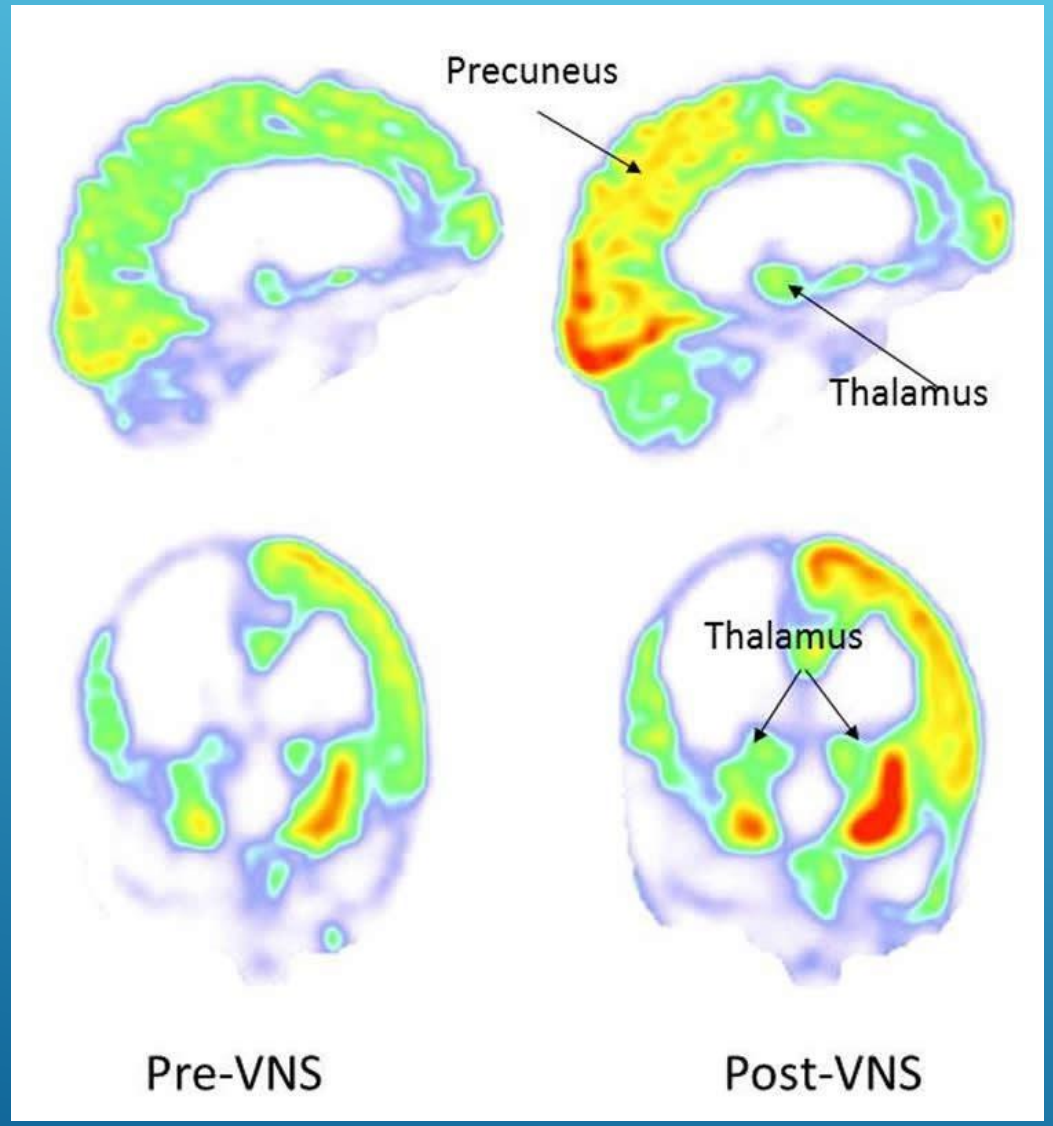
НЕЙРОПРОРЫВЫ-2017/2018

Neurology&Neuroscience

Лекторий «Извилины знаний» портала Neuronovosti.Ru

Алексей Паевский и Анна Хоружая



ВЫВЕДЕНИЕ ИЗ ВЕГЕТАТИВНОГО СОСТОЯНИЯ

Стимуляция блуждающего нерва, Corazzol et al.

Университет Клода Бернара в Лионе

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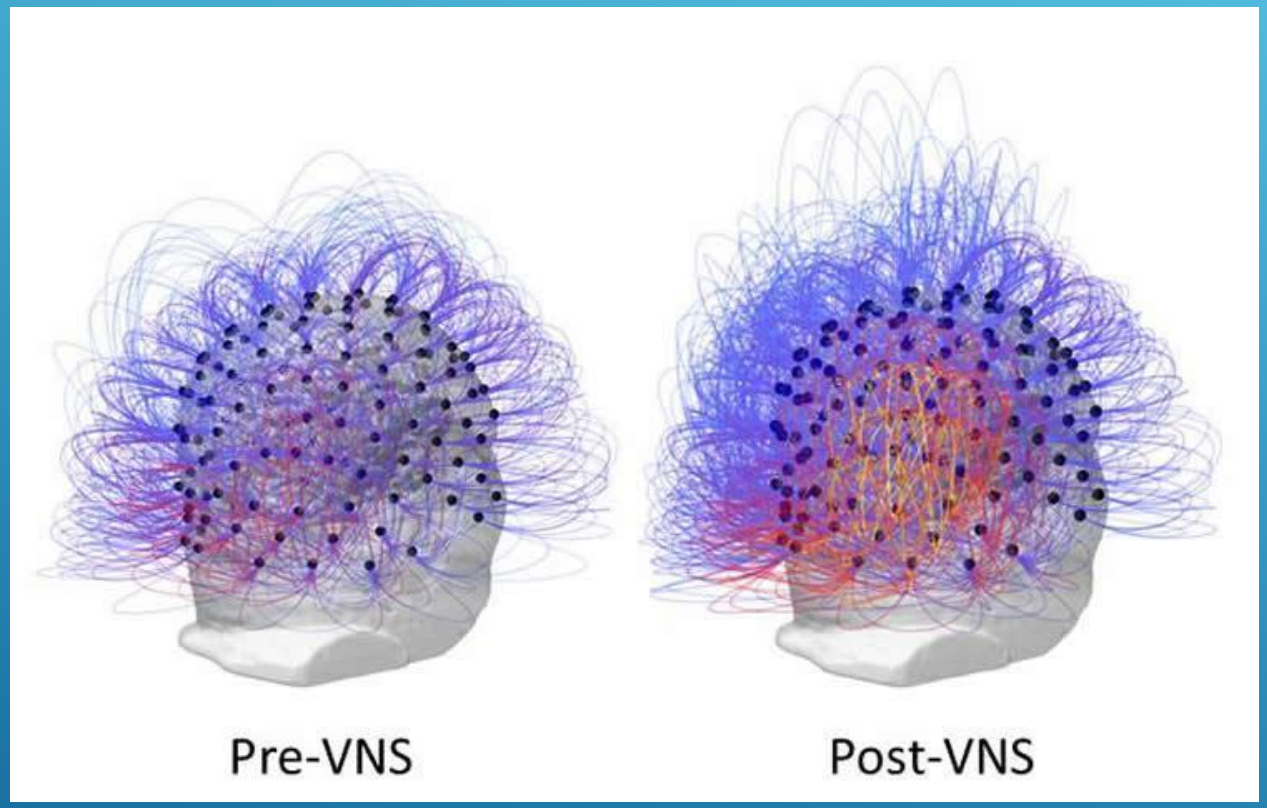

Стимуляция блуждающего нерва, Corazzol et al.

Университет Клода Бернара в Лионе

ТЕРМОГЕНЕТИКА

Всеволод Белоусов, ИБХ РАН

Thermogenetic neurostimulation with s ingle-cell resolution

Nature Communications

DOI: 10.1038/ncomms15362

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Всеволод Белоусов, ИБХ РАН

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Nature Communications

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7-ТЕСЛОВЫЙ МРТ В КЛИНИЧЕСКОЙ ПРАКТИКЕ

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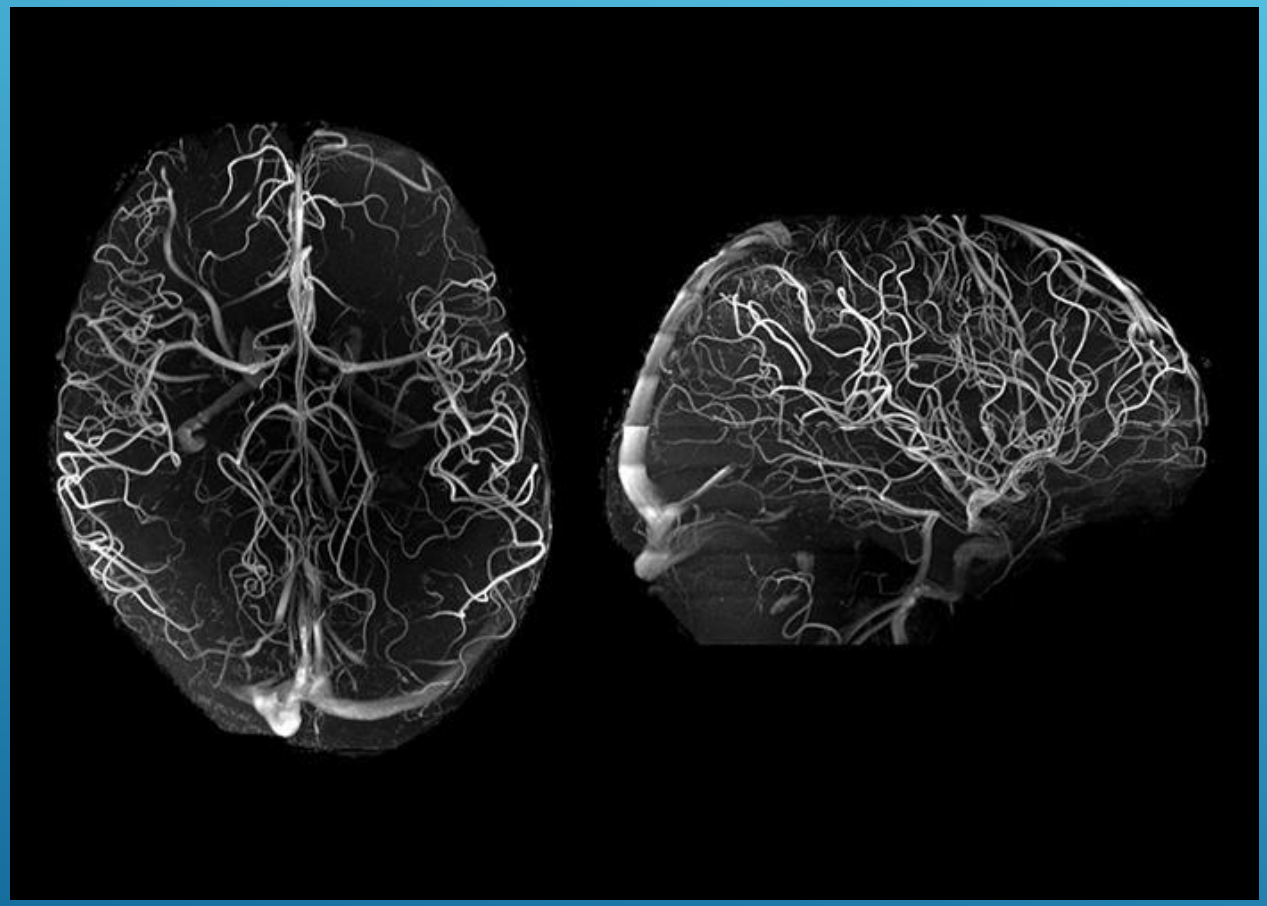
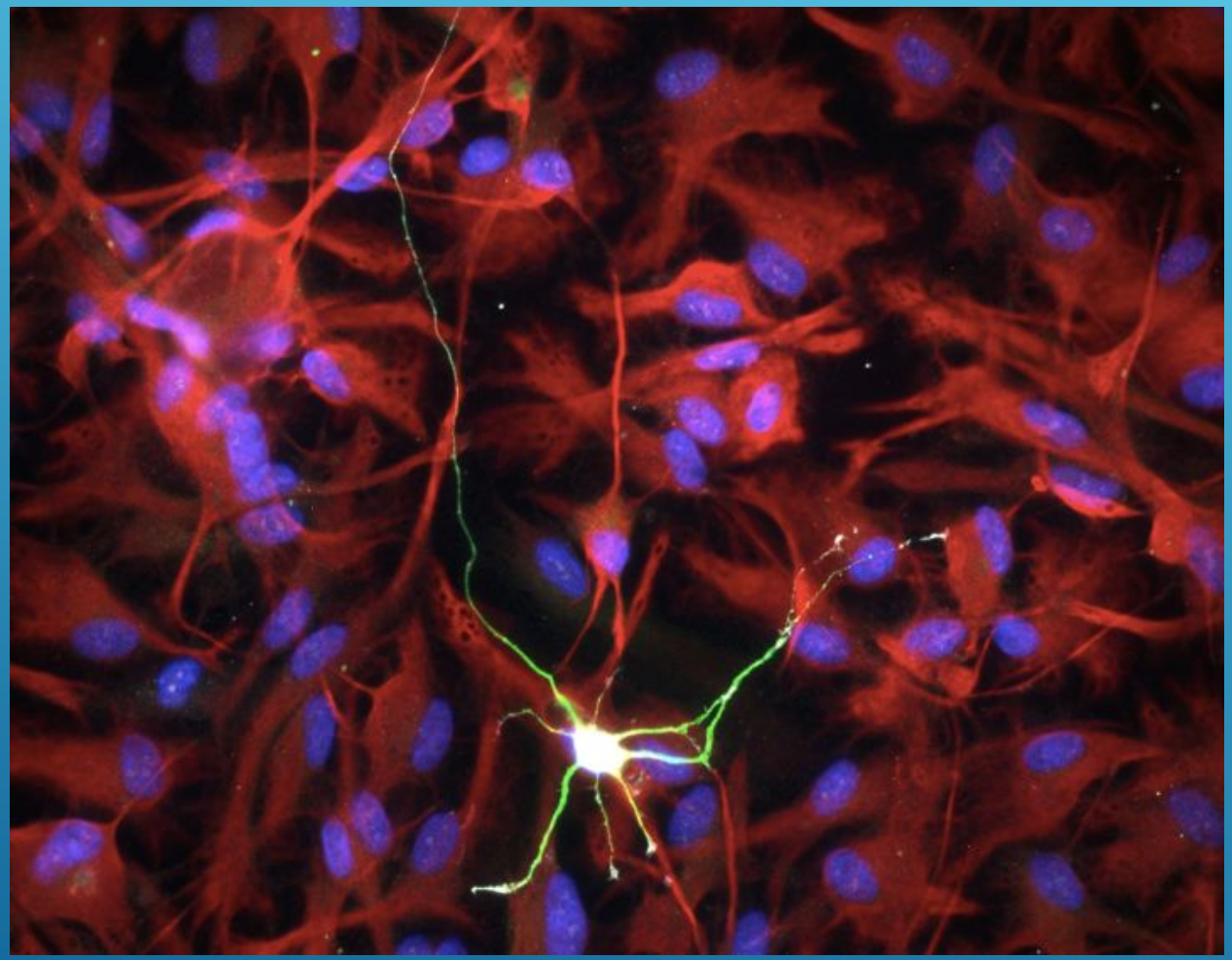




АУТИЗМ: КОГДА НЕЙРОНЫ С АСТРОЦИТАМИ «ССОРЯТСЯ»

Fabiele Baldino Russo, Beatriz Camille Freitas, Graciela Conceição Pignatari, Isabella Rodrigues Fernandes, Jonathan Sebat, Alysson Renato Muotri, Patricia Cristina Baleeiro Beltrão-Braga

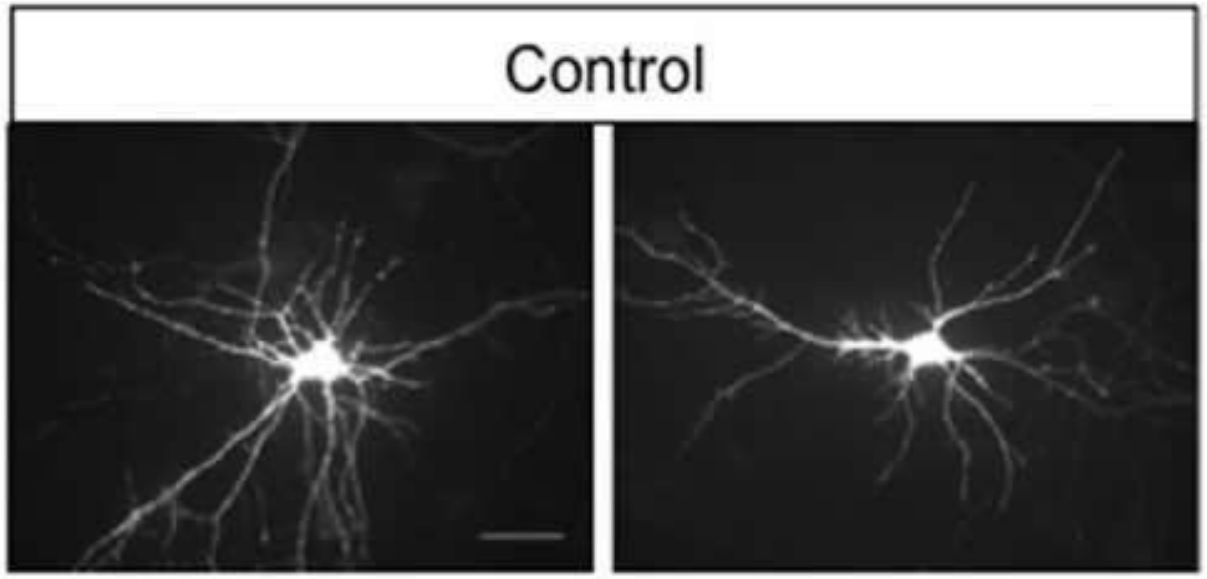
Modeling the interplay between neurons and astrocytes in autism using human induced pluripotent stem cells

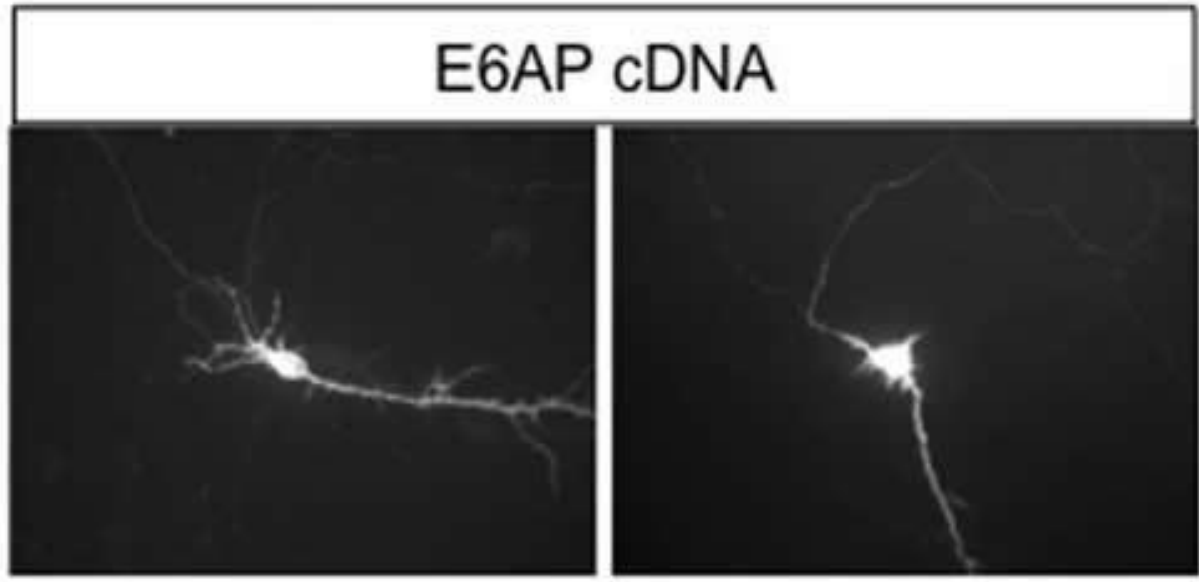
In Biological Psychiatry, 2017

https://doi.org/10.1016/j.biopsych.2017.09.021.

