



# STRATEGIC UPDATE III

Specialty Pharmaceutical Group

8 November 2021

ASX:  
Level 1 ADR (Nasdaq Int'l Designation):  
XETRA-DAX:

CUV  
CLVLY  
UR9

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## **Mission & Objectives**

Establishing a specialty pharmaceutical group  
which is

diversified,  
vertically integrated,  
and which serves unmet patient and  
healthcare needs.

We aim to provide a safe and accountable  
environment, where our staff are able to grow, thrive  
and build a career. In pursuing this mission, we  
provide long-term value for society and our  
shareholders.

## Business

Specialty Pharmaceuticals

Value Chain

Healthcare Solutions

## Differentiation

Risk Management

Finance

Human Capital

# Value Creation

## Resources

Proprietary Technology

## Position

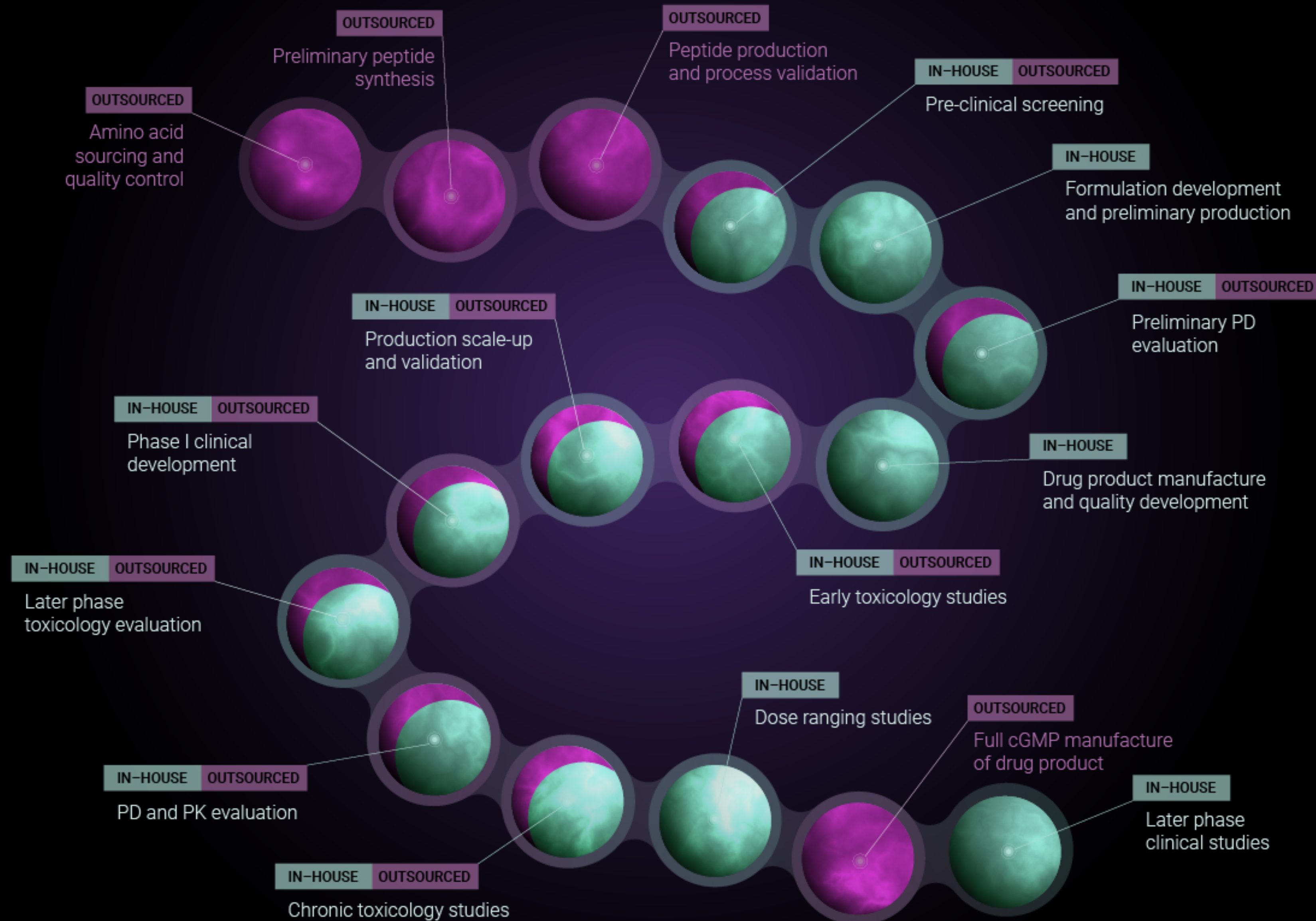
Defined Expertise

## Opportunity

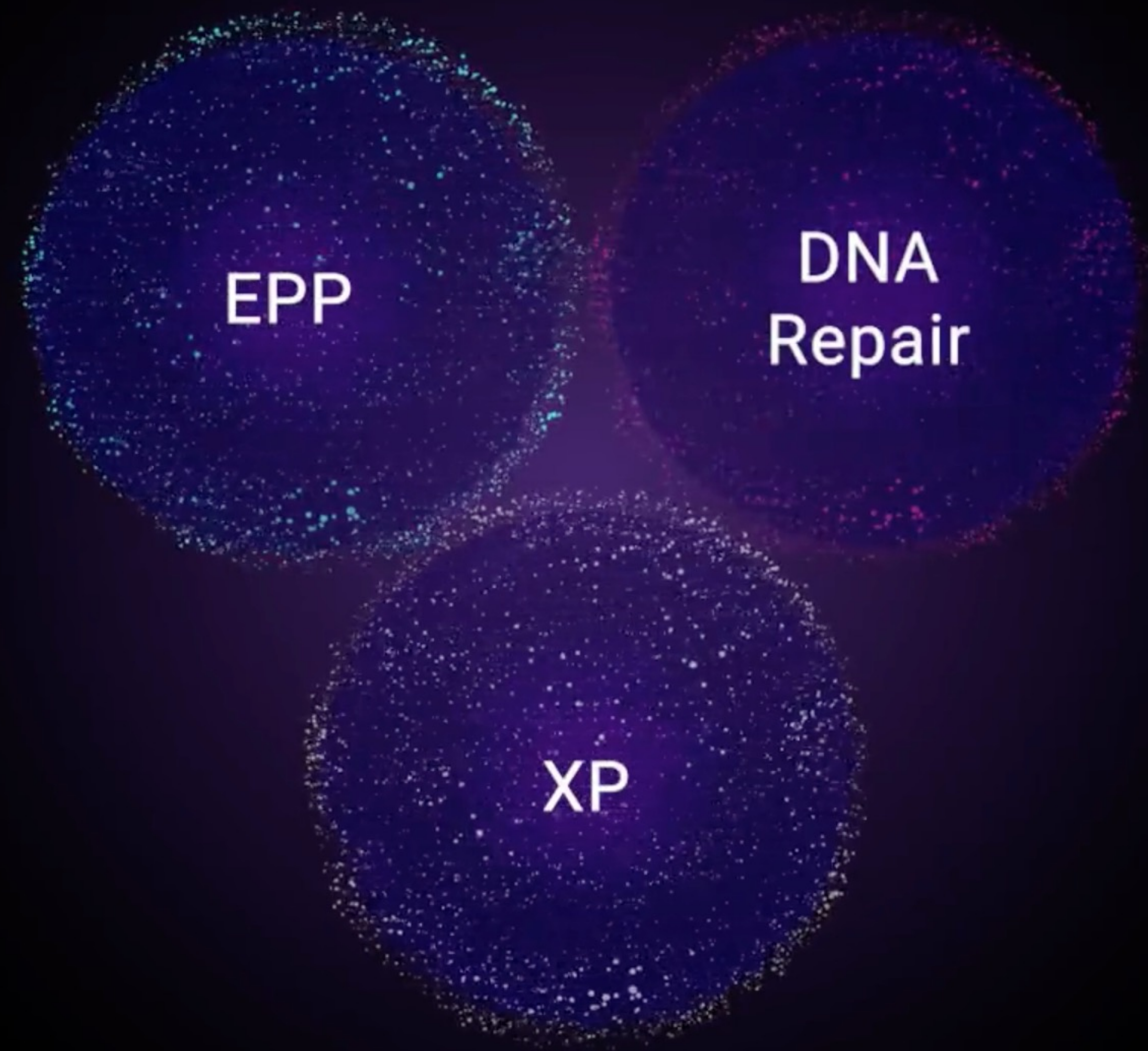
Unserved Populations



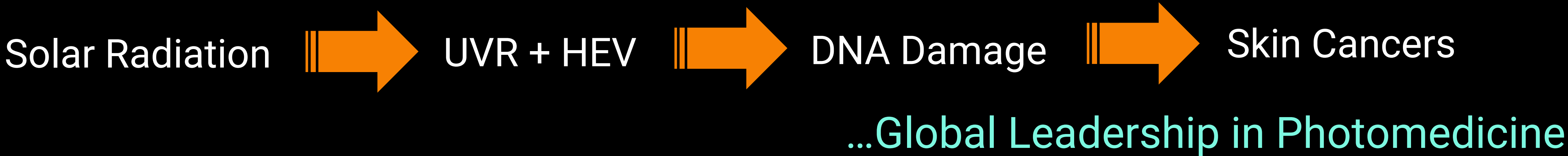
## Value Chain







What We Know.....  
What We Do.....  
What we Solve.....





Genetics

- prevalence 1:140,000
- chromosomal defects: 18q21, FECH deficiency
- defect in haem synthesis

Clinical Profile

- intolerance to UV-HEV = 320 – 450 – 650 nm
- phototoxicity – anaphylactoid reactions
- isolated life, indoors existence

