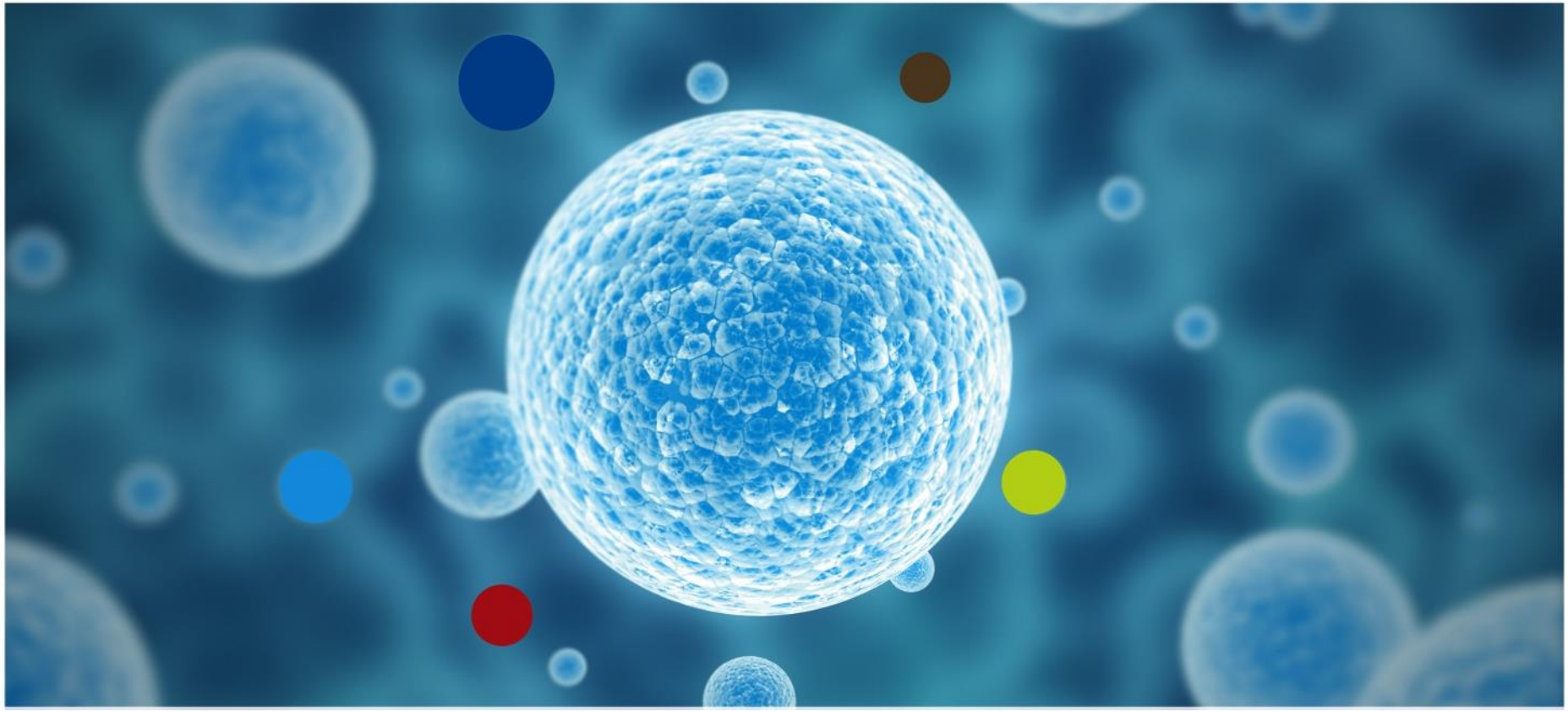
A sustainable European Bank for induced pluripotent Stem Cells

EBiSC2



The EBiSC2 project has received funding from the Innovative Medicines Initiative 2 Joint Undertaking (JU) under grant agreement No 821362. The JU receives support from the European Union's Horizon 2020 research and innovation programme and EFPIA.

