

Nasdaq: PLUR TASE: PLUR.TA

# INVESTOR PRESENTATION



March, 2024

# WHERE TECHNOLOGY COMES TO LEE

# FORWARD LOOKING STATEMENT

This presentation contains forward-looking statements within the Israeli Securities Law, 1968, the Private Securities Litigation Reform Act of 1995 and other U.S. Federal securities laws, as amended, regarding Pluri Inc. and/or its subsidiaries (collectively the "Company" or "Pluri"), to the extent such statements do not relate to historical or current facts. For example, the Company is using forward looking statements when it discusses its commercialization, development, and manufacturing activities, the potential of its technology to improve guality of life, change human course and make the world a better place, the potential benefits of Pluri's technology, the number of potential applications of Pluri's cell expansion technology, the potential applications of Pluri's and Ever After Foods' products, the statement that any mass cell production industry can benefit from Pluri's technology, its ability to seek and collaborate with strategic partners, its ability to continue and to expand its collaboration with Tnuva, its ability to solve medicine's most urgent unmet needs, the belief that cell therapy can lead to smart therapies which heal and regenerate the human body, the belief that cell therapy is an innovative treatment for ever-growing and aging population, the belief that the study results demonstrate PLX-PAD's ability to trigger muscle regeneration and maintain it over time, that the increase in muscle strength demonstrated in the PLX-PAD study is meaningful clinical evidence that PLX-PAD can be potentially beneficial for a variety of injuries, that PLX-R18 can stimulate the regeneration of damaged bone marrow following Hematopoietic Cell Transplantation, that Pluri will be able to scale up and scale out the Company's studies, that cell-based therapy will reshape the agricultural landscape and redefine the possibilities of sustainable crop production, the potential of Pluri's cell-based coffee to create new solutions and the ability of Pluri's cell-based technology platform to add value to many verticals and industries. Forward-looking statements are based on management's current expectations, estimates, projections, and assumptions about future events, and are subject to several factors and uncertainties that could cause actual results to differ materially from those described in the forward-looking statements. These statements are not guarantees of future performance and involve certain risks, uncertainties, and assumptions about the Company, which are difficult to predict, including projections of the Company's future financial results, its anticipated growth strategies, and anticipated trends in its business and in the market generally. Therefore, actual future results, performance and trends may differ materially from these forward-looking statements due to a variety of factors, including, without limitation: changes in technology and market requirements; the Company may encounter delays or obstacles in launching and/or successfully completing its proposed plans, including research and development; its products may not be approved by regulatory agencies, their technology may not be validated as they progress further and their methods may not be accepted; it may be unable to retain or attract key employees whose knowledge is essential to the development of its products; unforeseen scientific difficulties may develop with its processes; its products may wind up being more expensive than it anticipates; results in the laboratory may not translate to equally good results in real world settings; its patents may not be sufficient; its products may harm recipients or consumers; changes in legislation with an adverse impact; inability to timely develop and introduce new technologies, products and applications; loss of market share and pressure on pricing resulting from competition, which could cause the actual results or performance of the Company to differ materially from those contemplated in such forward-looking statements. The factors listed above are not exclusive, and further information is contained in the Company's Annual Report on Form 10-K and other reports on file with the U.S. Securities and Exchange Commission. All forward-looking statements speak only as of the date of this presentation. Although the Company believes the expectations reflected in the forward-looking statements contained herein are reasonable, it cannot guarantee future results, level of activity, performance, or achievements. Moreover, neither the Company nor any other person assumes responsibility for the accuracy and completeness of any of these forward-looking statements.

This presentation does not constitute an offer to sell, or the solicitation of an offer to buy, any securities of the Company. The information to be presented is not intended to replace the need to review the Company's formal filings with the U.S Securities and Exchange Commission, including, without limitation, its Annual Report on Form 10-K and any subsequent filings, prior to making any investment in the Company's securities. In case of any inconsistencies between the information provided in this presentation and the Company's regulatory filings, the latter will prevail. Except as otherwise required by law, the Company undertakes no obligation to publicly release any revisions to these forward-looking statements to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events. For a more detailed description of the risks and uncertainties affecting the Company, reference is made to the Company's reports filed from time to time with the Securities and Exchange Commission.