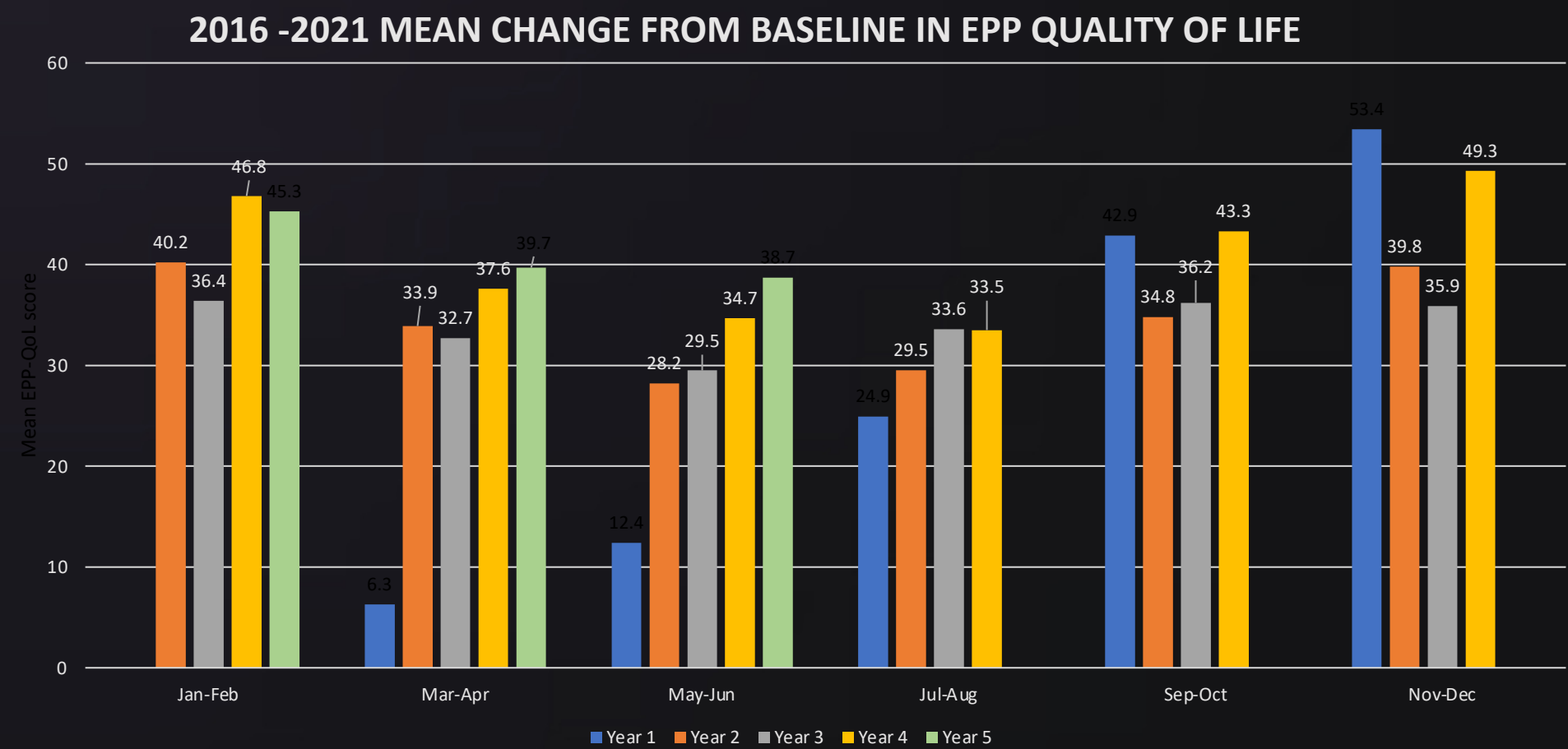
Therapy

- SCENESSE® (afamelanotide 16mg)
- unmet need, no alternative therapy

Addressable Market

- 5,000- 10,000 patients globally

Real world evidence: SCENESSE® improves patients’ quality of life (European PASS data)



# Erythropoietic Protoporphyria (EPP)

Absolute Intolerance to UV & HEV



### Genetics

- prevalence 1:250,000 to 1,000,000
- chromosomal defects:
  - XPC: on 3p25.1
  - XPV: on 6p21.1
- defective in DNA repair: nucleotide excision repair (NER)

### Clinical Profile

- highest risk of exposure to UV-HEV:  $\lambda = 320 - 450 \text{ nm}$
- highest rate of skin cancer(s)
- short life expectancy

### Therapy

- high unmet need, no alternative treatment

### Addressable Market

- 1,000 EU/US/LATAM patients

## Xeroderma Pigmentosum (XP)

Inability to repair DNA skin damage from UV + HEV





## XP CLINICAL TRIAL DESIGN (CUV156)

Start date: 21 October 2021

Duration: 6-9 months

- open label study of 6 adult patients: XP-C
- multiple dosing with afamelanotide
- analyses of afamelanotide treatment
  - safety (systemic/cutaneous)
  - anti-oxidative effects
  - DNA repair capacities
  - UV + HEV light tolerance
  - quality of life

# XP Clinical Trials Program 2021-22

## XP CLINICAL TRIAL PROGRAM 2021 - 22

CUV156  
XP-C patients (n=6)

CUV151  
Healthy control group (n=6)  
UV-provoked skin damage