efpia

imi innovative medicines initiative

EBiSC: The European Bank of induced Pluripotent Stem Cells

- **EBiSC1**: A first project phase to establish the bank supported by IMI and EFPIA, active 2014-2017

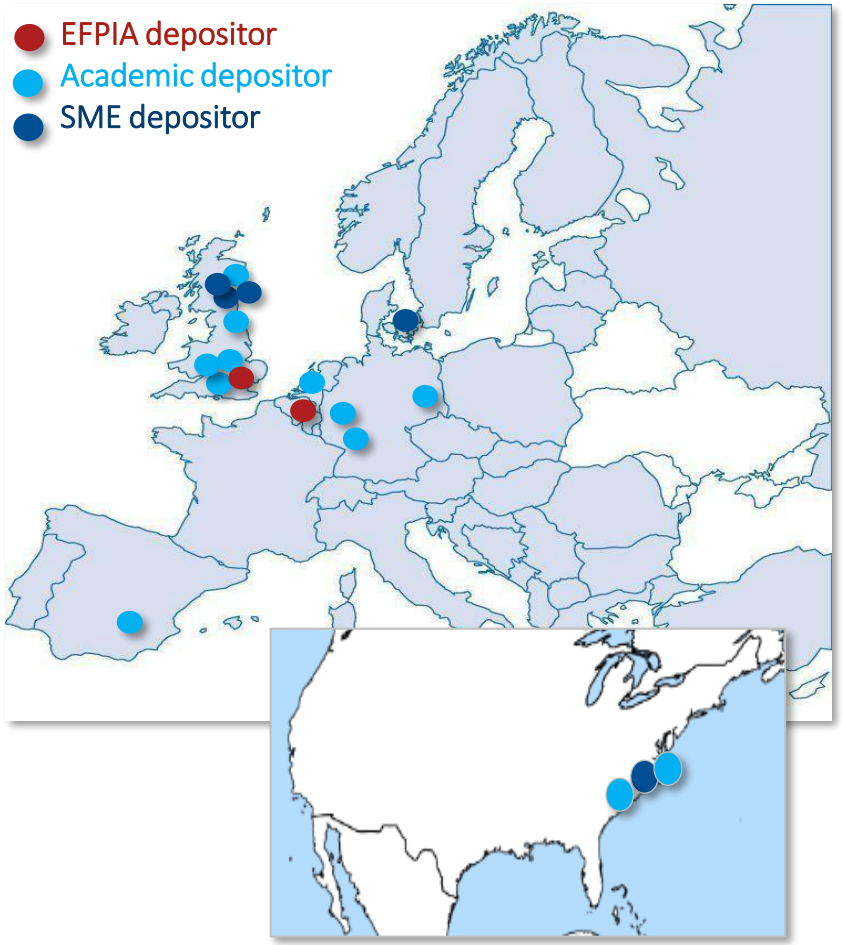
- **EBiSC2**: A second project phase supported by IMI and EFPIA, running 2019-2022 developing tools and infrastructure to ensure long term, independent and sustainable operations of the bank.

- **EBiSC**: The output –an operational iPSC biobank to collect and distribute iPSC lines for research use worldwide, in addition to providing new iPSC derived products and services.

www.EBiSC.org

EBiSC simplifies iPSC research through centrally collecting iPSC lines...

