

Defeating dementia: progress and challenges on the road to 2025

Funding & Incentives panel

Moderator: Dr Steven Hyman

Harvard University Distinguished Professor and Director, Stanley Center at the Broad Institute of Harvard and MIT

#DefeatingDementia

Defeating dementia: progress and challenges on the road to 2025

Professor Bart de Strooper

Director of the UK-Dementia Research Institute, Professor at University College London, UK
And Professor at University of Leuven and VIB, Belgium

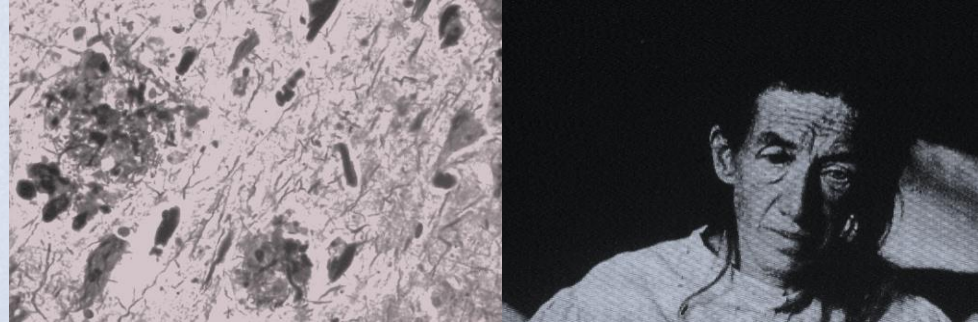
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WHY DIDN'T WE MAKE MORE PROGRESS?

Breakthrough Observation in 1906



Alois Alzheimer
1864-1915



Über eine eigenartige Erkrankung der Hirnrinde

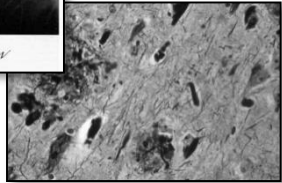
*Allgemeine Zeitschrift für Psychiatrie und Psychisch-gerichtliche
Medizin. 1907 Jan;64:146-8*



**UK Dementia
Research Institute**

Scientific research in AD

1906



1970

Acetylcholine hypothesis

Identification of β -amyloid (1984)
Tau (1986)

1990

APOE 4 (1993)

1987:
- 1^e clinical trial
- APP



FDA approval:
2000

2001

2003

2010

amyloid imaging (2004)

biomarkers

Presenilin (1995)
Gamma-secretase (1998)
BACE1 (1999)



mouse chimera model (2017)

2018:
Good Results with
Aducanumab
Ban2401

Tau imaging (2017)

Trem2
Microglia
neuroinflammation

Tau cryo-EM structures (2017)

Scientific Gap in dementia research

Number of publications



Number of Phase 3 trials since 2000:

Number of approved drugs since 2000:



“...I can think of no other condition where innovation, especially breakthrough innovation, is so badly needed...[Dementia] is not just a public health priority. It is a public policy priority...”

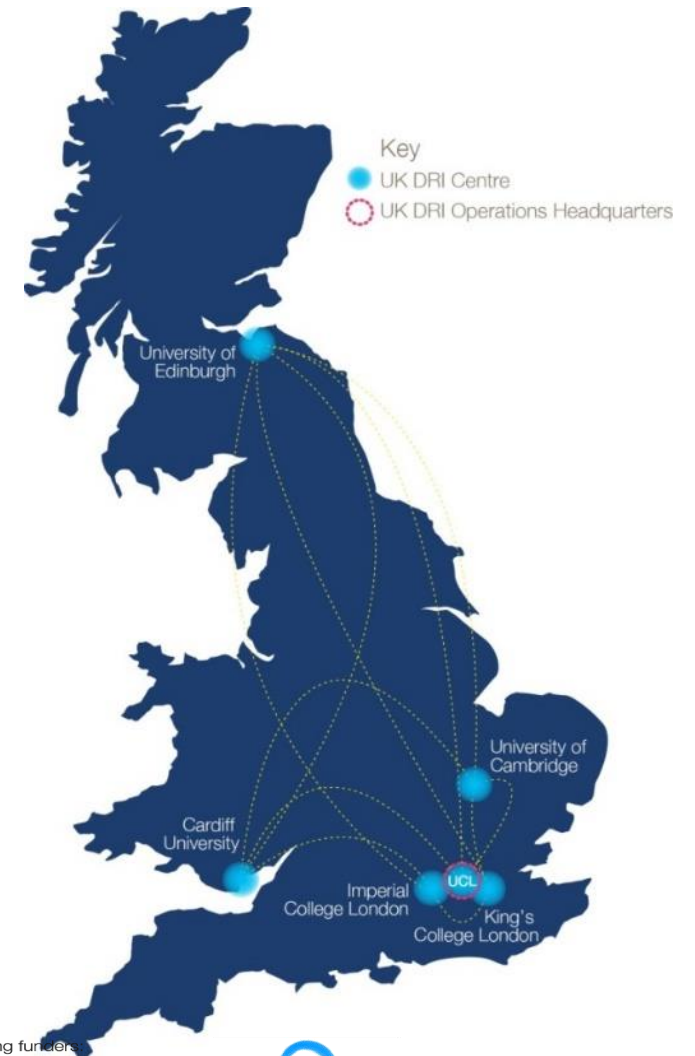
When the private sector... does not want to invest in R&D [research and development] we need to look at why... And when [the] market fails, we require strong leadership...

