.
- Potential for other detection modalities

PROPOSED LEAD INDICATION

► SIBO: >100 million U.S. patient visits annually with symptoms that may be suggestive of SIBO

POSSIBLE APPLICATIONS

- ► NASH
- Colon cancer screening

► IBD

KEY DATA

- Technology and interim data Week conferences
- culture and plate count for

DEVICE DEVELOPMENT

- Second-generation design to achieve:

 - Reduced cost

Gastrointestinal Health

Diagnostics

presented at the 2020 American College of Gastroenterology and 2019 Digestive Disease ► Interim data showed excellent observed concordance between assay and reference standard of identifying 10^5 CFU per mL

Improved manufacturability



RSS: SAMPLING TECHNOLOGY

Recoverable sampling + preservation system



OBJECTIVES

- Autonomously identify location in the GI tract
- Sample at the site of disease
- Recoverable, real-time preservation of analytes

POTENTIAL BENEFITS

Obtain samples from the GI tract without invasive endoscopy procedures

POSSIBLE APPLICATIONS

- ► Biomarker sampling in the GI tract
- Drug target identification
- Non-invasive microbiome evaluation
- ► Future key to GI therapeutic and diagnostic development
 - ► Local PK/PD to guide dosing and identify responders, dx biomarker levels, etc.
- Progenity lab and bioinformatics platform

- in Q3 2021

Gastrointestinal Health

Diagnostics

ANTICIPATED MILESTONES

► Complete clinical proof of concept study

Device development in parallel with PIL Dx





PROTEOMICS PLATFORM

Preeclampsia **> In development**

SIGNIFICANT UNMET NEED IN ASSESSING PATIENTS FOR PREECLAMPSIA





MORE THAN 700,000 PEOPLE

present with symptoms each year^{2,3,4}



UP TO \$3 BILLION U.S. estimated market opportunity

DIAGNOSIS OF PREECLAMPSIA RELIES ON METHODS INVENTED IN THE 1800s

Current assessment tools are sub-optimal

THERE IS NO SINGLE TEST FOR PREECLAMPSIA

Current tests, like blood pressure, are not specific to preeclampsia and cannot differentiate preeclampsia from other hypertensive disorders, such as chronic or gestational hypertension

HEALTHCARE COST BURDEN OF \$9 BILLION+1

Incremental costs associated with managing a preeclamptic pregnancy support value-based reimbursement

1. Henderson JT, et al. Preeclampsia Screening: Evidence Report and Systematic Review for the US Preventive Services Task Force. JAMA. 2017 Apr 25;317(16):1668-1683

- 2. Ananth CV, et al. Pre-eclampsia rates in the United States, 1980-2010: age-period-cohort analysis. BMJ. 2013 Nov 7;347:f6564
- 3. https://www.sciencedirect.com/topics/medicine-and-dentistry/gestational-hypertension
- 4. Center for Disease Control and Prevention. Births: Final Data for 2018 (In press), https://www.cdc.gov/nchs/nvss/births.htm





preeclampsia rule out test



INTRODUCING PREECLUDIA™ – THE FIRST U.S. PREECLAMPSIA RULE-OUT TEST

Designed to help OB/GYNs rule-out possible preeclampsia with confidence

FIRST-OF-ITS-KIND TEST DESIGNED TO ASSESS THE PATHOPHYSIOLOGY RISK OF PREECLAMPSIA

- ► A proprietary, multi-analyte protein biomarker assay with algorithmic interpretation
- Laboratory-developed test (LDT) designed to assess markers of both placental and maternal health

RULE OUT PATIENTS NOT AT RISK FOR DEVELOPING PREECLAMPSIA FOR UP TO 14 DAYS

- Designed to provide actionable results to improve clarity and confidence in managing patients
- Potential reassurance for patients
- ► Testing window of 28-37 weeks' gestation; 2-3 tests may be performed

POTENTIAL TO REDUCE COSTS AND IMPROVE OUTCOMES

- Return patients to routine care, decreasing health care over-utilization
- Identify at-risk patients early to potentially improve interventions and care management







preecludia

preecludia

Specimen Kit

preeclampsia rule out test

preecludia

CLINICAL DEVELOPMENT ROADMAP TO SUPPORT A SUCCESSFUL LAUNCH¹

Test developed with >3,700 patient samples, targeting NPV >95%

CLINICAL VALIDATION: PRO-104

- Achieved primary endpoint of validation study protocol (hazard ratio) •
- Demonstrated strong performance and a high NPV level in line with • original target at high prevalence rate and in a broad use population
- Received patent on methods for testing free and dissociated PIGF ٠
- Proceeding toward publication of results in peer reviewed journal •

VERIFICATION STUDY: PRO-129

- Prospective cohort clinical verification study clinical with data from 400 blinded samples
- Results support a rule-out window up to 14 days in the target population

Sensitivity	Specificity	NPV	
88.0%	73.3%	98.2%*	
(78.2% – 94.4%)	(68.1% – 78.0%)	(95.5% – 99.3%)	

*NPV calculated at a 10% prevalence representing the expected prevalence

¹ Potential launch subject to identification of commercial partner and validation activities

PRE-VALIDATION DATA SET

- N = 356 enrolled subjects**
- Demonstrated commercial laboratory systems readiness
- Performance consistent with verification study
 - NPV >97%, sensitivity >87%, with prevalence=11% within 14 day rule-out window; specificity >65%

ROBUST CLINICAL

- Initiate trials with partner to evaluate clinical utility
- Develop health economics data
- Targeted publication of key data



preeclampsia ule out tėst



DEVELOPMENT STRATEGY

Market education and development





SINGLE-MOLECULE DETECTION PLATFORM

NIPT

In development

Oncology

Future

Gastrointestinal Health

Future

SINGLE-MOLECULE DETECTION PLATFORM

Novel, single-molecule counting assay, initially for NIPT Potentially applicable to known genomic, epigenomic, and proteomic targets



QUALITY RESULTS

Maintain premium clinical value and reliability



FASTER RESULTS

Enables 3-day laboratory turnaround time



Q3 2020

Achieved development milestone demonstrating potential to "quantify" fetal fraction

Q4 2020

Made critical advancement by finalizing probe pool design and testing

Q4 2021

Anticipated optimization exit

1H 2022

Anticipated validation exit¹