- EBiSC iPSC lines deposited by research groups internationally
  - >900 iPSC lines
  - Samples from >30 different clinical studies
  - >20 different depositing institutions
  - Academic, SME, biobanks, EFPIA and consortia projects as depositors
  - Global deposition welcome



.. and making them available to researchers via standardised processes

- **Consent** review
- Completion of **legal** agreements
- Shipment of iPSC vials for **secure storage**

- **Feeder free** and **antibiotic free** culture
- **High volume** banking
- **Automation** and **bioreactor** based scalable culture

- Industry standard **quality control**
- **Data shared** to depositors and users
- **Functional /phenotypic** assessment of derived cells

- General iPSC line data in **hPSCreg** (www.hPSCreg.eu)
- Data shared via **EBiSC catalogue**
- **Sensitive data** via Data Access Committee archive

- **iPSCs shared** to non-profit and commercial users
- **Research use** only
- **Non-profit** fee per vial
- **Worldwide** distribution

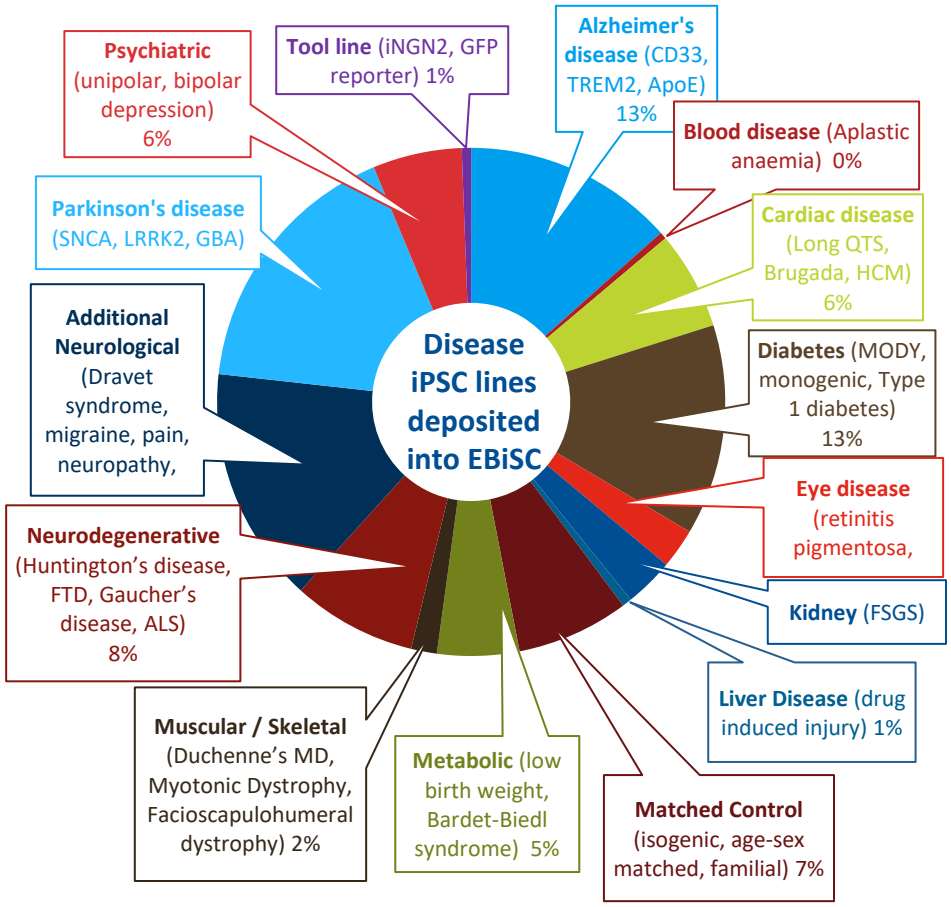
- Generation and sharing of **pre-differentiated** cells e.g. **iPSC-neurons**
- Participation in **external iPSC research projects**

Key results from the EBiSC2 project

iPSCs

- Maintenance, security and re-stocking of established collection.
- New isogenic cells including inserted variants and corrections
- Modified iPSC lines to drive differentiation and monitor cellular or disease phenotype.
- >45 diseases
- Age, ethnicity and sex matched controls