You are stepping in to take the slack and making sure people affected by such devastating disease can have the hope that they need...”

Margaret Chan
Director General, WHO
2007-2017



UK Dementia
Research Institute



Founding funders:



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Hilary Evans

Chief Executive Officer, Alzheimer's Research UK

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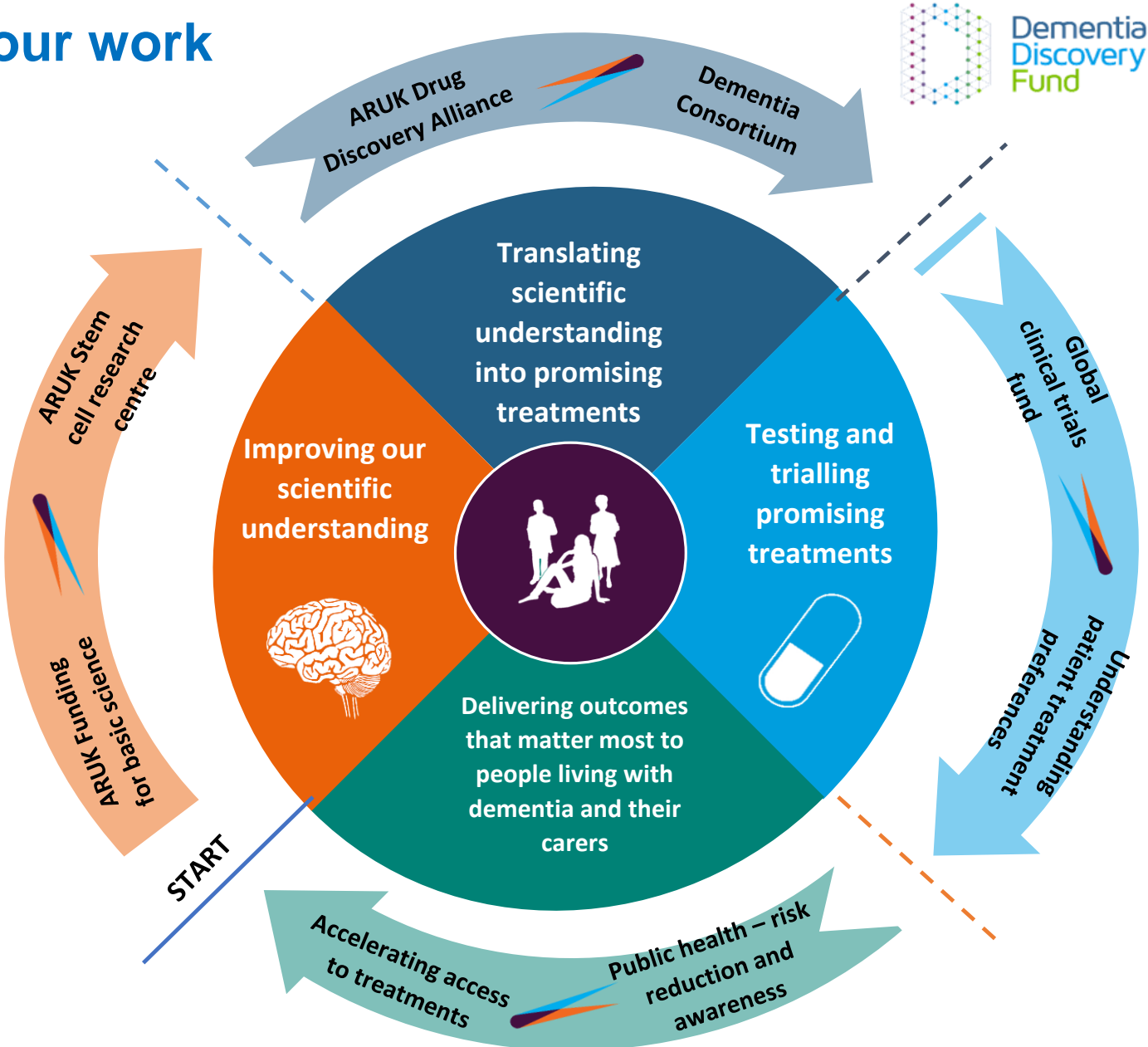
Alzheimer's Research UK