«АУТИСТИЧЕСКИЙ» ГЕН ОБРЕЗАЕТ ДЕНДРИТЫ

Journal of Neuroscience, NIH



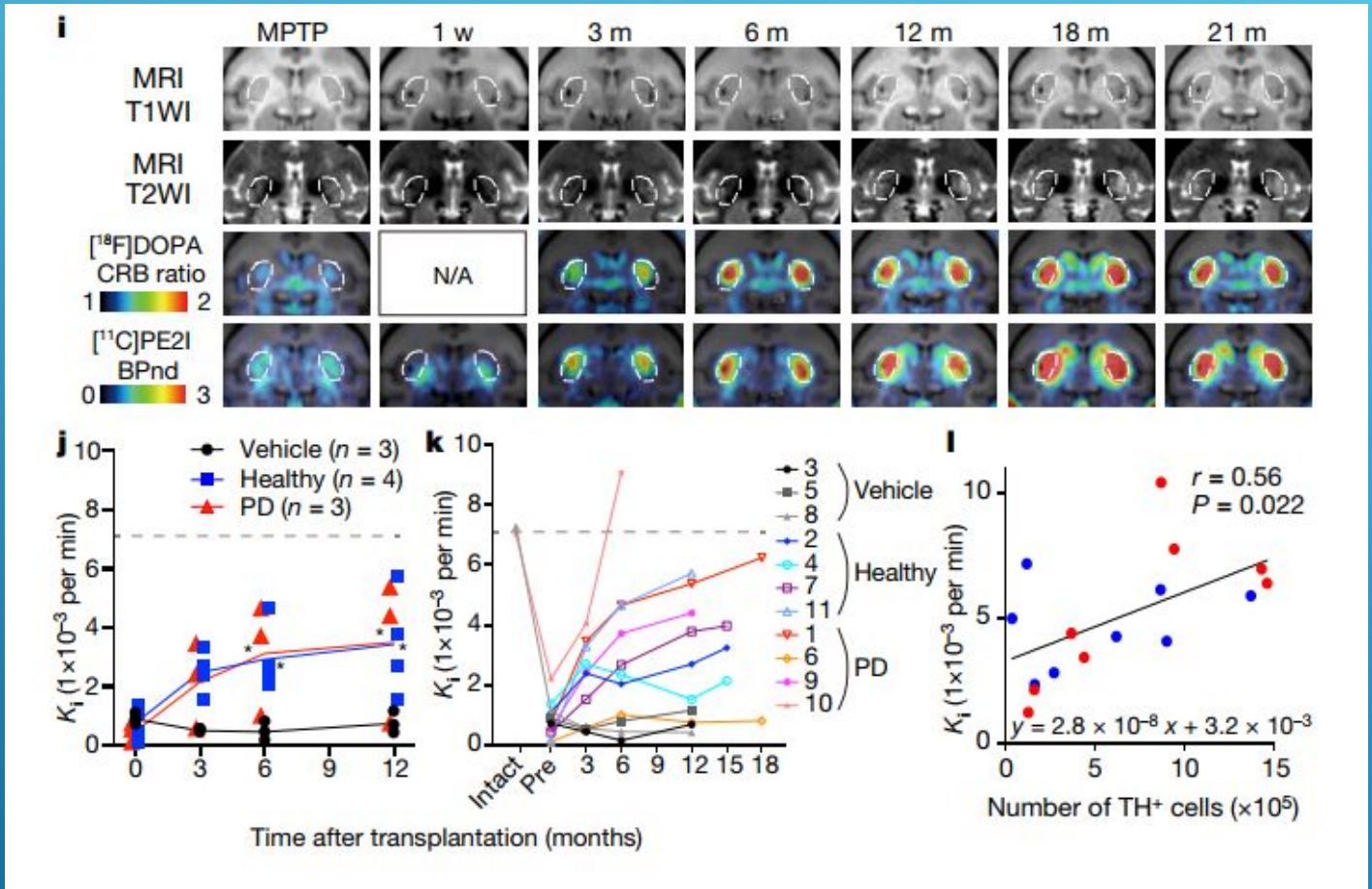


ВЫЛЕЧИТЬ БОЛЕЗНЬ ПАРКИНСОНА У МАКАК И ПОПЫТАТЬСЯ У ЛЮДЕЙ

Human iPS cell-derived dopaminergic neurons function in a primate Parkinson's disease model

Nature 548, 592–596

doi:10.1038/nature23664



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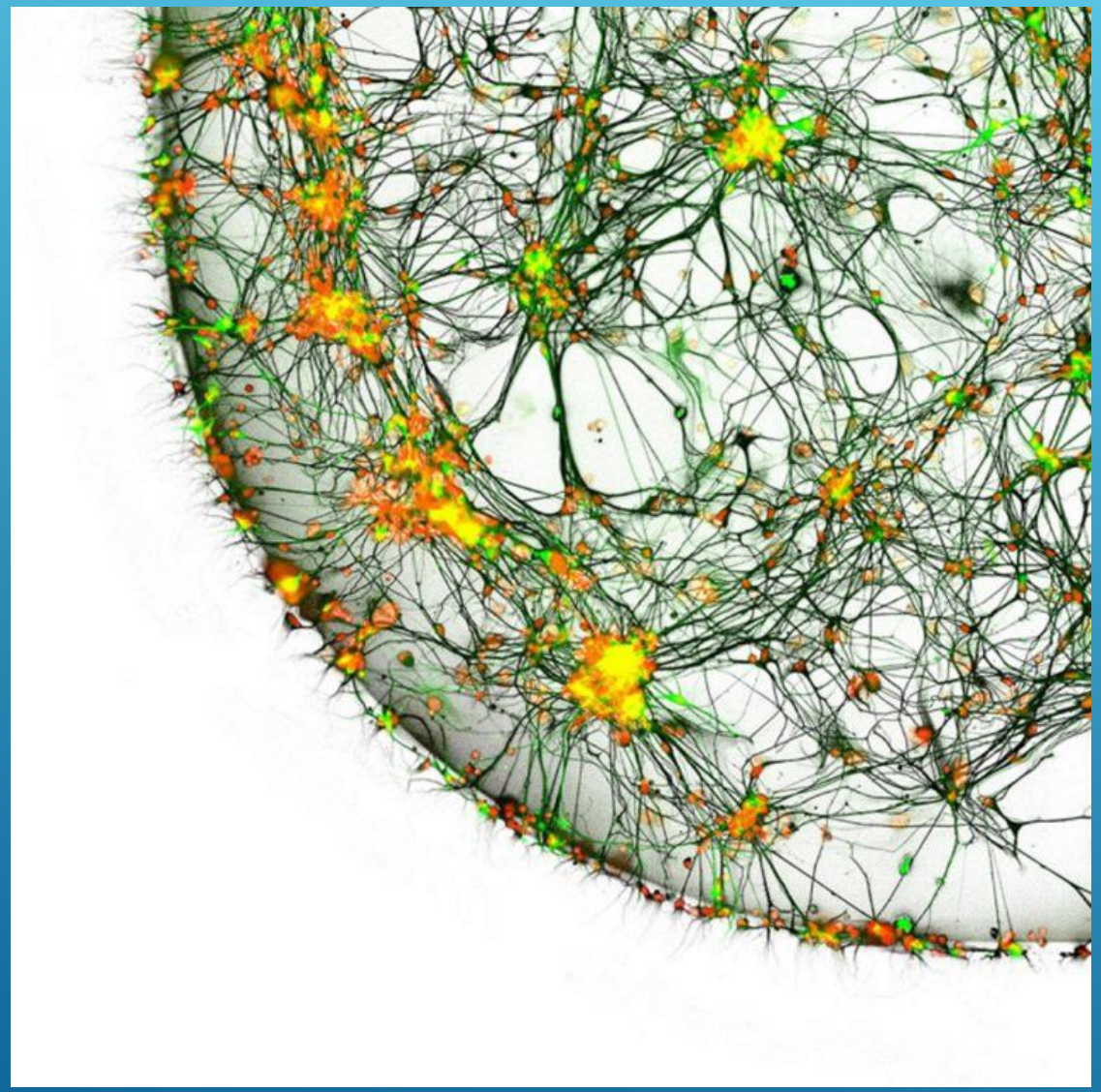

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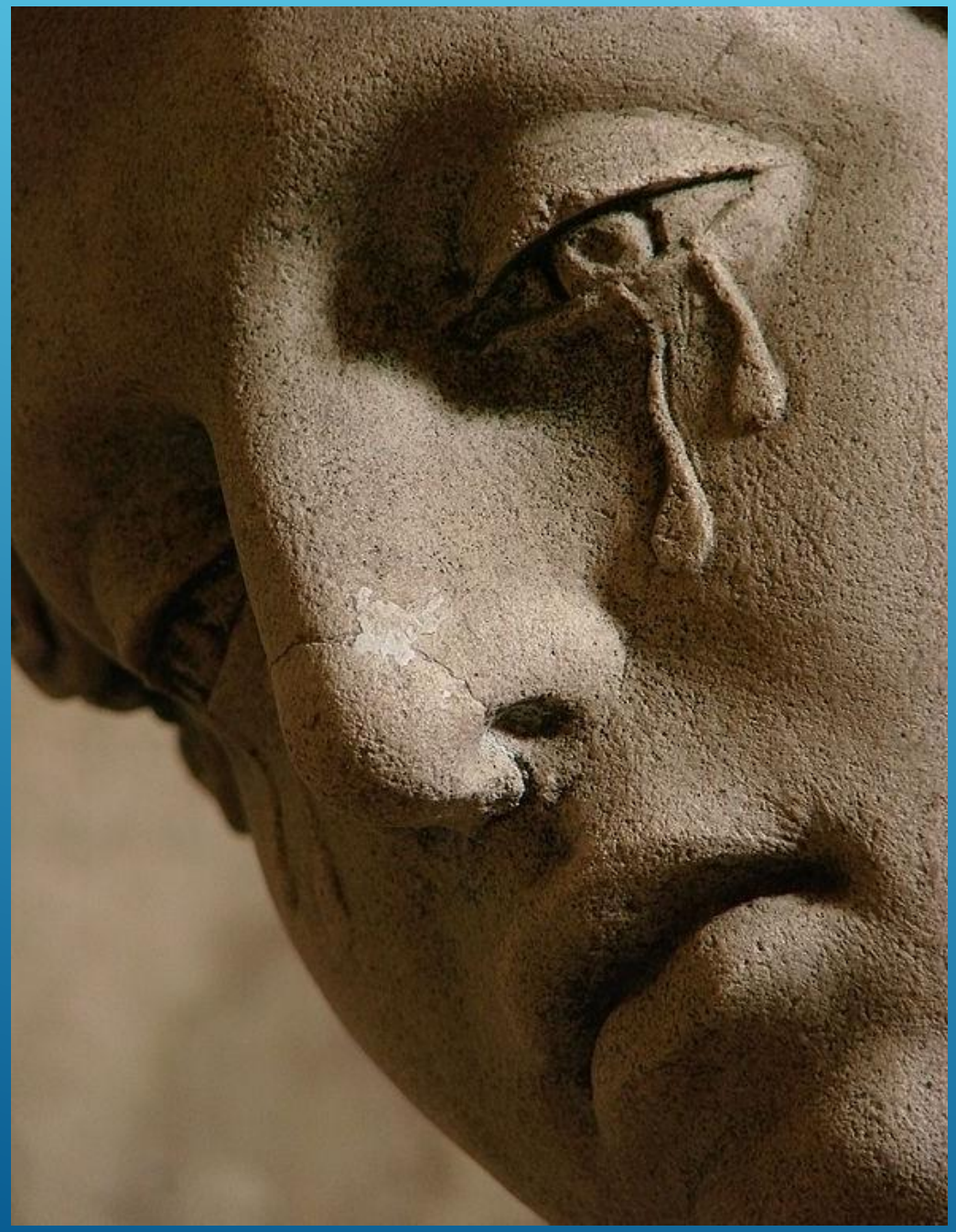
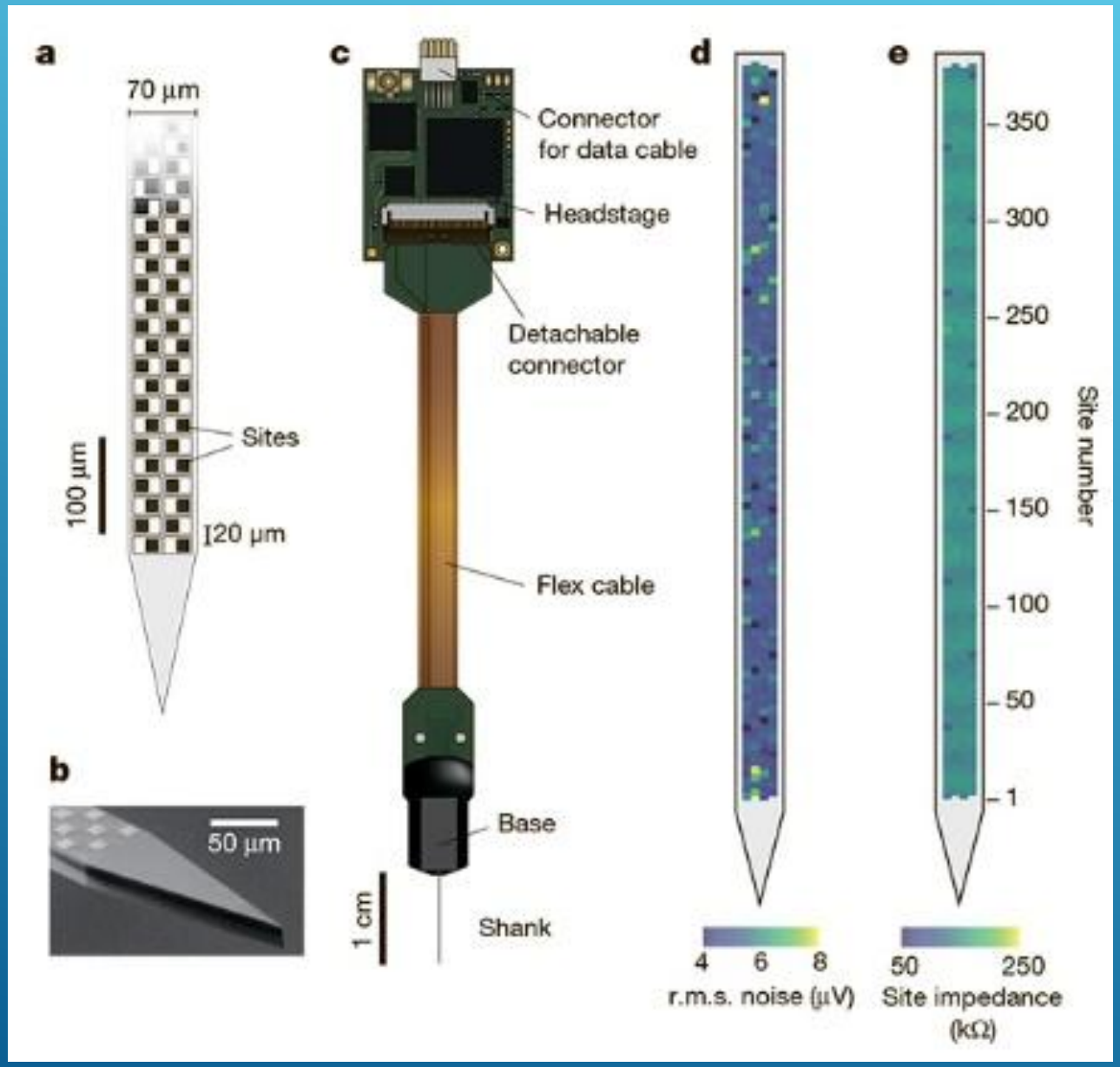
Dr. Regis Grailhe, Nasia Antoniou & Dr. Rebecca Matsas

