

European Bank for induced pluripotent Stem Cells



Creating a self financing stem cell repository
for Europe

The EBiSC - European Bank for induced pluripotent Stem Cells project has received support from the Innovative Medicines Initiative Joint Undertaking under grant agreement n° 115582, resources of which are composed of financial contribution from the European Union's Seventh Framework Programme (FP7/2007-2013) and EFPIA companies' in kind contribution. www.imi.europa.eu



What is the EBiSC project?

A €35 million, IMI funded project through which 26 leading European organisations will establish a central facility for the collection, testing and distribution of iPS cells to researchers.

Who is in the consortium?



- 6 large pharma companies
- 6 SMEs
- 8 Universities
- 5 public agencies
- 1 charity funded institute
- 9 countries

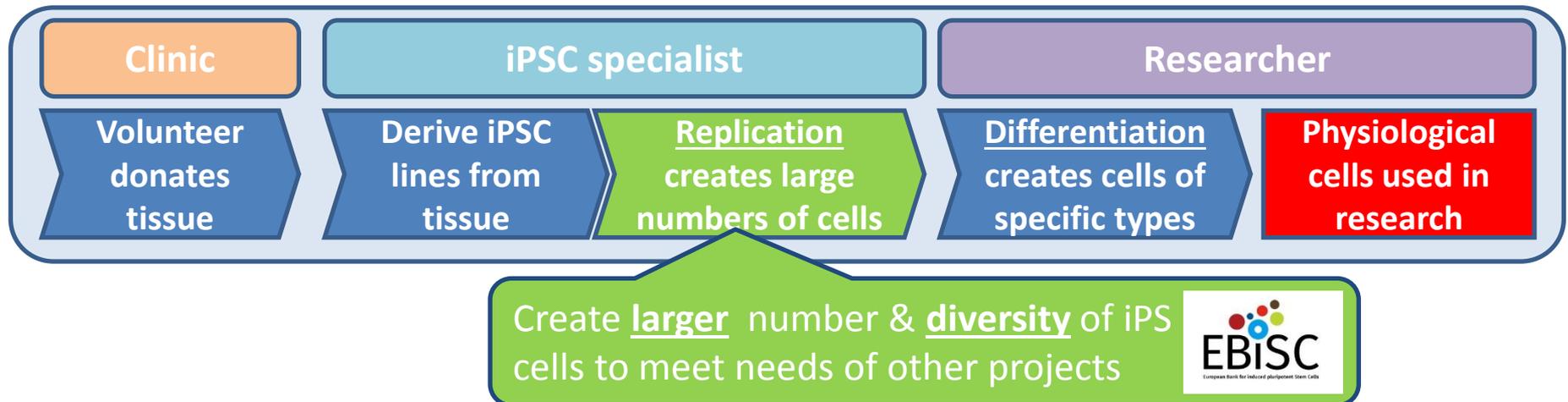
Large enough to have a **structuring effect** on the EU Research Landscape

Manageable as a multi-centre consortium

Why create EBiSC?

