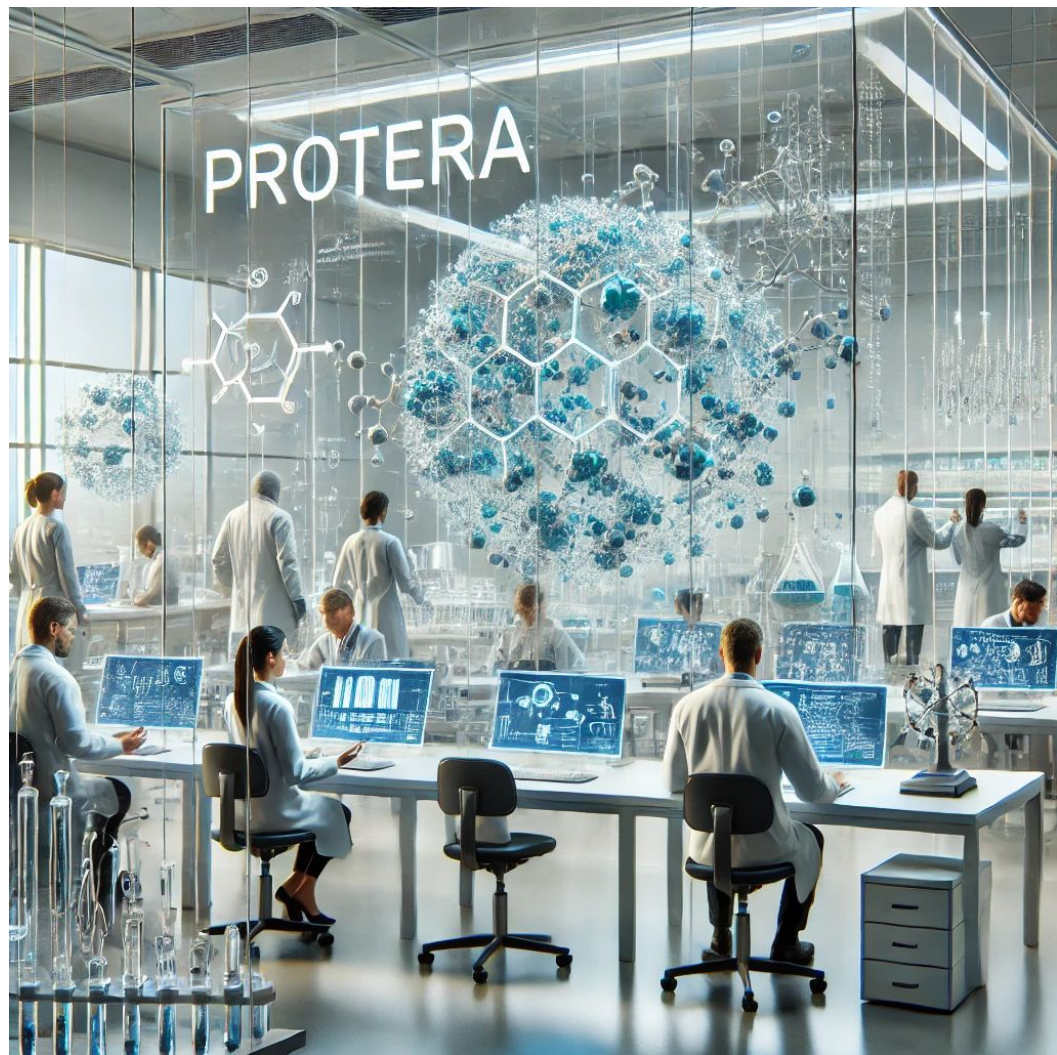# Revolutionizing
Protein-based
Bioactives **with AI**

June 2025

Our **Mission**

We substitute **unhealthy and unsustainable chemicals** with **safer, high-performing, and natural bioactives** derived from proteins
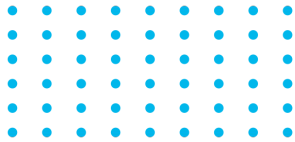
The **Challenge**

