azitra

CORPORATE PRESENTATION

August 2026

Precision dermatology powered by synthetic biology.

DISCLAIMER AND SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This document has been prepared and is made for informational purposes only to familiarize yourself with Azitra, Inc. ("Azitra", the "Company," "we," "us," and "our"). This document is neither an offer to sell or purchase, nor a solicitation of an offer to sell, buy or subscribe for any securities in any jurisdiction. Nothing contained in this document is, or should be construed as, a recommendation, promise, or representation by the Company or any officer, director, employee, agent, affiliate, representative, or advisor of the Company. You should not construe the contents of this document as legal, tax, accounting or investment advice or a recommendation.

This document contains forward-looking statements concerning Azitra. The words "believe," "may," "will," "potentially," "estimate," "continue," "anticipate," "intend," "could," "would," "project," "plan," "expect" and similar expressions that convey uncertainty of future events or outcomes are intended to identify forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements include, but are not limited to, statements concerning the following: (i) our future financial and operating results; (ii) our intentions, expectations and beliefs regarding anticipated growth, market penetration and trends in our business; (iii) the timing and success of our plan of commercialization; and (iv) our ability to successfully develop and clinically test our product candidates.

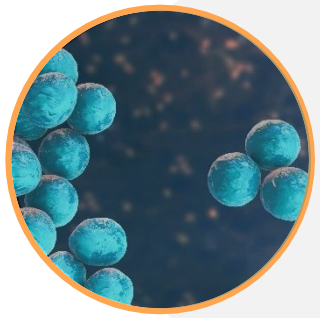
These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including (i) we are an early-stage clinical biopharmaceutical company with limited operating history, (ii) there are no drug products to date that incorporate our microbial library and genetic engineering platform and the clinical and commercial utility of our microbial library and genetic engineering platform is uncertain and may never be realized; (iii) we have only recently commenced Phase 1 clinical studies of our initial product candidates and our product candidates will require extensive additional preclinical and clinical testing; (iv) we expect we will need additional financing to execute our business plan and fund operations, which additional financing may not be available on reasonable terms or at all; and (v) those other risks described or incorporated by reference in the "Risk Factors" section in our Form 10-K filed by Azitra with the Securities and Exchange Commission ("SEC") on February 24, 2025 and in any subsequently filed quarterly reports on Form 10-Q.

In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this document may not occur and actual results could differ materially and adversely from those anticipated or implied in our forward-looking statements. You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in our forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance or events and circumstances described in the forward-looking statements will be achieved or occur. Azitra does not undertake and specifically disclaims any obligation to update or revise our forward-looking statements to reflect new circumstances or unanticipated events as they occur, except as required by law.

This document contains only basic information concerning Azitra. Because it is a summary it does not contain all of the information you should consider with regard to Azitra. You should read our Form 10-K filed with the SEC on February 24, 2025, as supplemented and/or amended from time to time, and our other filings with the SEC for more complete information about Azitra.

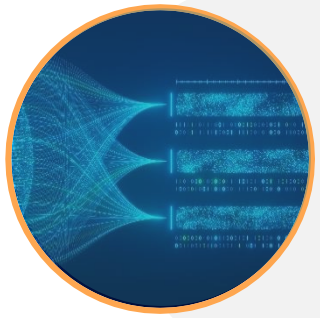
Three foundational platforms for precision dermatology

POWERED BY SYNTHETIC BIOLOGY AND THE METAGENOME



Bacterial Cell Library

- Proprietary, robust library of **~1,500 microbial strains**
- Engineered and non-engineered bacterial chasses
- Over 60 species in house, mostly *Staphylococcus epidermidis*



Artificial Intelligence / Machine Learning Discovery

- Predictive algorithms for **novel microbial-derived proteins, peptides & small molecules**
  - Exclusive agreement covering specific strains with team from Carnegie Mellon
  - Based on genetic sequences and biosynthetic gene clusters

Microbial Genetic Engineering Platform

- Demonstrated ability to make **novel transformations** to overcome challenge of thick cell walls and restriction modification systems
  - Exclusive worldwide license with Fred Hutchinson Cancer Center