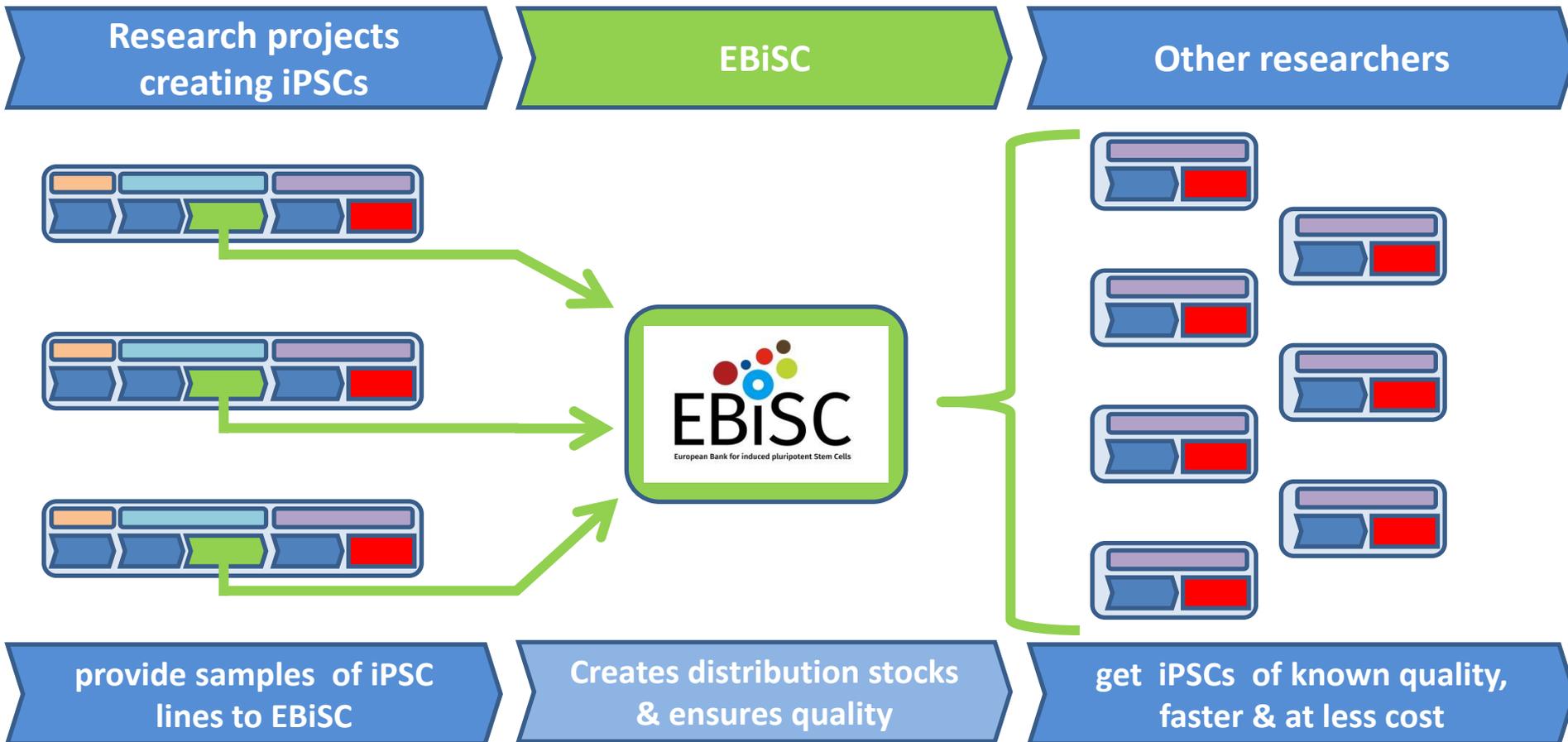
Without EBiSC:

iPSC based projects which address only one research effort =
a missed opportunity



Why create EBiSC?