Institut Pasteur Korea
Department of Screening Sciences & Novel Assay Technology
Seongnam, South Korea



СЛЁЗЫ ПАРКИНСОНА



ЭЛЕКТРОД ДЛЯ СОТЕН НЕЙРОНОВ

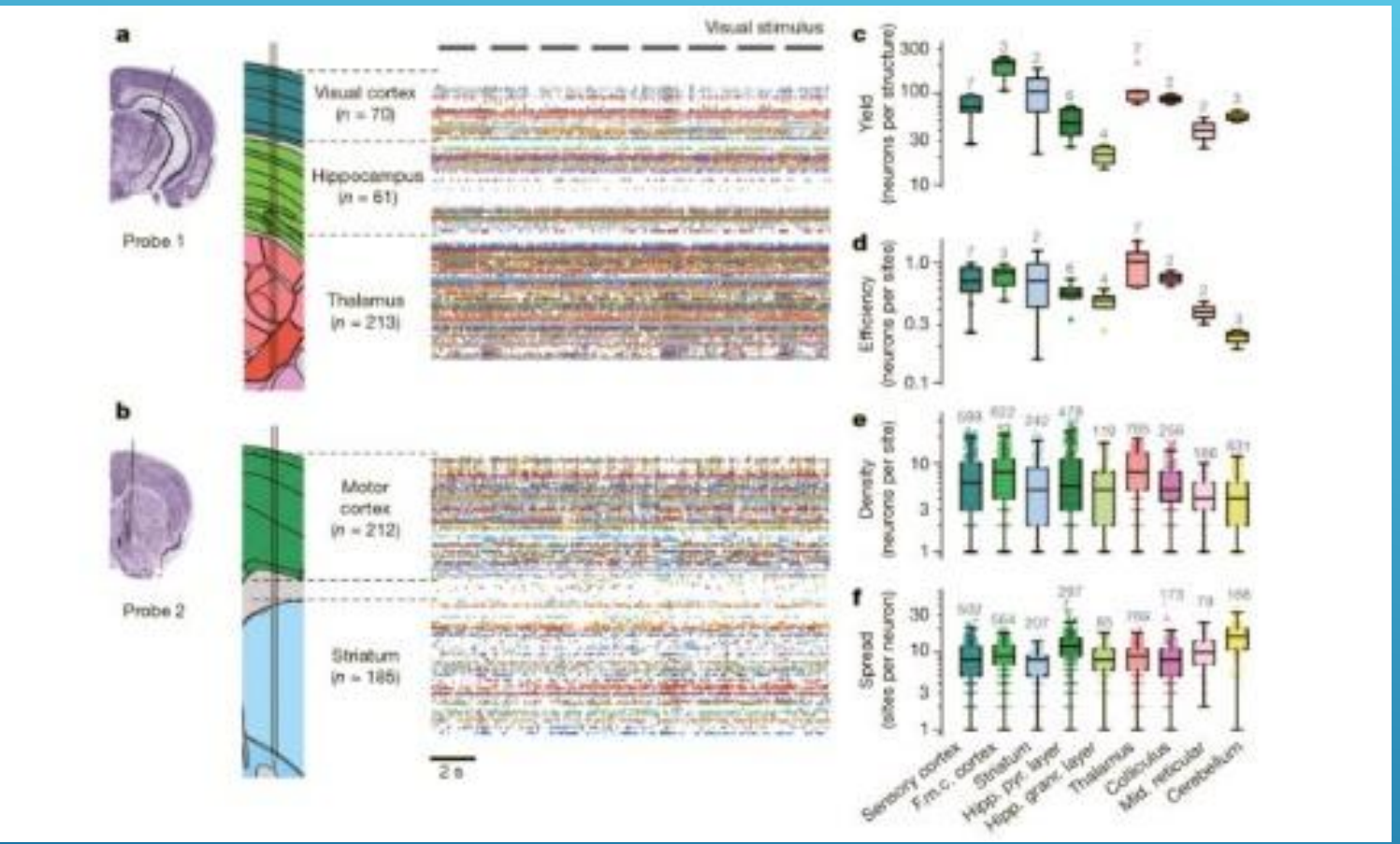
Timothy Harris, Michael Hausser, James J. Jun, Nicholas A. Steinmetz et. al

Fully integrated silicon probes for high-density

recording of neural activity

Nature

http://dx.doi.org/10.1038/nature24636



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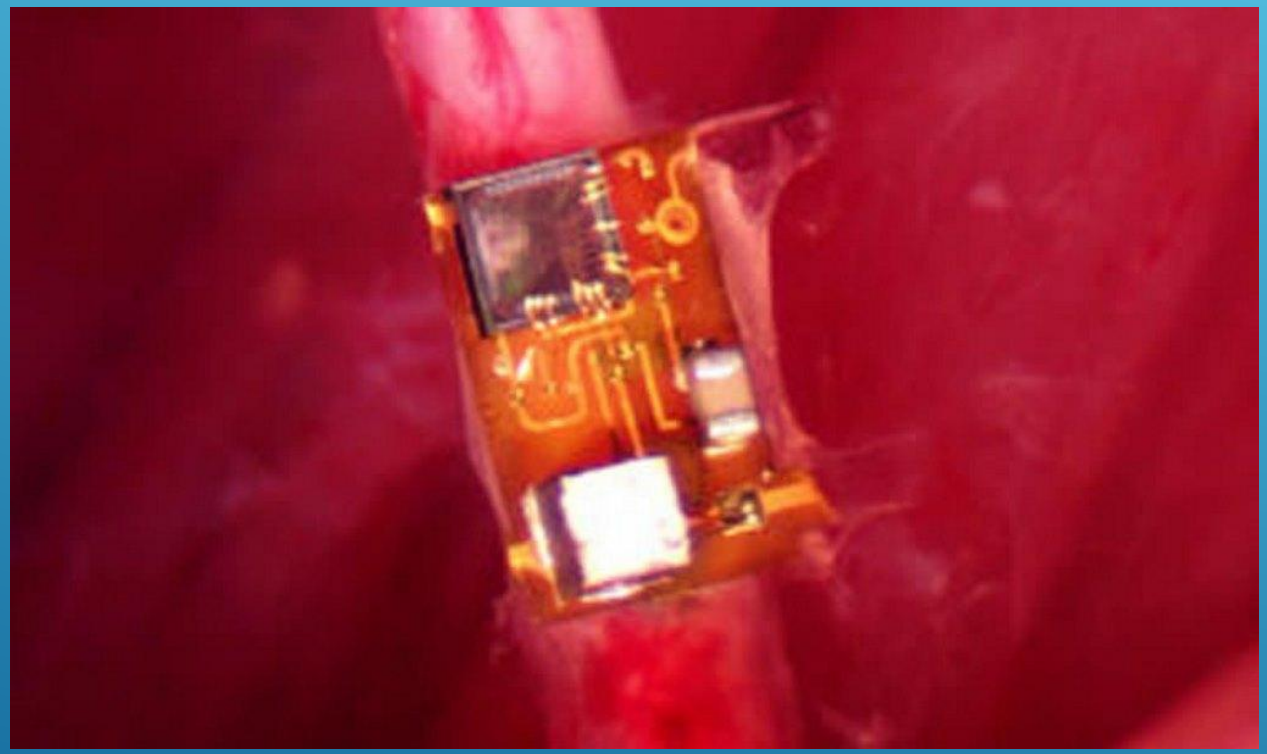
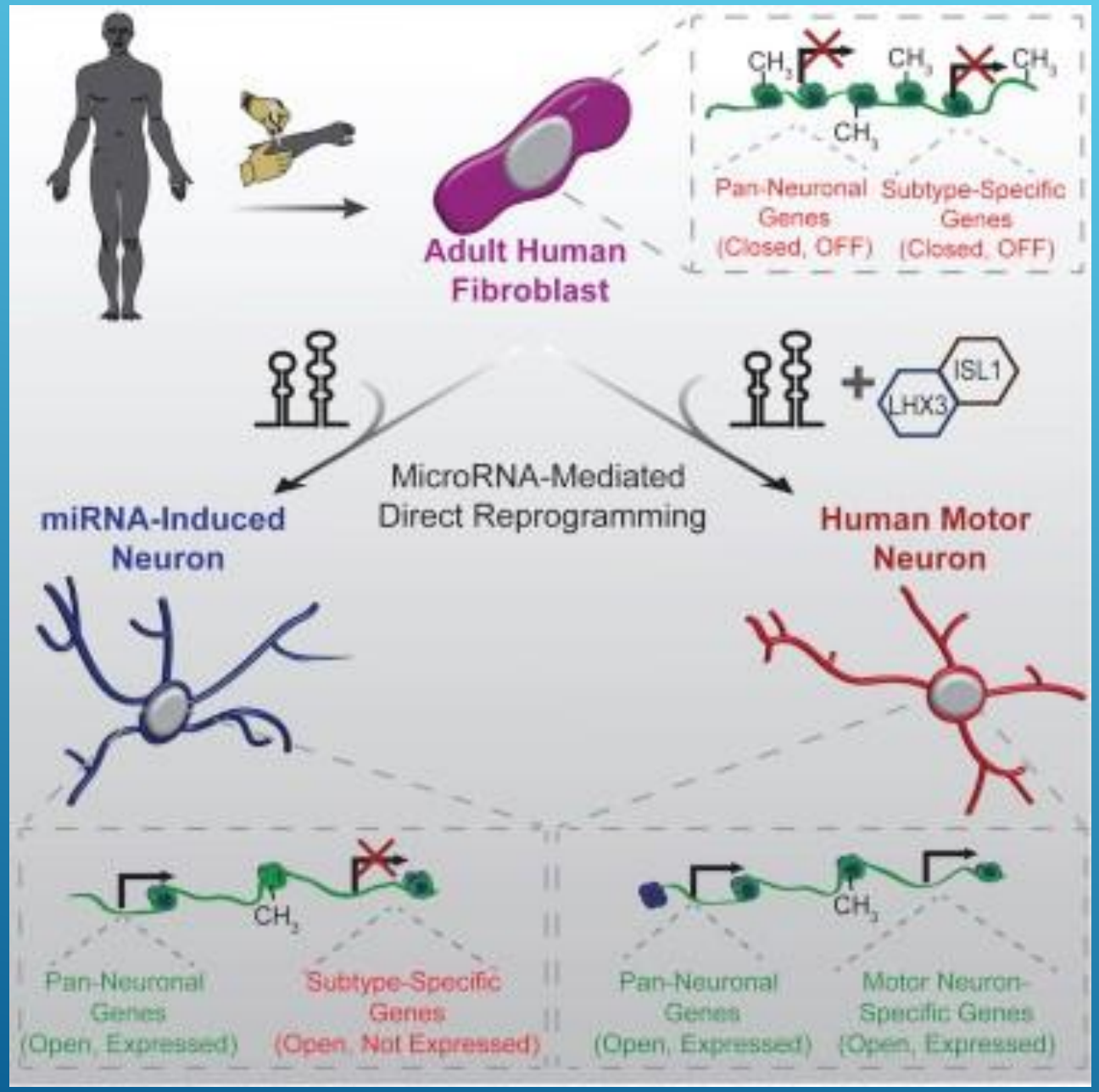
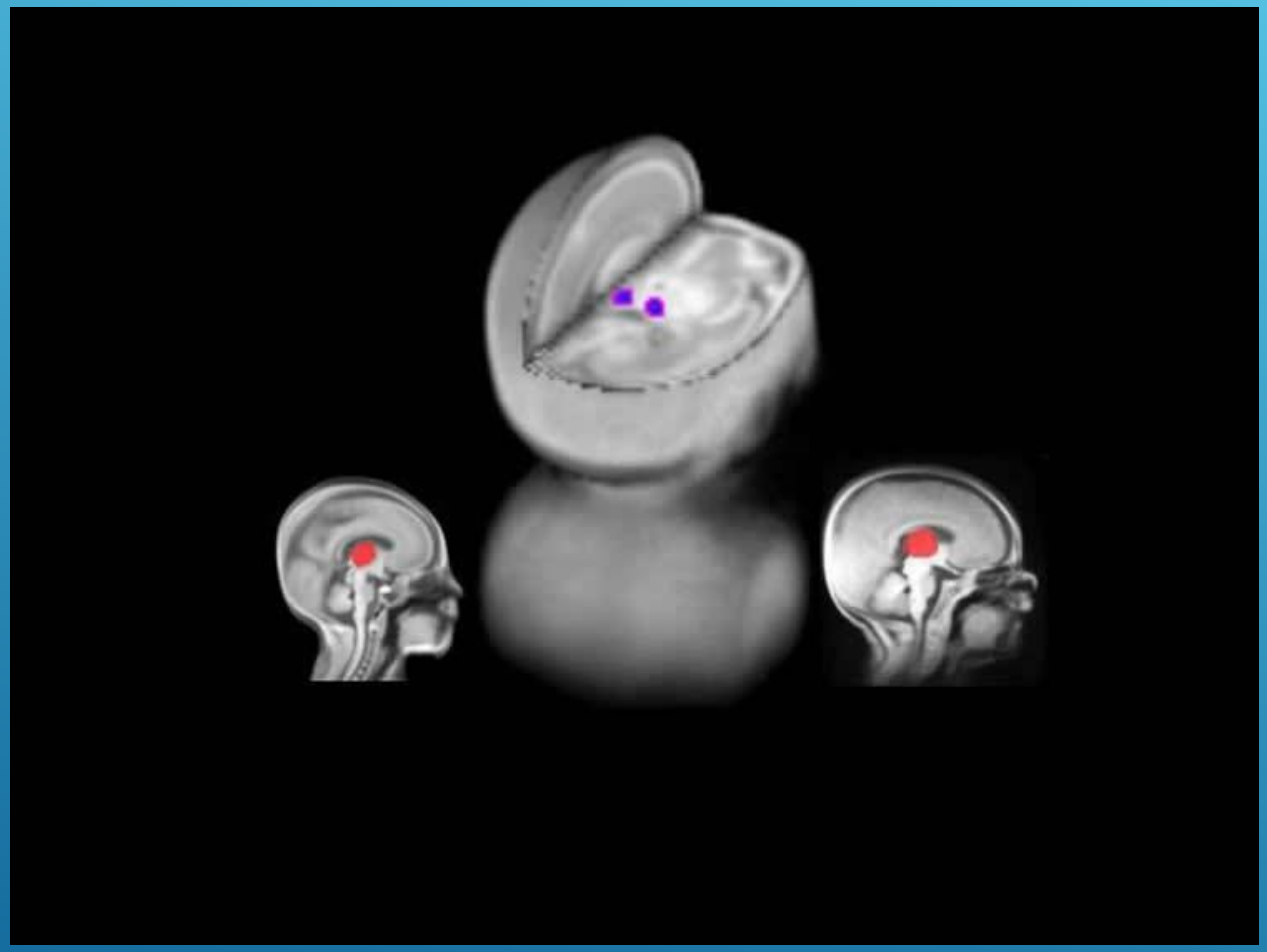


НЕЙРОПЫЛЬ. ТЕПЕРЬ И НЕЙРОСТИМУЛЯТОР



МОТОРНЫЕ НЕЙРОНЫ ПРЯМО ИЗ КОЖИ



ТАЛАМУС НЕДОНОШЕННЫХ НЕДОРАЗВИТ ИЗ-ЗА БОЛИ

Steven Miller & Emma Duerden

Journal of Neuroscienc

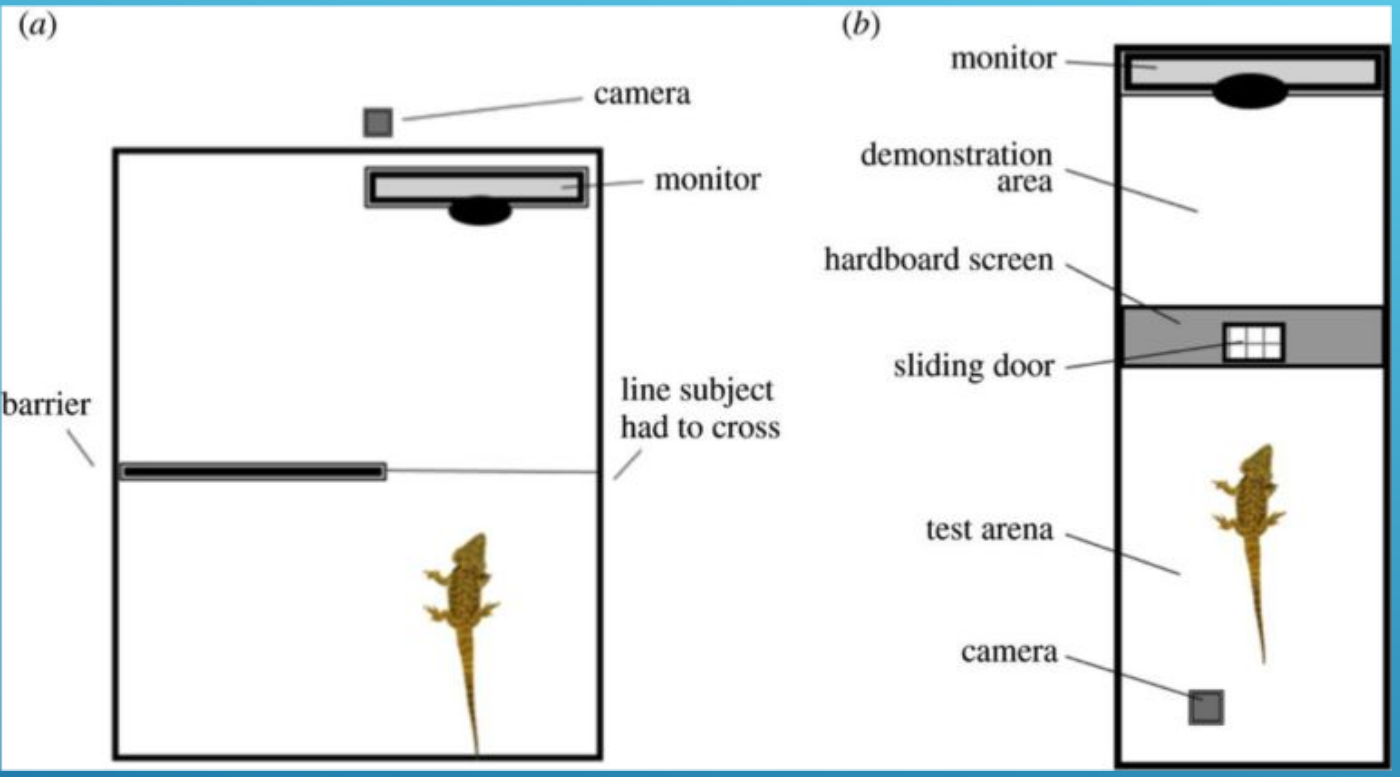
ГЛОБАЛЬНОЕ ПОТЕПЛЕНИЕ И ТУПЫЕ ЯЩЕРИЦЫ

Incubation environment impacts the social cognition of adult lizards

By Harry Siviter, D. Charles Deeming, M. F. T. van Giezen, Anna Wilkinson

Published 22 November 2017.