Protein discovery is **costly and slow.** Few products reach market due to major **bottlenecks** in expression, application fit, and scale-up
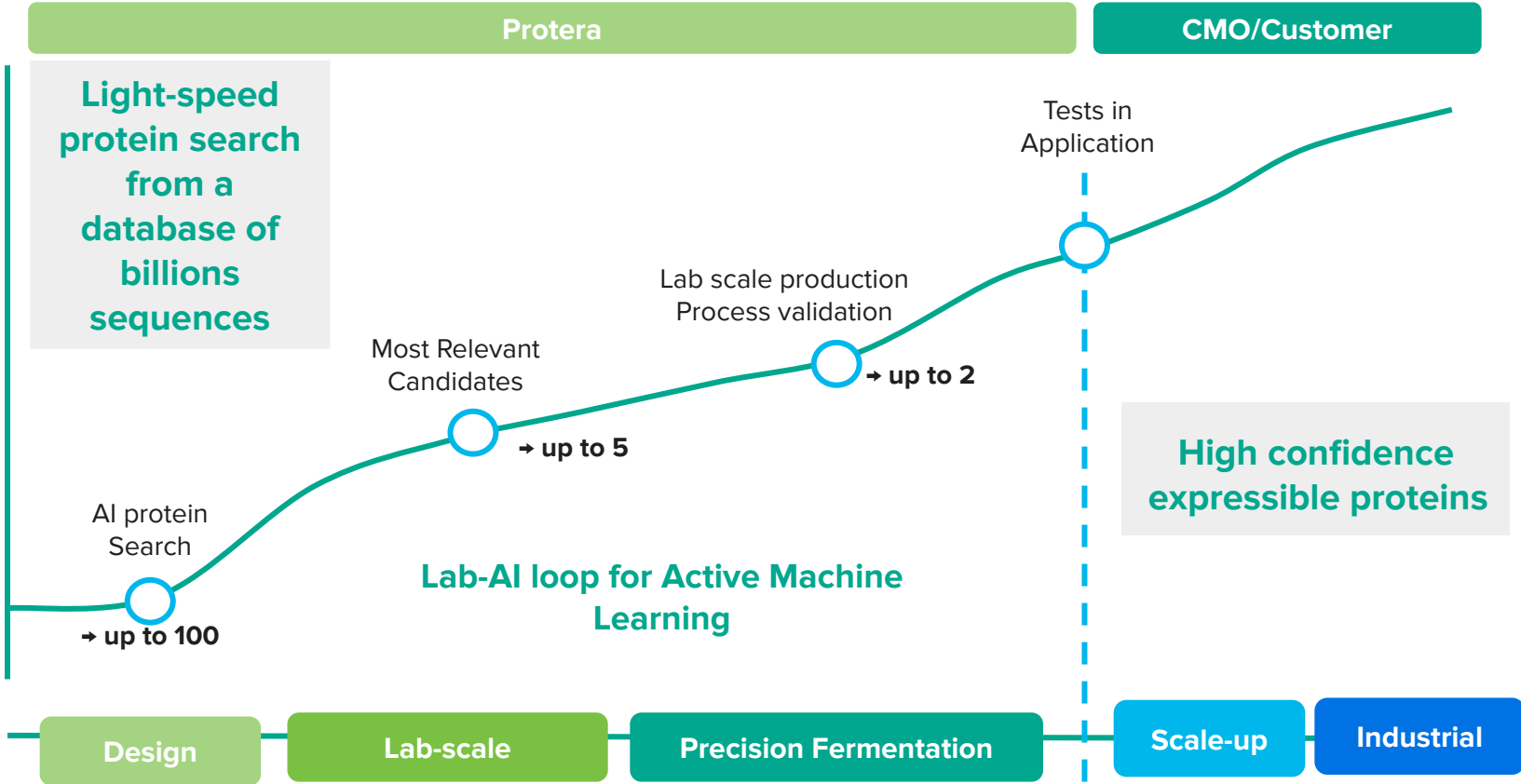
Our **Solution** protera