# **SOLUTIONS FOR HUMANITY'S GREATEST CHALLENGES**

WE OFFER ROBUST CELL EXPANSION TECHNOLOGY PLATFORMS THAT CREATE **NEW CELL-BASED SOLUTIONS.** 

OUR TECHNOLOGY HAS THE POTENTIAL TO IMPROVE QUALITY OF LIFE AND MAKE OUR WORLD A BETTER PLACE.



# PLURI AT A GLANCE



### COMPANY

- Nasdaq (PLUR), TASE (PLUR.TA)
- Cash & deposits: ~\$31 million (as of December 31, 2023)
- Based in Israel with **global presence**, including in the USA and Europe
- Rich IP portfolio with **140 patents** granted globally
- In-house GMP manufacturing facility
- **Two decades of experience** in cell processing and mass scale technology development







Regenerative medicine: cell therapies





Contract Development and Manufacturing Organization



Cell-based coffee and agtech collaboration





# **OUR GREATEST ASSET**

The Pluri technology platforms leverage the basic building blocks of life—cells—to create medicine, food and cell-based materials that can **change the course of** human history.

## TECHNOLOGY **ADVANTAGES**

Patented, proprietary 3D cell expansion technology to produce high-quality cells in mass quantities

- **Scalable**, automated, efficient, reliable and **fully controlled** process
- **Cost-effective**, consistent and validated process
- Suitable for multiple cell sources: human, animal and plant
- Robust in-house GMP (Good Manufacturing Practice) manufacturing facility
- Proven batch-to-batch consistency
- Manufacturing process approved by key regulators

















# **PLURIMATRIX**<sup>TM</sup>

PluriMatrix<sup>™</sup> is a breakthrough system for unprecedented **industrial scale** production of **cell-based products** 

## PLURIMATRIX<sup>™</sup> **ADVANTAGES**

- Significantly increases industrial scale production of cell-based products by using a packed-bed system
- Flexible production to power a range of cell-based products for industries such as pharma, biologics, foodtech, agri-tech and beyond
- Enables simultaneous expansion of various cell types within the same platform, giving each cell type its own growth space
- PluriMatrix' state-of-the-art modular cell production system enables a smaller infrastructure, significantly reducing cost and ecological footprint





## PLURI'S CELL EXPANSION TECHNOLOGY PLATFORMS

The potential applications are almost endless.

Any industry that requires mass cell production can potentially benefit from Pluri's patented technology.



## ONE TECHNOLOGY, MANY SOLUTIONS

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# **OUR MISSION**

To leverage our advanced cell expansion platforms and position as a global leader in cell technology to develop, manufacture and market highly effective cell-based products and solutions that enhance global wellbeing and promote sustainability