DOI: 10.1098/rsos.170742



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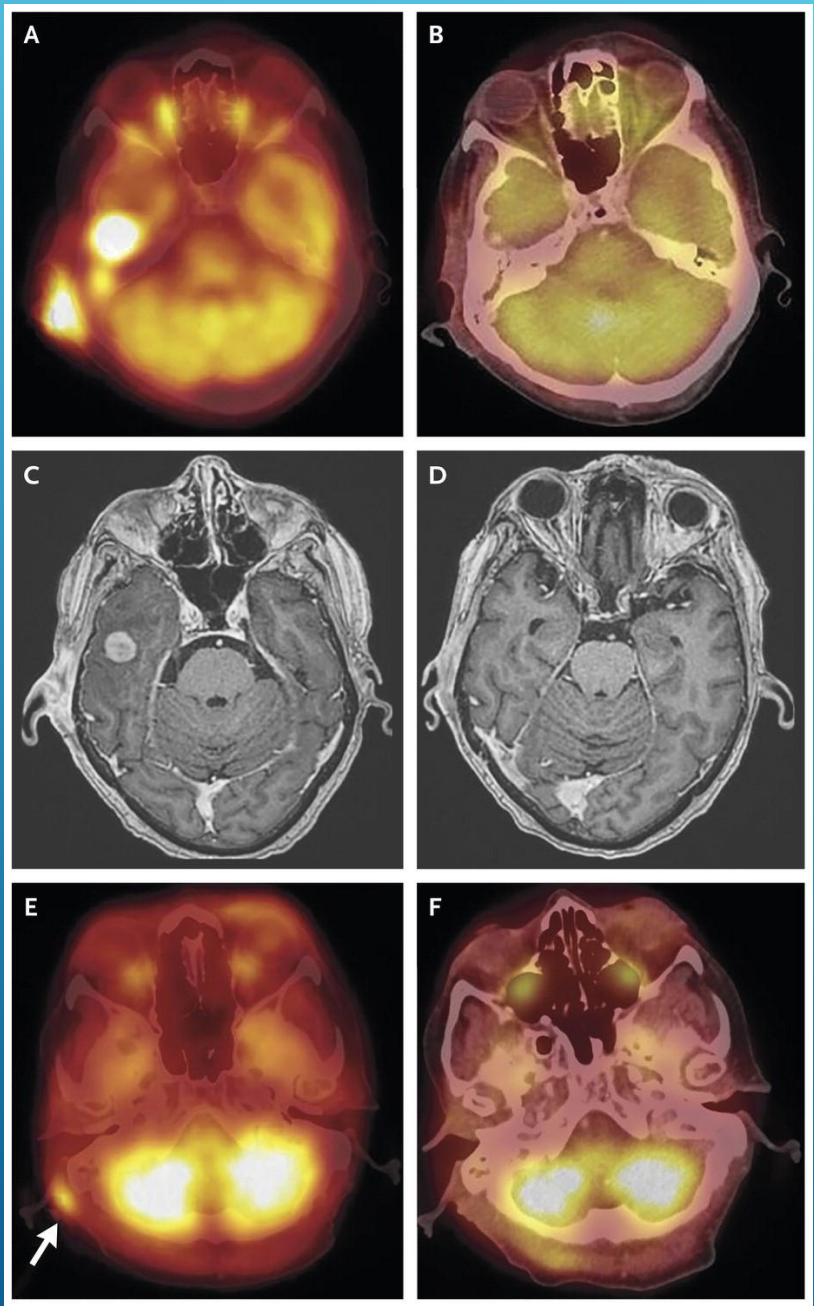
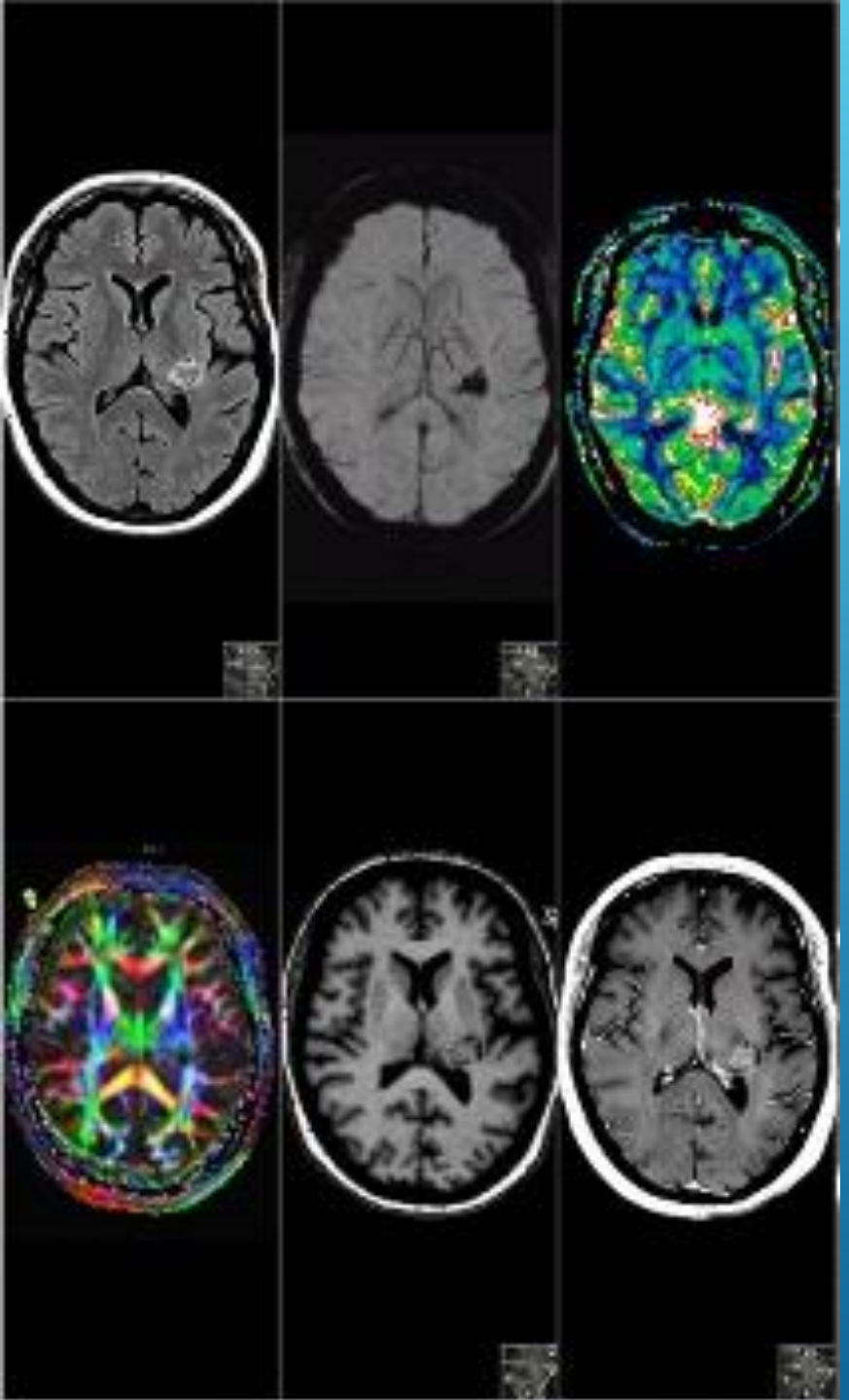


CAR-T ТЕРАПИЯ

Вылечена лимфобластома с метастазами в мозг



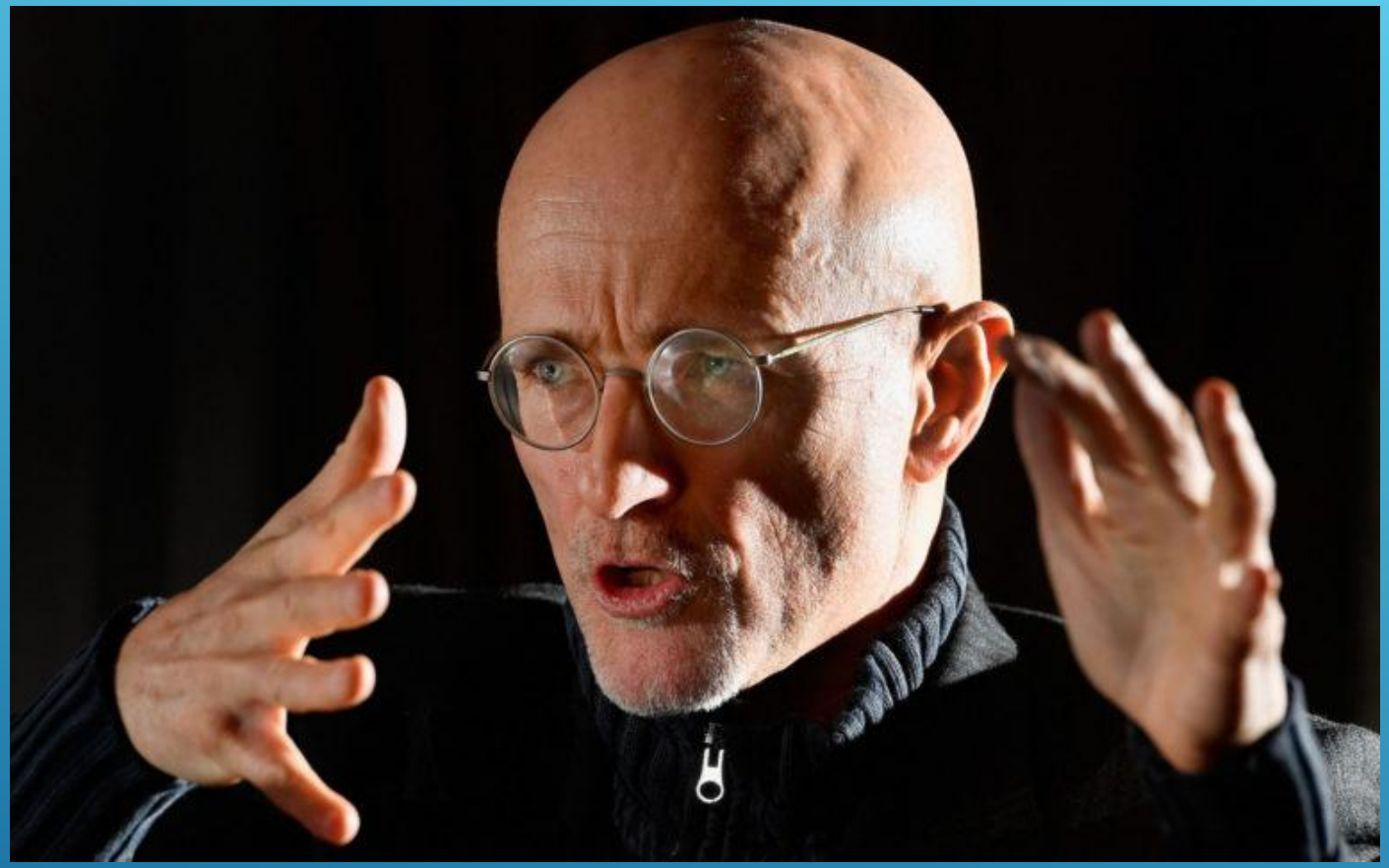
ГЛИОМА ПРИКАЗЫВАЕТ

Brain Tumor-Associated Psychosis and Spirituality — A Case Report

Lars Levi Dutschke, Sarah Steinau, Roland Wiest, Sebastian Walther

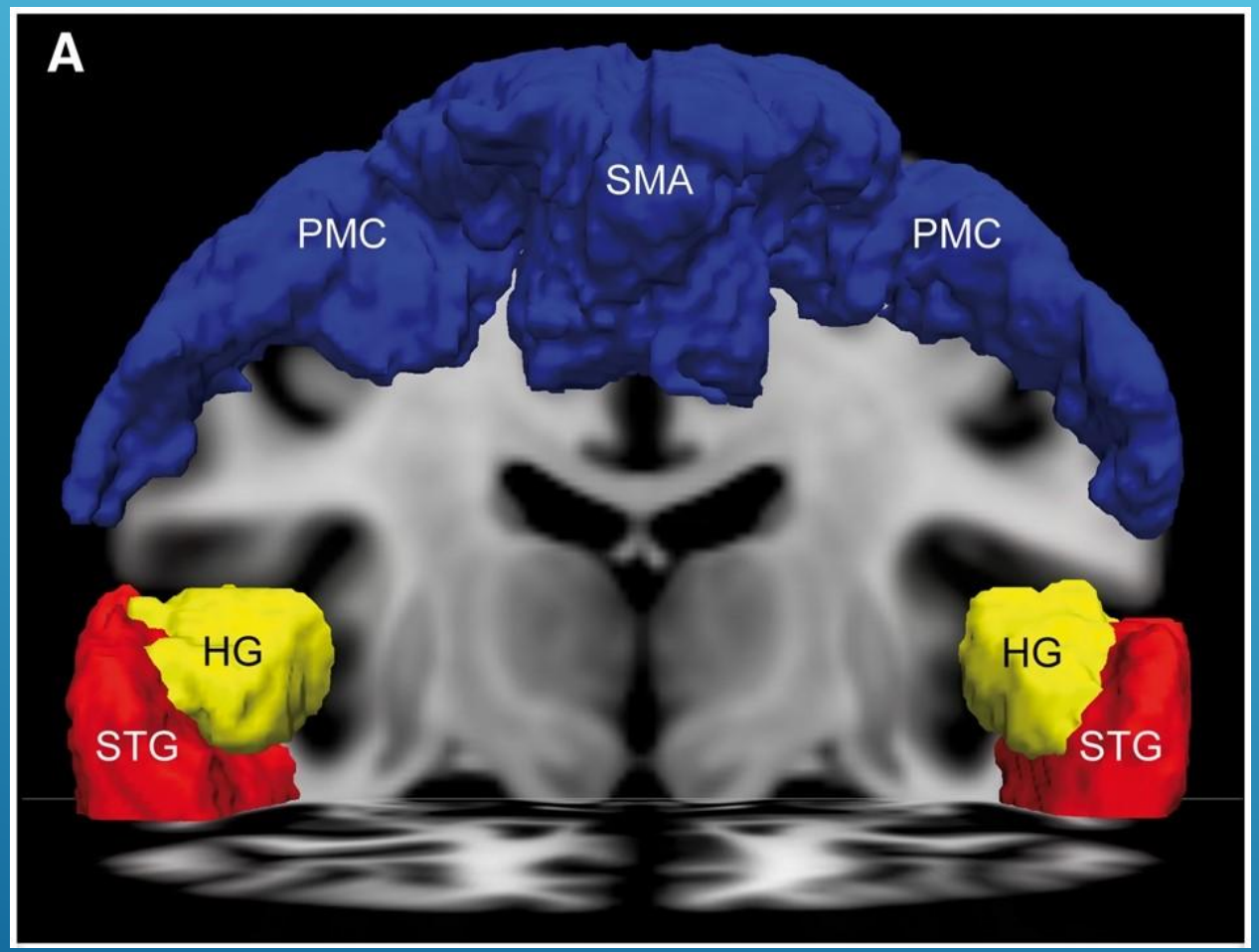
Front. Psychiatry, 14 November 2017 | https://doi.org/10.3389/fpsyt.2017.00237

Читайте материалы нашего сайта в Facebook, ВКонтакте и канале в Telegram, а также следите за новыми картинками дня в Instagram.