Make
breakthroughs
possible

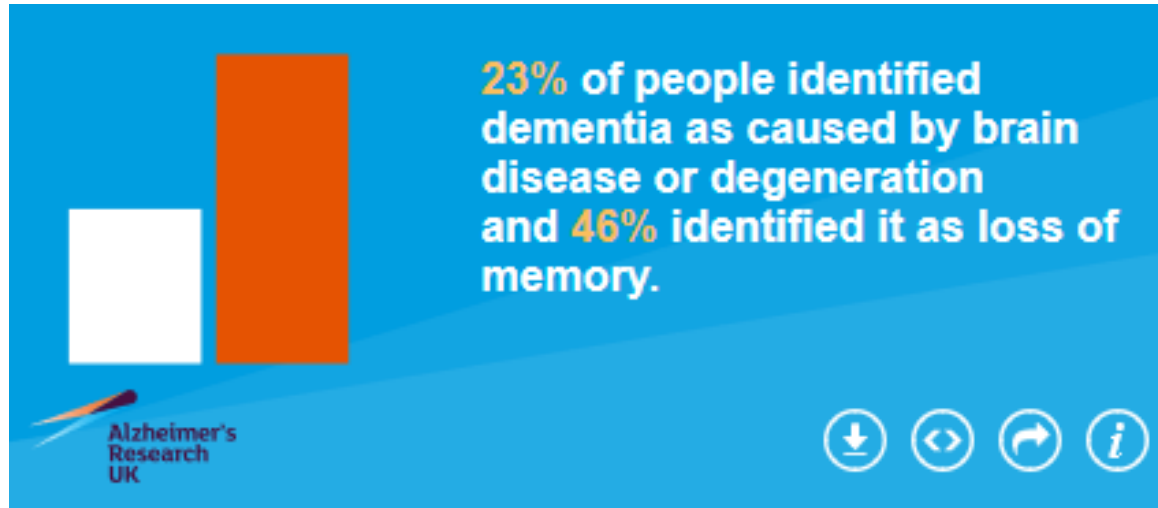
People with dementia are at the centre of our work



BRAINS FOR DEMENTIA RESEARCH
 Increasing knowledge - Finding a cure
 A partnership between Alzheimer's Research UK and Alzheimer's Society
 In association with the Medical Research Council