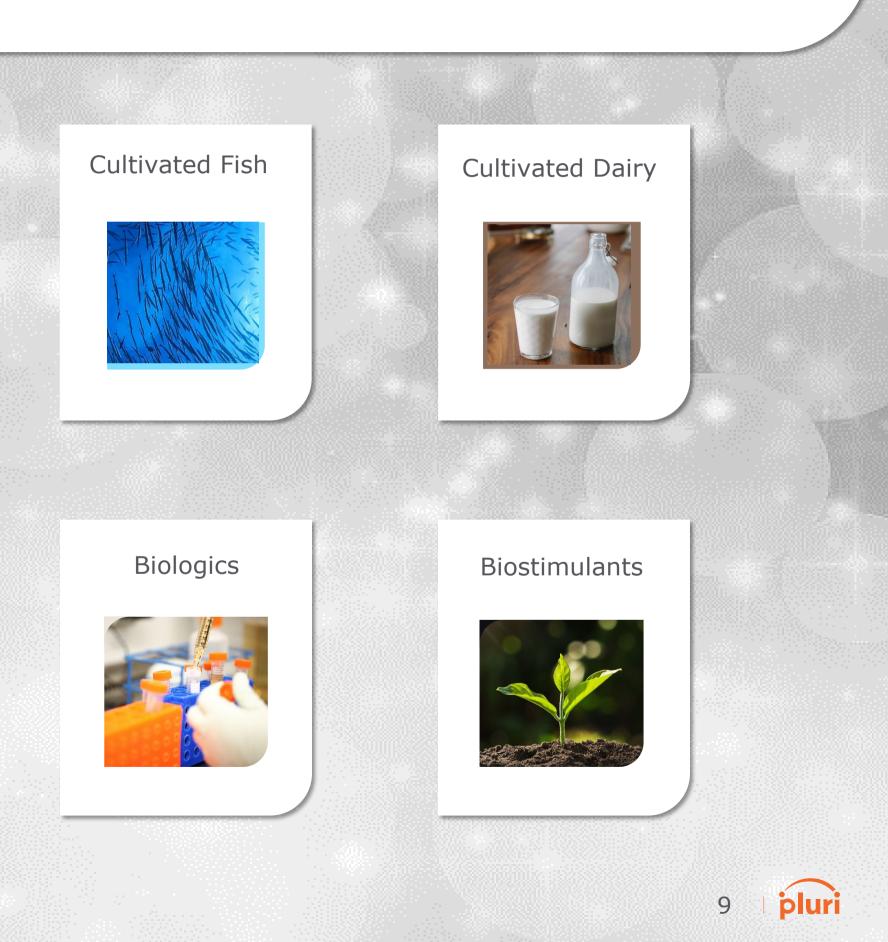


And many other industries...



# PLURIAPPS





# **BUSINESS DEVELOPMENT STRATEGY**

Development and manufacturing of innovative cell-based products using Pluri's 3D cell expansion technology

Partnerships that leverage Pluri's technology to meet cellbased manufacturing needs for a variety of industries





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# **CELL-BASED IS BETTER**

Cell expansion technology produces mass scale, costeffective food products in an efficient and sustainable manner

#### Fast growing industry:

- **Cultivated meat (Ever** After Foods): estimated to become a \$140 billion market by 20301
- Cultivated fish and **seafood:** estimated to become a \$8.7 billion market by 2031<sub>2</sub>
- Cultivated dairy: estimated to become a \$6.94 billion market 20323

#### **ENVIRONMENTAL**

- Uses significantly less land and water than conventional farming and breeding
- Emits fewer greenhouse gases
- Reduces agriculture-related pollution
- Provides solutions to feed the ever-growing population

- 1 "The future of food", 4 May 2021, Barclays news 2 https://www.factmr.com/report/fish-meal-market
- 3 https://www.futuremarketinsights.com/reports/cultured-dairy-blends-market

**ETHICAL** 

• Adheres to ethical **animal** welfare standards



#### **CONSUMER**

- Facilitates **natural flavor** modification
- Enables safe modification for healthier, more nutritious foods and raw materials



# LANDMARK COLLABORATION FOR CULTIVATED FOOD PLATFORM



Ever After Foods is a joint venture to develop, manufacture and commercialize cell-based meat products for the food industry, <u>announced</u> in early 2022.

Bringing sustainable, affordable cultivated food to consumers across the globe.

### COLLABORATION OF TWO PROVEN PIONEERS

Pluri and Tnuva Group may expand the collaboration to include cultivated dairy and fish products by establishing separate, new ventures.

"...We chose to collaborate with Pluri (formerly Pluristem) because we believe it owns one of the most advanced cell production technologies in the world. We expect the collaboration between the companies to revolutionize the cultivated food industry and develop the next generation of alternative proteins."

Eyal Malis, former CEO of Tnuva Group



# LANDMARK COLLABORATION FOR **CULTIVATED FOOD PLATFORM**

- Tnuva invested \$7.5 million in the Ever After Foods JV based on a \$40 M pre-money valuation • Pluri granted to Ever After Foods an exclusive global royalty-bearing license to use its IP and expertise in the field of
- cultivated meat
- Tnuva receives exclusive rights to market Ever After Foods' products in Israel
- Ever After Foods retains rights to **out-license marketing** of its cultivated meat products in the rest-of-world **outside of Israel**