Azitra's pipeline

Cosmeceutical ingredients

ATR-COSF: filaggrin protein ingredient

FDA-regulated candidates for drug development

ATR-01

Filaggrin-secreting *S. epidermidis*

Ichthyosis vulgaris

ATR-04

Engineered *S. epidermidis*

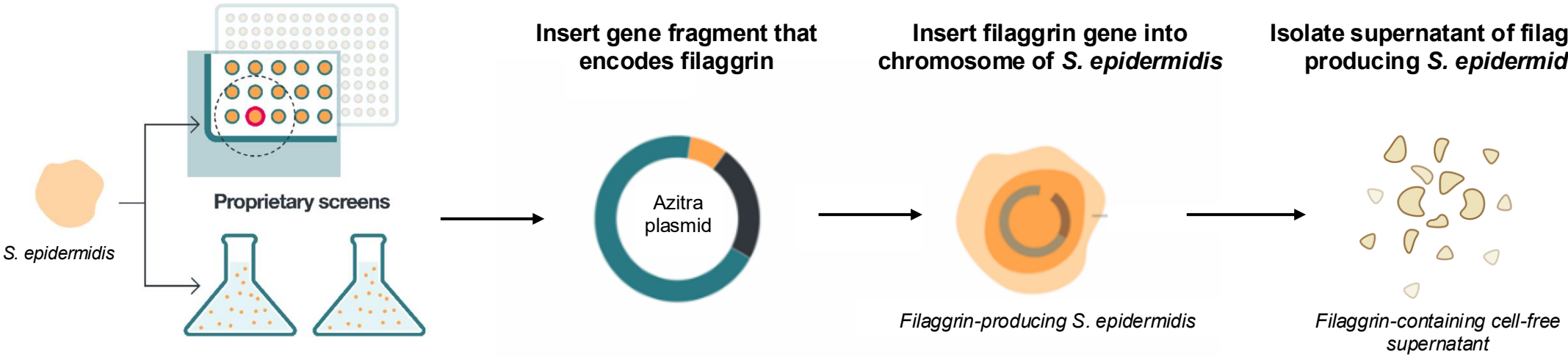
EGFR inhibitor associated rash

ATR-COSF Program

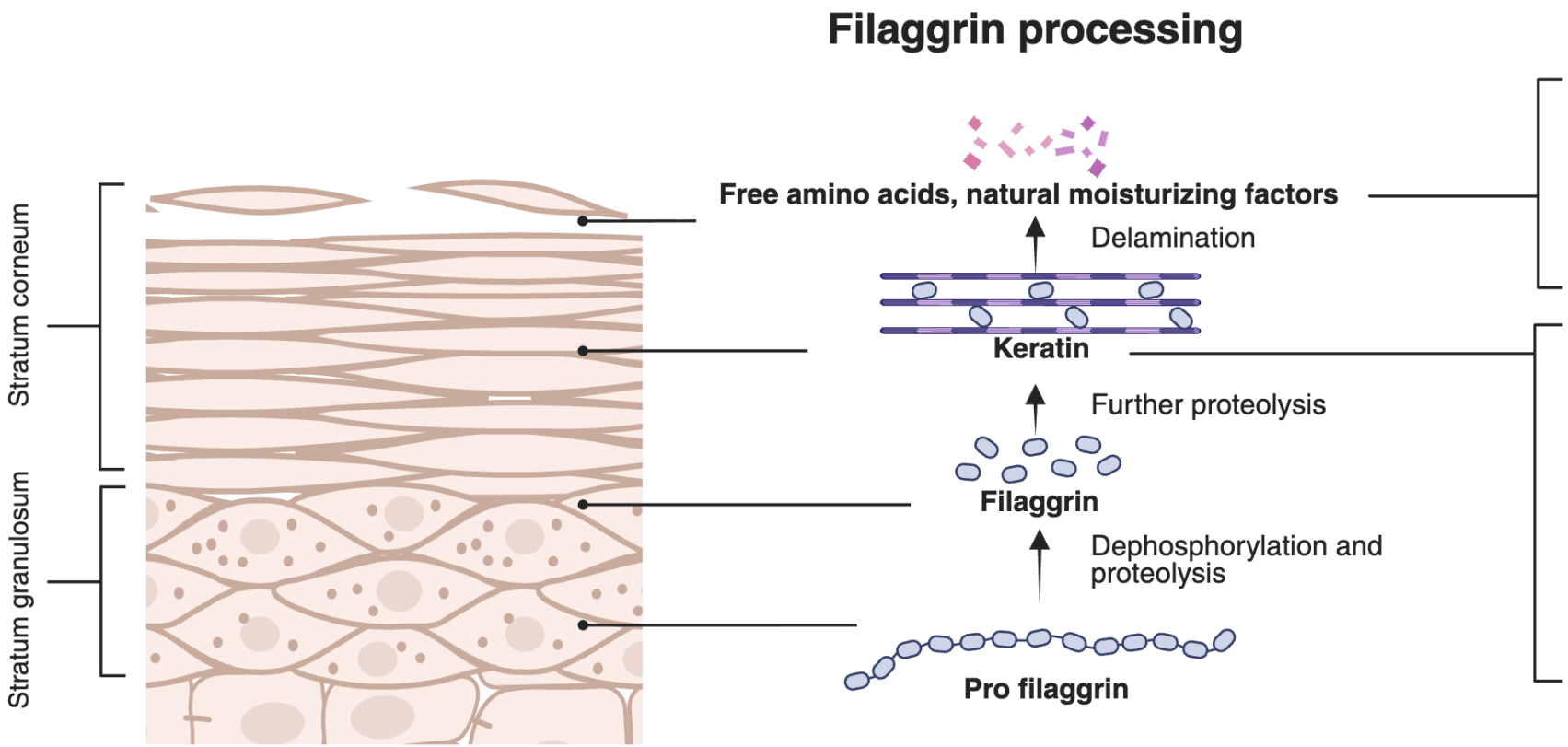
Recombinant filaggrin protein

azitra

ATR-COSF: topical filaggrin + bacterial lysate for cosmeceutical indications



Filaggrin’s function in the skin



Skin benefits

Deep skin hydration

- ✓ Breaks down into small products that attract and retain water in the skin

Maintains skin pH

- ✓ Byproducts help acidify the skin

Strengthens skin barrier

- ✓ Plays a crucial role in skin barrier formation, reducing water loss and preventing moisture escape

Soothes eczema-prone and sensitive skin

- ✓ Reinforced skin barrier helps protect against environmental allergens and irritants

Anti-aging benefits

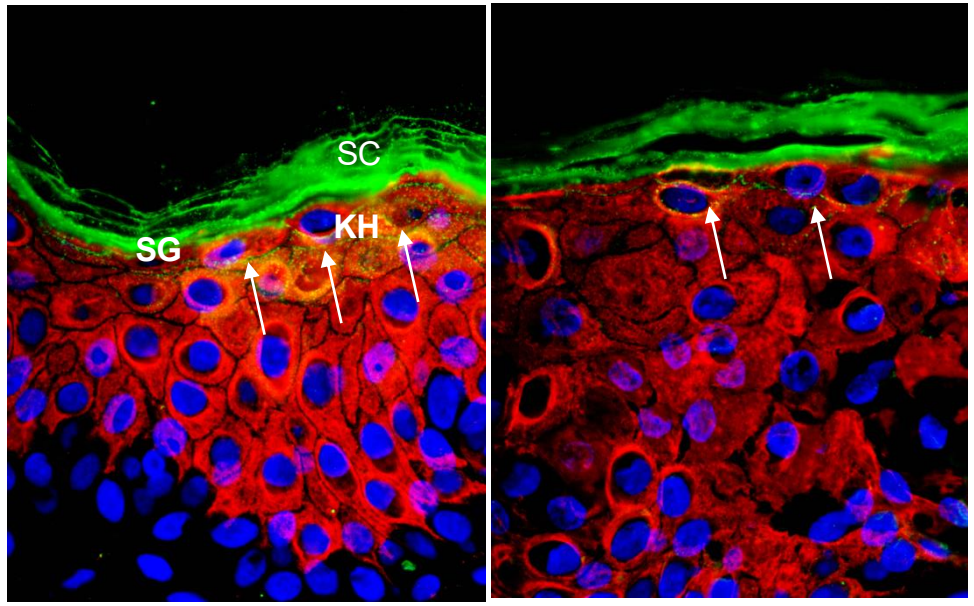
- ✓ Helps protect against UV damage

Filaggrin is a vital structural protein in cosmetics that **strengthens the skin barrier**, **enhances hydration** by producing Natural Moisturizing Factors (NMF), and **reduces eczema symptoms**. It acts as a "protein of youth," **repairing dry, sensitive skin**, **reducing transepidermal water loss**, and **protecting against environmental pollutants and UV damage.**

ATR-COSF delivers filaggrin below the stratum corneum after single dose

Skin with **Normal** levels

Skin model with **Reduced** filaggrin levels

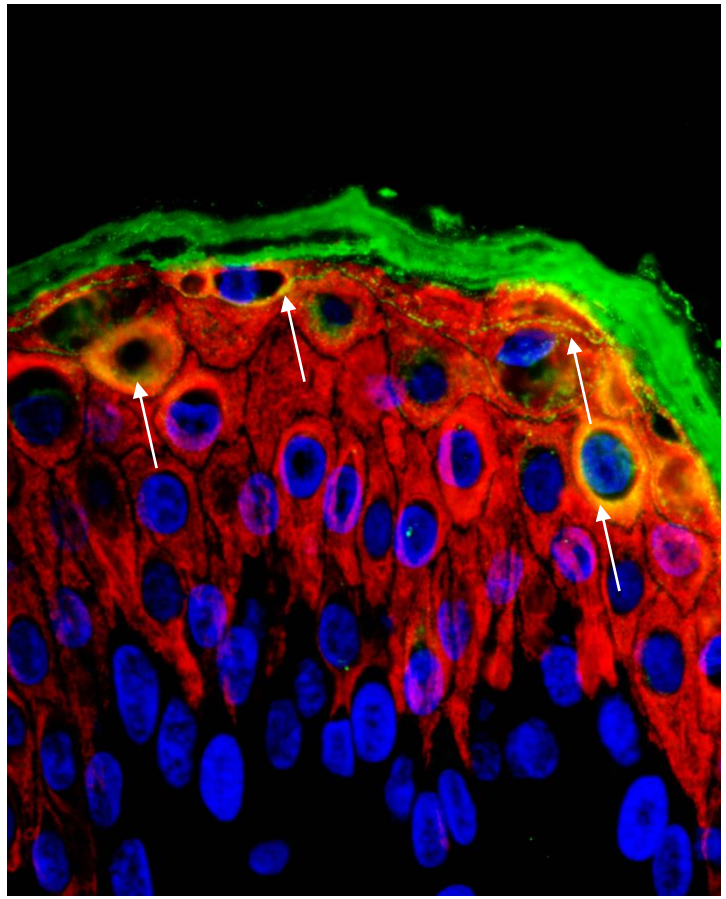


DNA
Filaggrin
Keratin-10

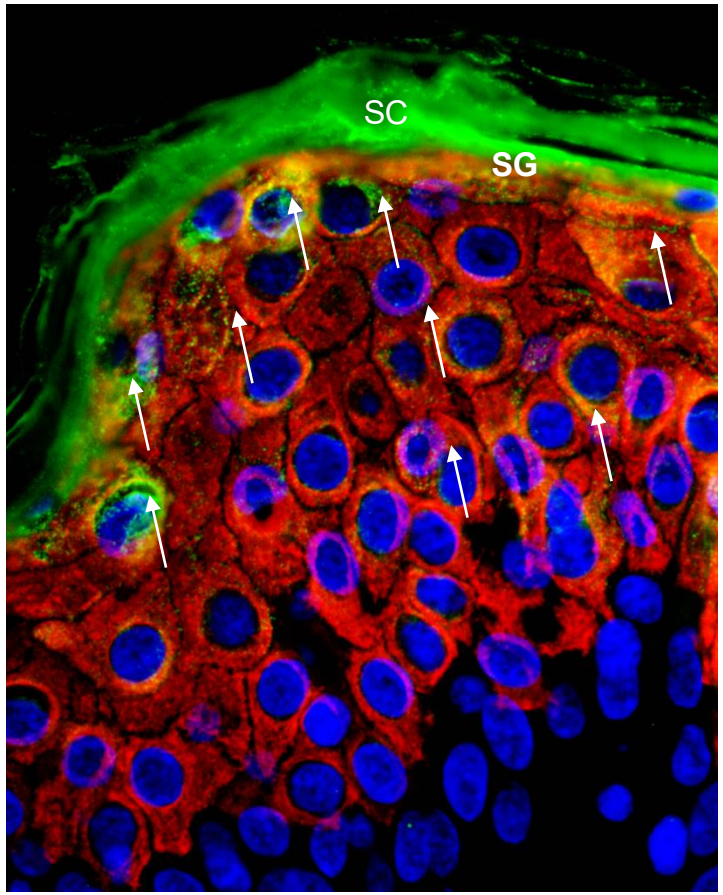
SC = Stratum corneum
SG = Stratum granulosum
KH = keratohyalin granules