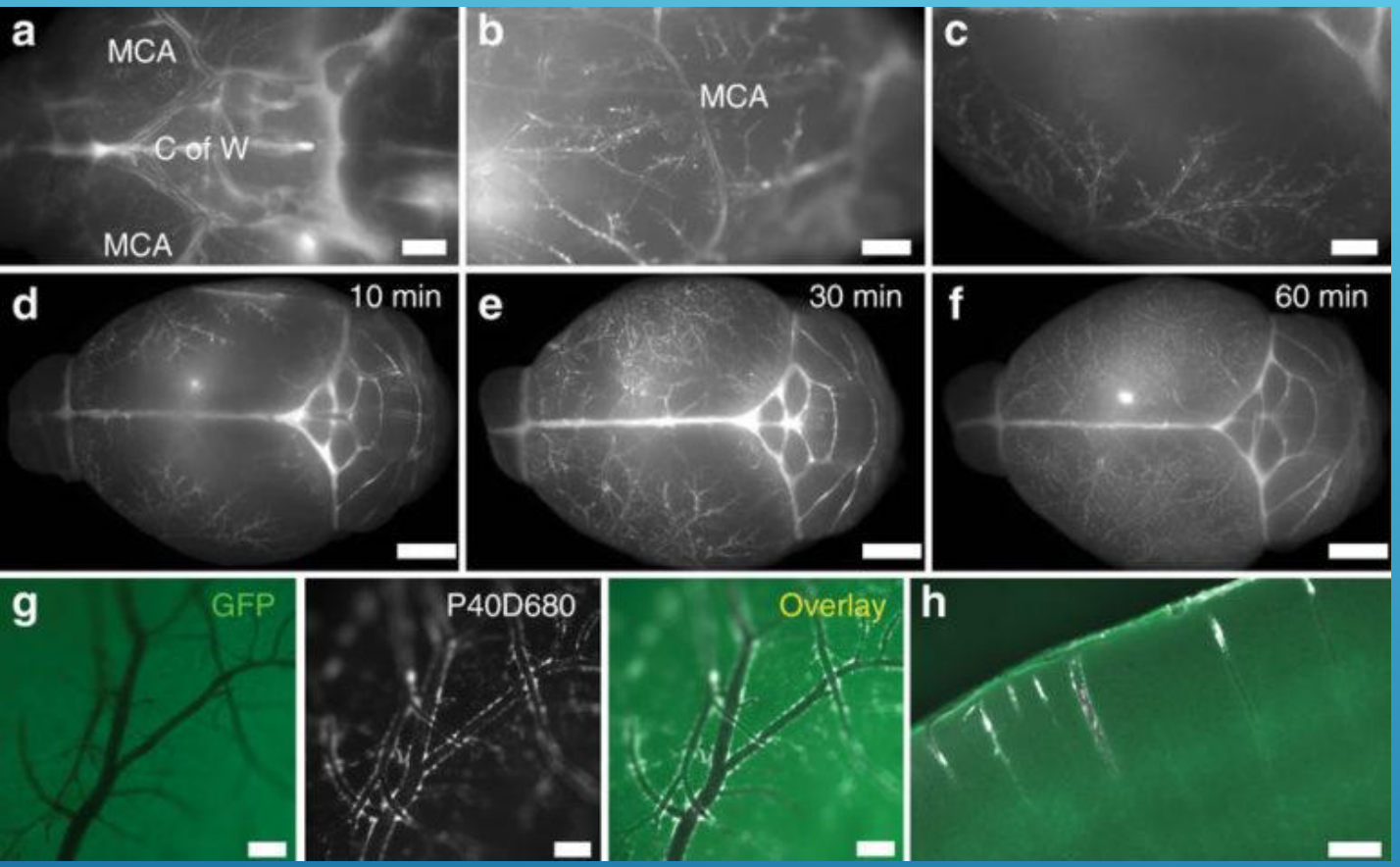
ПЕРЕСАДКА ГОЛОВЫ ТРУПУ

Canavero et al



НАЛИЧИЕ СОЗНАНИЯ ПО ЭЭГ И ФМРТ

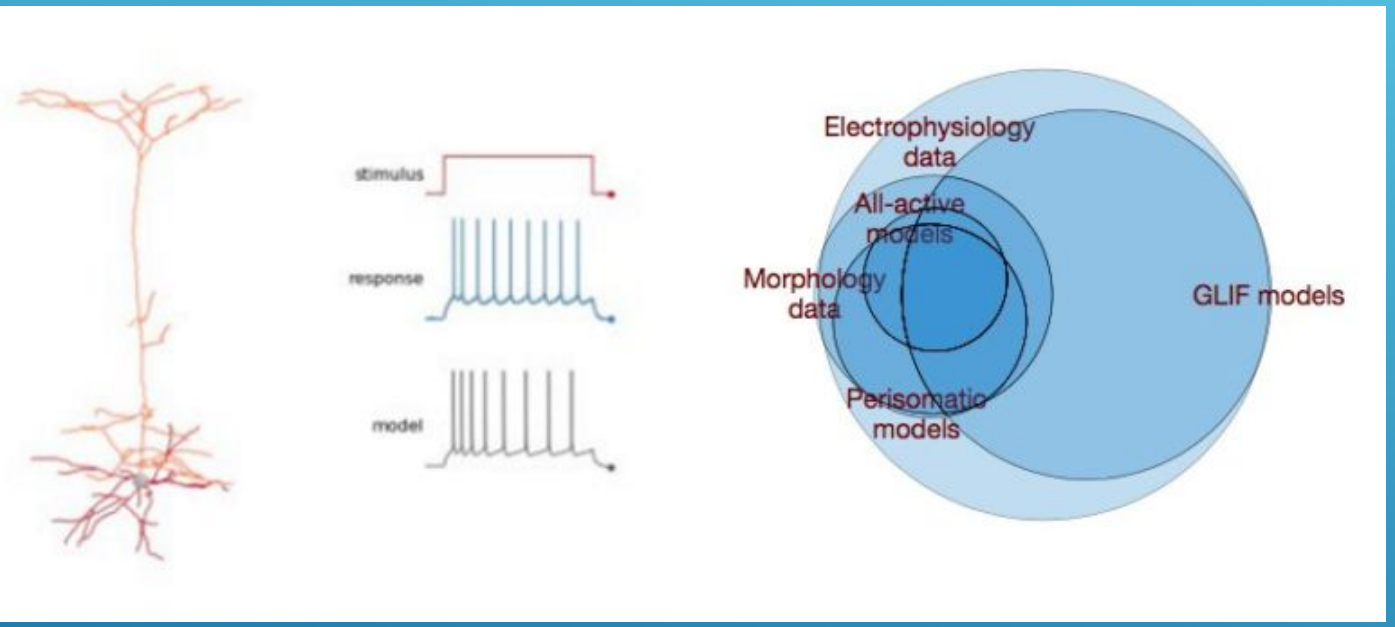
Вид спереди дополнительной моторной области (SMA) и премоторной коры (PMC, синий), используемый для оценки ответов моторики на МРТ, так же, как и извилина Хешля (HG, желтый) и верхняя височная извилина (STG, красный), которые используются для оценки функциональных МРТ-ответов. Credit: Ona Wu et al./Brain



ЛИМФАТИЧЕСКИЕ СОСУДЫ В МОЗГЕ

Outflow of cerebrospinal fluid is predominantly through lymphatic vessels and is reduced in aged mice by Qiaoli Ma, Benjamin V. Ineichen, Michael Detmar & Steven T. Proulx in Nature Communications. Published online November 2017.