With EBiSC: better use of research assets

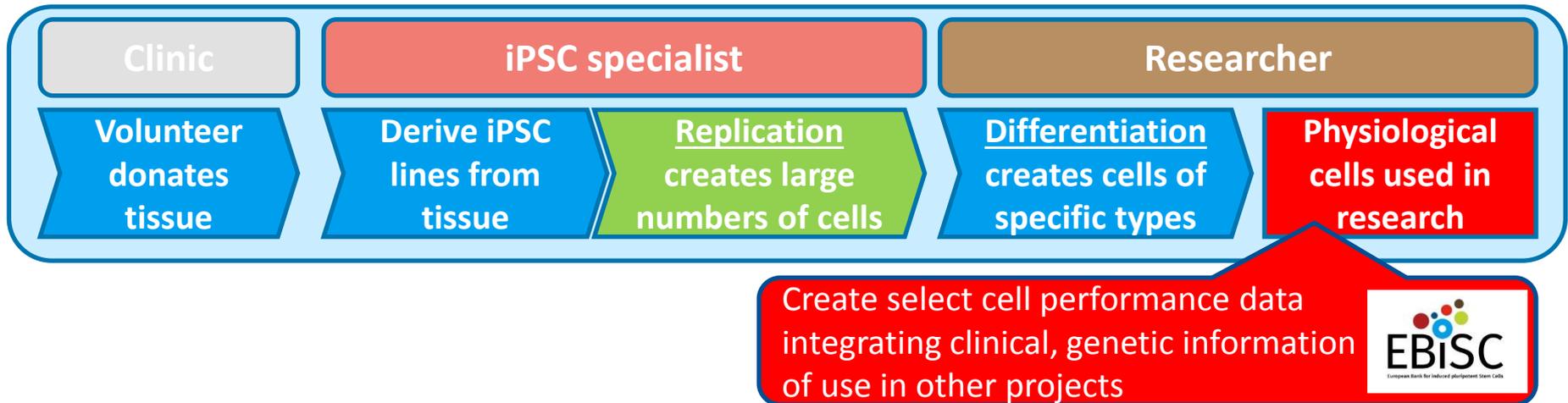


What makes EFPIA member engagement so important?



With pharma partners:

EBiSC' cell line collection will be configured to match industry needs =
EU hub supporting large & small industry collaboration



What will EBiSC do?

EBiSC : improving the research landscape in Europe

Research projects
creating iPSCs

EBiSC

Other researchers

Establish **central facilities** which use best cell culture technologies to operate at scale