Our **AI** considerably **accelerates** discovery and design, and, combined with **Biotech, derisk** scalable **production**

3

We develop **de-risked** bioactive **innovations**

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Derisk early with AI

✅ IP-free

✅ Allergenicity

✅ Non-toxic

✅ Expressible

✅ Soluble

✅ Functional

✅ Profitable

✅ Scalable

✅ Stable

| Protera | CMO/Customer |

Light-speed protein search from a database of billions sequences

Tests in Application

Lab scale production Process validation

Most Relevant Candidates

→ **up to 2**

→ **up to 5**

AI protein Search

→ **up to 100**

High confidence expressible proteins

Lab-AI loop for Active Machine Learning

| Design | Lab-scale | Precision Fermentation | Scale-up | Industrial |

4

Our technology is unique, cutting edge, proven, and constantly learning

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NEURAL INFORMATION PROCESSING SYSTEMS

cnrs

Featured 3 times at NeurIPS, the world's **top AI conference**

Published in **Nature**

World's **best AI expression model** > 86% of cases outperforms leaders by 50 to 300%

World's largest protein expression study in collaboration with **CNRS,** one of the top 3 research institution globally

Active learning for accuracy & faster time-to-market

Proven models for enhanced protein activity: **IP free variant 6X better performing**[(*)] than commercially available laundry enzyme (BASF)

(*) "better performing" means higher Activity, Stability, and Expression

In 2024, we transformed Protera for focus and impact

Industry and Strategic product Focus
- Antimicrobial applications in Cosmetics and Personal Care, then OTC
- Stopped SaaS

Enhanced AI Models for Product Development and Production
- Best-in-class in limiting biotechnology uncertainty : expression prediction and optimization
- Best-in-Class Discovery Model
- Solid proprietary database
- Global recognition

Efficient and Effective Company Organization
- New CEO early 2024
- Outsourced all non-core functions
- Consolidated all work in France
- 2.5x reduction of burn rate; drastic reduction of non core personnel

We focus on **antimicrobials bioactives,** a $10B addressable market

Why Antimicrobials?
- Microbial control spans food, cosmetics, OTC - multiple high-value categories.
- AI-designed peptides offer dual benefits: preservation + targeted skin and scalp activity.
- Multi-functional bioactives are a priority for personal care R&D teams : safe, effective, label-friendly.

Our Hedge
- 4+ years of cross-industry lab & pilot testing = deep antimicrobial dataset.
- Active learning loop between lab and AI: faster, smarter iteration.
- Deep scientific knowledge of the field.

Our AI platform is optimized for antimicrobial applications. Cosmetics enables future OTC entry.

Starting with Cosmetics and Personal Care, a $2B market under regulatory & consumer pressure

Learning curve in food, the hardest market
- Validated platform in a highly regulated, conservative, and price sensitive market.
- Samples delivered to top-tier food partners (Grupo Bimbo, ICL).
- Built robust data: efficacy, expression, stability in challenging applications.
- Built resilience and technical credibility that now de-risk expansion.

Now executing in cosmetics and Personal Care
- Same microbial targets, faster adoption, broader formulation potential.
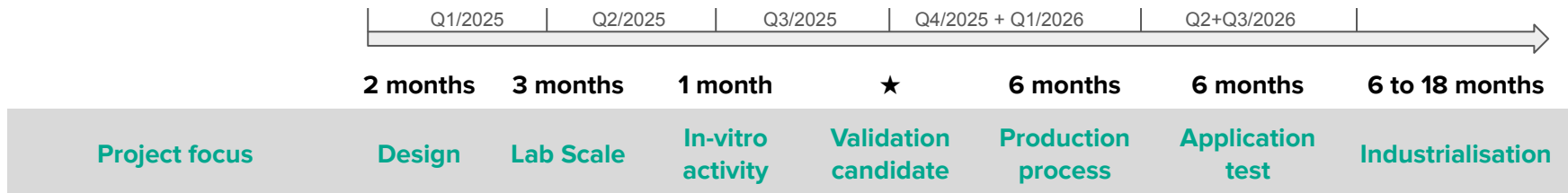- Cosmetic use cases enable faster ROI and multiple SKU leverage :