**Pluri's** mass-scale, cost-effective, consistent cell production expertise and technology platform





- Mass-scale, cost-effective 3D cell expansion platform
- Proven cell expansion technology
- Potential to produce cultivated meat cells at mass scale
- Supports expansion of a wide variety of cells
- Robust IP portfolio
- Regulatory expertise in cells

**Tnuva Group's** power multipliers in consumer-packaged goods, R&D, consumer branding, marketing, sales and distribution

#### **\TNUVA** ~15.8%

- Israel's largest food producer, +95 years of experience Proven pioneer in the field of alternative protein
- Strong consumer goods R&D platform
- Regulatory expertise
- Global sales, marketing and distribution infrastructure



# plurihealth



# THE EVOLUTION OF PLURI'S 3D CELL-EXPANSION TECHNOLOGY PLATFORMS

- Nearly **20 years of experience** perfecting a manufacturing process to grow cells efficiently in mass quantities
- Developing an innovative line of placenta cell product candidates in regenerative medicine to treat unmet medical needs
- Targeting early development collaborations with pharmaceutical partners, to create the next generation of cell-based product candidates

THERAPEUTIC AREA	PRODUCT	INDICATION	LOCATION
Muscle Injuries	PLX-PAD	Muscle Regeneration following Hip Fracture	U.S., Europe, Israel
Inflammatory		Knee Osteoarthritis (OA) $^*$	Germany
Diseases		Chronic Graft vs. Host Diseases (cGvHD)	Israel
		Acute Radiation Syndrome (ARS) **	U.S.
Hematology		Hematopoietic Recovery following Hematopoietic Cell Transplantation (HCT)	U.S., Israel

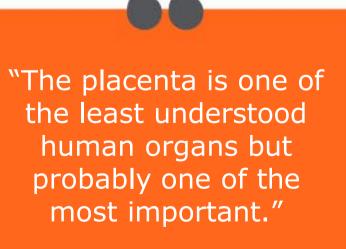
FUNDING/ PARTNER	PHASE I PHASE	II PHASE III
European Commission		
European Commission		
TEL AVIV SOURASKY MEDICAL CENTER		
NIH NIAID		



# **CELL-BASED IS BETTER**

Since 2003, Pluri has perfected methods to expand a single placenta cell into billions of distinct cells.

**Cell therapy will take us** from chronic treatments and hospitalizations to smart therapies that will heal and regenerate our bodies



The U.S. National Institute of Health

#### **SCIENTIFIC**

- Cell therapies encourage the body to regenerate and heal itself, addressing **unmet medical needs**
- No need for genetic matching. Cell-based therapies allow immune systems to coexist side by side without immune rejection, allowing the body to heal itself





#### REACH

• Cells from a single placenta can help 20,000+ patients

• Ethically sourced, endless and consistent supply of young, potent cells

#### **FUTURE**

- Manufacturing flexibility is key to ushering in new cellbased products and solutions
- Innovative treatments for an ever-growing and aging population



# **ADVANCED AND ONGOING CLINICAL STUDIES**

#### **Phase I/II study of PLX-PAD for muscle injury following total hip** replacement (N=20)

PLX-PAD demonstrated a significant increase in muscle strength & volume

#### **Phase III study of PLX-PAD for muscle injury following hip fracture** surgery (N=240), results reported in July 2022