CUV152  
XP-C & XP-V patients (n=6)

CUV153  
XP-V patients (n=6)



# Global Leadership in Photomedicine

## DIVISION OF PHARMACEUTICALS

### Rx Product Lines

#### *Photomedicine, DNA Repair Program*

- Focus on highest unmet medical need: Xeroderma Pigmentosum
- Afamelanotide evaluated: DNA skin damage caused by ultraviolet radiation
- Validation of model: assisting populations at highest risk of solar damage

*Targeted Technology Translation*

## DIVISION OF HEALTHCARE SOLUTIONS

### OTC Product Lines

#### *Polychromatic Photoprotection, DNA Repair*

Focus on Highest Risk Populations, neglected by industry:

- immune-suppressed
- history of skin cancer
- extreme outdoor exposure



ADDRESSABLE COMMUNITIES

In 2020 there were 120,774 deaths due to skin cancer.<sup>3</sup>

An estimated 5.4 million non-melanoma skin cancers and >100,000 melanomas are diagnosed in the USA each year.<sup>4</sup>

By 2040, 2.7 million new skin cancer cases are predicted.<sup>3</sup>

The mission of CLINUVEL’s Healthcare Solutions Division is to:

- provide information, education
- introduce personal care solutions
- build communities

**Sources:**

<sup>1</sup> Outdoor Foundation. 2021 Outdoor Participation Trends [Report](#) .

<sup>2</sup> Snyder et al (2020). Solar UV Exposure in Individuals Who Perform Outdoor Sport Activities. Sports Med – Open. 6(42).