Anti-acne actives
Scalp health (anti-dandruff, microbiome rebalancing)
Skin barrier support & **wound** healing
Natural **preservation of skin care** formulations

Our **Cosmetic Pipeline** is solid

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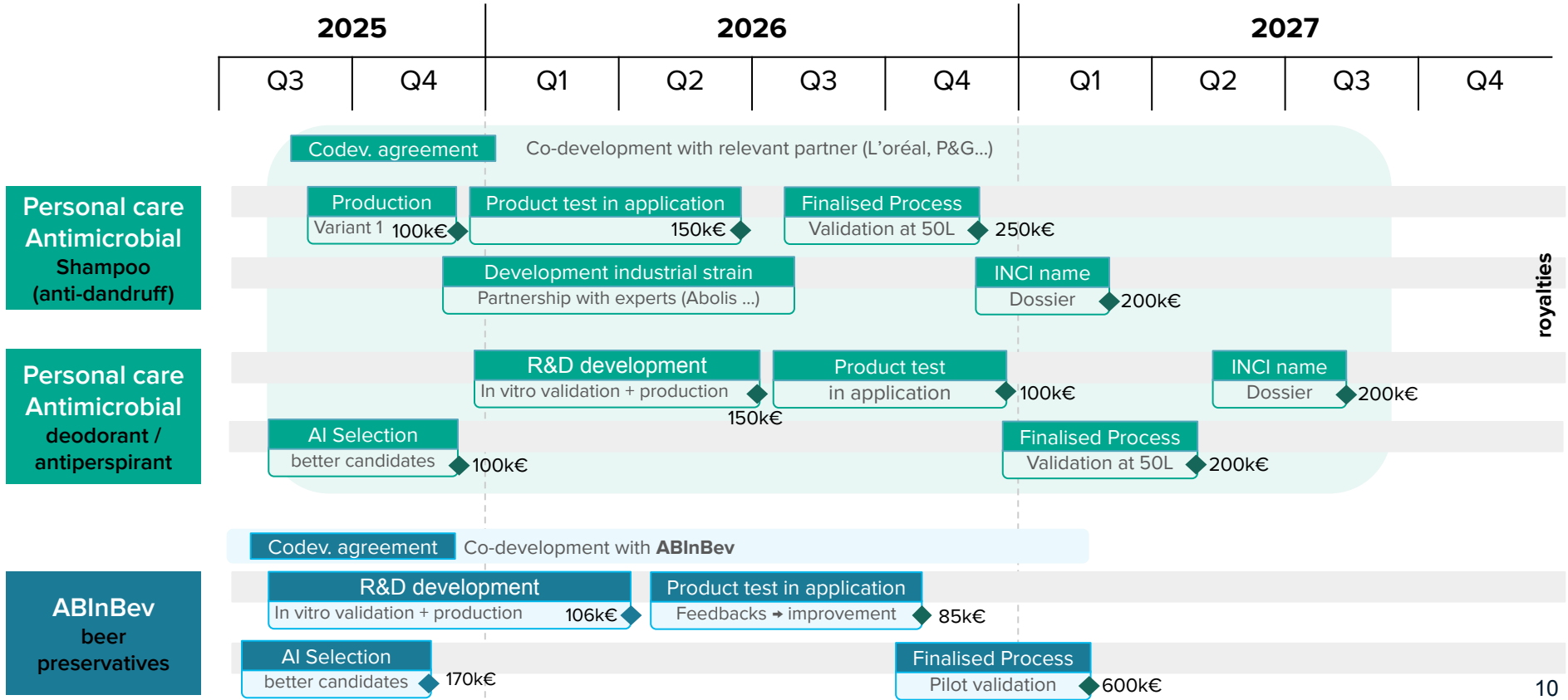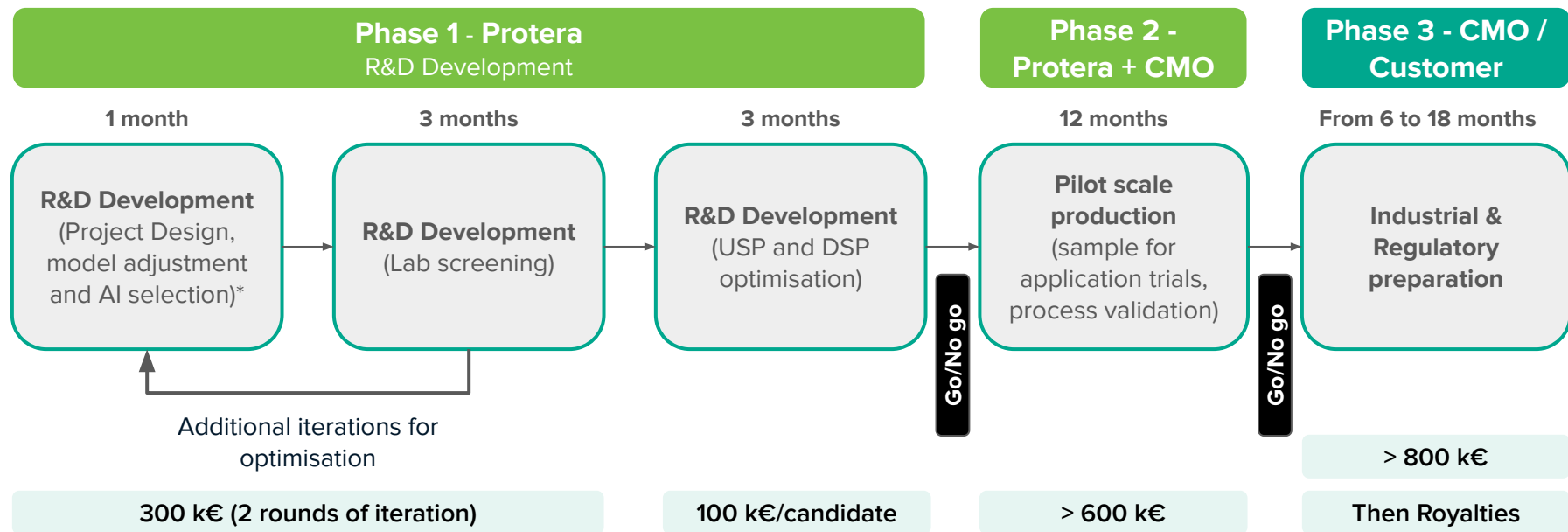| Project focus	Design	Lab Scale	In-vitro activity	Validation candidate	Production process	Application test	Industrialisation
	Q1/2025	Q2/2025	Q3/2025	Q4/2025 + Q1/2026		Q2+Q3/2026	
	2 months	3 months	1 month	★	6 months	6 months	6 to 18 months
Antimicrobial for shelf life increase of cosmetics							
Anti-dandruff							
Anti Acne							
Antiperspirant							
Health care							