Consent forms & contracts which meet needs of all stakeholders

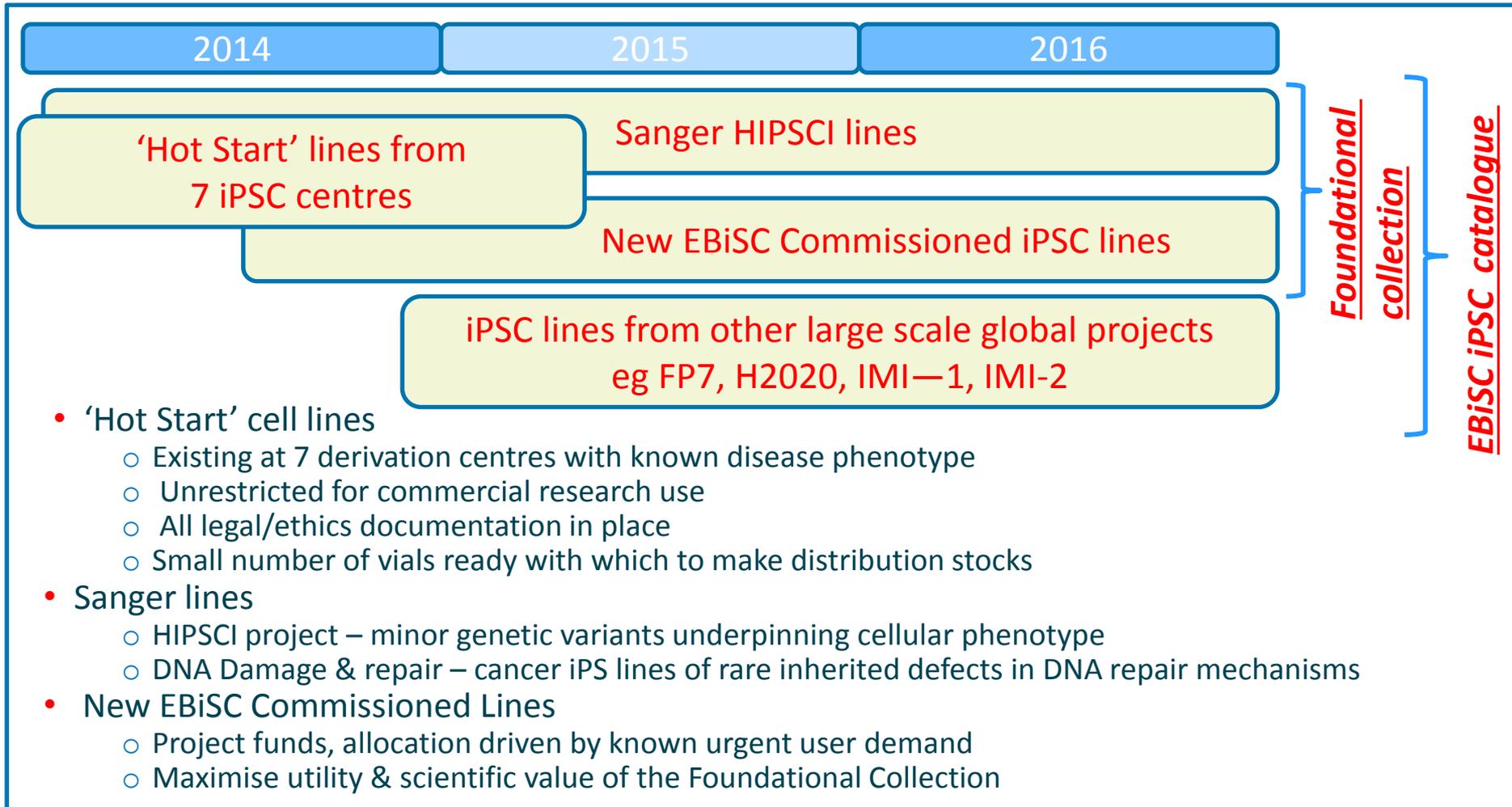


Create a **catalogue** of cell lines which meet user needs

Common standards for processing and testing cell lines

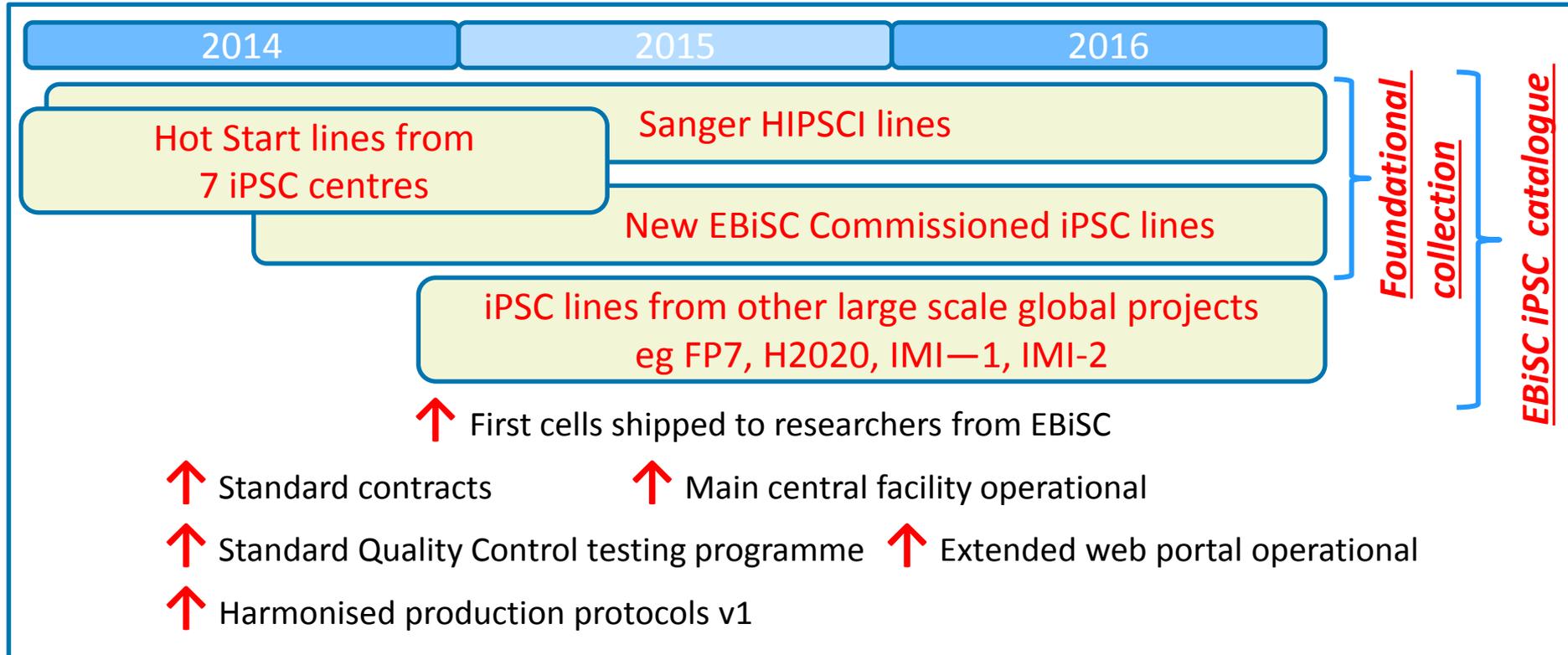
Data management system which provides extensive data to users but controls access