Application of ATR-COSF on skin with reduced filaggrin levels

8 hr post application

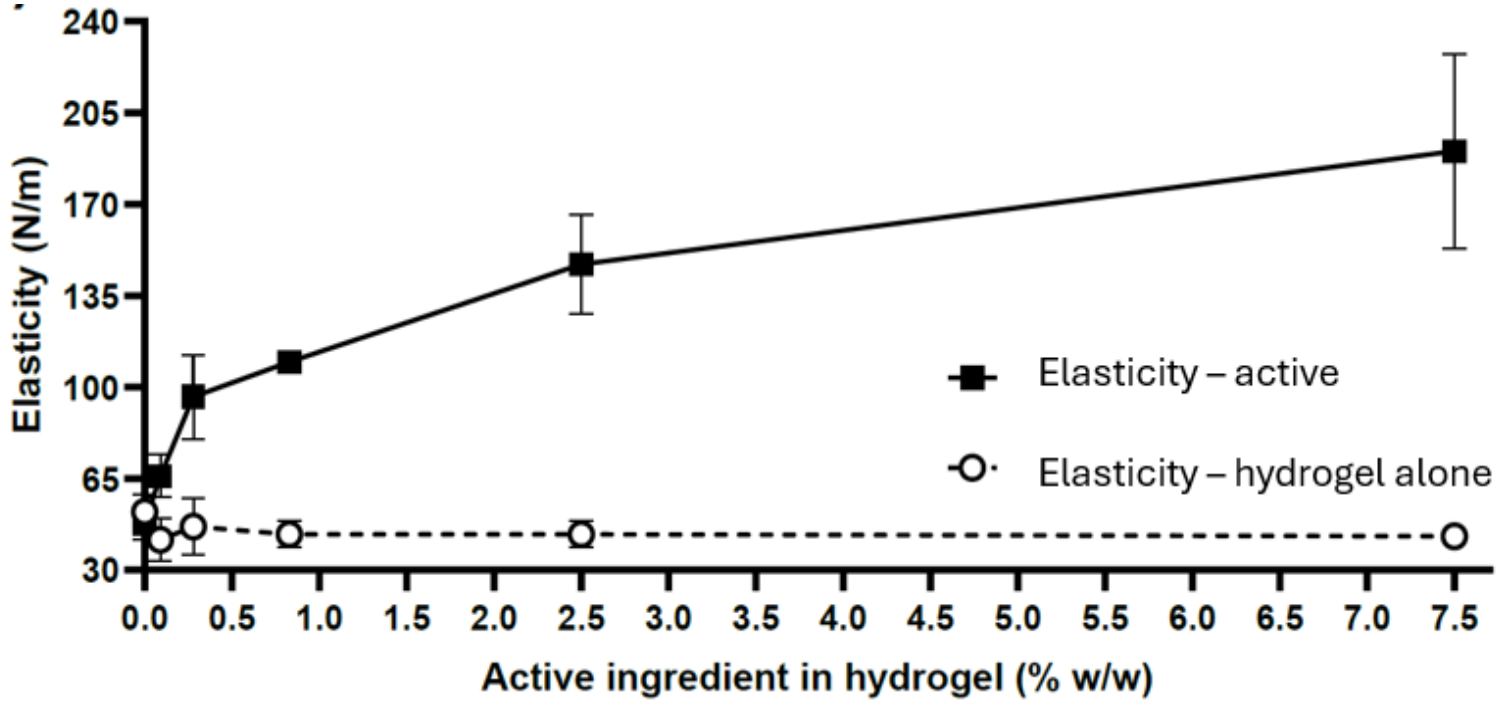


24 hr post application

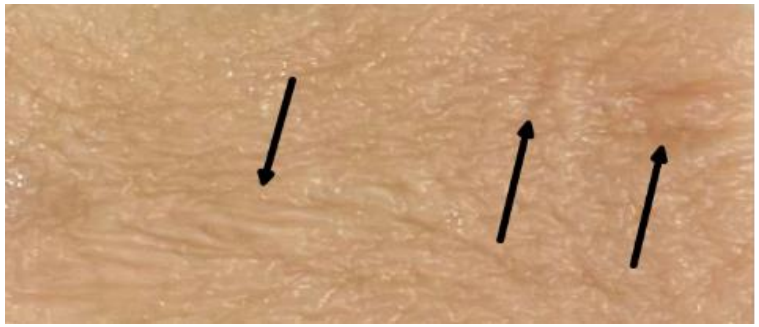


Recombinant filaggrin detected below the stratum corneum and in the granular layers after 1 application of ATR-COSF

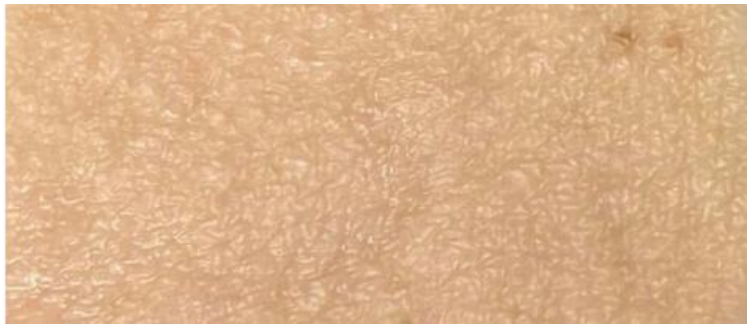
Human skin elasticity measurement vs supernatant concentration



Placebo Treated



Active Treated - 0.3% Supernatant



Abdominal skin explant model

- Hydrogels containing 0.3% (by weight) of active ingredient
- Restored ex vivo abdominoplasty skin elasticity to values observed in belly skin of a healthy subject
  - ~100 N/m reported in literature

ATR-04 Program

EGFR inhibitor-associated rash

azitra

ATR-04: auxotrophic *S. epidermidis* for EGFR inhibitor-associated rash

ATR-04 Summary

- Chemotherapy agents such as EGFR inhibitors and immunotherapies such as early BTK inhibitors lead to an aggressive and debilitating rash on most patients
- Severity of the rash is linked to IL-36γ signaling as well as correlations to *S. aureus* increases
- EGFR inhibitors produce the most prevalent and most predictable affliction
- **ATR-04** is topically administered and inhibits IL-36γ and *S. aureus*
- Fast Track designation from the FDA

ATR-04 Key Facts

Primary Mechanism:
Topical IL36γ inhibition, *S. aureus* control

Clinical Status:
Phase 1/2 ready

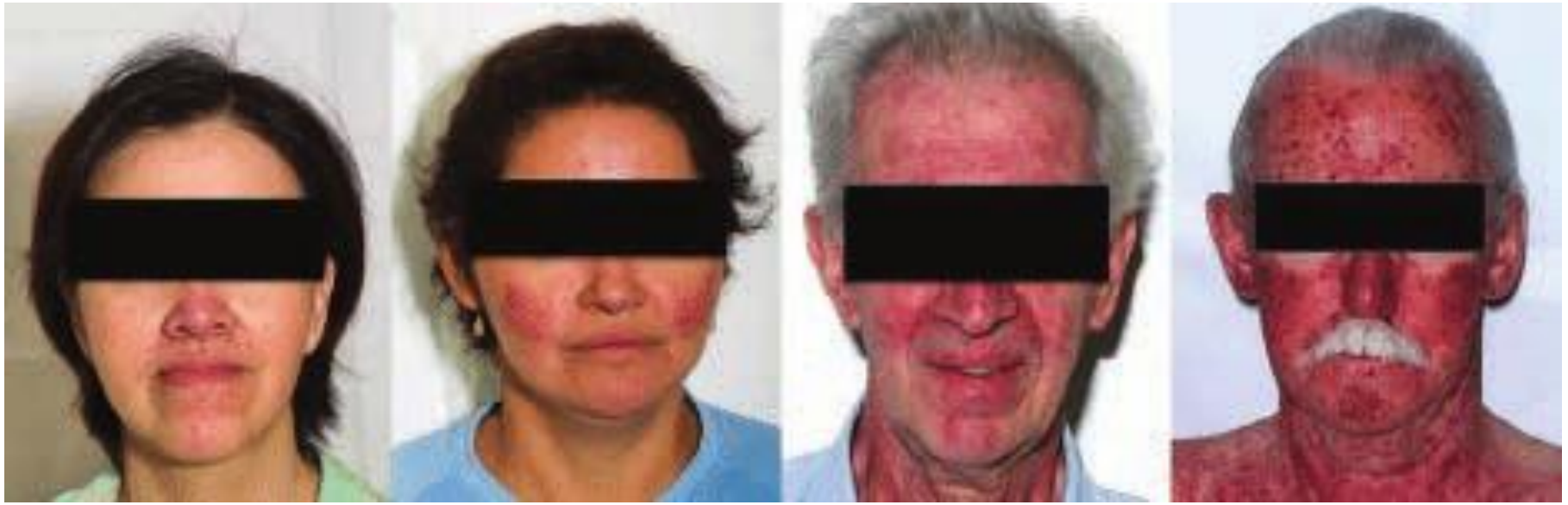
US Prevalence:
~150,000 patients[1]

