



**ACTOBIOTICS®**, MICROBE-BASED BIOPHARMACEUTICALS  
for expression and local delivery of therapeutics at disease sites including the intestine, the mouth and the nasopharynx.

- [ ] A unique delivery platform precisely tailored for specific disease modification
- [ ] Specifically designed to target disease areas with high unmet need
- [ ] Rapid development of new candidates
- [ ] Targeted delivery via oral capsule, oral rinse or topical solution
- [ ] Demonstrated safety and tolerability
- [ ] Robust and scalable manufacturing process

## Pioneers in unique disease-modifying technology

ActoBio Therapeutics™ is pioneering a new class of therapeutic agents: **ActoBiotics®**. These are targeted, **specifically designed and engineered** products that express and **locally deliver** potential **disease-modifying treatments** for a range of disorders. Since ActoBiotics® are based on the safe food-grade microorganism, *Lactococcus lactis*, this approach promises **safer and more efficacious** treatments than injectable agents. A broad and diverse portfolio of ActoBiotics® is being developed to treat a wide range of diseases, focusing primarily on disease areas with **high unmet needs** in immunotherapy, allergy and tolerance induction, such as Oral Mucositis and Type 1 Diabetes.

## HISTORY

2006

2013

2014

2015

2017

2018

**CORPORATE**  
ActoGeniX NV founded to commercialize and develop ActoBiotics®

Acquired by Intrexon Corporation (NYSE: XON) and renamed Intrexon ActoBiotics NV

Rebranded to ActoBio Therapeutics™

**CLINICAL MILESTONES**  
Publication of first ever successful clinical testing of an ActoBiotics®-type product

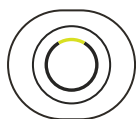
Publication of first Phase Ib clinical study in Oral Mucositis of AG013

Phase I clinical trial successfully completed for AG014 for Inflammatory Bowel Disease

Start of Phase IIb clinical study with AG013 treating Oral Mucositis

IND approval for ActoBiotics® AG019 treating Type 1 Diabetes

## KEY INVESTMENT HIGHLIGHTS



### PLATFORM

- **ActoBiotics®** is a fully integrated, **unique delivery platform** for therapeutics
- **Designed** to perform specific biological interventions
- Potential for **superior efficacy and safety** through oral or local targeted delivery
- **Accelerated development** and validated regulatory path for new IND candidates: less than 2 years from inception to IND
- Strong R&D engine and **large collection** of 2000 strains, with potential for further development



### PRODUCT PORTFOLIO

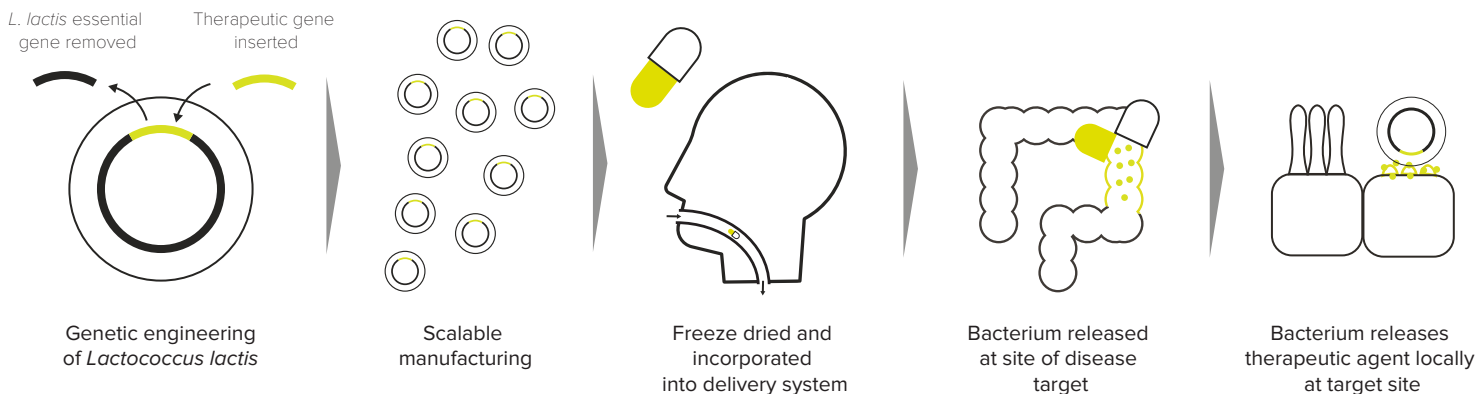
- **Two clinical stage programs** in Phase IIb and Phase Ib, and multiple programs close to clinical stage
- **Broad therapeutic application** across a wide set of diseases with strong growth dynamics
- Target the (gut) mucosal immune system for **mucosal healing**, decreasing local inflammation and to steer the **systemic immune system** towards immune tolerance/desensitization
- Can incorporate multiple biologicals, thereby acting as a combination therapy to **target multiple disease pathways simultaneously**



### EXPERIENCE

- Straightforward, reliable and **low-cost cGMP manufacturing process**
- Strong IP position covering platform and specific applications
- Extensive **regulatory acceptance** of platform and applications
- **Experienced leadership team** with unique expertise in bacterial engineering, and strong scientific, regulatory and clinical backgrounds

## TECHNOLOGY OVERVIEW



## PIPELINE

PRODUCT CANDIDATE

INDICATION

PRECLINICAL

PHASE I

PHASE II

PHASE III

EST 2018 GLOBAL ADDRESSABLE POPULATION

### IMMUNOTHERAPY:

AG013	Oral Mucositis		850 K
AG020	Inflammatory Bowel Disease		> 4 M
AG018	Chronic Rhinosinusitis		12.3 M

### DESENSITIZATION:

Research Food, seasonal, perennial and venom allergy



### TOLERANCE INDUCTION:

AG019	Type 1 Diabetes		> 70 K new cases per year
AG017	Celiac Disease		1.9 M

### ADDITIONAL PROGRAMS IN EARLY STAGE:

Research	Phenylketonuria		51 K
Research	Metabolic Disease		
Research	Auto-immune Skin Disease		

## INTELLECTUAL PROPERTY

ActoBio Therapeutics™ holds a strong intellectual property portfolio, with over 250 granted patents and more than 50 pending patent applications covering clinical candidates across the technology platform.

## EXECUTIVE TEAM

Pieter Rottiers, PhD - CEO, Director

Lothar Steidler, PhD - CTO

Luc Van fraeyenhoven - CFO

Stefan Herdinius, MSc, MBA - VP and Head of Strategic Drug Development