doi:10.1038/s41467-017-01484-6

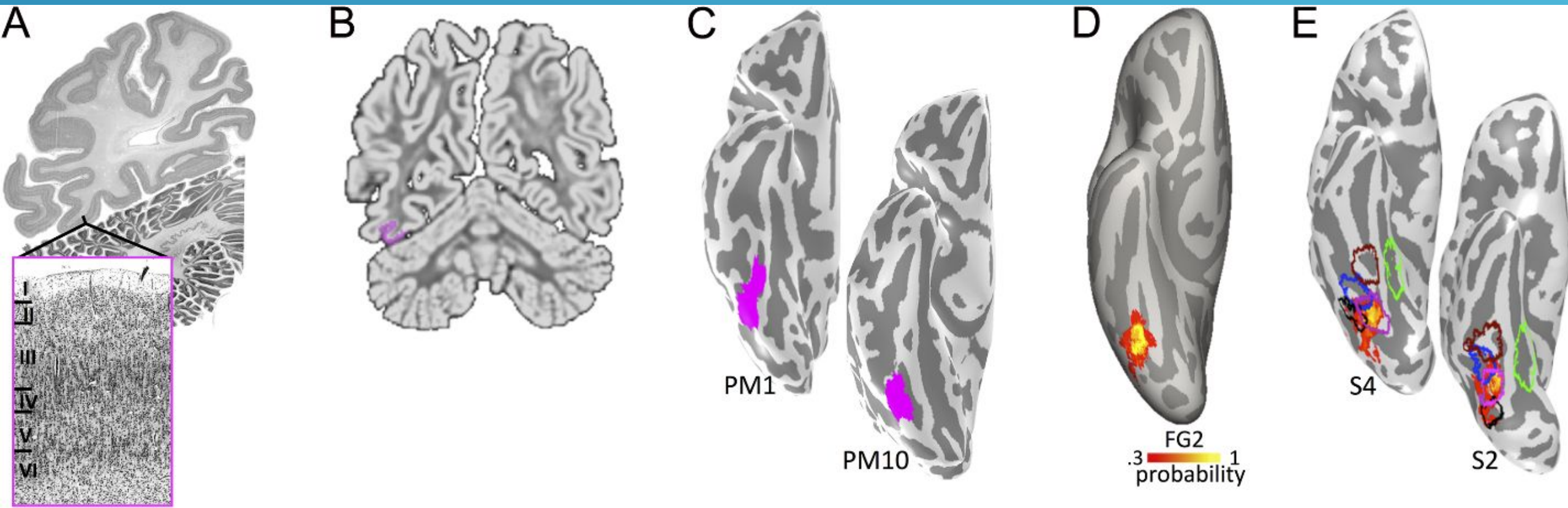


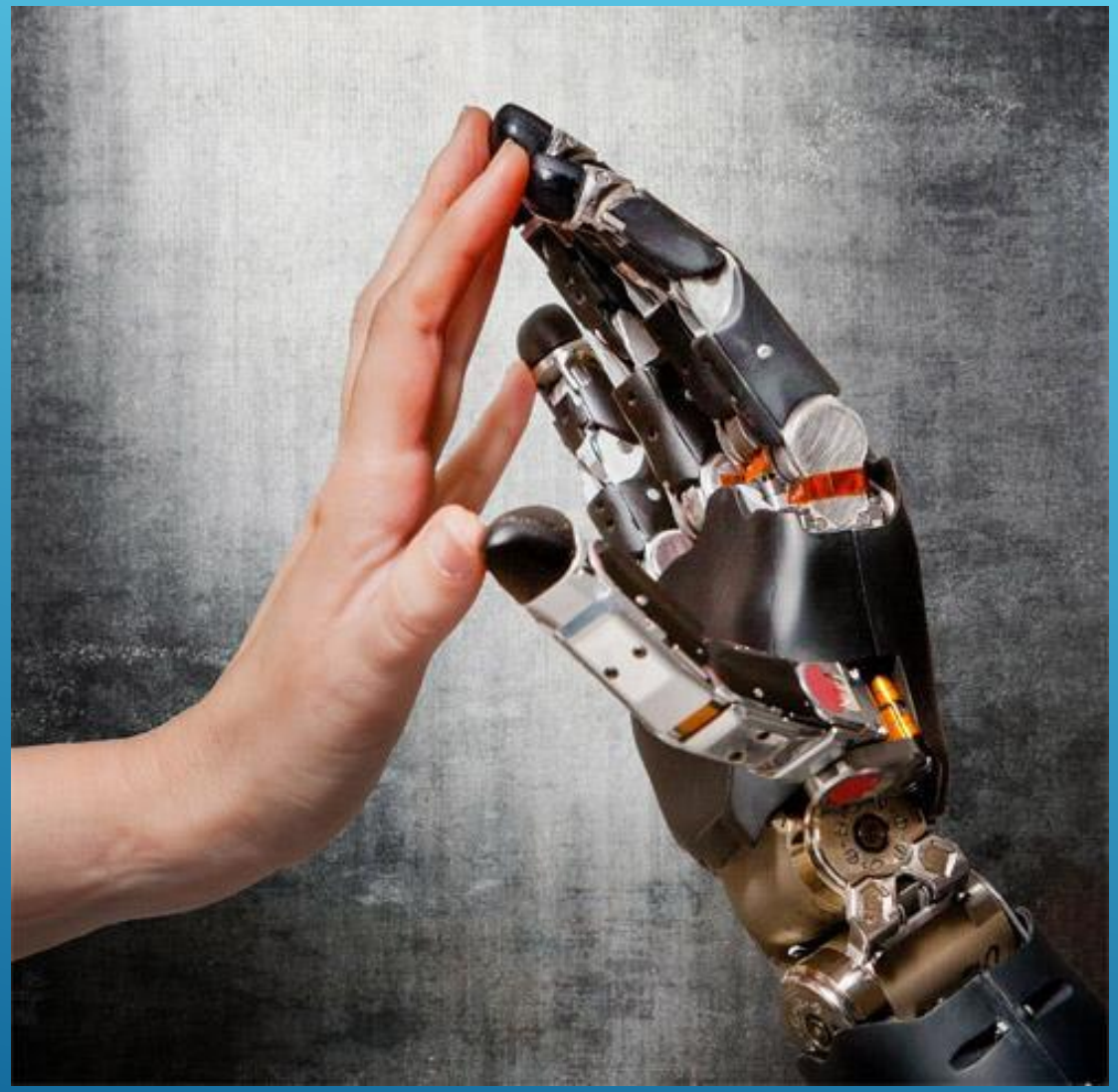
БАЗА ДАННЫХ ЖИВЫХ КЛЕТОК МОЗГА

The Allen Institute for Brain Science

http://celltypes.brain-map.org/

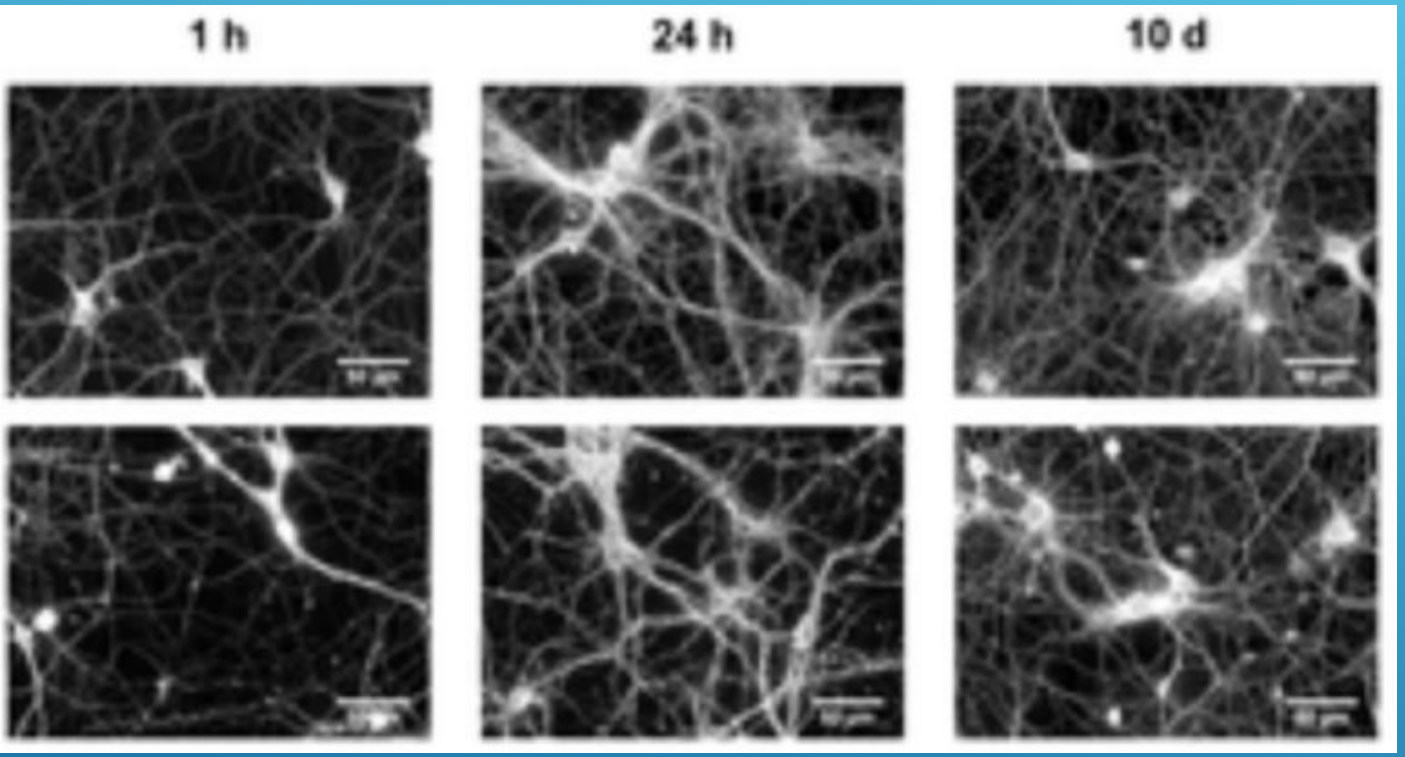
МОЗГ РАСТЁТ ВСЮ ЖИЗНЬ





НЕЙРОПРОТЕЗЫ С ОБРАТНОЙ СВЯЗЬЮ

Слиман Бенсмайа, DARPA



НЕЙРОНЫ АСТРОНАВТА

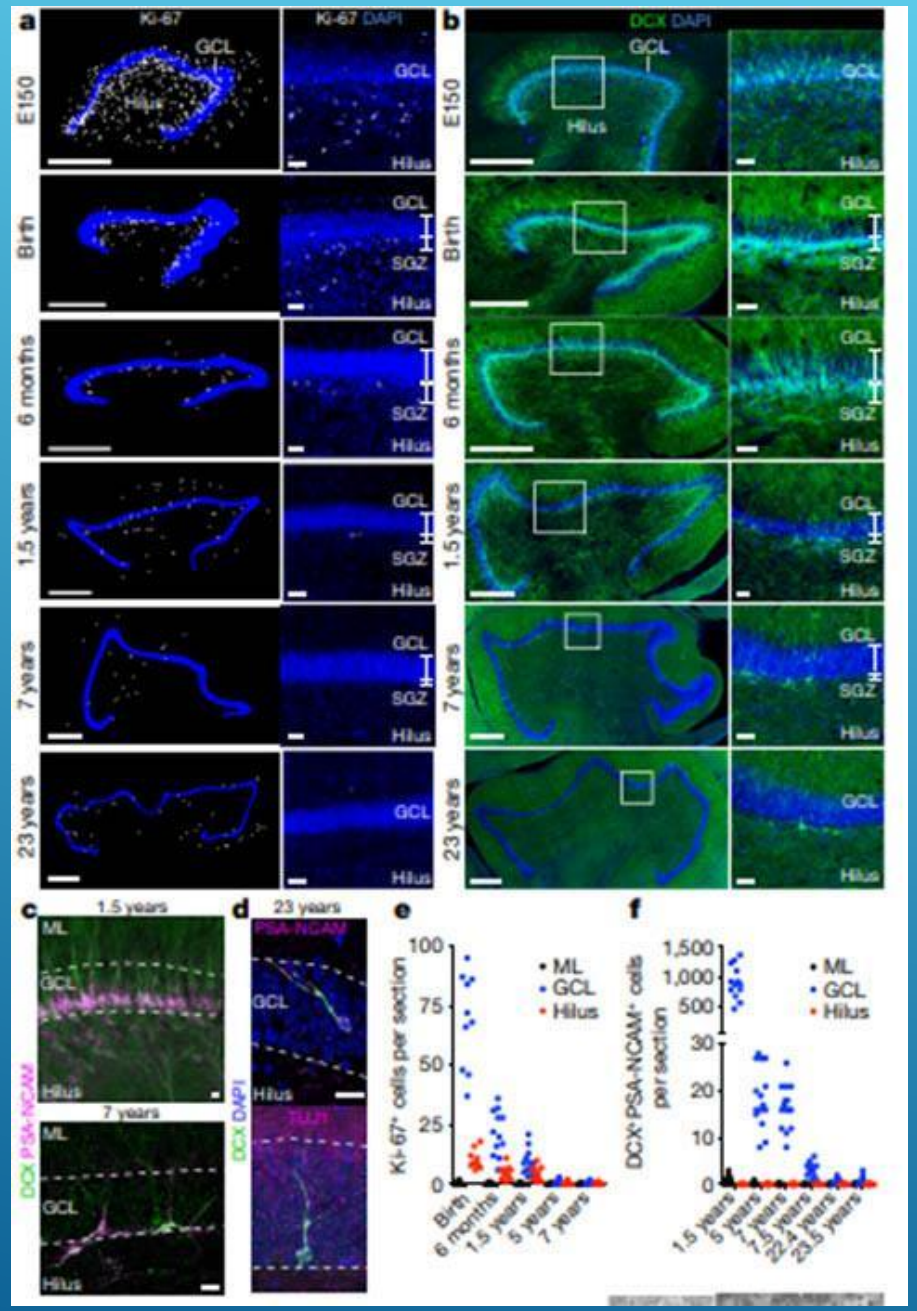
Morphological and Physiological Changes in Mature In Vitro Neuronal Networks towards Exposure to Short-, Middle- or Long-Term Simulated Microgravity by Giuseppe Pani, Nada Samari, Roel Quintens, Louis de Saint-Georges, MariAntonia Meloni, Sarah Baatout, Patrick Van Oostveldt, Mohammed Abderrafi Benotmane in PLoS One. Published September 2013

https://doi.org/10.1371/journal.pone.0073857

МОЗГ ОТБИРАЕТ ЭНЕРГИЮ У МЫШЦ

A trade-off between cognitive and physical performance, with relative preservation of brain function by Daniel Longman, Jay T. Stock & Jonathan C. K. Wells in Scientific Reports. Published online October 2017

doi:10.1038/s41598-017-14186-2



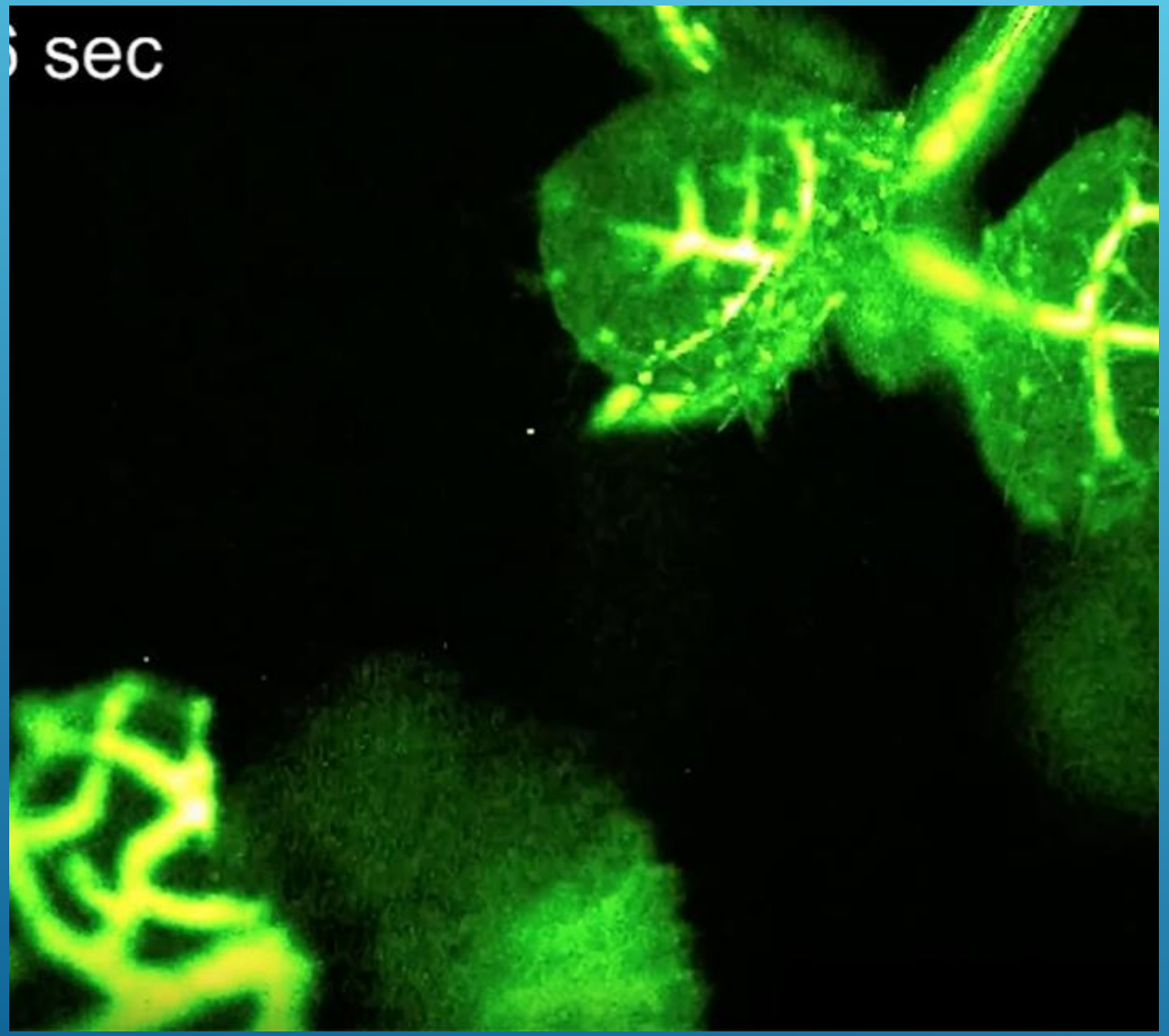
«ЗАКРЫТИЕ» НЕЙРОГЕНЕЗА У ВЗРОСЛЫХ?

Human hippocampal neurogenesis drops sharply in children to undetectable levels in adults by Shawn F. Sorrells, Mercedes F. Paredes, Arantxa Cebrian-Silla, Kadellyn Sandoval, Dashi Qi, Kevin W. Kelley, David James, Simone Mayer, Julia Chang, Kurtis I. Auguste, Edward F. Chang, Antonio J. Gutierrez, Arnold R. Kriegstein, Gary W. Mathern, Michael C. Oldham, Eric J. Huang, Jose Manuel Garcia-Verdugo, Zhengang Yang & Arturo Alvarez-Buylla in Nature. Published online March 2018.

doi:10.1038/nature25975

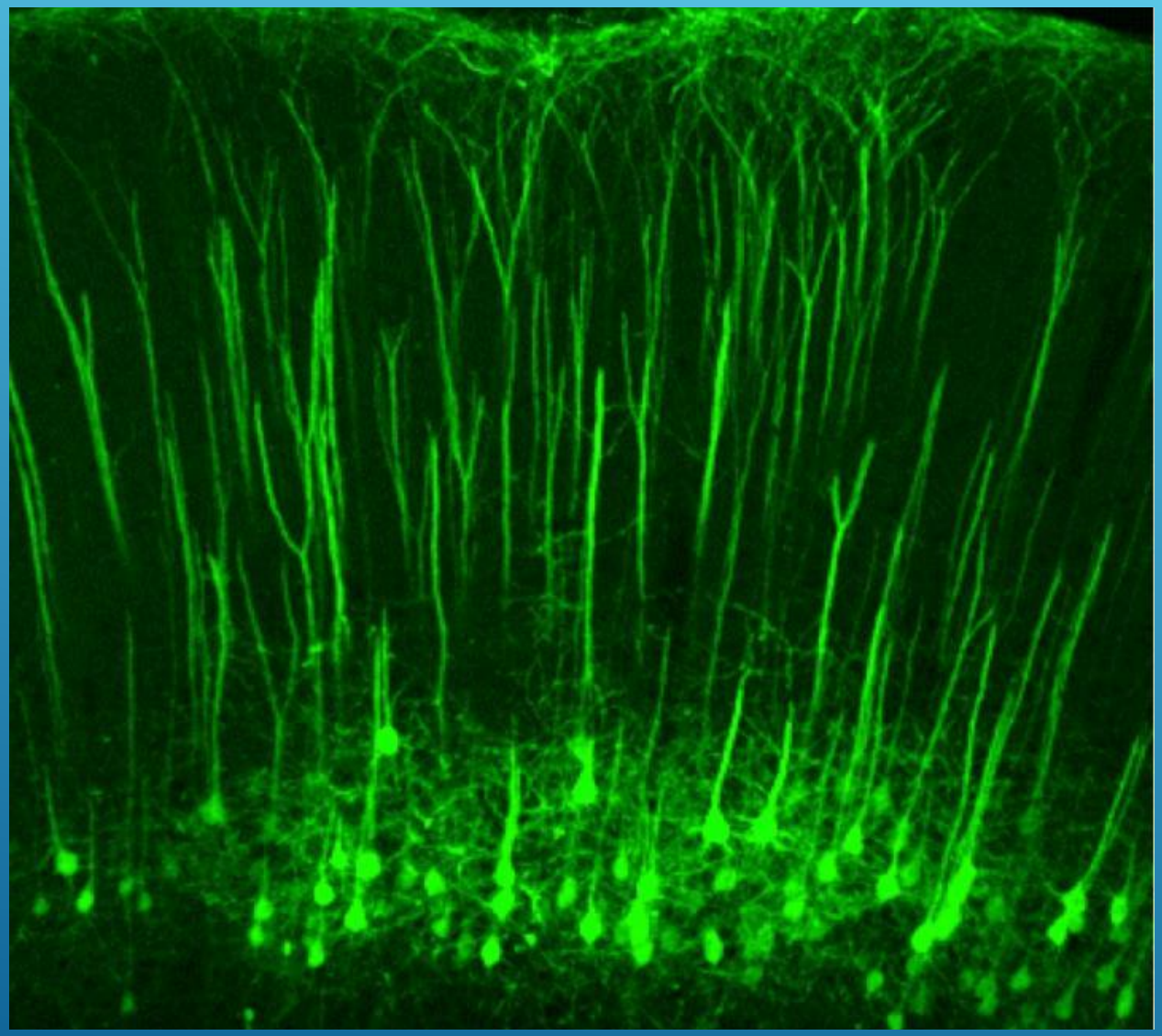
ТМС ПРОТИВ ОКР

Brain Stimulation Approved for Obsessive-Compulsive Disorder by Rebecca Voelker, MSJ in JAMA. Published September 18, 2018 doi:10.1001/jama.2018.13301



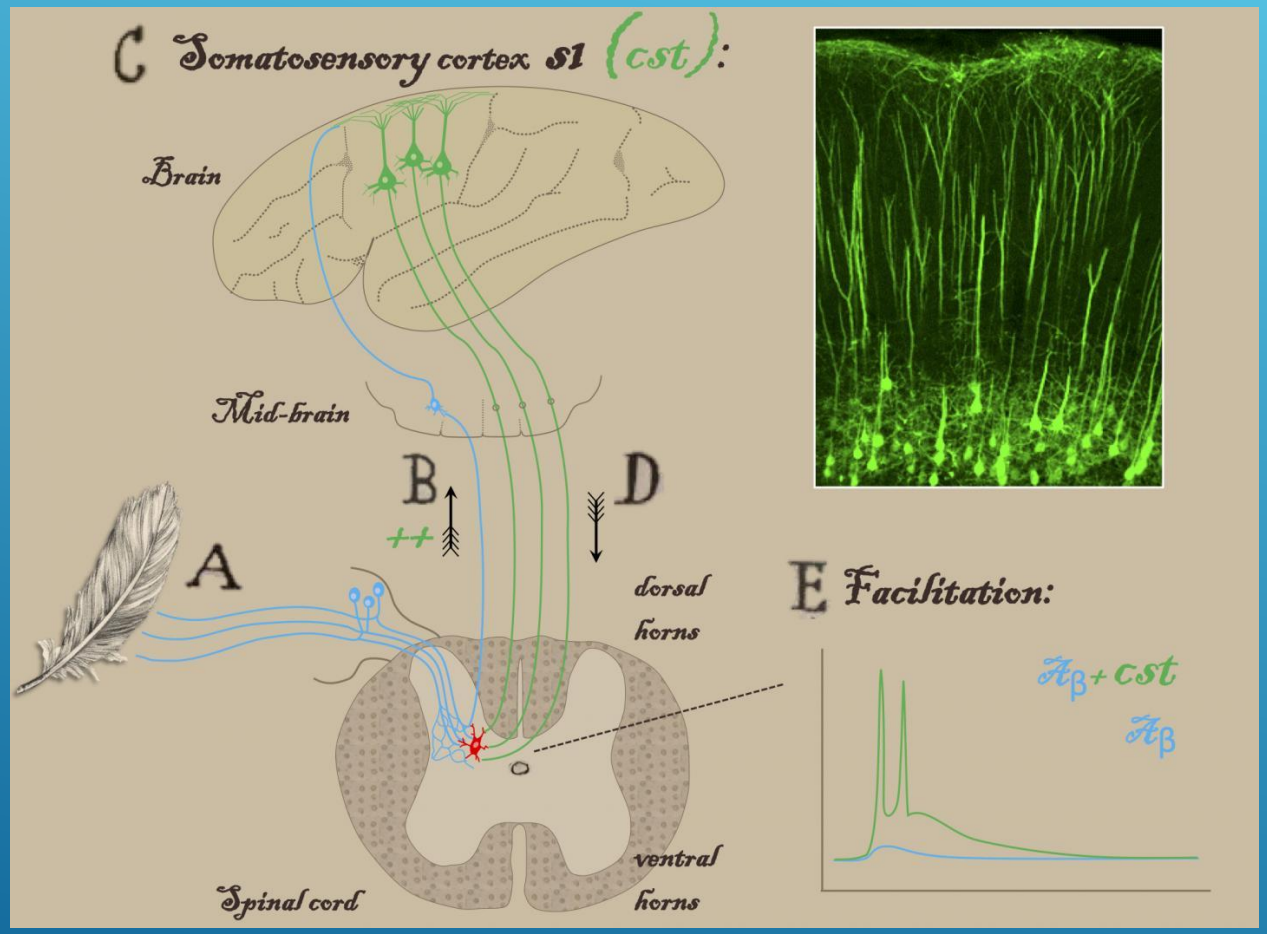
НЕРВНАЯ СИСТЕМА У РАСТЕНИЙ?

