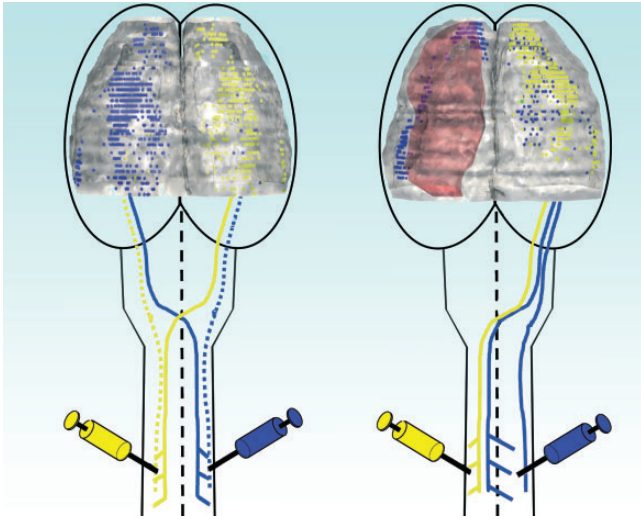


BRAIN

A JOURNAL OF NEUROLOGY



Cover image: Bilateral retrograde tract tracing illustrates a massive somatotopic reorganization of the forelimb motor cortex and its descending corticospinal tract after unilateral stroke (and growth promoting treatment). From Lindau *et al.* Rewiring of the corticospinal tract in the adult rat after unilateral stroke and anti-Nogo-A therapy. pp. 739–756.

Contents

Editorial

D. M. Kullmann
645

Scientific Commentaries

Lafora's odyssey reaches a mysterious port of call
B. A. Minassian
646

Removing the brakes on post-stroke plasticity drives recovery from the intact hemisphere and spinal cord
G. Silasi and T. H. Murphy
648

Role of PACAP in migraine headaches
L. Vécsei, B. Tuka and J. Tajti
650

Deepening understanding of the neural substrates of chronic pain
M. W. Salter
651

Review Article

Restoration of sensorimotor functions after spinal cord injury
V. Dietz and K. Fouad
654

Original Articles

The *Gdap1* knockout mouse mechanistically links redox control to Charcot–Marie–Tooth disease
A. Niemann, N. Huber, K. M. Wagner, C. Somandin, M. Horn, F. Lebrun-Julien, B. Angst, J. A. Pereira, H. Halfter, H. Welzl, M. L. Feltri, L. Wrabetz, P. Young, C. Wessig, K. V. Toyka and U. Suter
668

Sensory neuropathy with bone destruction due to a mutation in the membrane-shaping atlastin GTPase 3

U. Kornak, I. Mademan, M. Schinke, M. Voigt, P. Krawitz, J. Hecht, F. Barvencik, T. Schinke, S. Gießelmann, F. T. Beil, A. Pou-Serradell, J. J. Vilchez, C. Beetz, T. Deconinck, V. Timmerman, C. Kaether, P. De Jonghe, C. A. Hübner, A. Gal, M. Amling, S. Mundlos, J. Baets and I. Kurth

683

X-linked adrenoleukodystrophy in women: a cross-sectional cohort study

M. Engelen, M. Barbier, I. M. E. Dijkstra, R. Schür, R. M. A. de Bie, C. Verhamme, M. G. W. Dijkgraaf, P. A. Aubourg, R. J. A. Wanders, B. M. van Geel, M. de Visser, B. T. Poll-The and S. Kemp

693

Toll-like receptor 2-mediated alternative activation of microglia is protective after spinal cord injury

D. P. Stirling, K. Cummins, M. Mishra, W. Teo, V. Wee Yong and P. Stys

707

Enhancing K-Cl co-transport restores normal spinothalamic sensory coding in a neuropathic pain model

G. Lavertu, S. L. Côté and Y. De Koninck

724

Rewiring of the corticospinal tract in the adult rat after unilateral stroke and anti-Nogo-A therapy

N. T. Lindau, B. J. Bänninger, M. Gullo, N. A. Good, L. C. Bachmann, M. L. Starkey and M. E. Schwab

739

Cortical reorganization after macroreplantation at the upper extremity: a magnetoencephalographic study

