

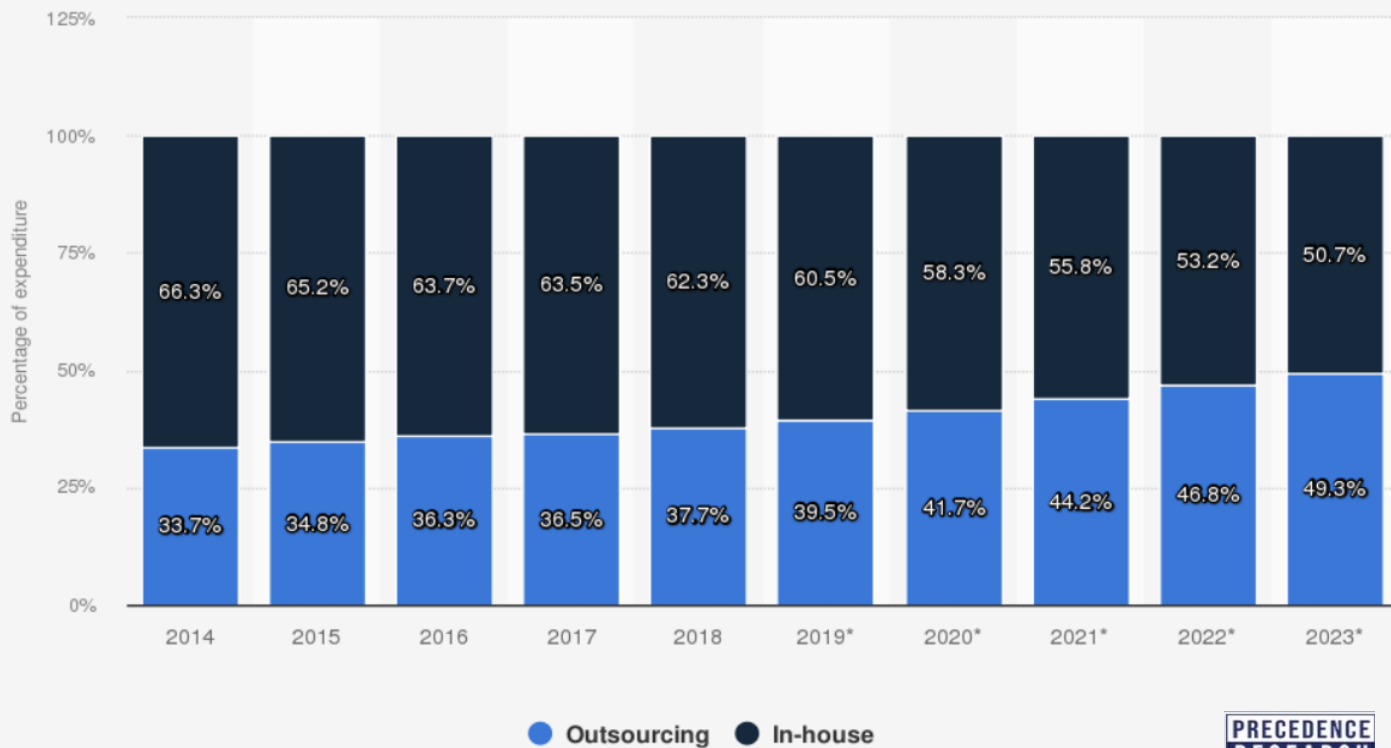


# Drug Research in Economic Development

## Achilleas Gravanis

Professor of Pharmacology, School of Medicine, University of Crete

## Distribution of in-house and outsourcing services expenditure in the global pharmaceutical market from 2014 to 2023



## DRUG DISCOVERY OUTSOURCING MARKET SIZE, 2020 TO 2030 (USD BILLION)





Pfizer within MIT campus (Cambridge)



Merck within Harvard campus (Longwood)