<sup>3</sup> Global Cancer Statistics 2020: GLOBOCAN

<sup>4</sup> American Cancer Society (2021). Key Statistics for Basal and Squamous Cell Skin Cancers. <https://www.cancer.org/cancer/basal-and-squamous-cell-skin-cancer/about/key-statistics.html>. Key Statistics for Melanoma Skin Cancer. <https://www.cancer.org/cancer/melanoma-skin-cancer/about/key-statistics.html>

<sup>5</sup> American Society of Clinical Oncology (2020). Skin Cancer (Non-Melanoma): Risk Factors and Prevention. <https://www.cancer.net/cancer-types/skin-cancer-non-melanoma/risk-factors-and-prevention>.

<sup>6</sup> Wei, Li & Nan (2019). Having a first-degree relative with melanoma increases lifetime risk of melanoma, squamous cell carcinoma, and basal cell carcinoma. JAAD. 81(2): 489-99.

<sup>6</sup> 2019 Statistics: Global Observatory on Donation and Transplantation

<sup>7</sup> Risks of Multiple Skin Cancers in Organ Transplant Recipients. Mackenzie R. Wehner, MD, MPhil1,2,3; Jiangong Niu, PhD2; Lee Wheless, MD, PhD4; et al

<sup>8</sup> RunRepeat. Marathon Statistics 2019 Worldwide. <https://runrepeat.com/research-marathon-performance-across-nations>.

<sup>9</sup> SurferToday. How many surfers are there in the world? <https://www.surfertoday.com/surfing/how-many-surfers-are-there-in-the-world>. Sports & Fitness Industry Association – Surfing Participation Report [2019](#) .



IMMUNE-SUPRESSED

- 153,863 organ transplants were recorded globally in 2019.<sup>6</sup>
- 4.5% to 13.3% of OTRs have had at least 1 skin cancer treatment. Of those, approx. 50% will develop further skin cancers within 2 years.<sup>7</sup>



SKIN CANCER HISTORY

- 35-55% of people diagnosed with a basal cell carcinoma will develop another skin cancer within 5 years.<sup>5</sup>
- Individuals with a family history of melanoma, have a markedly increased risk of being diagnosed with melanoma (74% increased), squamous cell carcinoma (22%) and basal cell carcinoma (27%), compared to those without a family history of melanoma.<sup>6</sup>



EXTREME OUTDOORS

- Of the 53 percent of Americans who participated in outdoors activities in 2020, 20% did so twice or more per week.<sup>1</sup>
- 1.2m people completed a marathon in 2018, nearly 500,000 of whom were in the USA.<sup>8</sup>
- The global surfing population is estimated to be between 17-35m people, >2.8m in the USA .<sup>9</sup>
- People who practice outdoor sports experience much higher UV exposure, exceed recommended exposure limits, and are at a higher risk of developing skin cancer. <sup>2</sup>

COMMONALITY OF THE 3 POPULATIONS

- unaddressed, neglected by the medical community (prevention = “staying indoors”)
- lack of longitudinal care and communication
- fragmented, lack of strong online community



### REACHING OUR ADDRESSABLE AUDIENCE

- To connect and unite our diverse and disparate communities we must go where they go and be where they are – join their digital world with a common purpose of reducing the number of skin cancers globally.
- As far back as 2015 'A positive effect of Social Networking Sites interventions on health behaviour outcomes was found'.<sup>1</sup>
- Today, sites such as patientslikeme.com have communities with almost a million members, looking for and giving advice.