Potential Peak Sales Opportunity:
>$1B[2]

[1] Bloomberg/Symphony drug prescription data and FDA labels
[2] Company estimates of 150,000 patients x $10,000/year.

azitra

EGFRi-driven rash is highly prevalent with significant clinical impact

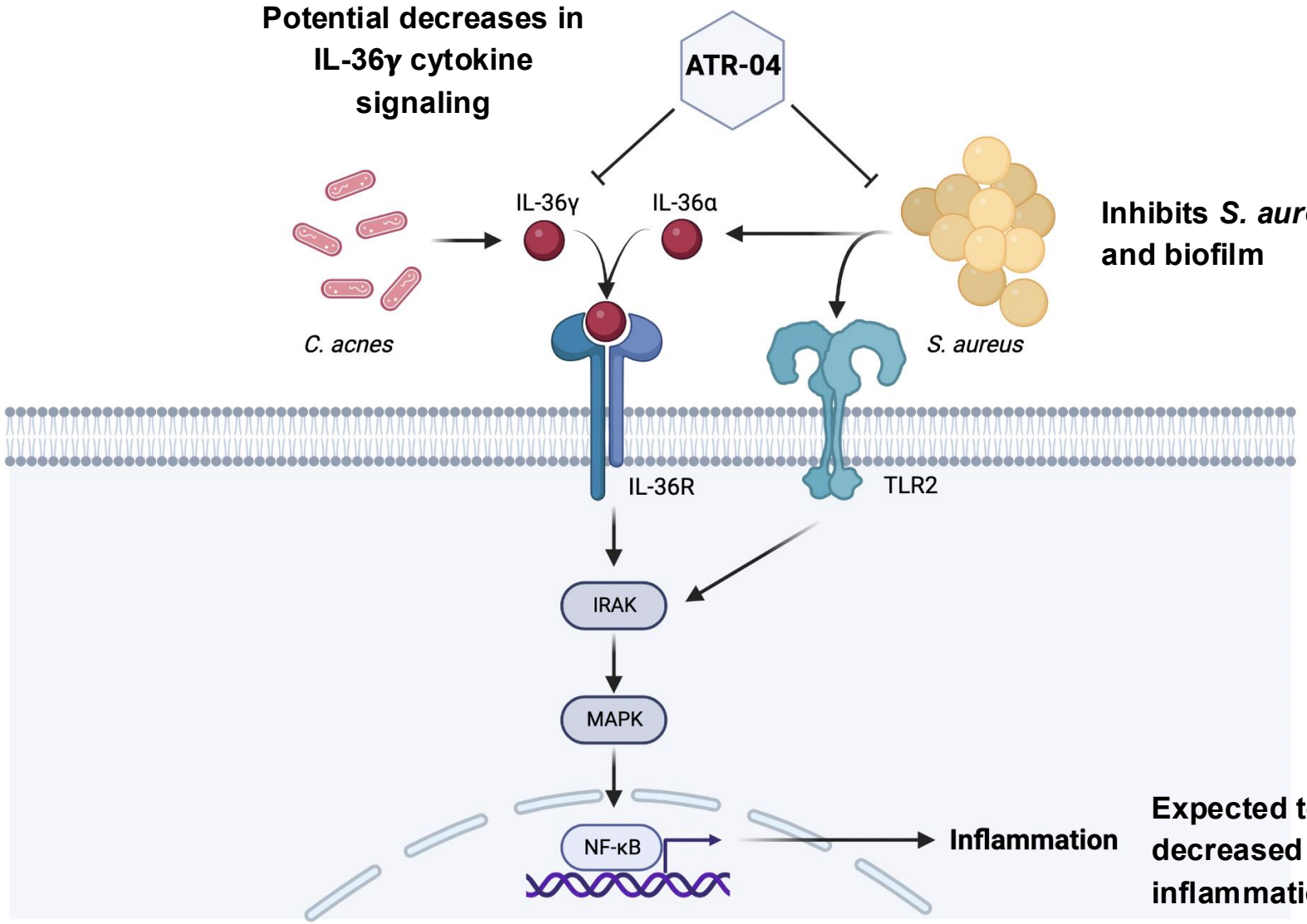


Grade 1	Grade 2	Grade 3	Grade 4

- Rash severity often linked to cancer drug dosing and correlates with *S. aureus* levels on the skin
- Rash can lead to significant changes in course of therapy and QOL
- **As many as 15-20% discontinue EGFRi therapy due to skin rash**

Source: Melosky et al. (2015). Grade 1, gefitinib; grade 2, erlotinib; grade 3, erlotinib; grade 4, erlotinib

