

Human Brain Project Newsletter!

Dear Sir or Madam,

Please find a short overview of Human Brain Project (HBP) news from April 2020 below.

Best regards,

HBP Digital Communications

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Fenix Resources for COVID-19 research

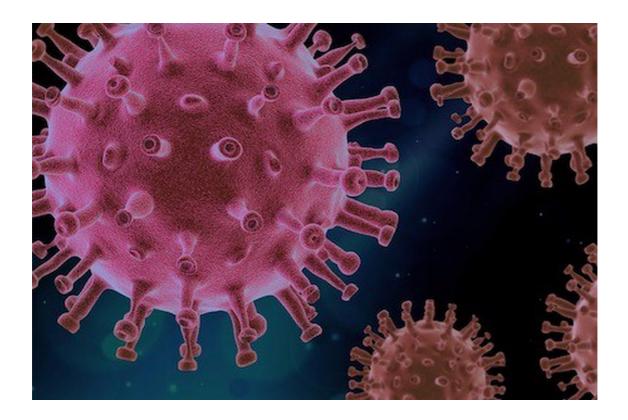
The Fenix Research Infrastructures are being made available to researchers and scientists working on topics related to the current COVID-19 pandemic.

Read more



Spotlight series: How HBP scientists and infrastructures help in the Corona crisis

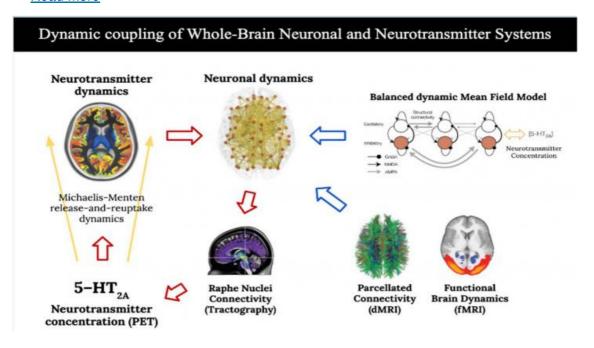
Researchers throughout the Human Brain Project use their expertise and unique scientific infrastructure to address research questions that go beyond neuroscience, to support activities against the pandemic.



Neuronal and neurotransmitter systems dynamic coupling explains the effects of psilocybin

Interest in research into the effects of psilocybin, a psychedelic drug, has increased significantly in recent years due to its promising therapeutic effects in neuropsychiatric disorders such as depression, anxiety, and addiction.

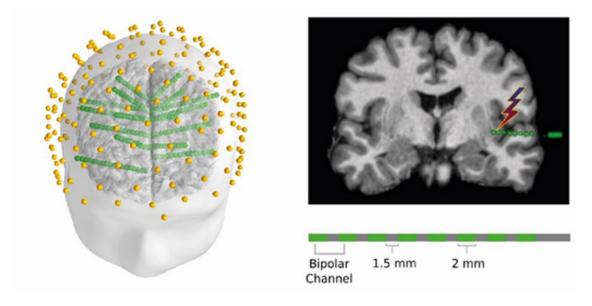
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LOCALIZE-MI: an open source dataset of simultaneous intracerebral stimulation and HD-EEG in humans

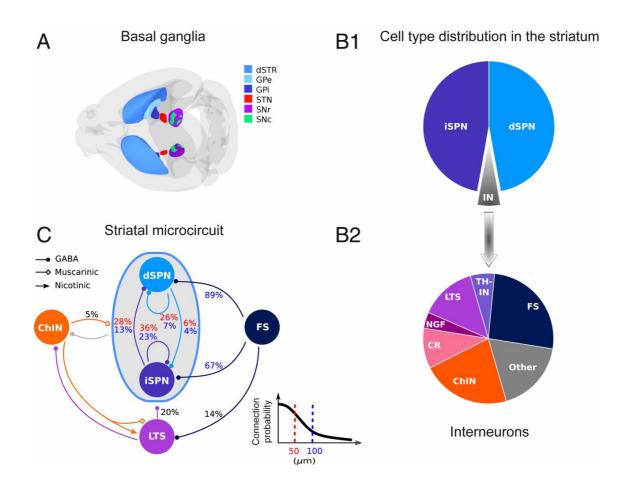
The LOCALIZE-MI dataset constitutes the first open dataset that comprises EEG recorded electrical activity originating from precisely known locations inside the brain of living humans.

Read more



The microcircuits of striatum in silico

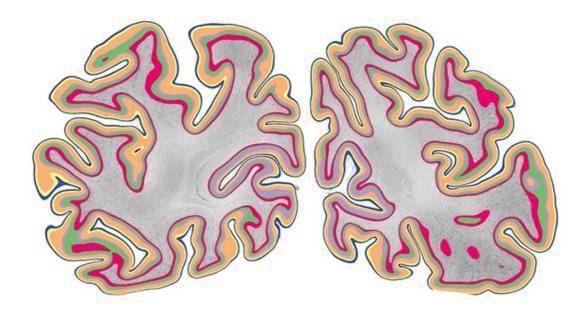
"We present a nearly full-scale model of the mouse striatum using available data on synaptic connectivity, cellular morphology, and electrophysiological properties to create a microcircuit mimicking the real network."



BigBrain 3D atlas of cortical layers: Cortical and laminar thickness gradients diverge in sensory and motor cortices

"We present the first whole-brain quantitative 3D laminar atlas of the human cerebral cortex."