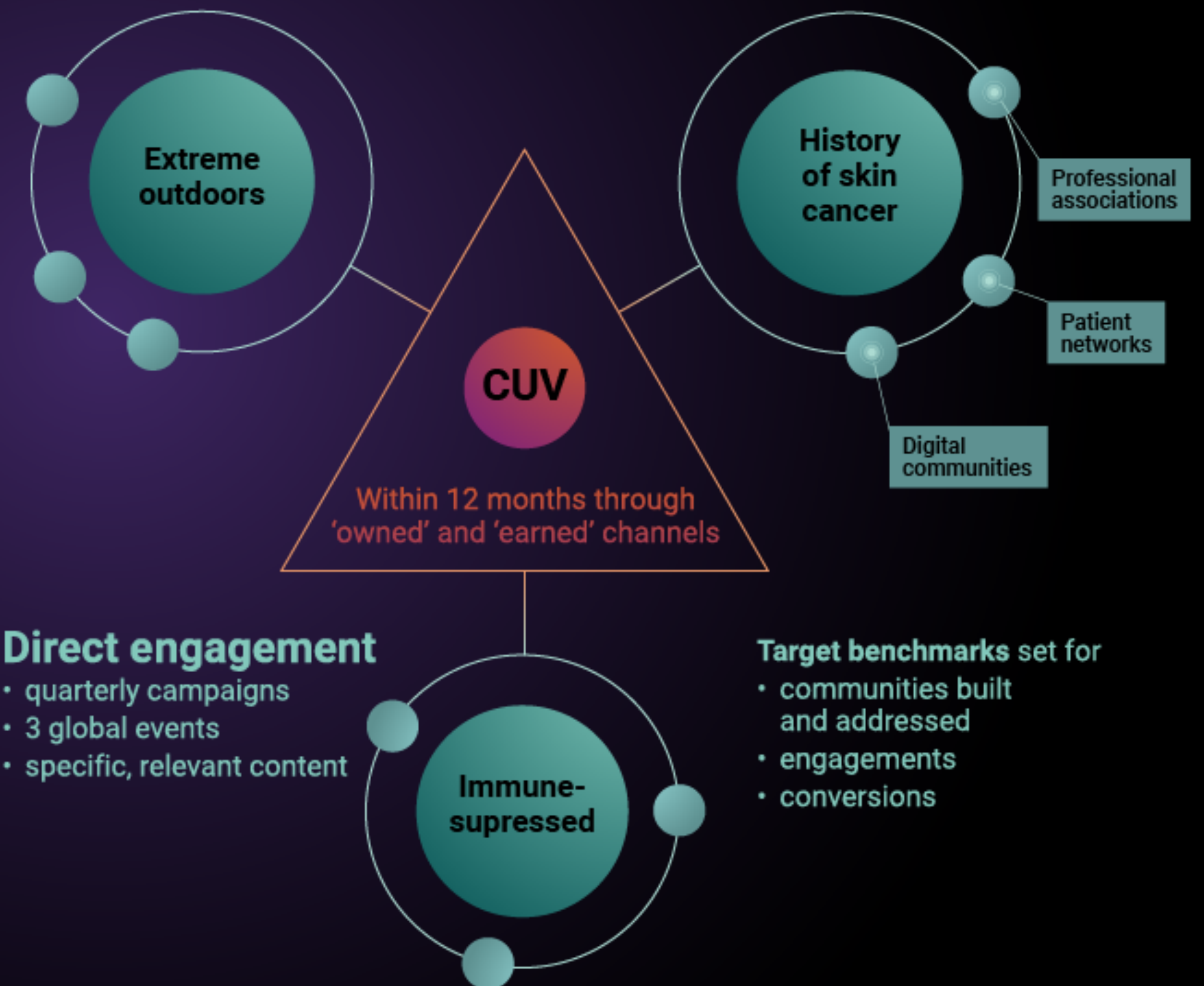
What do your groups want out of a community?

Education, resources, not feeling alone, feeling understood, sharing and hearing similar experiences

How do we deliver this for our community?

A conversation, not a broadcast. Establish our credentials in photomedicine and build trust over time

### SELECTED: 60 global ambassadors (3 populations)



<sup>1</sup> Laranjo et al (2015). The influence of social networking sites on health behavior change: a systematic review and meta-analysis. *JAMIA*. 22(1):243-56



# Global Leadership in Photomedicine

MEDICAL PROBLEM	1. EPP	2. XP	3. AT HIGHEST RISK
	<ul style="list-style-type: none"><li>› isolated life</li><li>› absolute light intolerance</li></ul>	<ul style="list-style-type: none"><li>› high mortality</li><li>› UV intolerance</li></ul>	<ul style="list-style-type: none"><li>› immune-suppressed</li><li>› family history of skin cancer</li><li>› extreme outdoors</li></ul>
	UVR + HEV	DNA damage	Skin cancer(s)
ADDRESSABLE MARKET	5,000–10,000 worldwide	1,000	15–35 M
OBJECTIVES	SYSTEMIC PHOTOPROTECTION	DNA REPAIR	Reduction of skin cancer risk
Endpoints	<ul style="list-style-type: none"><li>• decrease ROS</li><li>• decrease oxydative damage</li><li>• supranuclear barrier</li></ul>	<ul style="list-style-type: none"><li>• remove photoproducts</li><li>• decrease oxydative damage</li><li>• assist NER</li></ul>	
PHOTOPROTECTION	SYSTEMIC	SYSTEMIC	TOPICAL
Progress	first systemic drug	breakthrough program	complimentary products