Mechanism of action of ATR-04



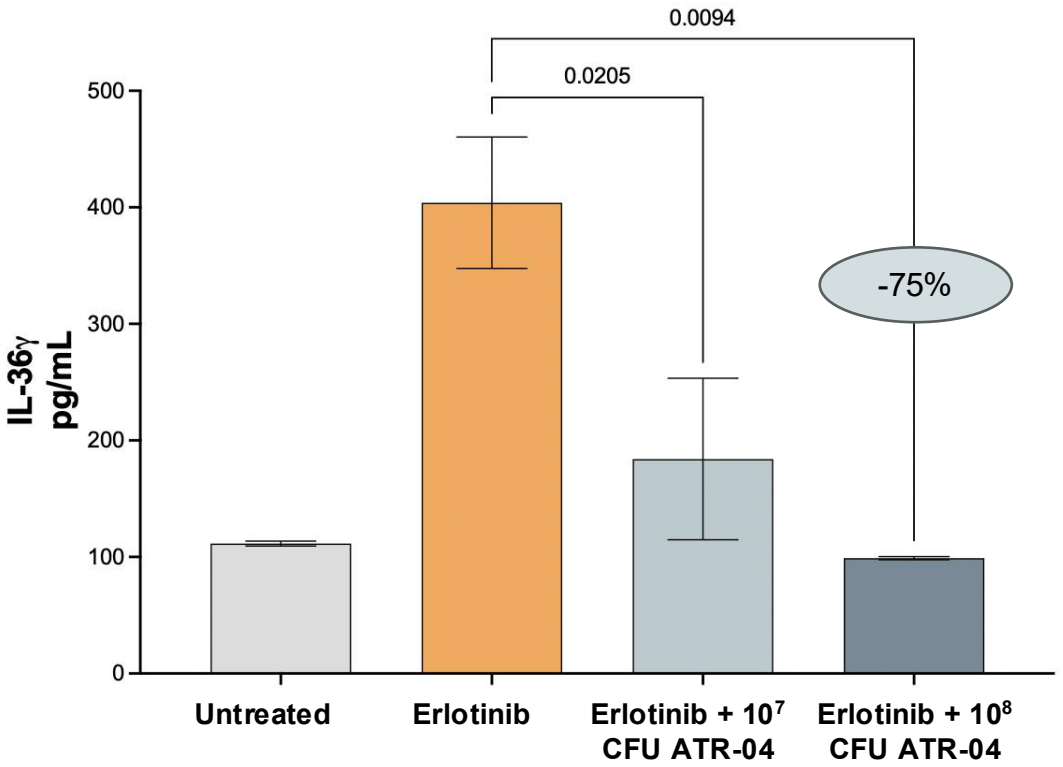
Inhibits *S. aureus* growth and biofilm

Expected to lead to decreased inflammation

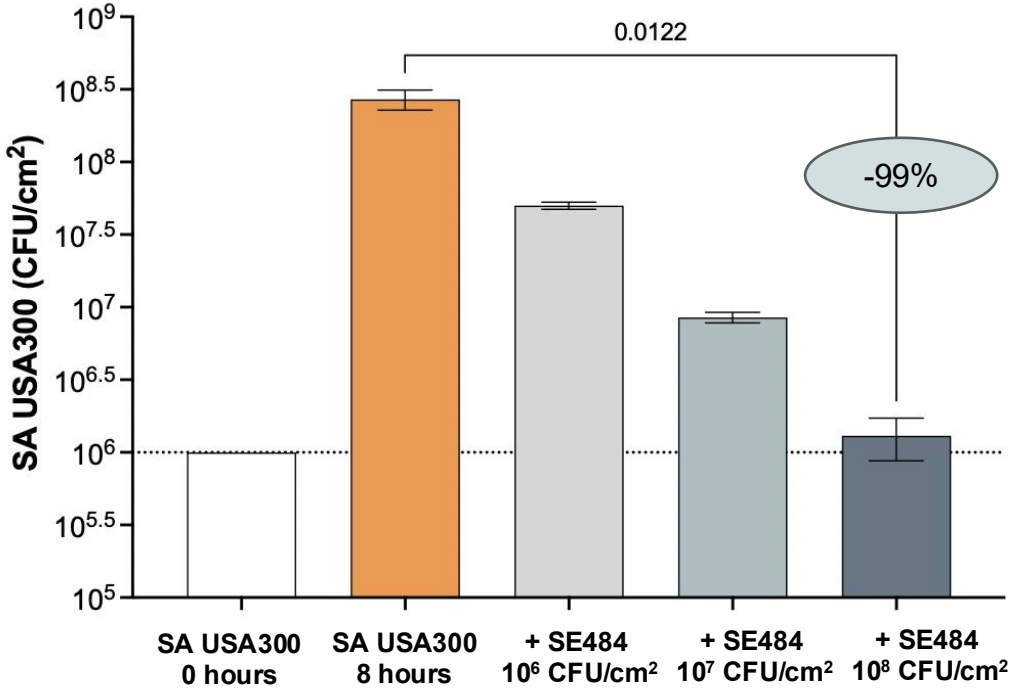
Collectively, ATR-04 addresses rash severity driven by EGFR inhibition

In vitro data show ATR-04 reduces erlotinib-induced IL-36γ and *S. aureus*

IL-36γ reduction in reconstructed human epidermis



***S. aureus* reduction on *ex vivo* pig skin**



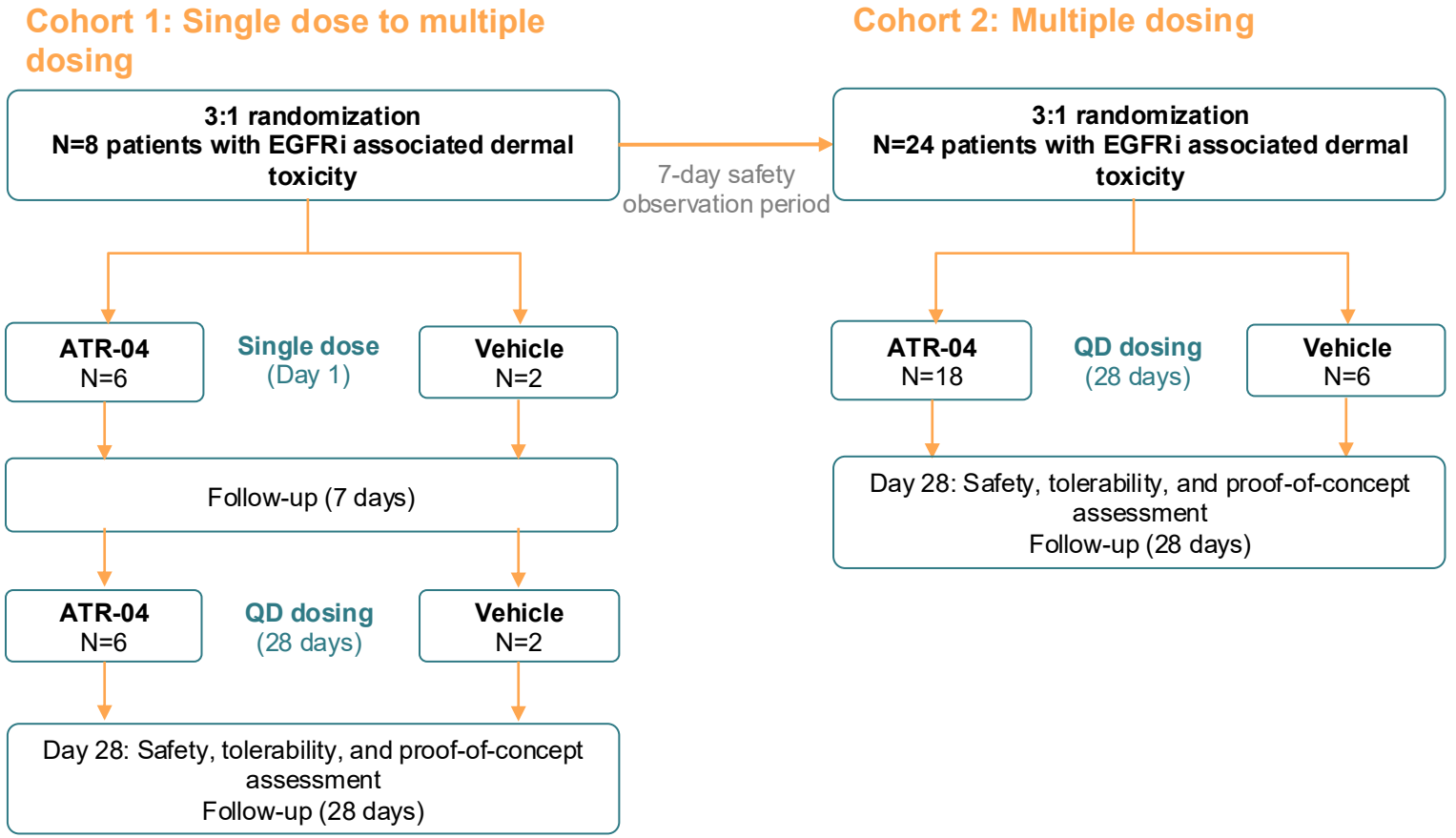
- ✓ IL-36γ is elevated in reconstructed human epidermis following erlotinib exposure
- ✓ ATR-04 reduces IL-36γ induced by erlotinib and reduces *S. aureus*
- ✓ Dose-dependent effect observed

Phase 1/2 clinical trial design: IND cleared August 2024

Study overview

- Multicenter, randomized, double-blind, vehicle-controlled study in adults (n=32) with EGFRi associated dermal toxicity
  - Dose level: 10^9 CFU / g ATR-04
  - Cohort 1 (n=8): single dose leading to multiple dose for 28 days
  - Cohort 2 (n=24): multiple dose cohort for 28 days
- Primary objective: to assess the safety and tolerability of topical application of ATR-04
- Secondary objectives:
  - Evaluate efficacy signals (modified CTCAE, pruritus, and pain)
  - Bioavailability of ATR-04
- Exploratory objectives:
  - Evaluate PD parameters, including IL-36γ
  - Quality of life questionnaire

Design



Future Directions

azitra

SyMPL (SyngenicDNA minicircle plasmid) technology: stealth by engineering

The problem

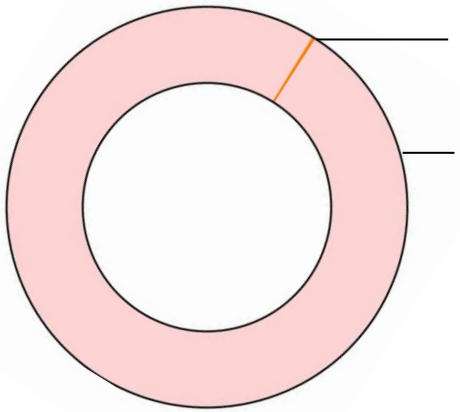
Current biomanufacturing processes are unable to overcome bacterial defenses, leading to high costs/inefficiency

Current challenges in genetic engineering:

- **99% of bacteria** are genetically 'Intractable' due to defense systems against human DNA
- Current approaches rely on inefficient hosts (*E. coli* K12) or expensive CHO cells

Regulatory Risk: Supply chains often require the use of antibiotic resistance genes