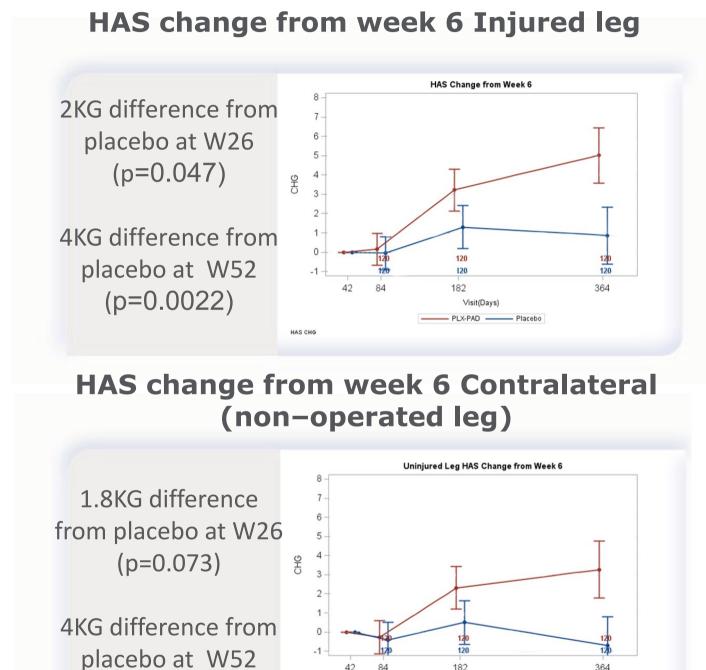
- The study did not meet the primary endpoint (Short Physical Performance) Battery test at week 26)
- A significant increase in Hip Abduction Strength (HAS) was observed at week 26 and week 52 for patients treated with PLX-PAD (n=120), in the injured and uninjured leg compared to placebo (n=120)
- PLX-PAD demonstrated a meaningful increase in the absolute HAS at week 52 in the injured leg (p=0.0511) and uninjured (p=0.113) leg
- PLX-PAD treated patients were able to walk 296 meters versus 266 meters in placebo during 6-min walking test at week 52











(p=0.0046)

Visit(Days)

PLX-PAD

€ 7.4 million grant from the EU Horizon 2020 program



# PLX-R18 FOR ACUTE RADIATION SYNDROME (ARS)

ARS, also known as radiation sickness or radiation poisoning, is caused by exposure to high amounts of ionizing radiation, such as in nuclear reactor accidents or warfare

- Studies conducted and funded by U.S. government
- \$4.2 Million contract signed with the US NIAID and DOD to advance the development of PLX-R18 for ARS in July 20231
- FDA cleared Investigational New Drug (IND) application for PLX-R18 for the treatment of ARS in case of nuclear events
- FDA Orphan Drug Designation

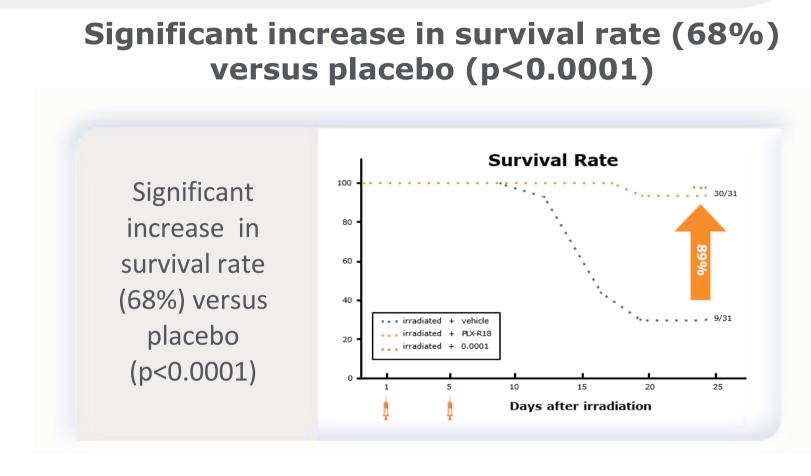


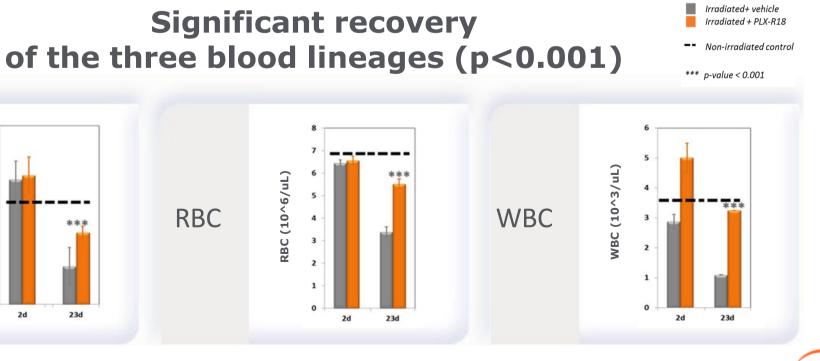
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1. This project has been funded in whole or in part with Federal funds from the National Institute of Allergy and Infectious Diseases, National Institutes of Health, Department of Health and Human Services, under Contract No. 75N93023C00012