## Clinical Development



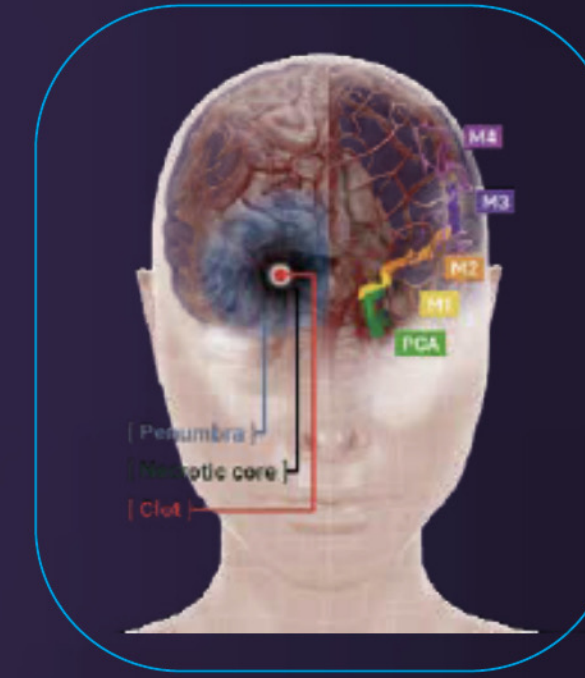
### Vitiligo CUV104 [2022]

- patients of darker skin types (Fitzpatrick IV-V)
- inclusion > 10% depigmentation
- endpoints: face, head & neck
- >70% repigmentation



### Variegate Porphyria CUV040

- confirmed biochemical diagnosis
- inclusion: multiple lesions p/a
- endpoints: reduction in blister formation
- controlled photo-provocation



### Arterial Ischaemic Stroke CUV801 (n=6)

- safety confirmed, no cerebral adverse events
- first three patients completed treatment
- improvement neurological functions (n=3)
- read out 2022



### New Indication CUV901

- awaiting administrative sign-off, IP



# Specialty Pharmaceutical:

## Portfolio of melanocortins

### 1. Afamelanotide

SCENESSE®	adults	solid	in production	EPP, XP, vitiligo
SCENESSE® Enfance	paediatric 12–17	liquid	in development	EPP, XP, vitiligo
PRÉNUMBRA® Instant	all ages	liquid	in production	stroke, XP
PRÉNUMBRA® Modified-release	adults	liquid	in development	stroke

### 2. CUV9900

CUV9900	adults	topical, leave on	in development	anti-oxidative, DNA repair
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### 3. ACTH

NEURACTHEL® Instant	adults	liquid	awaiting production	acute neurological, endocrinological, and degenerative disorders
NEURACTHEL® Depot	adults	liquid	awaiting production	acute neurological, endocrinological, and degenerative disorders