Failed Products: Many complex molecules cannot be produced in standard hosts



~50 (0.3%)
transformed bacterial species

30,000
total identified bacterial species

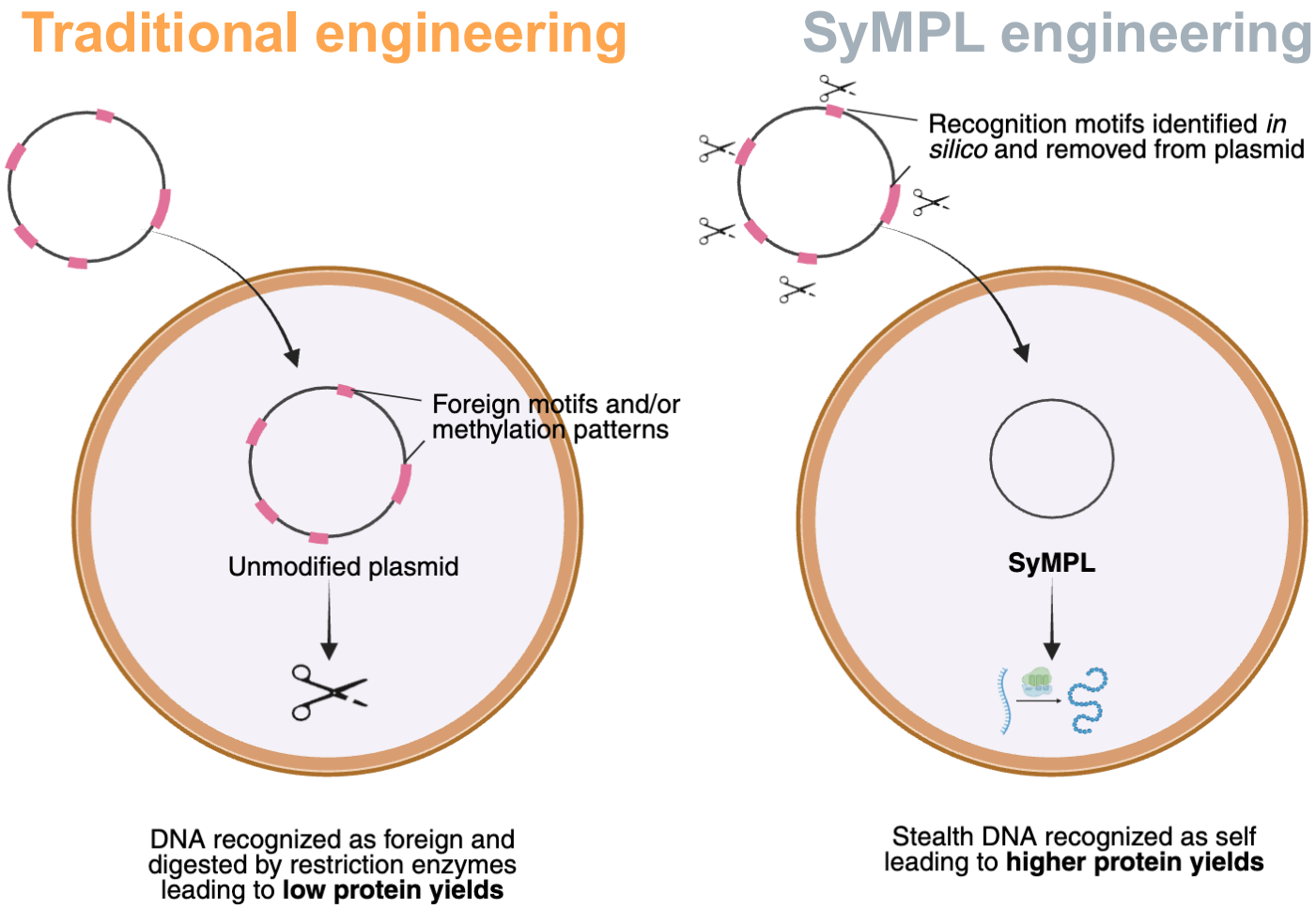
SyMPL (SyngenicDNA minicircle plasmid) technology: stealth by engineering

The solution

SyMPL technology to evade bacterial defenses for improved genetic engineering

The solution:

- Instead of adding a disguise to the human DNA, **remove specific recognition motifs** of its sequence
- The bacterial defense systems need the motifs to recognize foreign DNA and mount an attack. Without them, the **human DNA becomes invisible to the bacterium's defense** system



SyMPL applications: begin with proven markets

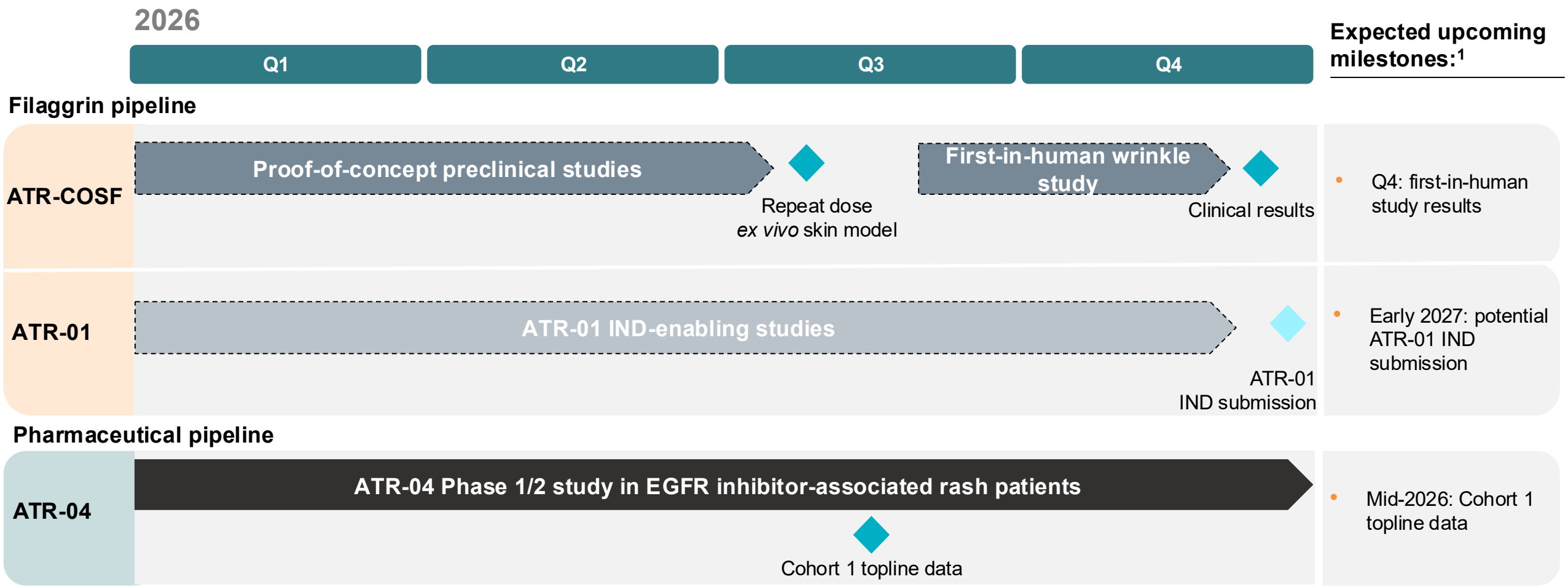
Initial Product Pipeline of Multiple ~$1B+ Opportunities:

Bio-Identical Filaggrin
The Issue: Unstable gene prevents production
The Solution: Minicircle stabilization enables mass production

mRNA Kit
The Issue: T7 Pol is toxic; DNA is unstable
The Solution: Antibiotic-Free DNA + High-Yield Enzymes

Recombinant Protein A
The Issue: Critical antibody ingredient; hard to manufacture
The Solution: Secretion in alternative bacteria with much higher yield

ATR-COSF and ATR-04 bring value-creating anticipated milestones in 2026[1]



[1] Upcoming milestones are estimates.


azitra
THANK YOU
Precision dermatology powered by synthetic biology.

APPENDIX

azitra

Azitra is led by world-class management team

Francisco Salva, MSc.
President and CEO

- Prior Co-Founder and VP of Operations at Acerta Pharma – Sold for $6.3 billion
- Formerly Senior Director –Corporate Development at Pharmacyclics
- 25+ years experience in life science venture capital, investment banking and operating roles

Travis Whitfill, Ph.D., M.P.H.
Co-Founder and COO

- Prior Partner at Bios Partners, a venture capital fund with $350M+ assets under management
- Assistant Professor Adjunct in the Department of Pediatrics at Yale University
- Named one of Forbes' 30 Under 30 in healthcare in 2018

Norman Staskey, CPA
CFO

- Currently Acting CFO via Danforth Advisors
- Previously, Managing Director at E&Y
- 20+ years accounting experience, including multiple IPO, SPAC and M&A transactions

Mary Spellman, M.D.
Acting CMO

- Prior CMO of Revance Therapeutics, Menlo Therapeutics, and Castle Creek Biosciences
- Previously Scientific Director at Biogen and Novartis
- 30+ years of dermatology and broad industry experience, including 10+ NDAs

Leonard Milstone, M.D.
Professor Emeritus of Dermatology
Yale School of Medicine
Azitra Scientific Advisory Board

- Led the group that first demonstrated gene editing in the epidermis
- Discovered the unique proteoglycan Epican as well as keratins 4 and 13
- Former Chair, Medical and Scientific Advisory Board, Foundation for Ichthyosis and Related Skin Types