Toyota, M., Spencer, D., Sawai-Toyota, S., Jiaqi, W., Zhang, T., Koo, A. J., … Gilroy, S. (2018). Glutamate triggers long-distance, calcium-based plant defense signaling. Science, 361(6407), 1112–1115. doi:10.1126/science.aat7744



УМНОЖИТЕЛИ БОЛИ

Touch and tactile neuropathic pain sensitivity are set by corticospinal projections by Yuanyuan Liu, Alban Latremoliere, Xinjian Li, Zicong Zhang, Mengying Chen, Xuhua Wang, Chao Fang, Junjie Zhu, Chloe Alexandre, Zhongyang Gao, Bo Chen, Xin Ding, Jin-Yong Zhou, Yiming Zhang, Chinfei Chen, Kuan Hong Wang, Clifford J. Woolf, Zhigang He in Nature. Published September 2018.
DOI: 10.1038/s41586-018-0515-2



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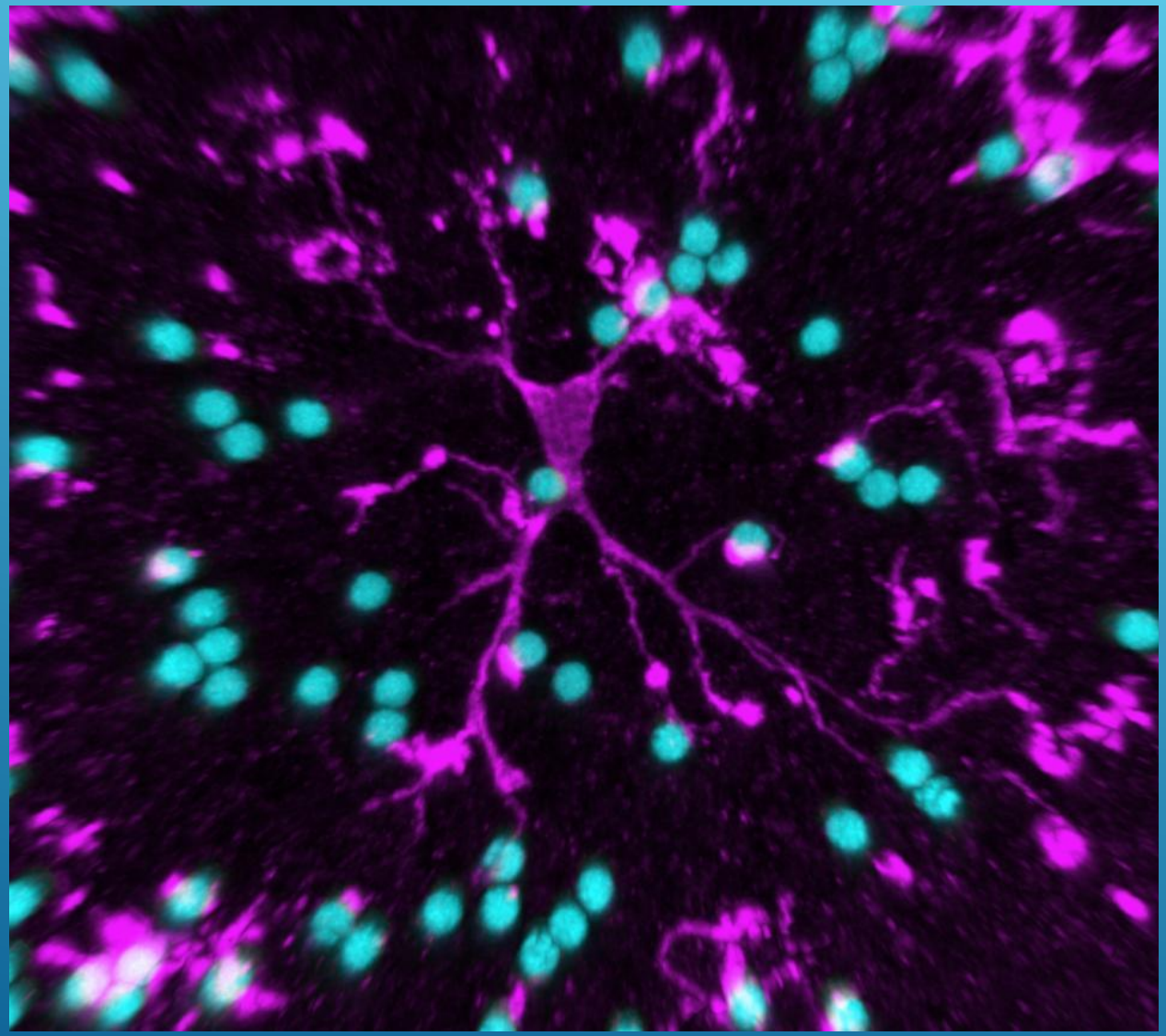
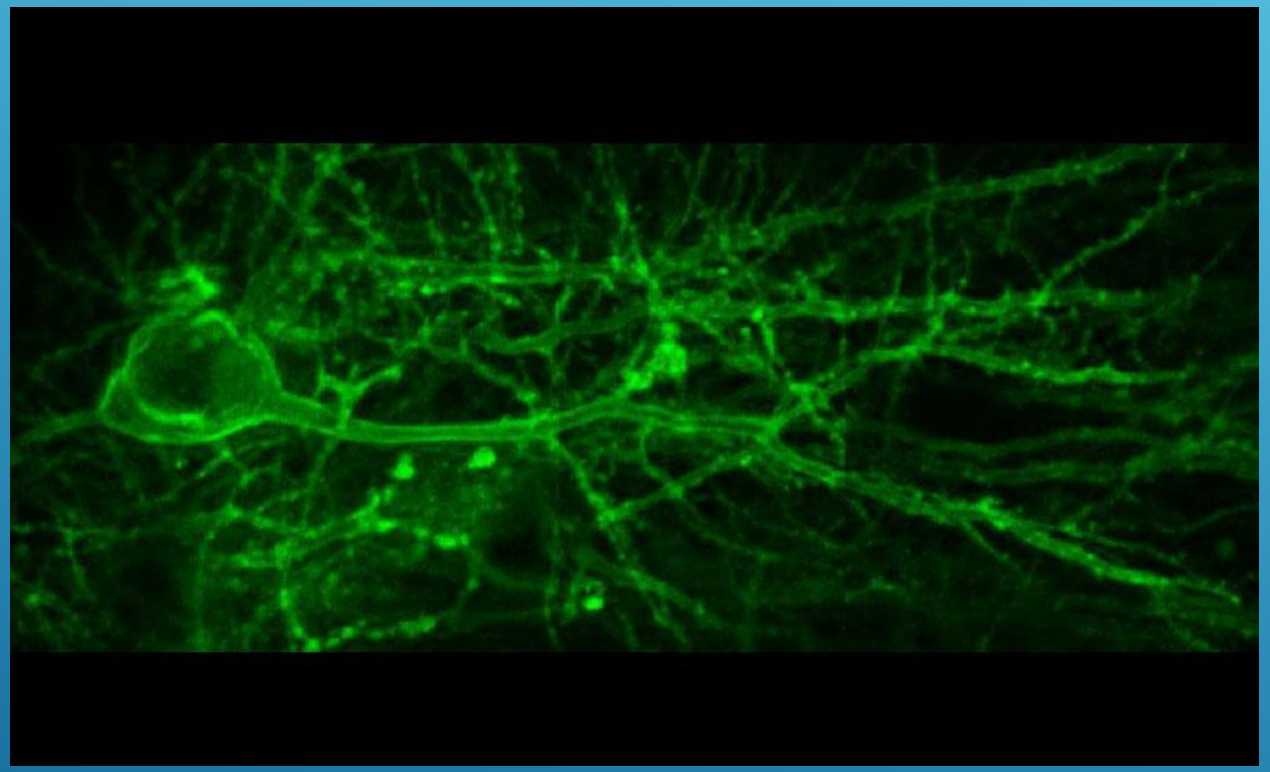


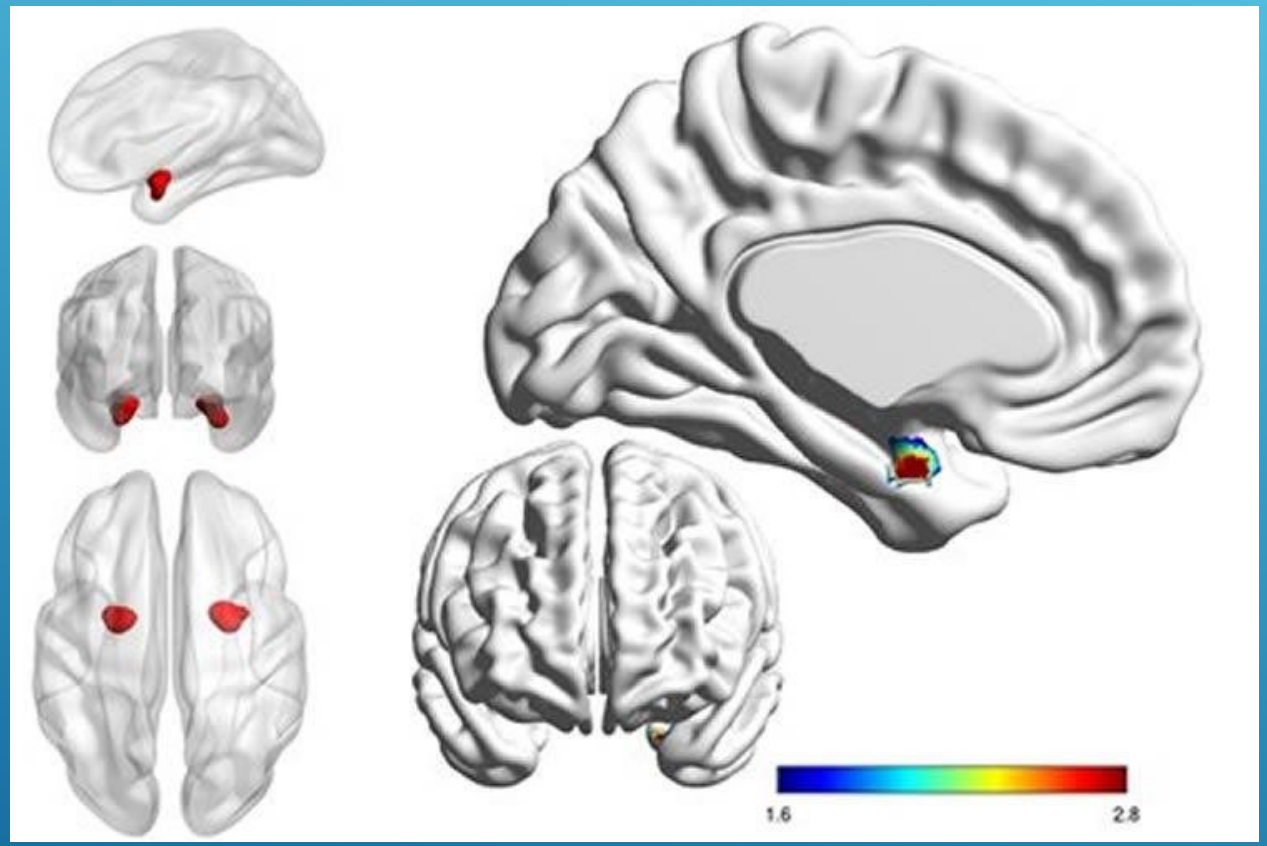
МИКРОГЛИЯ МУЖСКАЯ И ЖЕНСКАЯ

Transcriptional and Translational Differences of Microglia from Male and Female Brains by Dilansu Guneykaya et al. in Cell Reports. Published September 2018. doi:10.1016/j.celrep.2018.08.001



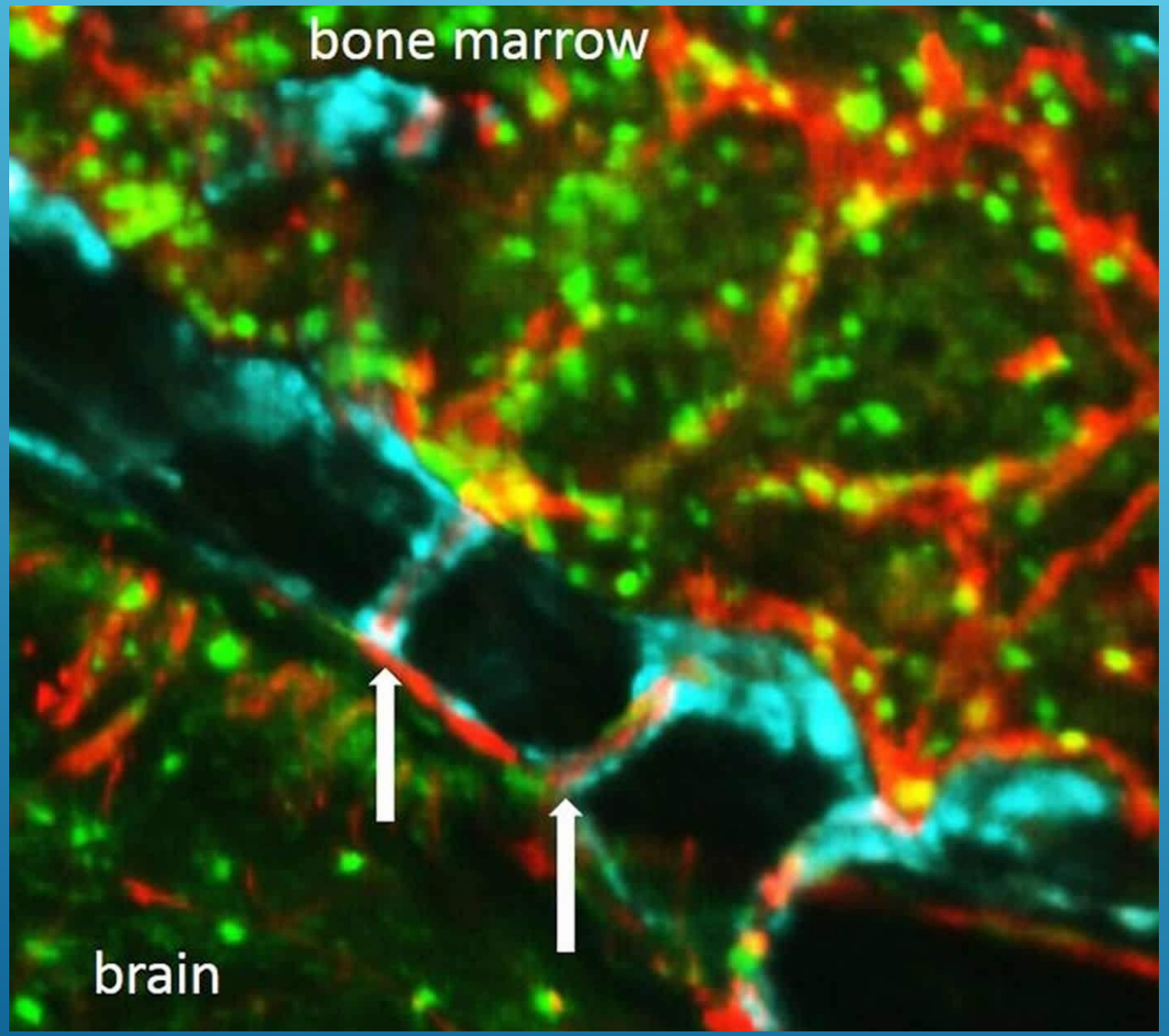
УВИДЕТЬ РАБОТУ СИНАПСА

A genetically encoded fluorescent acetylcholine indicator for in vitro and in vivo studies by Miao Jing, Peng Zhang, Guangfu Wang, Jiesi Feng, Lukas Mesik, Jianzhi Zeng, Huoqing Jiang, Shaohua Wang, Jess C Looby, Nick A Guagliardo, Linda W Langma, Ju Lu, Yi Zuo, David A Talmage, Lorna W Role, Paula Q Barrett, Li I Zhang, Minmin Luo, Yan Song, J Julius Zhu & Yulong Li in Nature Biotechnology. Published July 2018.
https://doi.org/10.1038/nbt.4184



КАК ОТЛИЧИТЬ БАР ОТ ДЕПРЕССИИ

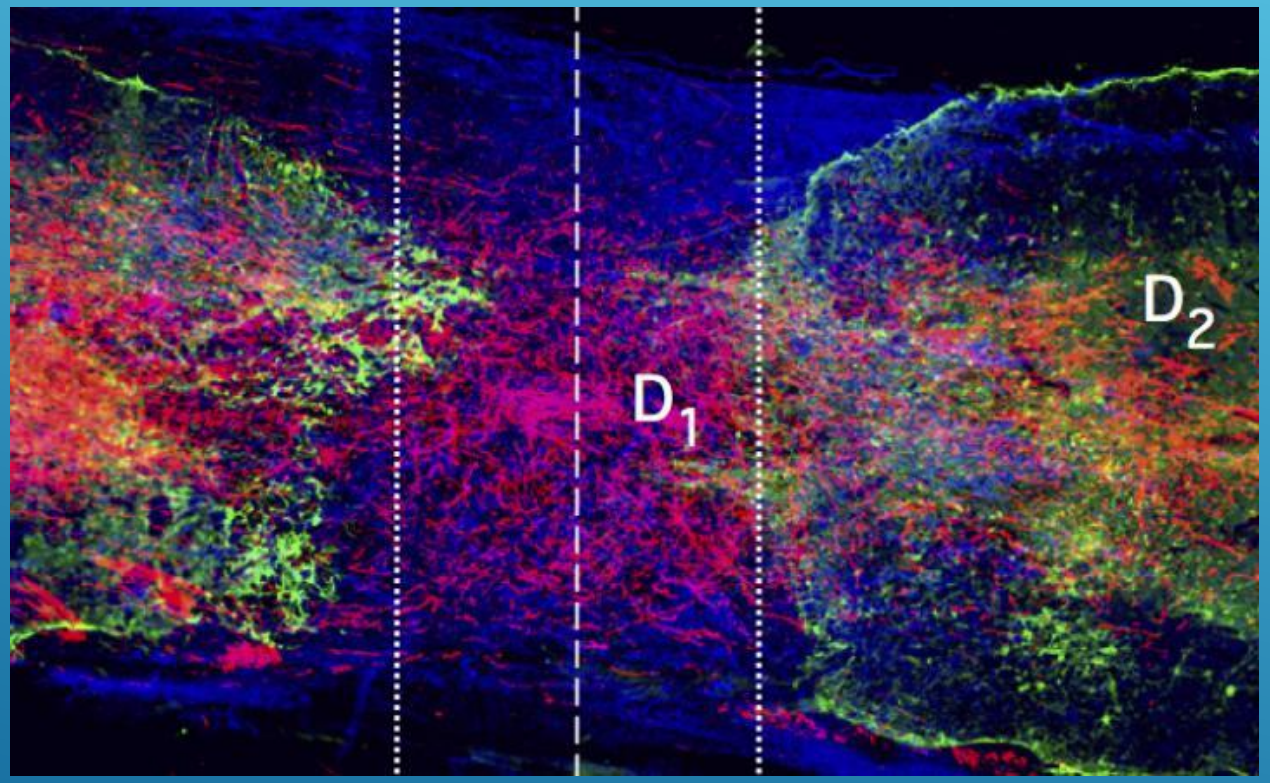
Amygdala activation and connectivity to emotional processing distinguishes asymptomatic patients with bipolar disorders and unipolar depression by Mayuresh S. Korgaonkar, May Erlinger, Isabella A. Breukelaar, Philip Boyce, Philip Hazell, Cassandra Antees, Sheryl Foster, Stuart M. Grieve, Lavier Gomes, Leanne M. Williams, Anthony W. F. Harris, and Gin S. Malhi in Biological Psychiatry: Cognitive Neuroscience and NeuroImaging. Published August 2018.
doi:10.1016/j.bpsc.2018.08.012