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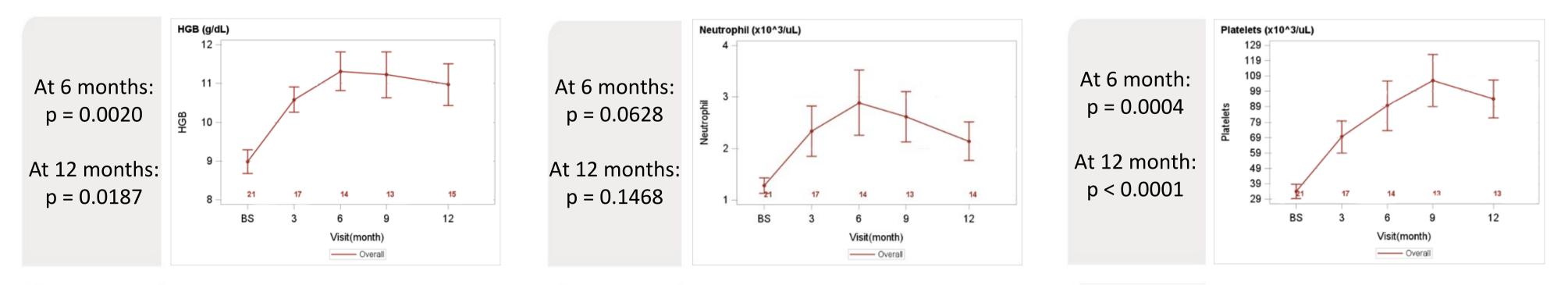
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# **ADVANCED AND ONGOING CLINICAL STUDIES**

#### PLX-R18 to stimulate the regeneration of damaged bone marrow following Hematopoietic Cell Transplantation (HCT)

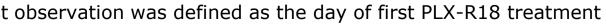
Positive Phase I results to demonstrate the safety and exploratory efficacy of PLX-R18 in humans reported March 2022

- PLX-R18 reduced mortality from 29% to 18% and was well-tolerated with a favorable safety profile\*
- Decreased mean number of transfused units from a monthly 5.09 to 0.55 for platelets (p=0.045) and 2.91 to 0 for red blood cells (p=0.0005) at 12 months
- Increase in all three blood cell types with platelets (p < 0.001), hemoglobin (p = 0.02) and neutrophils (p = 0.15) levels increasing, enduring up to 12 months



<sup>\*</sup> When compared to data obtained from the CIBMTR registry during a 12-month interval from first observation. First observation was defined as the day of first PLX-R18 treatment for the Phase I patients and as day 100 post-HCT for the CIBMTR population.







# **PLURI IS PART OF THE PROTO CONSORTIUM**

#### **Phase I/IIa study of PLX-PAD for the treatment of mild to** moderate knee osteoarthritis (OA)

- OA is one of the most common chronic articular diseases, global prevalence of 16% in the adult population1. Third most rapidly growing disease associated with disability<sub>2</sub>, affecting over 500 million people worldwide<sub>3</sub>
- Other than joint replacement surgery, there is currently no effective disease-modifying therapy for OA
- Pluri is part of PROTO (Advanced PeRsOnalized Therapies for Osteoarthritis), an international collaboration led by Charité Berlin
- PROTO received a €7.5 million grant from the EU Horizon Europe program



1 Cui et al., 2020, PMID: 34505846 2 Hawker et al., 2019, PMID: 31621562 3 Hunter et al., 2020, PMID: 33159851





Chronic inflammation in the articular environment causes cartilage degeneration at an early stage, resulting in pain, disability and loss of independence due to progressive joint destruction.