Market launch

2028-2030 Pipeline (incl. Synergies with Food)

- **Anti-Aging** for skin care and Hair care
- **Antimicrobials** for food & beverage
- **Enzyme** optimisation for food processes

2025-2026 : Delivering client-validated antimicrobial innovative solutions for cosmetics and food
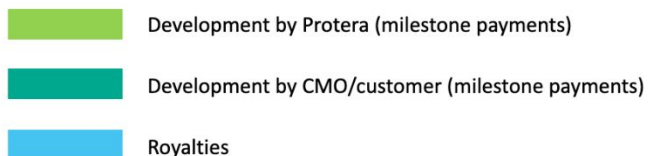
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	2025		2026				2027			
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4

Personal care Antimicrobial Shampoo (anti-dandruff)

Codev. agreement — Co-development with relevant partner (L'oréal, P&G...)

Production — Variant 1 — 100k€

Product test in application — 150k€

Finalised Process — Validation at 50L — 250k€

Development industrial strain — Partnership with experts (Abolis ...)

INCI name — Dossier — 200k€

Personal care Antimicrobial deodorant / antiperspirant

R&D development — In vitro validation + production — 150k€

Product test in application — 100k€

INCI name — Dossier — 200k€

AI Selection — better candidates — 100k€

Finalised Process — Validation at 50L — 200k€

royalties

ABInBev beer preservatives

Codev. agreement — Co-development with **ABInBev**

R&D development — In vitro validation + production — 106k€

Product test in application — Feedbacks ➔ improvement — 85k€

AI Selection — better candidates — 170k€

Finalised Process — Pilot validation — 600k€

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Our Business Model : create breakthrough products in **partnership with industry leaders**

Phase 1 - **Protera** R&D Development			**Phase 2 -** **Protera + CMO**	**Phase 3 - CMO /** **Customer**
1 month	3 months	3 months	12 months	From 6 to 18 months
R&D Development (Project Design, model adjustment and AI selection)*	**R&D Development** (Lab screening)	**R&D Development** (USP and DSP optimisation)	**Pilot scale production** (sample for application trials, process validation)	**Industrial & Regulatory preparation**

Additional iterations for optimisation

Go/No go

Go/No go

300 k€ (2 rounds of iteration)	100 k€/candidate	> 600 k€	> 800 k€
			Then Royalties

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KEUR	2025	2026	2027	2028	2029	5 Year plan	2030	2031	2032	2033	2034	10 Year plan
AI platform	0	50	100	100	100	350	100	100	100	100	100	500
AI Campaigns	0	50	100	100	100	350	100	100	100	100	100	850
Product Innovations	370	1 050	2 350	2 250	3 500	9 520	11 000	28 000	48 000	68 000	88 000	243 000
Antimicrobial shampoo (anti-dandruff)	100	400	600	500	1000	2 600,0	4 000	8 000	12 000	16 000	20 000	62 600,0
Antimicrobial deodorant / antiperspirant	100	250	400	250	500	1 500,0	1 000	4 000	8 000	12 000	16 000	42 500,0
Beer preservative	170	200	700	500	1000	2 570,0	4 000	8 000	12 000	16 000	20 000	62 570,0
New antimicrobial 1		100	400	600	500	1 600,0	1 000	4 000	8 000	12 000	16 000	42 600,0
New antimicrobial 2		100	250	400	500	1 250,0	1 000	4 000	8 000	12 000	16 000	42 250,0
Total Revenues	370	1 100	2 450	2 350	3 600	9 870	11 100	28 100	48 100	68 100	88 100	243 500

Development by Protera (milestone payments)