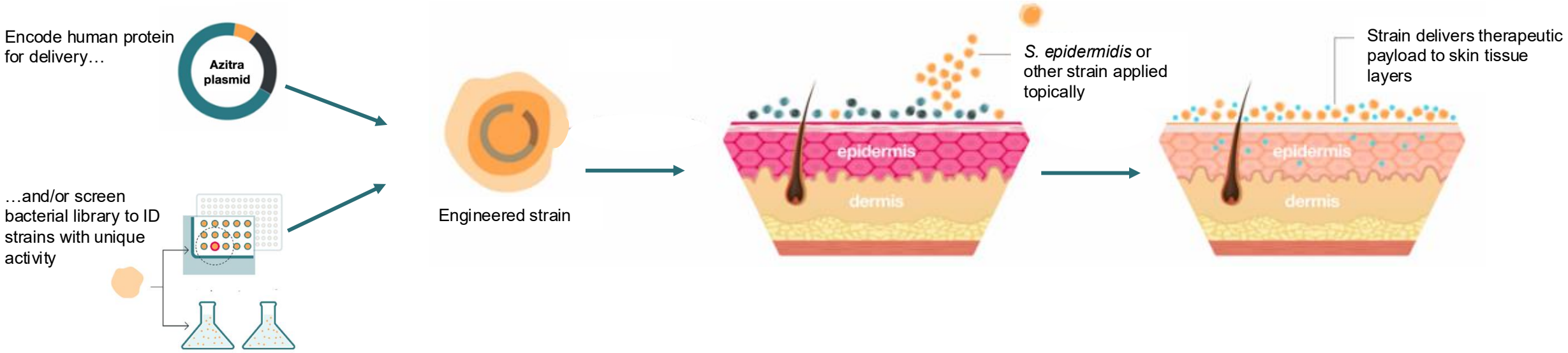
Using synthetic biology and *S. epidermidis* biology for skin therapeutics

1 **Identify human or bacterial protein or molecule of interest**

2 **Engineer auxotrophy to control strain growth**

3 **Colonize affected skin with engineered strain**

4 **Secrete active molecule throughout layers of the epidermis for therapeutic treatment**



ATR-01 Program

Ichthyosis vulgaris

azitra

ATR-01: topical filaggrin delivery for ichthyosis vulgaris

ATR-01 Summary

- **Ichthyosis vulgaris** is a common autosomal dominant disease with no current FDA-approved treatment option
  - Characterized by dry, rough, and scaly skin
  - Caused by loss-of-function mutations in the *filaggrin* gene
- **Mechanism of action:** ATR-01, an engineered strain of *S. epidermidis,* delivers missing filaggrin protein to result in restoration of the skin barrier and skin hydration
  - A human filaggrin subunit is attached to a peptide (RMR) that facilitates transdermal delivery