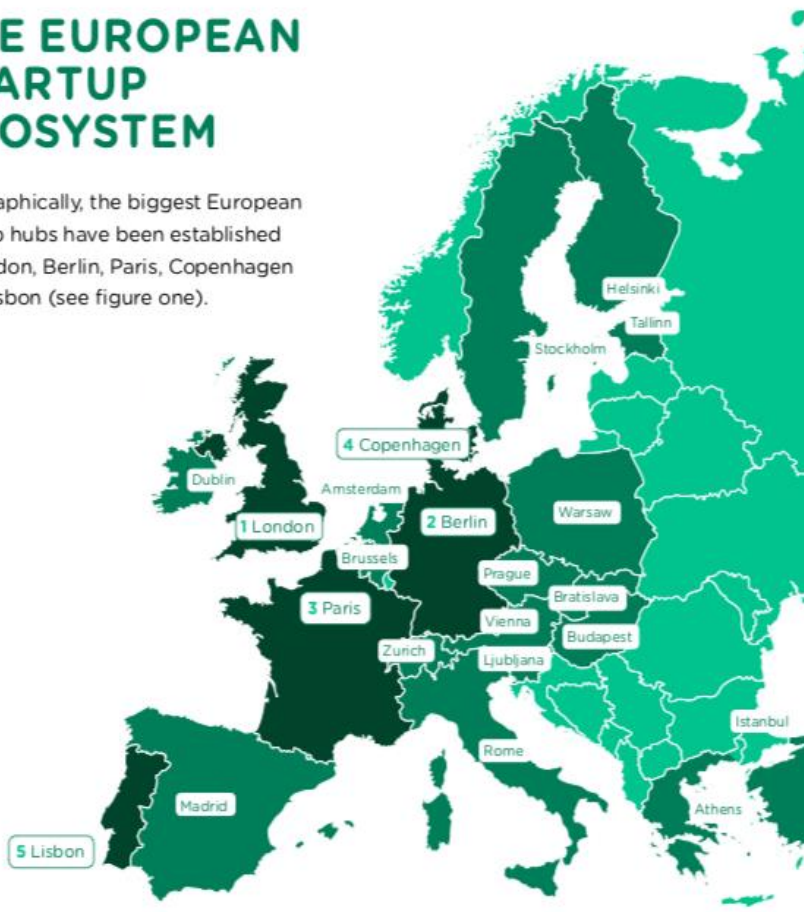


# Biotech Parks in Europe



## THE EUROPEAN STARTUP ECOSYSTEM

Geographically, the biggest European startup hubs have been established in London, Berlin, Paris, Copenhagen and Lisbon (see figure one).

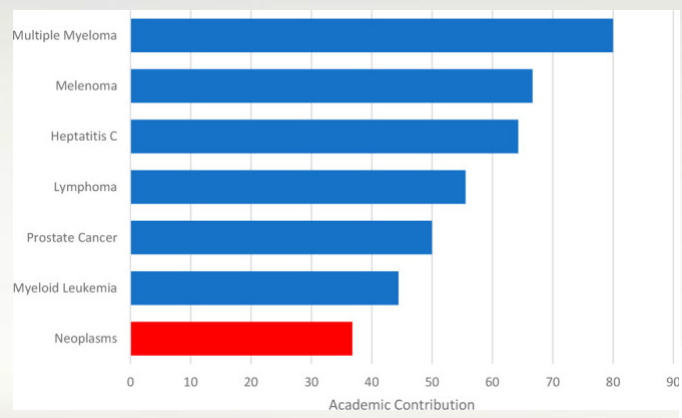


In 2018

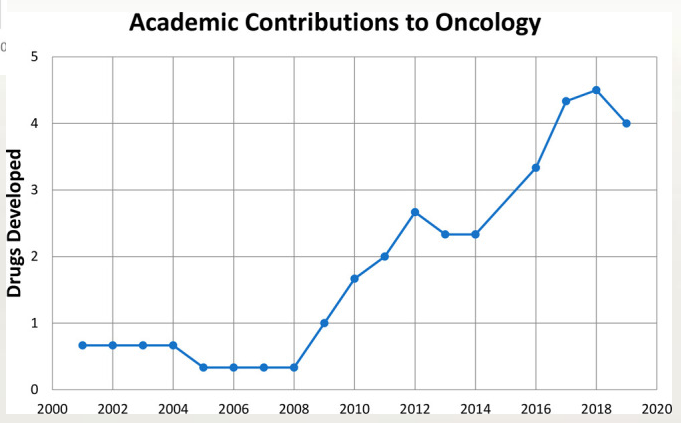
66%

of new net jobs  
arose from small  
businesses.