Development by CMO/customer (milestone payments)
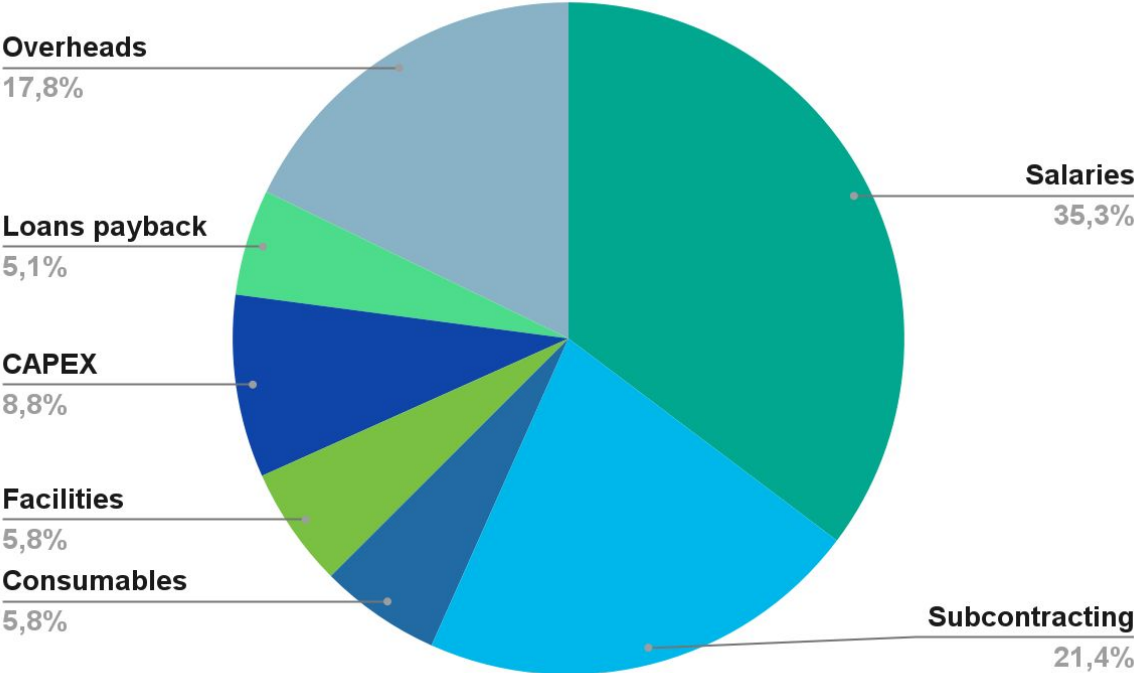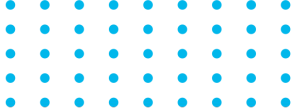
Royalties

Fundraising Ask

- July 2025: 2 MEUR

- April 2026: 2.5 MEUR

Additional sources of funds:
- 2025: convertible bonds (Sofinnova) - 0.4 MEUR
- Research Tax Credit - 0.3 to 0.5 MEUR/year
- Public funding - 0.2 to 0.4 MEUR/year

Projected use of proceeds **(2025-26)**

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Overheads
17,8%

Loans payback
5,1%

CAPEX
8,8%

Facilities
5,8%

Consumables
5,8%

Salaries
35,3%

Subcontracting
21,4%

Why Invest Now : All of the learnings none of the overheads

2024 reset = lean Series A

- Tech de-risked: proven learning, deep dataset, initial successes
- Co-devs with Grupo Bimbo & ICL on going
- Food validates tech — but slow timelines, low margins

Return On Investment

Growth

- Bioactive pipeline (cosmetics, food, healthcare)
- R&D to PoC/PoV ➜ licensing. **Royalties** from 2029
- Breakeven in 2029

Exit : as from 2028

- AI proves scalable innovation, IP-rich portfolio

Some of our experts

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Franck
CEO
General Management, BD

Scientific Advisor

Guillaume (PhD)

Franck (PhD)

R&D team

EPFL

Rajendra (PhD)
Biophysics

Charles (PhD)
Machine & Deep Learning

Michael (PhD)
Mathematics & Genomics

Laure (Msc)
Biochemistry

Board members

novozymes

DSM

BASF
We create chemistry

Thomas (PhD)

Joško (PhD)

Sofinnova partners

Oswaldo (PhD)

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Our **Financial** & **Commercial** Bedrock

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Our investors

SOSV — Sofinnova partners — DOOSAN — ICL — BIMBO

Our partners

ATV TECHNOLOGIES — ABOLIS — ALLIANCE SORBONNE UNIVERSITÉ / utc — AB Enzymes an ABF Ingredients company

GenScript — NVIDIA — aws — cnrs

Our main clients

AB MAURI Passionate About Baking™ — BASF — CARBIOS — KIRIN BioMaterials — ICL — BIMBO