ATR-01 Key Facts

Primary Mechanism:
Topical protein replacement

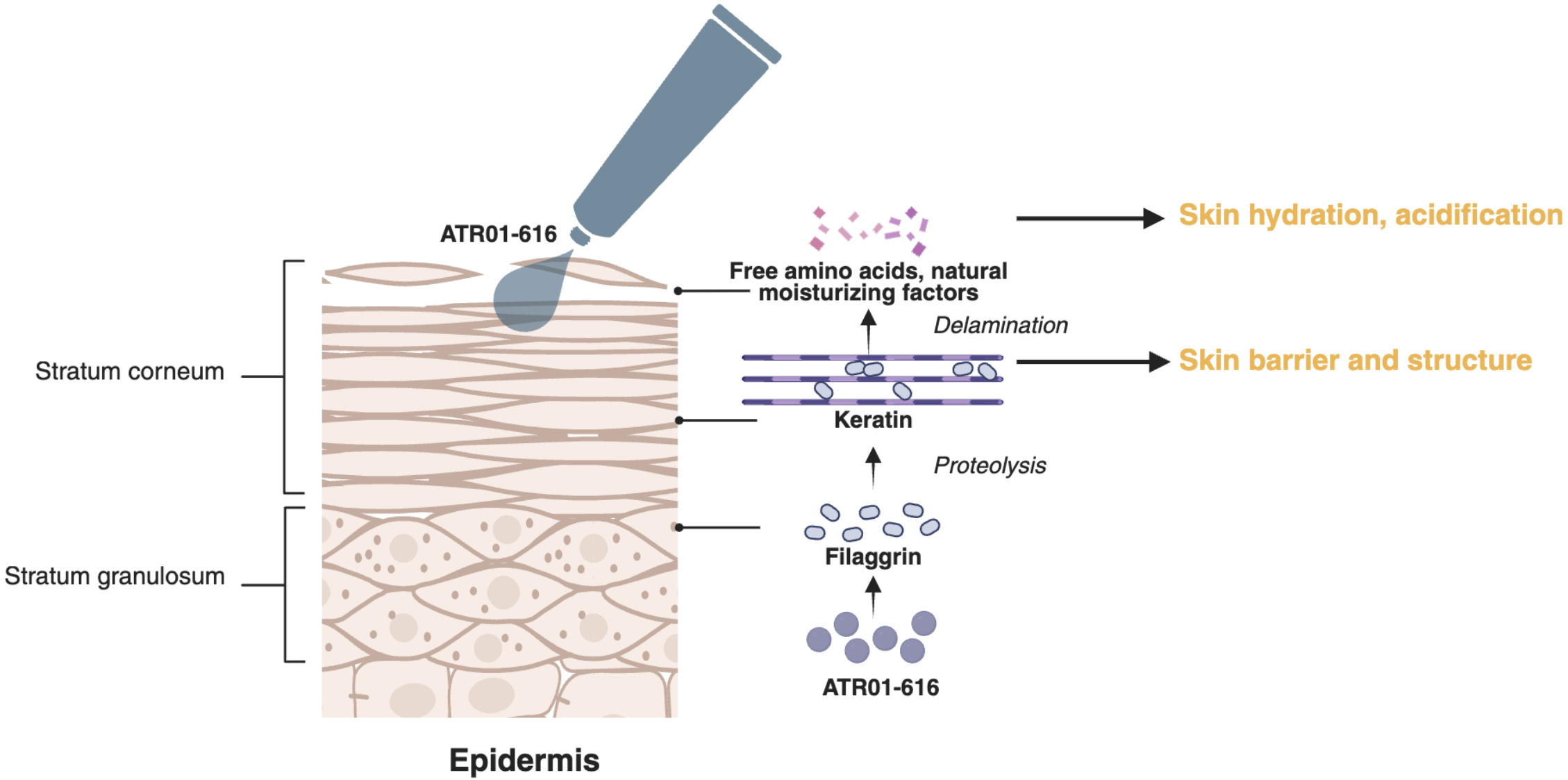
Clinical Status:
IND-enabling studies

US Prevalence[1]:
>1M patients

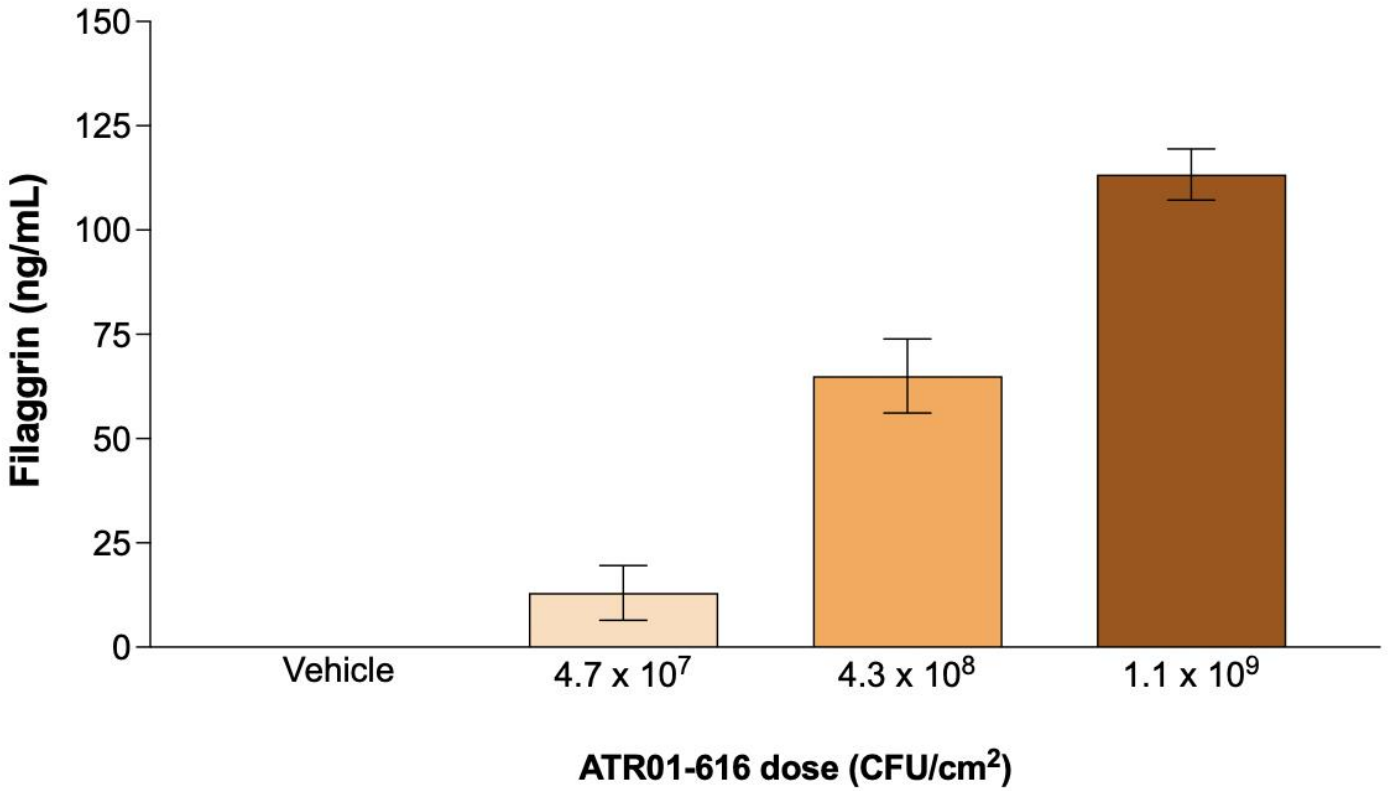
azitra

[1] Süßmuth K, et al, J Dtsch Dermatol Ges. 2020.

Mechanism of action of ATR01-616



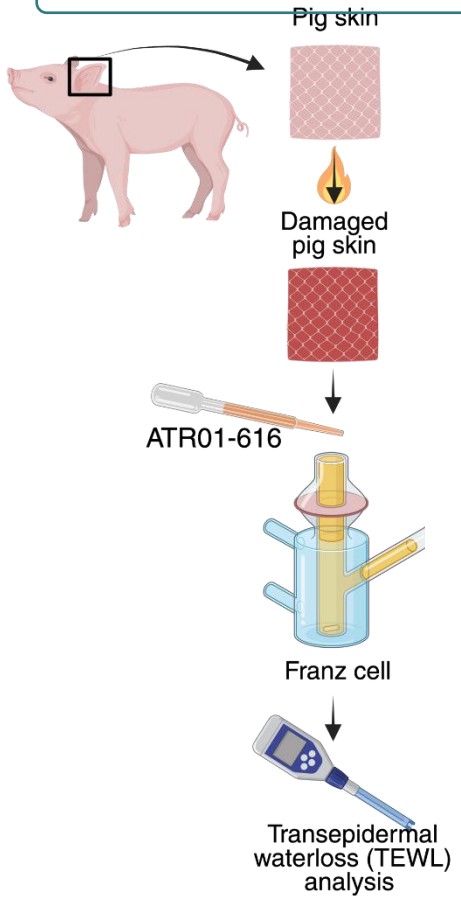
Dose-dependent filaggrin delivery in *ex vivo* pig skin with ATR01-616



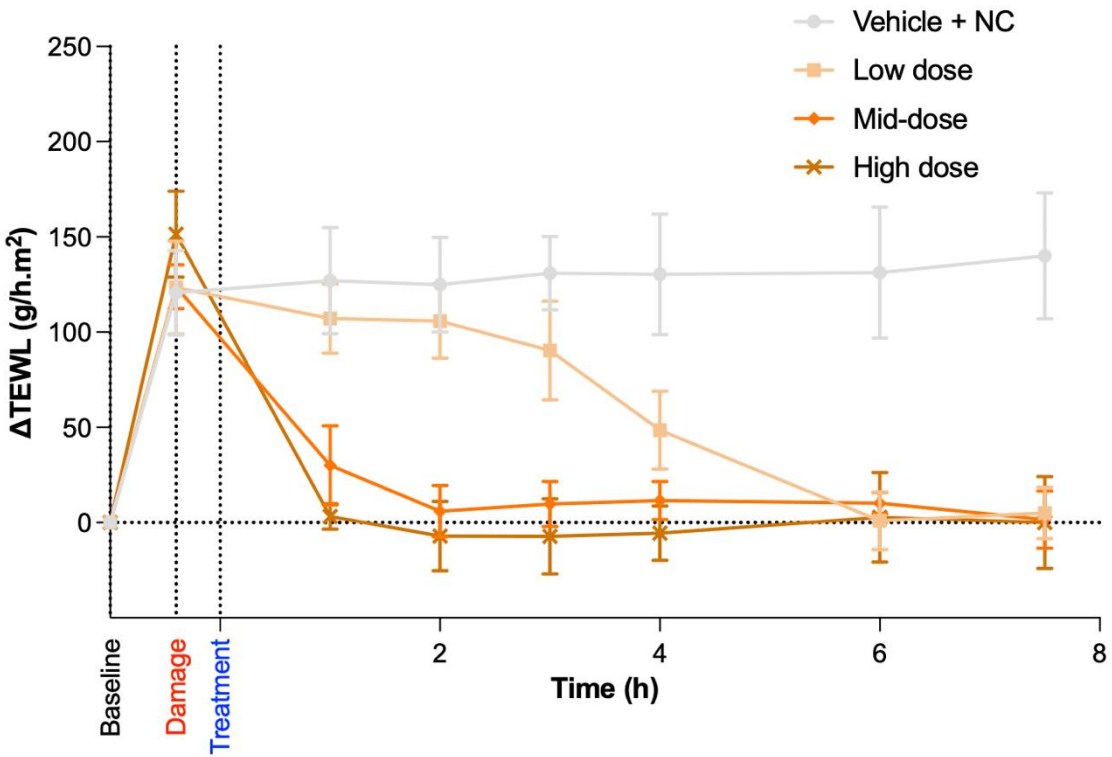
- ✓ ATR01-616 delivers filaggrin in a dose-dependent manner on *ex vivo* pig skin
- ✓ No human filaggrin detected in pig skin using vehicle

ATR-01 (SE616) decreases transepidermal water loss (TEWL) on *ex vivo* damaged skin

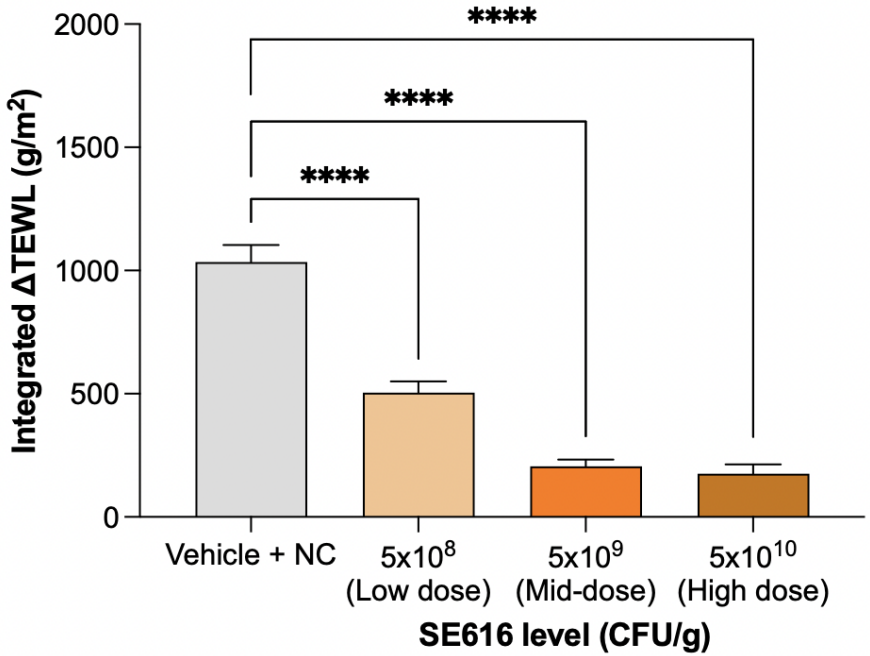
Ex vivo model



Change in TEWL over time



Total change in TEWL



ATR-01 summary

- ✓ ATR01-616 delivers human filaggrin in a **dose-dependent manner**, and delivers filaggrin to the stratum granulosum in human skin
- ✓ Filaggrin delivered from ATR01-616 is **functional**, measured by keratin collapse assays and shown to colocalize with keratin in fluorescent imaging
- ✓ ATR01-616 leads to reduced transepidermal water loss (TEWL) in a heat-damaged pig skin model, **demonstrating initial proof-of-concept**
- ✓ Additional IND-enabling studies are ongoing with an **IND submission in 2027**