OA manifests as joint inflammation, pain, stiffness, swelling, disability and is associated with reduced quality of life and work performance



# pluricdmo



# PLURI'S CONTRACT DEVELOPMENT MANUFACTURING ORGANIZATION

At **PluriCDMO** we work with our partners from **early** preclinical development to commercialization, with a mission to deliver high-quality, essential therapies to patients

### **EXPERTISE**

- Deep process and analytical development expertise
- All services to support **high** standard Process Development and GMP
- CDMO established from a **cell** therapy developer from early stage till phase 3



The <u>CDMO Market</u> was valued at **\$5** billion in 2022 and is expected to grow at a 17.5% CAGR from 2023 to 2029



### **EXPERIENCE**

 Pluri's team is experienced in multiple early and late-stage clinical trials, with an average tenure of over 5 years • Proven experience with

process optimization

#### **FACILITY & LOGISTICS**

- Reliable logistics links and direct connections to European, North American and Middle East cities
- 300m<sup>2</sup> Process and Analytical **Development Laboratories**
- Mature quality systems embedded within facility design and work processes
- Scalability from 2D to lab scale and up to marketing **scale** bioreactors



# FACILITY OVERVIEW

- With more than 15 years of GMP manufacturing expertise, Pluri is leveraging its skilled team, 4,400m<sup>2</sup> facility and logistics capabilities for cell therapy CDMO clients
- GMP manufacturing facility compliant to Europe, USA and Israel standards
  - Local presence in Europe and USA for client support
  - EU GMP certification
  - **Israel MoH** (compliant to EU regulations) **facility approval**



Production Level Area

**1,800** m<sup>2</sup>

Clean Rooms Area 4 segregated suits

600 m<sup>2</sup>

Total Area

4,400 m<sup>2</sup>



Flexible GMP manufacturing facility with excellent infrastructure

Process & Analytical Labs





# QC & DEVELOPMENT SUPPORT, TECHNOLOGY & PROCESS CAPABILITIES

#### **QUALITY COMPLIANCE**

- Comprehensive Quality Management System
- Monitoring, testing, product release, review and approval performed by an **experienced staff**
- Efficiently supports changes requested by clients
- Validation activities performed with deep involvement of QC
- **Continuous improvement** to processes, procedures, facility and qualification

#### **PROCESS & ANALYTICAL DEVELOPMENT**

- Large, well equipped **process development lab**
- Analytical development lab
- Development and tech **transfer expertise**
- Replicate and optimize production equipment operation
- Scale-up and scale-out studies
- Broad analytical testing, improvement and qualification capabilities
- Proprietary **3D adherent expansion platform**

### **TECHNOLOGY & PROCESS**

- Allogeneic and autologous manufacturing
- Cell therapy types
  - Mesenchymal stem cells (MSCs)
  - Pluripotent stem cells (iPSCs)
  - Chimeric antigen receptor cells (CAR-T)
- From 2D to lab scale and up to marketing scale bioreactors
- Suspension-based or adherent cell production
- Proprietary high-productivity adherent process
- Gene-editing capability

   Use of viral vectors or CRISPR/Cas9

 $_{\odot}$  Use of viral vectors or C technologies





# pluriagtech



# **CELL-BASED IS BETTER**



Reshaping the agricultural landscape and redefining the possibilities of sustainable crop production

#### **ENVIRONMENT**

- Enhances **agricultural** sustainability and productivity and provides novel solutions
- Reduces environmental **footprint** and fosters a more harmonious coexistence between **agriculture and** nature



#### **PRODUCT**

• Safer and more efficient platform for producing a range of plant metabolites

• More **resilient plants** and plant based bioactive compounds for medicinal and nutritional purposes

#### COST

Pioneering work in cell expansion technology has made plant cell culture more **affordable** and accessible



# THE COFFEE CRISIS

#### **CLIMATE CHANGE**

• Global coffee production will decrease by half in the next 30 years due to global warming

#### **PRICE INSTABILITY**

- US coffee import prices have risen by over 65%
- Prices changed from 390 cents per kg to 624 and back to 419 cents per kg (2009-2023)

#### LAND SHORTAGE

• Land suitable for growing coffee will reduce by up to 50% by 2050

#### **CARBON FOOTPRINT**

- 126 B kg of CO<sub>2</sub> emissions per year
- 140 liters of water required to produce a single cup of coffee



The **Coffee Market size is estimated at \$130 billion** in 2024 growing at a CAGR of 4.72% during the forecast period (2024-2029)