# Academic contributions of “neoplasm” drugs on a percent basis approved by FDA between 2001 and 2019 and listed as having academic inventors or founders based upon analyses of the FDA Orange Book.



65% of FDA and 35% of EMA approved drugs have academic origin

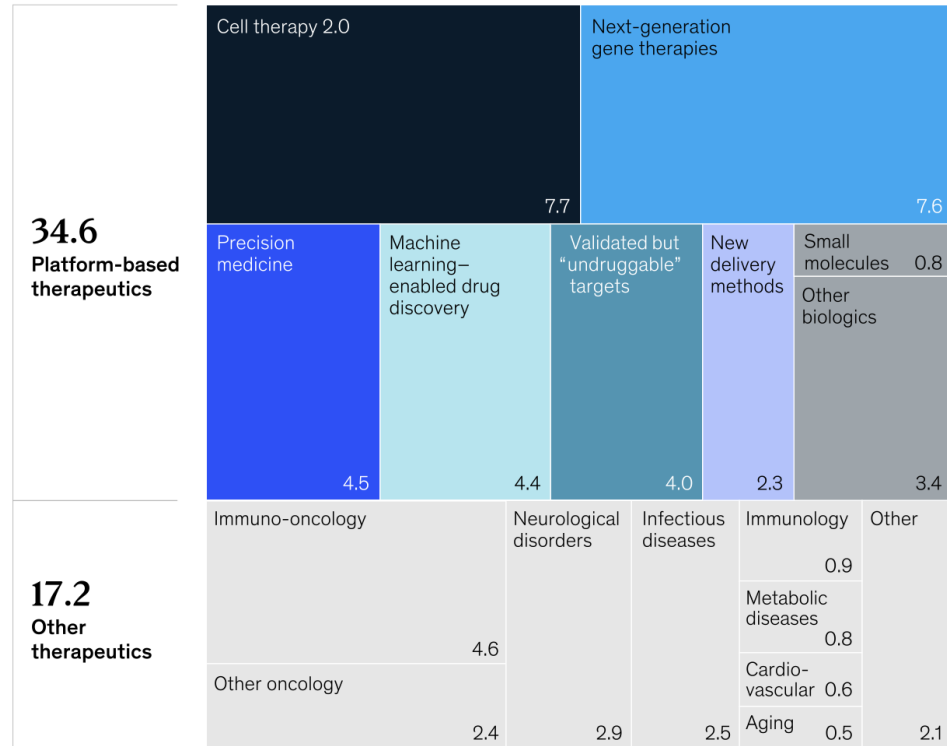


# Directions in Biotech Investments

- **Next Generation Platforms**
  - Cell Therapy 2.0, Gene Therapy
- **Early Disease detection – Biomarkers – Precision health**
- **Next Drug Discovery Platforms (AI-enabled)**
- **New Target Validation Technologies (AI - enabled)**
- **Unmet needs in high Value Therapeutic Areas**
  - Difficult Targets (“undruggable”)
  - Conventional Drug Discovery

