Programme Day 1 October 11th 2:15 pm - 7:00 pm

2.15 – 2.30 pm **Welcome and introduction** Elena Cattaneo (University of Milan)

Theme 1: Empowering cell replacement and cell

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reprogramming through Single-cell analysis – what have we learnt and what comes next?

2:30 – 3:00 pm **Overview on the literature** Ernest Arenas – theme coordinator - talk given remotely

3:00 – 3:20 pm Focus 1 - How single cell profiling in vivo can drive in vitro stem cell modeling Vittoria Bocchi (University of Milan)

3:20 – 3:40 pm Focus 2 - Refining dopaminergic subtype specification and graft composition for DA cell replacement in PD Alessandro Fiorenzano (Lund University)

3:40 – 4:00 pm

Focus 3 - RNA sequencing cartography of the ventral midbrain lineage and its utility for cellular therapeutics

NSC Reconstruct Focus Neeting

Hotel Nazionale, Piazza Montecitorio 131, Rome

The meeting will be held in Sala Capranichetta

Jonathan Niclis (Novo Nordisk) - talk given remotely

4:00 – 4:15 pm **Theme 1 Discussion**

4:15 – 4:45 Coffee Break

Theme 2: Making new connections, what the cortex can teach us about cell replacement in neurodegenerative disorders?

4:45 – 5:45 pm **Overview on the literature** by Pierre Vanderhaegen (VIB) – theme coordinator

5:45 – 6:05 pm **Focus 1 - Cortical circuit analysis tools to study transplanted human** neurons Ben Vermaercke (VIB)

6:05 – 6:25 pm



Focus 2 - Generating human basal forebrain cholinergic neurons as a potential treatment for dementia Alison Salvador (Copenhagen University)

6:25 – 6:45 pm **Focus 3 - General rules of direct neuronal reprogramming - the** influence of starter cell identity and fate competition Bob Hersbach (Helmholtz Zentrum München)

6:45 – 7:00 pm **Theme 2 Discussion**

To follow: Aperitif, short walk and dinner

NSC-Reconstruct

NSC-Reconstruct (01/2020 - 12/2023) is one of the 14 projects awarded in the European Union competitive call for proposals "Regenerative medicine: from new insights to new applications" under the current framework program for research of the European Union, Horizon2020 - Grant Agreement 874758.



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Programme Day 2 October 12th 9:00 am - 3.30 pm

Theme 3: Exploring graft function: how looking back over the last decades can help moving forward

9:00 – 10:00 am

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Overview on the literature Anders Björklund (Lund University) – theme coordinator

10:00 – 10:20 am Focus 1 – Strategies to investigate the functional impact of intrastriatal grafts in rodent HD models by Gabriela Gomez-Gonzalez (University of Turin)

10:20 – 10:40 am **Focus 2 – Patient-specific treatments - protecting the graft from** pathology by Malin Parmar (Lund University)

10:40 – 11:00 am Focus 3 – Strategies to improve the impact of cell therapy on non-motor symptoms in PD by Roger Barker (Cambridge University) - talk given remotely

11:00 – 11:15 am **Theme 3 Discussion**

NSC Reconstruct Neetinc

Hotel Nazionale, Piazza Montecitorio 131, Rome

The meeting will be held in Sala Capranichetta

11:15 – 11:45 am Coffee Break

Theme 4: can we shape a new-generation of grafts with enhanced function and integration assays for regenerative medicine?

11:45 – 12:45 pm **Overview on the literature** Annalisa Buffo (University of Turin) – theme coordinator

12.45 – 2.15 pm Lunch

2:15 –2:35 pm Focus 1 - Novel methodologies for the assessment of graft potency, integration and transcriptomic profile in situ Tomas Björklund (Lund University)

2:35 –2:55 pm



Focus 2- Assessing CNS integration of programmed neurons Oliver Brüstle (Bonn University)

2:55 –3:15 pm

Focus 3 - Shaping a new generation of grafts with adequate myelination Maria Martinez Reza (Helmholtz Zentrum München)

3:15 – 3:30 pm **Theme 4 Discussion**

3:30 pm Final remarks and end of the meeting

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