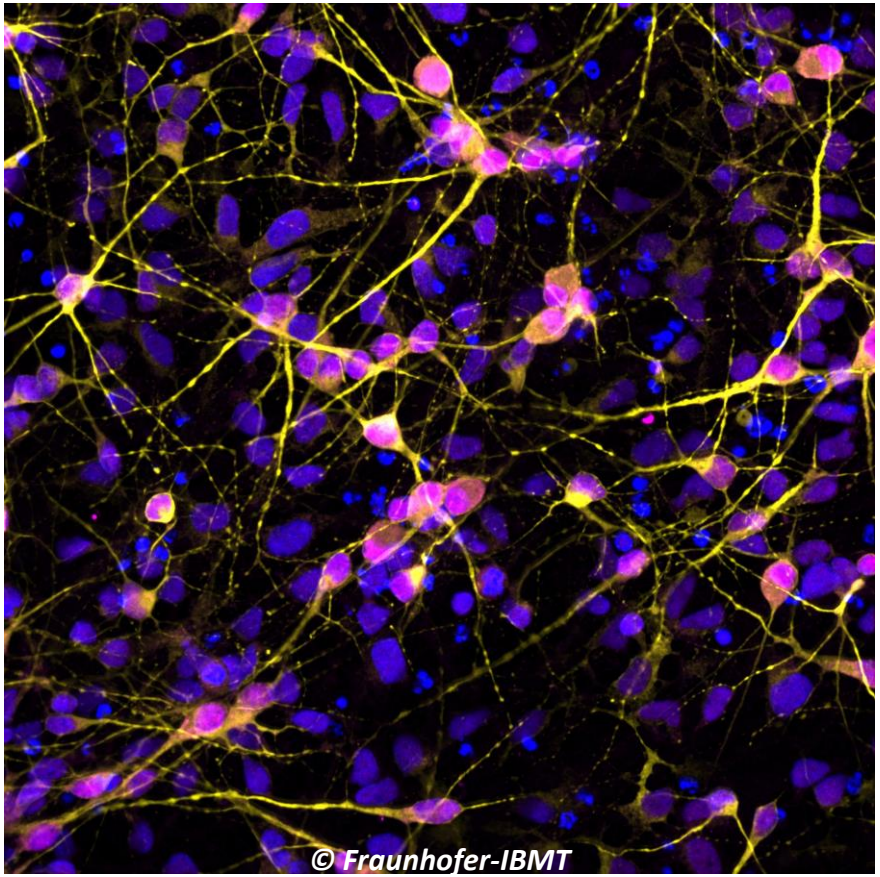
- See www.EBiSC.org/search



Key results from the EBiSC2 project

iPSC- derived cells

- Pre-differentiated iPSC neurons and others coming soon.
  - www.EBiSC.org/EBISC-NEUR1
- Tailored QC panel according to industry standards
- Functional screening and characterisation
- High cell concentration cryopreservation.
- Scaleable differentiation protocols



Time: 7 days post-thaw. Magnification: 40x
Description: Cryopreserved EBiSC-NEUR1 cells were thawed, cultured on Poly-Ornithine / Laminin and immunostained after 7 days for beta-III-tubulin (TUBB3, magenta) and DAPI (blue).