How is the initial cell line collection constituted?



- 'Hot Start' cell lines
 - Existing at 7 derivation centres with known disease phenotype
 - Unrestricted for commercial research use
 - All legal/ethics documentation in place
 - Small number of vials ready with which to make distribution stocks
- Sanger lines
 - HIPSCI project – minor genetic variants underpinning cellular phenotype
 - DNA Damage & repair – cancer iPS lines of rare inherited defects in DNA repair mechanisms
- New EBiSC Commissioned Lines
 - Project funds, allocation driven by known urgent user demand
 - Maximise utility & scientific value of the Foundational Collection

When will EBiSC deliver results?



Beyond 2016:

EBiSC will expand its catalogue to meet user demand leading to a self financing operation by 2019.

How will researchers benefit?

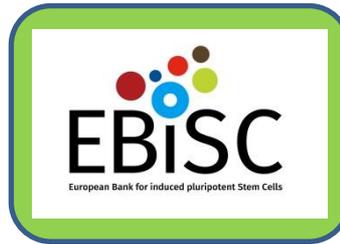
EBiSC : a better research landscape in Europe

Research projects
creating iPSCs

EBiSC

Other researchers

- Supports best practice for:
 - procurement of primary tissue
 - derivation of iPSC lines
 - testing lines for quality
- Connections to other researchers.
- Provides simple way to distribute iPSCs to other researchers.



Greater integration of
European Research

- Access to existing lines :
 - Reduced delay & cost
 - More data on actual performance of lines
- Simple contract to access the cells for research
- Access to control lines
- Access point for technology innovation – especially for SME's

How will EFPIA partners benefit?

■ Access to high quality, research grade cell lines before general distribution

- Single diversity collection covering a broad spectrum of diseases and therapeutic areas
- Sustainable supply of cells, with high quality maintained through a standardized QC platform
- Diversity collection built to align with current commercial aims
- Existing lines with interesting phenotype prior to peer reviewed publication
- New lines created via standardized protocols according to EFPIA specification
- Control lines for building functional/phenotype assays
- iPS cell culture expertise, resources and optimized methodologies
- Cells of known provenance, consented for commercial use and with freedom to operate

■ Access to expanding data annotating each cell line & new technologies

- Versatile information management system capable of handling all categories of cell line linked data
- Controlled access to patient/donor de-identified medical record data
- User-generated content updated periodically & directly relevant to the specific cell line
- Development of automated platforms for expansion, cryo-preservation & recovery

■ Access to a full service approach

- Patient/donors and their medical records from a broad network of clinical centers
- SOPs from tissue procurement to characterized cell lines and beyond into phenotype assays
- iPS-derived progenitors other somatic lineages if preferred, overcoming need for in-house iPS capabilities
- Training & skills development if needed for in house iPS capabilities

How will the public benefit?

A common European approach for iPSC based research

Establishing a central resource will

- define and disseminate best practice for iPSC based research **to tissue donors, their clinicians, research funders, patients etc** as well as to researchers
- provide confidence in current European practice for iPSC based research
- provide a focal point for academics and SME's for technology innovation
- Enable faster more cost effective research.

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Thank you for your attention!

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More about EBiSC...



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