Innovative Engagement

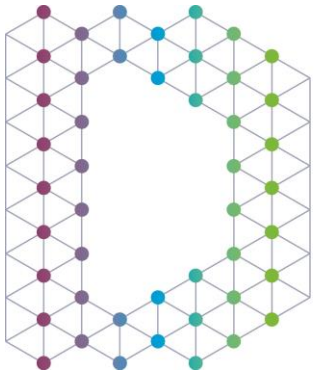


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Dr Laurence Barker

Chief Business Officer, Dementia Discovery Fund

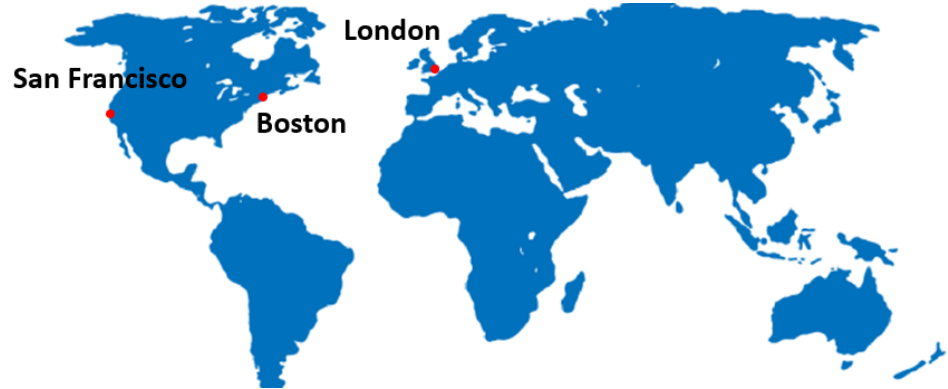
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Dementia
Discovery
Fund

Funding and Incentives Panel Discussion

WDC 5th Anniversary Summit – Laurence Barker, CBO, Dementia Discovery Fund



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DDF

- Mandate from the WDC: To develop meaningful new treatments for dementia
- Key components of the funding challenge include novelty of mechanism, lack of 'traditional' capital, early stage nature of approaches
- DDF's approach to addressing the challenge:
 - To increase the number and diversify the types of therapeutic approaches being pursued to treat dementia
 - Use an innovative, focussed venture capital model
 - Invest from an early stage onwards
- Mission: To invest in novel science to create meaningful new treatments for Alzheimer's Disease and other forms of dementia, thereby generate returns for investors
- The first time charity, government, pharma and significant public/private investors have teamed up with a venture capital firm on this scale and with this level of collaboration
- Managed by SV Health Managers, who bring a proven 20-year track record of venture investing
- DDF completed its fundraising at an oversubscribed £250m (~\$350m) in March 2018



Bill Gates



UNITEDHEALTH GROUP

woodford

**Microglial biology
& inflammation:**



Neuroinflammation
Project



Oligodendrocyte
Project



**Synaptic physiology
& function:**



**Compelling investment
opportunities beyond the
prioritised areas:**



DDF
ChemCo



AD Target
Discovery Project

DNA Damage
Response Project

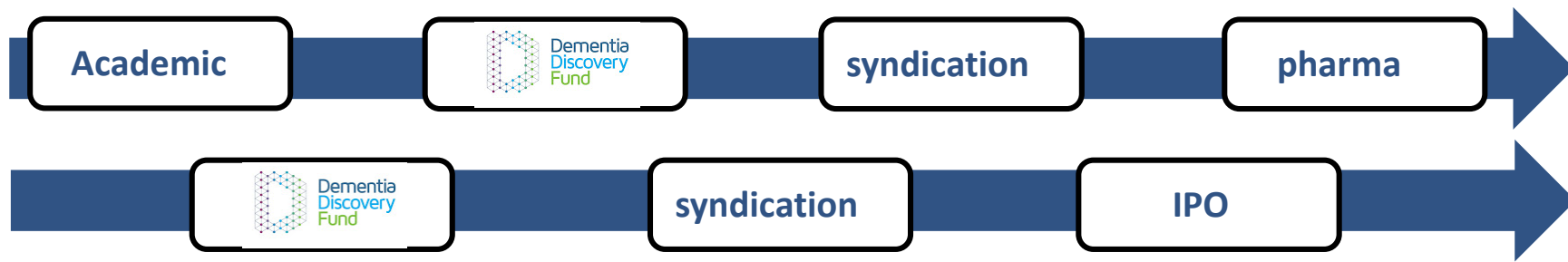
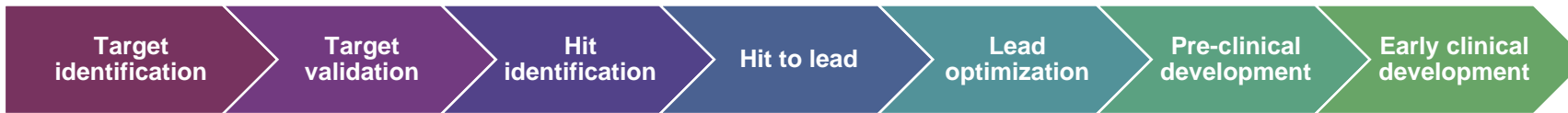
Trafficking and membrane biology:



Mitochondrial Dynamics:



- DDF will invest based on compelling novel science and unique insights for dementia therapeutics, rather than well-explored approaches such as amyloid removal
- Seek to leverage expertise and insights from neighboring fields such as immunology and oncology into the dementia field
- Collaborate with key groups to better enable the development of novel therapeutics, including the Dementia Research Institute, the Diagnostics Accelerator and others



Daionus gen2 TIAKI THERAPEUTICS Mitoconix ALECTOR THERAPIES TO REMEMBER
 NB3 Project amathus therapeutics Rheostat cerevance
 Rhizome Project ribometrix EVELO

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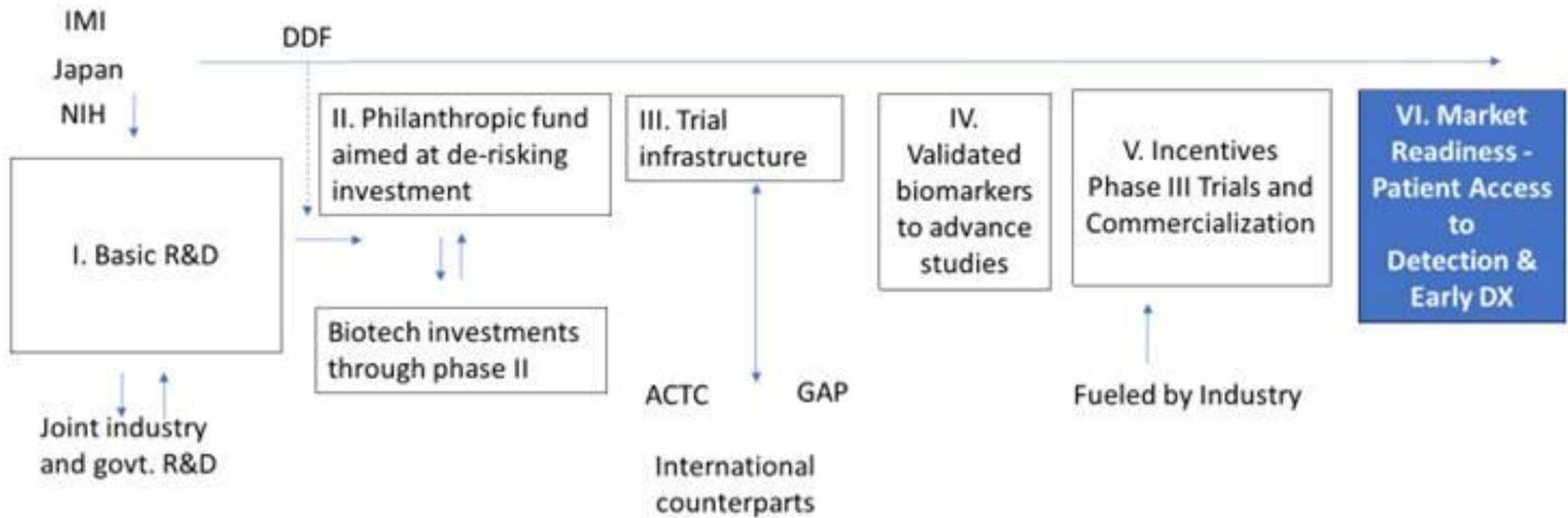
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Dr Paul Stoffels

Chief Scientific Officer, Johnson & Johnson

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Public Sector Funders Philanthropy Patients Regulators Industry



I. Deploy AMP globally	II. Launch DDF 2.0	III. Extend GAP and ACTC	IV. Fund BCI	V. Test Incentives	VI. WHO/ CEOi UsA2 BHI
Expand identification of druggable targets	Focus on de-risking targets through phase 2	Use as architecture for Global Clinical Trial Network	Achieve structured, precompetitive, data sharing	Vet concepts; Prepare for PDUFA VII	Position large, global populations - diagnosed & ready for access

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Questions?

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Lunch

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Are we on Track?

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Dr Richard J. Hodes

Director, National Institute on Aging

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