# Financial Discipline

## Start commercial operations 2016

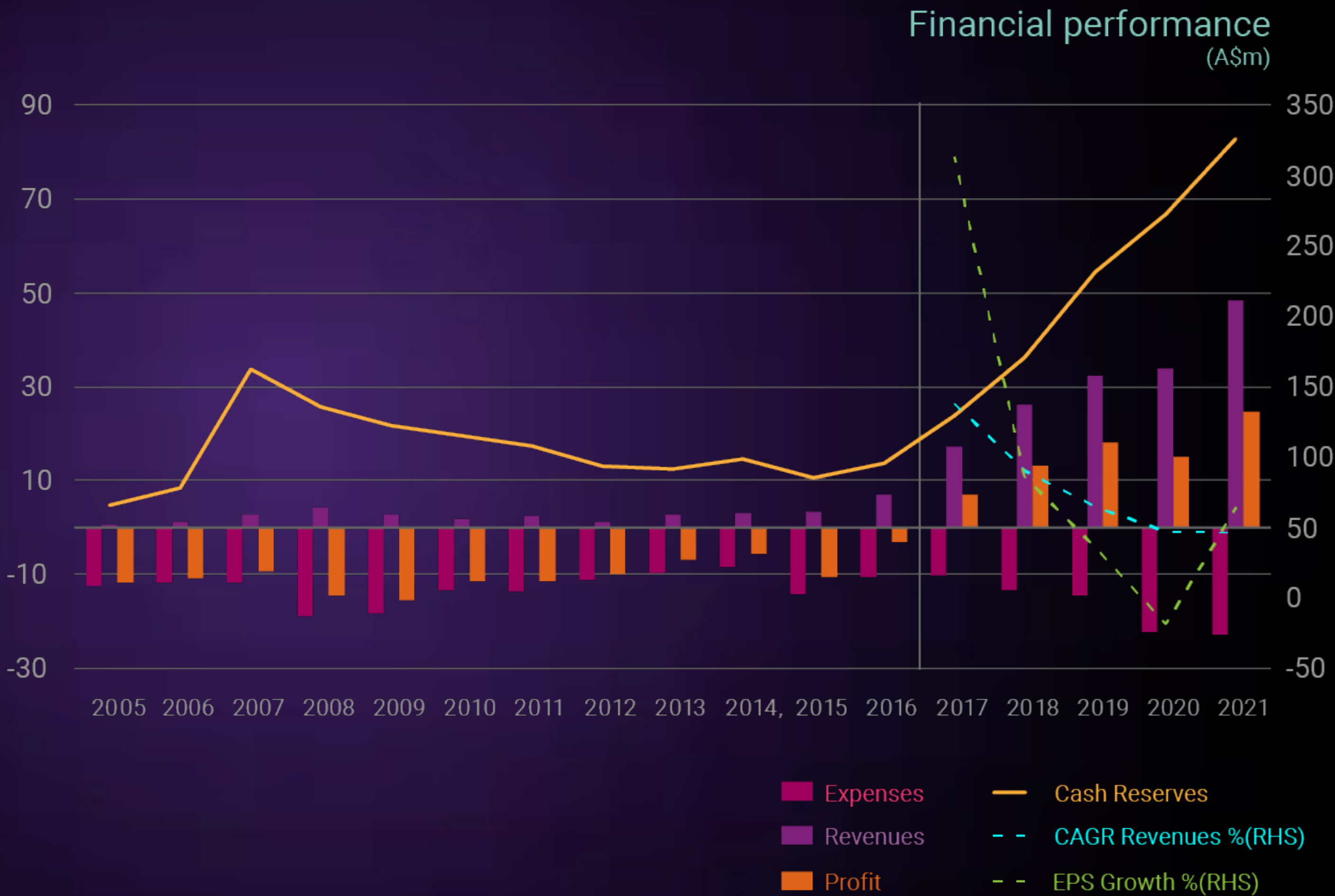
As the Company progressed, the rate of reinvestment has consistently increased. More than 40% of CLINUVEL’s revenues were put towards innovation, research and development in 2020 to 2021.

The rate of reinvestment is only possible due to the high level of financial discipline across the Group, managed by our finance team. The ability to retain much of the services within the Group enabled CLINUVEL to contain its cost base and gradually increase its experimental output.

The illustration shows the cautious approach to managing available funds over the years, as well as the revenues versus expenditures. Ten years after starting the program, and three years after EMA approval of SCENESSE®, the Company became profitable. CLINUVEL’s entrenched ways of approaching its operational and capital expenditures make returns on deployed capital (ROCE) more likely and plays a part in the perception of the Company’s conduct by state and private insurers. Our shareholders have reaped the benefit from the fiscal discipline.

The CAGR over the years has reached double digits, while the earnings per share was recorded at A\$0.50 in FY2021.

As the Company increases its operations, the operating and capital expenditures will increase to ensure further growth, but most of all for us to realise our objectives.







The pessimist complains about the wind,  
the optimist expects it to change,  
the realist adjusts the sails.

William Arthur Ward