# **PLURI'S CELL-BASED COFFEE**

#### **SUSTAINABLE** COFFEE

Pioneering production for a sustainable and ethical alternative

#### PATENTED COFFEE **CELL TECH**

3D plant cell cultivation, license to use Pluri's IP and know-how

#### **ECO-EFFICIENT MASS SCALE** PRODUCTION

Reducing carbon footprint through cultivation, lowering resources while increasing yield

#### **EXPERIENCE**

Two decades of experience and a professional, diverse team driving the future of coffee science







# SIGNIFICANT SUPPORT FROM LEADING ORGANIZATIONS

#### REGULATORY

## FDA



















#### ADSCC مركز أبو ظبي للخلايا الجذعية ABU DHABI STEM CELLS CENTER

hipgen



### SCIENTIFIC COLLABORATIONS AND PARTNERING







European Commission









רשות החדשנות
L> Israel Innovation
L Authority





# **COMMITMENT TO EXCELLENCE**



Yaky Yanay CEO & President



**Chen Franco-Yehuda** Chief Financial Officer



Dr. Nitsan Halevy, MD Chief Medical Officer



Dr. Arthur Machlenkin, PhD Chief Scientific Officer



**Efrat Livne-Hadass** Chief Wellbeing Officer



**Orly Amiran** Chief Quality Officer



**Lior Raviv** Chief Technology Officer



**Nimrod Bar Zvi** Chief Commercial Officer



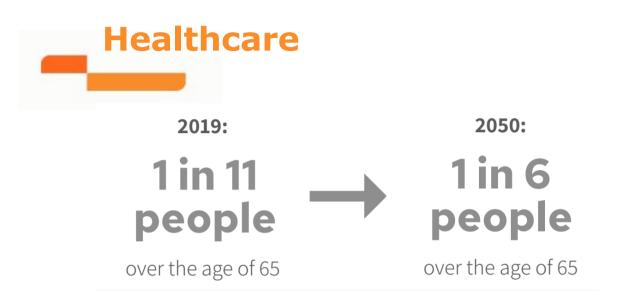
**Efrat Kaduri** Chief Business Development Officer - Pharma



John Dvor **EVP North America** 



# MAKING A POSITIVE IMPACT\*



As the average age increases, productivity and pension payments will decrease

#### **New Regenerative Models**

- Developing effective cell therapies for an aging population
- Advancing treatment for conditions such as ARS and OA
- Exploring potential **pharmaceutical collaborations**
- Advancing **humane sourcing** of animal-derived pharmaceutical ingredients (APIs)
- Ethical research





#### **Healthier food**

- Hormone and antibiotic free
- **Superior** nutritional profile

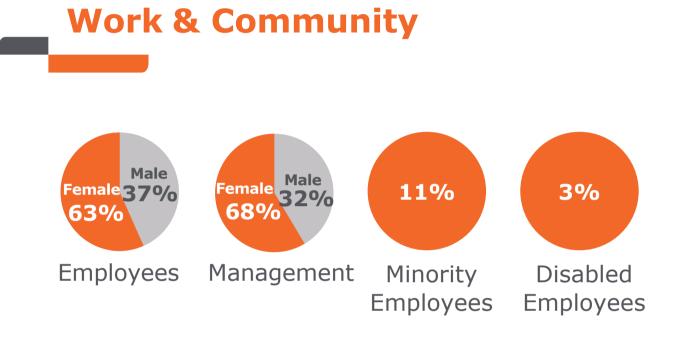
#### **Animal Welfare**

• No animals harmed

#### **Stable Supply Chain**

 Production facilities less vulnerable to changing climate





- Ranked in Dun's 100 top 50 Best High-Tech Companies to work for in 2023
- Awarded the **Egalitarian Employment Award** from the Israeli Ministry of Labor in 2022
- \$100K reclaimed costs
- 180 hours of **physician mentorship**
- 110 students hosted & mentored







# THE PROMISE & THE OPPORTUNITY

Pluri's cell-expansion technology will touch and improve every aspect of our lives.

Promoting sustainability, wellbeing and improving quality of life.

For every one of us. Individually.

And for all of us, as a society. Together.

For further information contact: investor.relations@pluri-biotech.com