Appendices

Business revenues (2025-Q1/2027)

protera		BP version 27.05.2025				
kEUR		2025	2026	Q1/2027		TOTAL
REVENUES						
From operations						
AI platform	AI campaigns	0	50	100		150
	Total platform	0	50	100		**150**
Protein pipeline	Antimicrobial shampoo (anti-dandruff)	100	400	200		700
	Antimicrobial deodorant / antiperspirant	100	250			350
	Beer preservative	170	190	600		960
	New antimicrobial 1		100			100
	New antimicrobial 2		100			100
	Total platform	370	1040	800		**2 210**
Sub-total from operations		**370**	**1090**	**900**		**2 360**
From financing						
Convertible bonds		400				400
Series A		2 000	2 500	0		4 500
Public funding	Innov'Up (second tranche)	52				52
	New Biotech project					0
	New AI/Comp. Bio project		225			225
	ANRT (PhD Thesis)	14	5			19
Research Tax Credit		347	359	0		706
Sub-total from financing		**2 813**	**3 089**	**0**		**5 902**
TOTAL REVENUES		**3 183**	**4 179**	**900**		**8 262**

Cash-burn (2025-Q1/2027)

kEUR		BP version 27.05.2025			TOTAL
		2025	2026	Q1/2027	
EXPENSES					
From operations					
Salaries		833	1 305	452	2 590
Consumables		163	190	47	400
Subcontracting		482	817	238	1 537
Lab facilities		83	268	59	410
Overheads		610	470	89	1 169
Sub-total from operations		**2 172**	**3 050**	**886**	**6 107**
From investments					
Intangible assets		0	87	0	87
Tangible assets		130	316	0	446
Sub-total from investments		**130**	**403**	**0**	**533**
From financing					
Public funding loans (principal & interests)		43	266	36	345
Sub-total from financing		**43**	**266**	**36**	**345**
TOTAL EXPENSES		**2 345**	**3 719**	**921**	**6 985**

Meet the team: key people

Name	Position	Degrees	Former experience
Franck LEYZE	CEO	MBA INSEAD	- Unilever, Nestlé : various Marketing, Commercial, and General pôsition in Europe and Asia/China - J&J: Senior VP APAC & CEO China - Sanofi: Managing Director Consumer Healthcare
Michael DUNNE	Head Computational Biology	MSc Mathematics PhD Genomics Oxford Univ.	- Cambridge Technology: Software developer - Monolith AI: Data Scientist
Charles CHALAS	AI Engineer	Digital Control Engineer MSc Automation, PhD Deep Learning	- UTT (Univ. Technology Troyes): postdoc
Rajendra SHARMA	Comp. Biology Engineer	MSc Biology MSc Biotechnology PhD Computational Biophysics	- EPFL: postdoc - INRAE: postdoc
Laure COULOMB	Head Protein Production	MSc Biochemistry, food & life science	- Bunge: Enzymology researcher - Novozymes: Enzymology researcher - AstraZeneca: DSP engineer - Johnson Matthey: Bioprocess scientist

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Organisation chart (2025-2027)

2025 (8 FTE)

CEO
Franck Leyze

Executive Advisor
P. Francoisse

Computational Biology platform

Head Comp.Bio
M. Dunne

AI Engineer
C. Chalas

Comp. Bio Engineer
R. Sharma

PhD student
V. Gonay

Biotech Platform

Head Protein Production
L. Coulomb

DSP & QA/QC Engineer
M. Freytet

Fermentation technician
C. Variot

Organisation Chart

2027 (13 FTE)

CEO
Franck Leyze

HR-Admin Director (50 %)
X

Senior Biology Advisor (50 %)
X

Computational Biology platform

Head Comp.Bio
M. Dunne

AI Engineer
C. Chalas

Comp. Bio Engineer
R. Sharma

Comp. Bio Engineer
V. Gonay

AI Engineer
X

Software dev. Engineer
X

Biotech Platform

Head Protein Production
L. Coulomb

DSP & QA/QC Engineer
M. Freytet

Fermentation Engineer
X

Microbiology PhD
X

Biochemical analysis Engineer
X