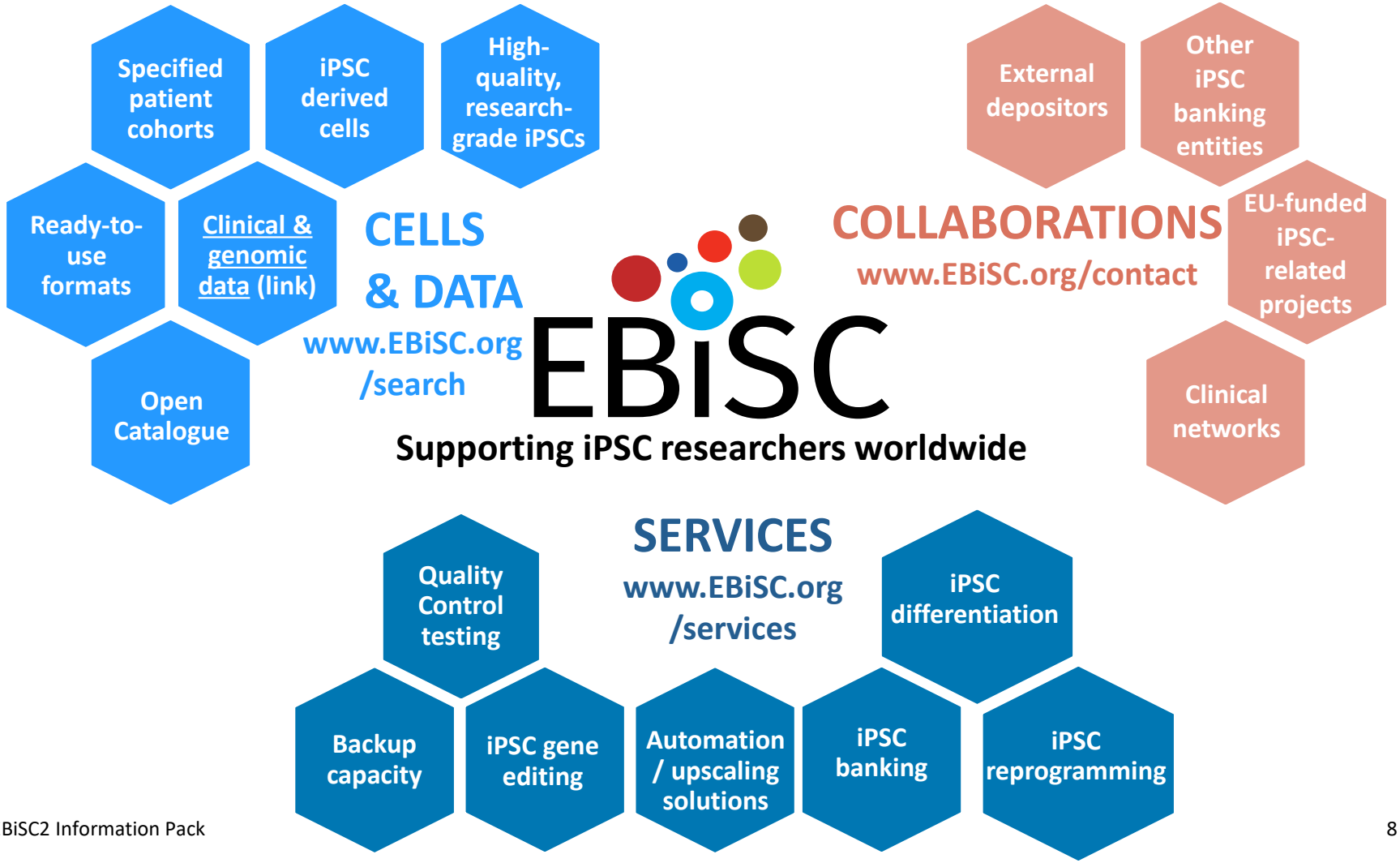
Key results from the EBiSC2 project

Scientific developments

- 16 published open-access publications
  - www.EBiSC.org/resources/documents
- Collaboration with external projects e.g. R2U-Tox and UKDRI-IPMAR
- Collaboration with patient advocacy groups and disease research charities e.g. Alzheimer Europe
- Information for patients and the general public:
  - www.EBiSC.org/information_general_public/
- Expertise in iPSC cryopreservation, upscaling & differentiation.
- Seminars, videos, training material & protocols
  - www.EBiSC.org/resources/videos
  - www.EBiSC.org/customer-information/
- Expertise and 'lessons learned' through extensive collaboration with many different research groups and projects across 10 years of EBiSC.

www.EBiSC.org/r2u

Accessing EBiSC2 cells, data and services.



Accessing EBiSC2 cells, data and services.