КАНАЛЫ ОТ ЧЕРЕПА К МОЗГУ

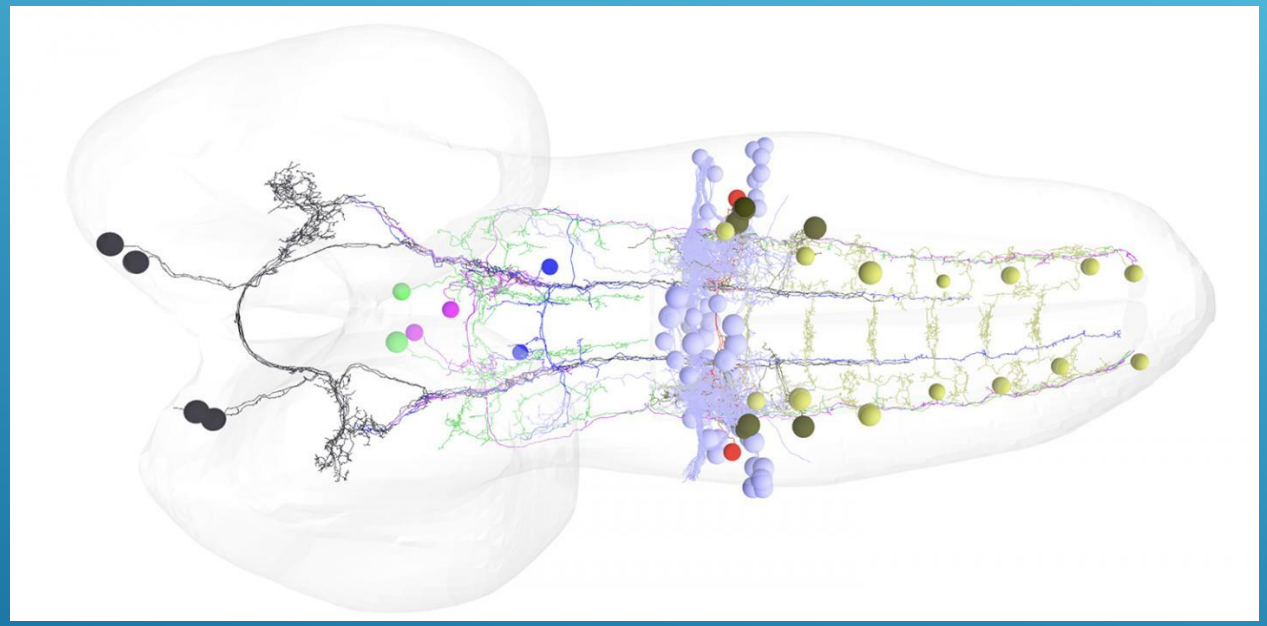
Direct vascular channels connect skull bone marrow and the brain surface enabling myeloid cell migration by Fanny Herisson, Vanessa Frodermann, Gabriel Courties, David Rohde, Yuan Sun, Katrien Vandoorne, Gregory R. Wojtkiewicz, Gustavo Santos Masson, Claudio Vinegoni, Jiwon Kim, Dong-Eog Kim, Ralph Weissleder, Filip K. Swirski, Michael A. Moskowitz & Matthias Nahrendorf in Nature Neuroscience. Published August 2018.

doi:*10.1038/s41593-018-0213-2*



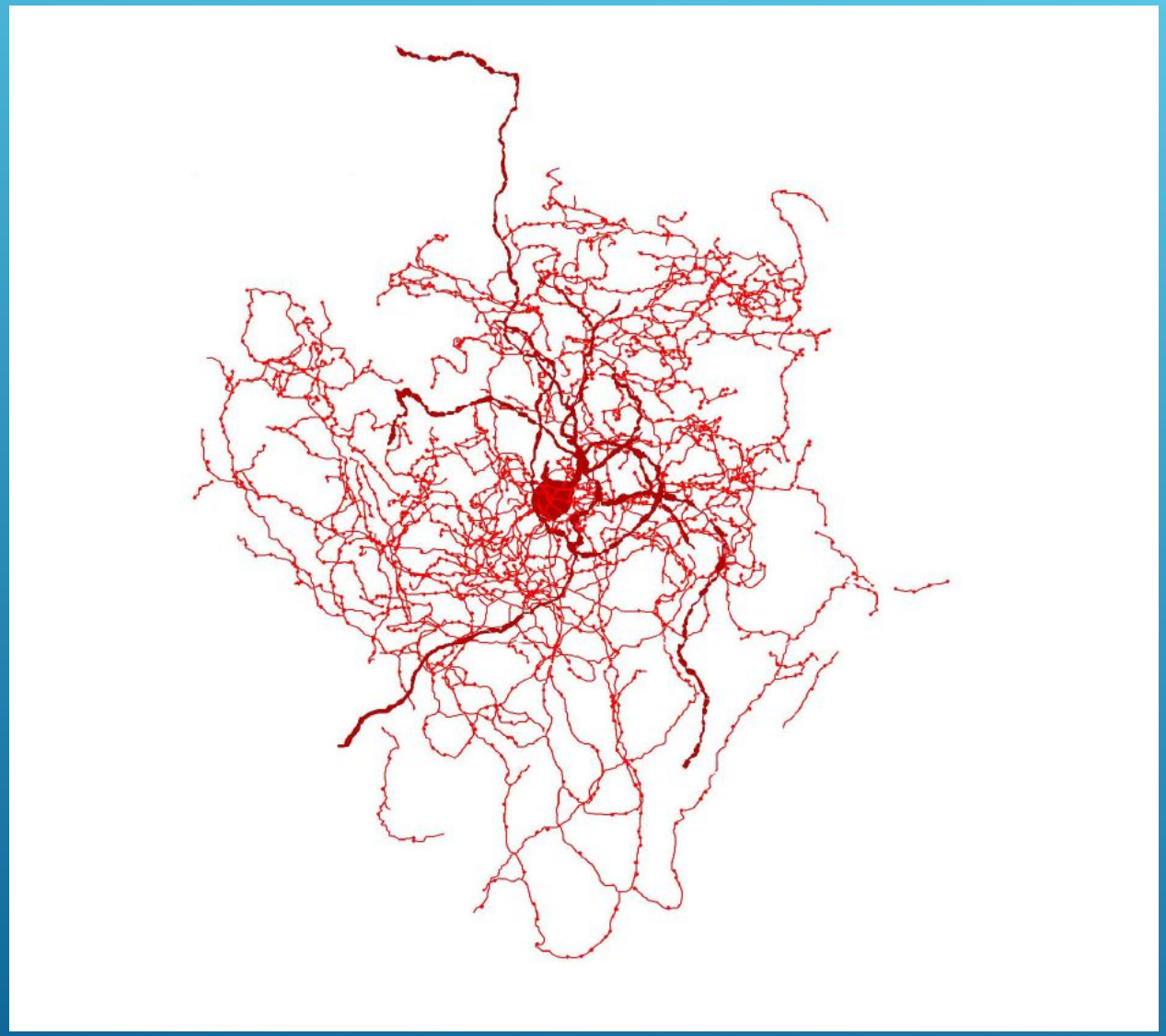
ЕЩЁ ОДНА ПОПЫТКА ПОБЕДИТЬ СПИНАЛЬНУЮ ТРАВМУ

Required growth facilitators propel axon regeneration across complete spinal cord injury by Anderson MA et al. in *Nature*. August 29, 2018. DOI: 10.1038/s41586-018-0467-6



СВЕРХПЛАСТИЧНОСТЬ «ЛУНОХОДНЫХ НЕЙРОНОВ»

MDN brain descending neurons coordinately activate backward and inhibit forward locomotion by Arnaldo Carreira-Rosario, Aref Arzan Zarin, Matthew Q Clark, Laurina Manning, Richard D Fetter, Albert Cardona, Chris Q Doe in eLife 2018;7:e38554
DOI: 10.7554/eLife.38554



НЕЙРОНЫ ШИПОВНИКА: ЧЕЛОВЕКУ, А НЕ МЫШИ

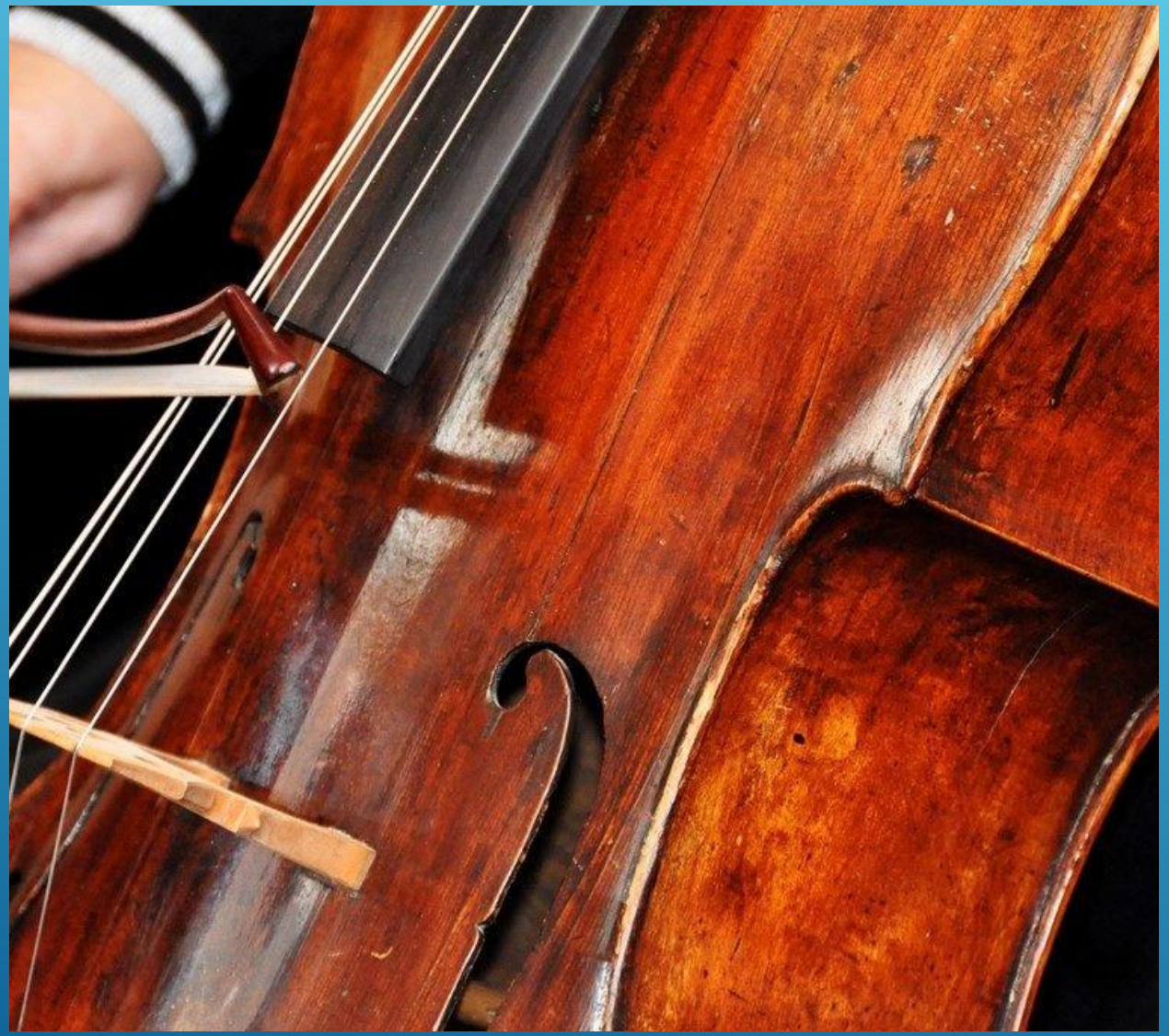
Transcriptomic and morphophysiological evidence for a specialized human cortical GABAergic cell type by Eszter Boldog, Trygve E. Bakken, […]Gábor Tamás in Nature Neuroscience. Published August 2018. https://doi.org/10.1038/s41593-018-0205-2

АЛЬЦГЕЙМЕР, ПО ГЛАЗАМ ВИЖУ

Optical coherence tomography angiography findings in pre-clinical Alzheimer's disease by O'Bryhim BE, Apte RS, Kung N, Coble D, Van Stavern GP in JAMA Ophthalmology. Publeshed August 2018. doi:10.1001/jamaophthalmol.2018.3556

ПОХМЕЛЬЕ = СОТРЯСЕНИЕ МОЗГА

Alcohol hangover impacts learning and reward processing within the medial-frontal cortex by *Ashley D. Howse Cameron D. Hassall Chad C. Williams Greg Hajcak Olave E. Krigolson in Psychophysiology. Published August 2018. https://doi.org/10.1111/psyp.13081*



УЛУЧШИТЬ МОЗГ ВИОЛОНЧЕЛЬЮ

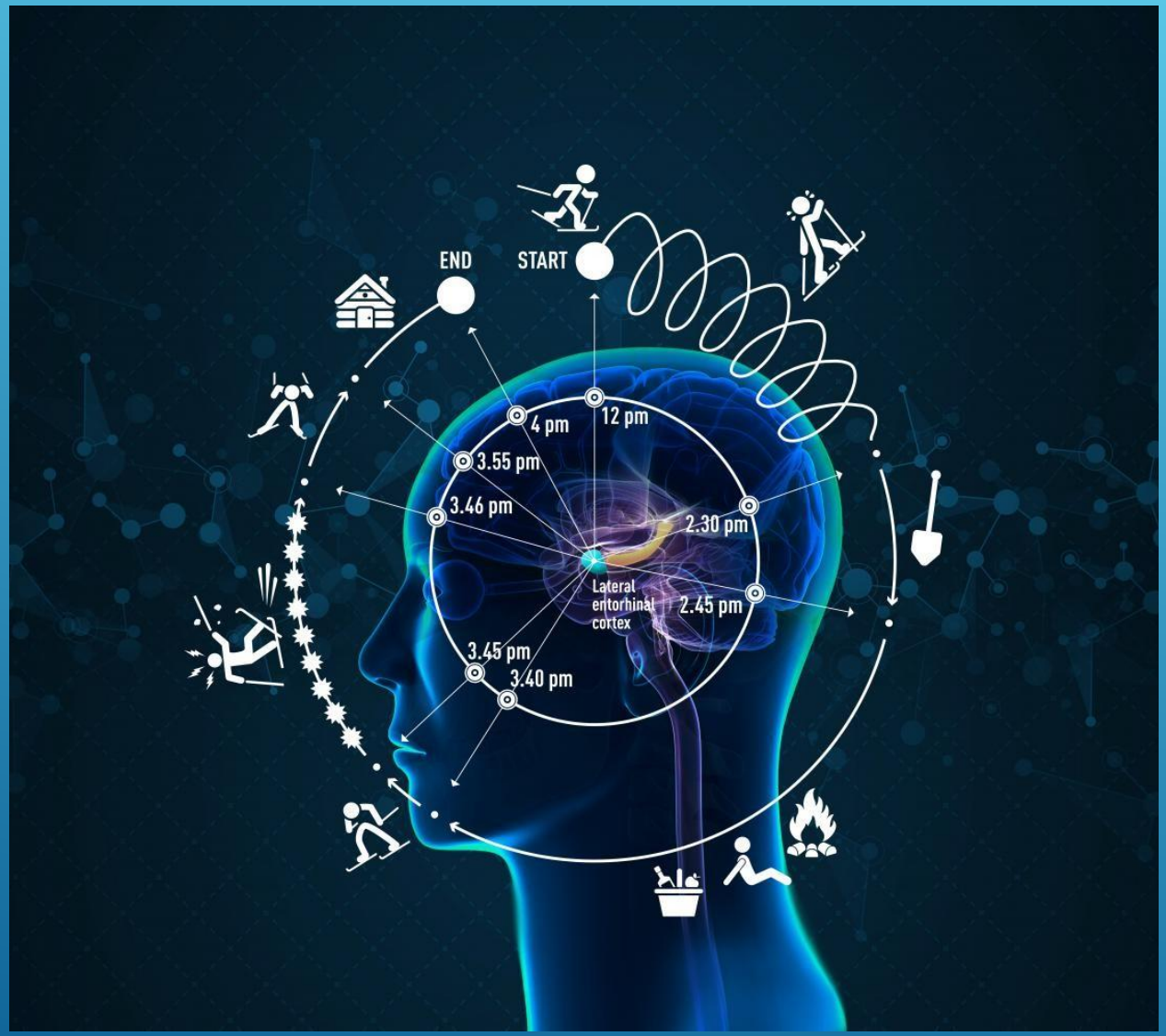
Neural network retuning and neural predictors of learning success associated with cello training by Indiana Wollman, Virginia Penhune, Melanie Segado, Thibaut Carpentier, and Robert J. Zatorre in Proceedings of the National Academy of Sciences. Published June 2018. https://doi.org/10.1073/pnas.1721414115

ЧЕМ МОЗГ ГИТАРИСТА ОТЛИЧАЕТСЯ ОТ МОЗГА УДАРНИКА

Beatboxers and Guitarists Engage Sensorimotor Regions Selectively When Listening to the Instruments They can Play

By Saloni Krishnan César F Lima Samuel Evans Sinead Chen Stella Guldner Harry Yeff Tom Manly Sophie K Scott

https://doi.org/10.1093/cercor/bhy208



КАК МОЗГ ИЗМЕРЯЕТ ВРЕМЯ

Episodic time coding in lateral entorhinal cortex by Albert Tsao, Jørgen Sugar, Li Lu, Cheng Wang, James J. Knierim, May-Britt Moser, Edvard I. Moser in *Nature*. *Published* August 2018.

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