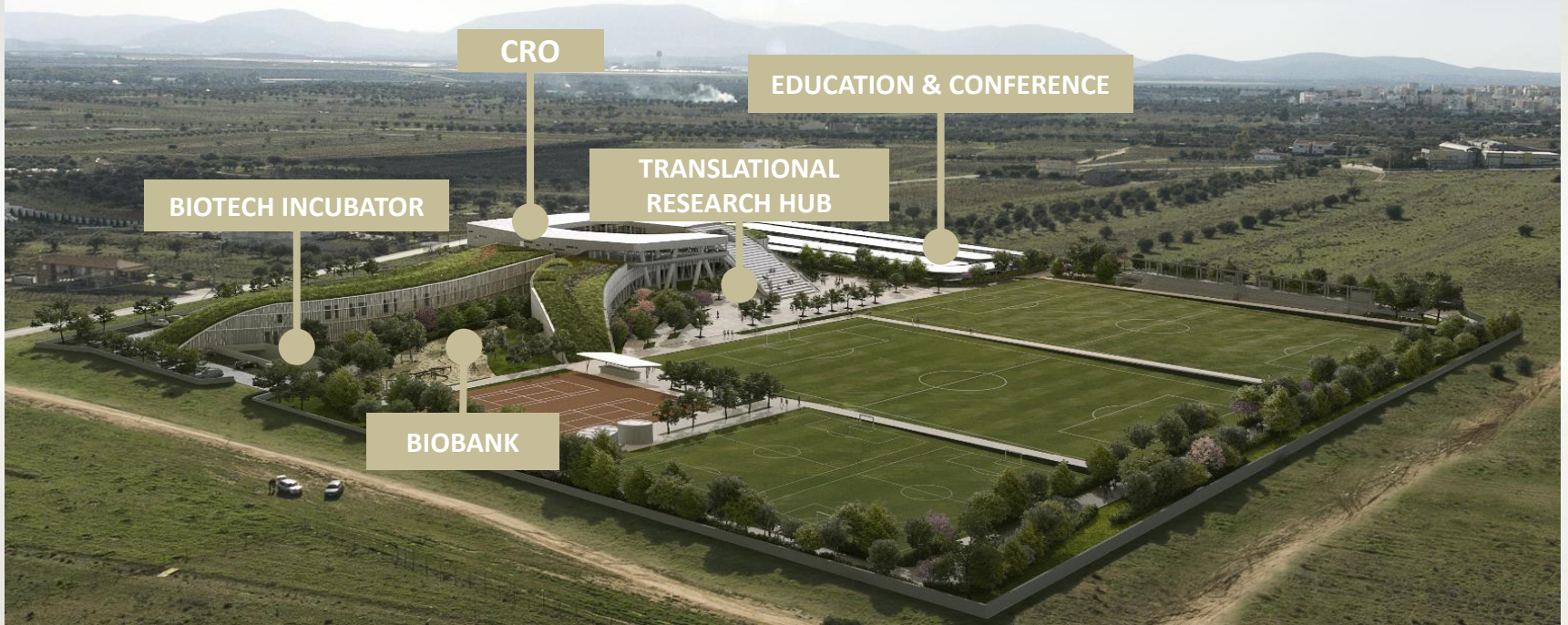
Leclerc O., Suhendra, M, The, L., What are the biotech investment themes that will shape the industry? McKinsey & Co, June 6, 2022

Seed to series C<sup>1</sup> VC funding in privately held biotech companies, 2019–21, \$ billion





# Athens LifeTech Park at Spata-Greece



# A GREEK EFFORT FOR DRUG DEVELOPMENT

## Developing novel Therapeutics for Neurodegenerative Diseases and Neural Trauma

Novel synthetic compounds with Neuroprotective, neurogenic and anti-neuroinflammatory actions. (MicroNeurotrophins).



Novel neuroimplants for spinal cord injury and brain trauma with 3D scaffolds hosting neural stem cells (brain-on-a-chip technologies)

ReNeuroCell  
THERAPEUTICS

The logo for ReNeuroCell Therapeutics features the text "ReNeuroCell" in a blue, sans-serif font, with "Re" in a lighter blue and "NeuroCell" in a darker blue. Below it, the word "THERAPEUTICS" is written in a smaller, grey, sans-serif font. The logo is centered within a white rectangular box.

# The Ecosystem of Innovative Pharma-Biotech

## OPPORTUNITIES