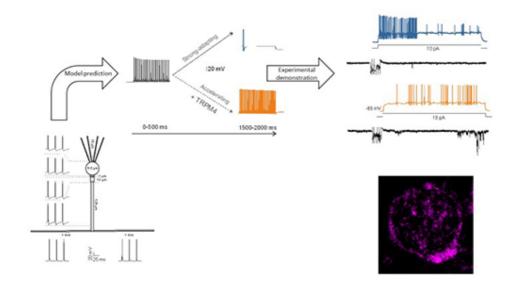
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Computational modeling predicts unsuspected complexity in the simplest cells of the brain

Collaborations in the HBP will implement new cellular properties in large-scale models connected to neurorobots and neuromorphic computers.

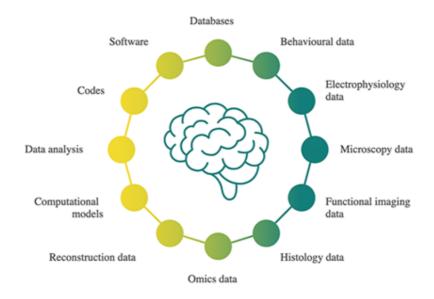
Read more



Project News

EBRAINS now a recommended data sharing service for Nature Scientific Data

EBRAINS services join the list of recommended repositories for neuroscience data.



The Human Brain Project Calls for Expression of Interest – 6 projects selected for EC funding for the third Specific Grant Agreement

6 projects were selected for EC funding from October 2020 to March 2023 (SGA3 phase).

Read more



Impressions from the first HBP Tea & Slides session on 23 April 2020

The HBP Student Representatives & Ambassadors, supported by the HBP Education Programme, invited interested researchers from within as well as outside the HBP to a virtual tea and coffee break featuring talks by young researchers from the HBP.



Human Brain Project / EBRAINS: Call for Proposals for European Neuroscientists at Large for Using ICEI e-Infrastructure Resources

European neuroscientists are invited to submit proposals for using these resources for research on topics in the broader scope of the HBP.

Read more



The Fenix User Forum is now live

The Fenix User Forum is organised by the ICEI project that facilitates the Fenix Infrastructure. Its aim is to enable interaction between Fenix and users as well as among users themselves.

Find out more and become a member



Call for Clusters – The European Brain Research Area – Deadline June 1st

The last EBRA Call for Clusters has its deadline on June 1st, 2020. It aims to promote cooperation and exchange between brain research projects and to enable or enhance international collaboration and the development of clusters in all areas of brains research.

A cluster is an association of research projects that can be directed towards basic research, clinical research and/or methodological approaches under a common topic, and disease and/or thematic area.

Find out more



Publications

- SpiNNaker: A Spiking Neural Network Architecture Book was published on 31 March 2020, It is Open Access - free to download, with a paper version available to buy - and in less than a month has already had over 5,000 downloads from
 - the publisher's web site.
- PLOS Biology: <u>BigBrain 3D atlas of cortical layers: Cortical and laminar thickness gradients diverge in sensory and motor cortices</u>
- AJOB Neuroscience: Anthropomorphism in Al
- PNAS: <u>Dynamic coupling of whole-brain neuronal and neurotransmitter</u> <u>systems</u>
- PNAS: The microcircuits of striatum in silico

- Cortex: Four new cytoarchitectonic areas surrounding the primary and early auditory cortex in human brains
- **Network Neuroscience:** <u>Model-based whole-brain effective connectivity</u> <u>to study distributed cognition in health and disease</u>
- Front. Neuroinform: Efficient Communication in Distributed Simulations of Spiking Neuronal Networks With Gap Junctions

HBP in the Media

CORDIS (EU): BSC acquires innovative technology for optimised storage and data analysis

InsideHPC: Jülich Supercomputers Power New Insights into Brain Imaging

Yahoo Finance (USA): Global Neuromorphic Chip Industry

European Animal Research Association (EU): <u>Fighting coronavirus using computer modelling</u>

Global Research (Canada): Neurotechnology Overview: Wiring Human Brains

<u>Directly to Computers</u>

Open Access Government: Brain diseases at the time of the COVID-19 pandemic

HBP experts on the Pandemic:

- Jean-Pierre Changeux
- Katrin Amunts
- Steven Laureys
- Thomas Lippert

Events

Please check with the organizer of your event to see if it has been cancelled, postponed, or will take place online due to COVID-19 prevention measures.

5th Fenix Webinar: How to use ICEI's Virtual Machines for deploying platform services

23 June 2020

This webinar will give an introduction to Virtual Machines, and how this infrastructure is suitable for deploying platform services.

Find out more

NEST Conference 2020

29-30 June

The NEST Conference provides an opportunity for the NEST Community to meet, exchange success stories, swap advice, learn about current developments in and around NEST spiking network simulation and its application.

This year's conference will take place as a virtual conference. We are now inviting contributions to the conference, including plenary talks, "posters" and breakout sessions on specific topics.

Important dates

01 June 2020 — Deadline for submission of contributions

08 June 2020 — Notification of acceptance

10 June 2020 — Deadline for NEST Initiative Membership applications (registration is free for members in 2020)

22 June 2020 - Registration deadline

29 June 2020 — NEST Conference 2020 starts

Find out more

FENS 2020 Virtual Forum

11 - 15 July 2020

As a consequence of the COVID-19 pandemic, the FENS Forum 2020 will be held entirely virtually. Professionally implemented online, the Forum will provide all delegates with plenty of opportunities to learn, interact, grow, and network.

Find out more

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