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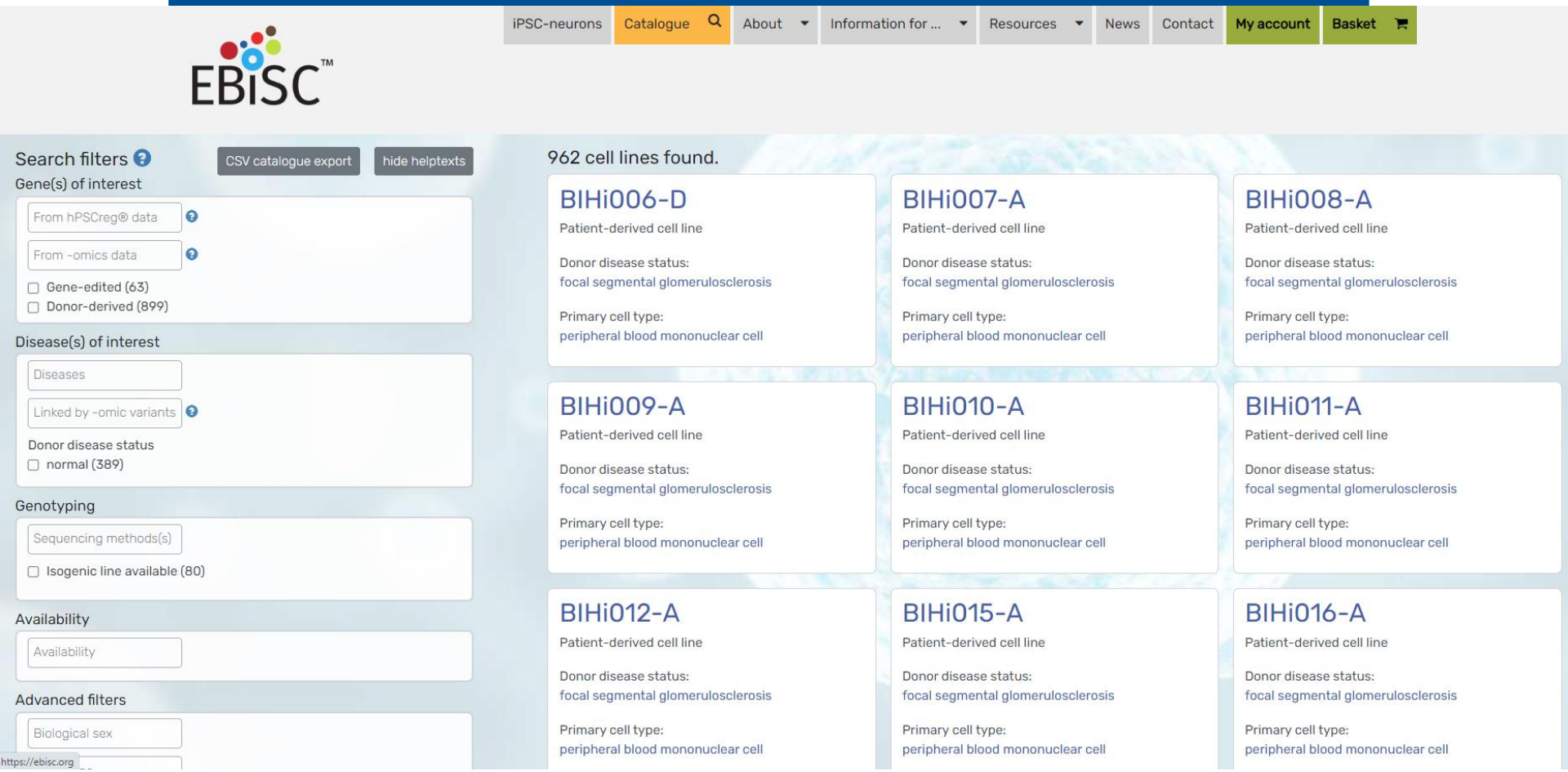

Access to the EBiSC catalogue

www.EBiSC.org

Contact

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