K. R. Blume, C. Dietrich, R. Huonker, T. Götz, E. Sens, R. Friedel, G. O. Hofmann, W. H. R. Miltner and T. Weiss

757

Modest familial risks for multiple sclerosis: a registry-based study of the population of Sweden

H. Westerlind, R. Ramanujam, D. Uvehag, R. Kuja-Halkola, M. Boman, M. Bottai, P. Lichtenstein and J. Hillert

770

Investigation of the pathophysiological mechanisms of migraine attacks induced by pituitary adenylate cyclase-activating polypeptide-38

F. M. Amin, A. Hougaard, H. W. Schytz, M. S. Asghar, E. Lundholm, A. I. Parvaiz, P. J. H. de Koning, M. R. Andersen, H. B. W. Larsson, J. Fahrenkrug, J. Olesen and M. Ashina

779

Familial risk of epilepsy: a population-based study

A. L. Peljto, C. Barker-Cummings, V. M. Vasoli, C. L. Leibson, W. A. Hauser, J. R. Buchhalter and R. Ottman

795

The phosphatase activity of laforin is dispensable to rescue *Epm2a*^{-/-} mice from Lafora disease

J. Gayarre, L. Duran-Trío, O. Criado Garcia, C. Aguado, L. Juana-López, I. Crespo, E. Knecht, P. Bovolenta and S. Rodríguez de Córdoba

806

HTT-lowering reverses Huntington's disease immune dysfunction caused by NFκB pathway dysregulation

U. Träger, R. Andre, N. Lahiri, A. Magnusson-Lind, A. Weiss, S. Grueninger, C. McKinnon, E. Sirinathsinghji, S. Kahlon, E. L. Pfister, R. Moser, H. Hummerich, M. Antoniou, G. P. Bates, R. Luthi-Carter, M. W. Lowdell, M. Björkqvist, G. R. Ostroff, N. Aronin and S. J. Tabrizi

819

Reduced glucocerebrosidase is associated with increased α-synuclein in sporadic Parkinson's disease

K. E. Murphy, A. M. Gysbers, S. K. Abbott, N. Tayebi, W. S. Kim, E. Sidransky, A. Cooper, B. Garner and G. M. Halliday

834

Visuoperceptive region atrophy independent of cognitive status in patients with Parkinson's disease with hallucinations

J. G. Goldman, G. T. Stebbins, V. Dinh, B. Bernard, D. Merkitich, L. deToledo-Morrell and C. G. Goetz

849

Nerve growth factor metabolic dysfunction in Down's syndrome brains

M. F. Iulita, S. Do Carmo, A. K. Ower, A. M. Fortress, L. F. Aguilar, M. Hanna, T. Wisniewski, A.-C. Granholm, M. Buhusi, J. Busciglio and A. C. Cuello

860

High molecular mass assemblies of amyloid-β oligomers bind prion protein in patients with Alzheimer's disease

F. Dohler, D. Sepulveda-Falla, S. Krasemann, H. Altmeyen, H. Schlüter, D. Hildebrand, I. Zerr, J. Matschke and M. Glatzel

873

Biochemical stages of amyloid-β peptide aggregation and accumulation in the human brain and their association with symptomatic and pathologically preclinical Alzheimer's disease

A. Rijal Upadhaya, I. Kosterin, S. Kumar, C. A. F. von Arnim, H. Yamaguchi, M. Fändrich, J. Walter and D. R. Thal

887

Does cognitive functioning predict chronic pain? Results from a prospective surgical cohort

N. Attal, A. Masselin-Dubois, V. Martinez, C. Jayr, A. Albi, J. Fermanian, D. Bouhassira and S. Baudic

904

Lesion correlates of patholinguistic profiles in chronic aphasia: comparisons of syndrome-, modality- and symptom-level assessment

I. Henseler, F. Regenbrecht and H. Obrig

918

The anterior temporal lobes support residual comprehension in Wernicke's aphasia

H. Robson, R. Zahn, J. L. Keidel, R. J. Binney, K. Sage and M. A. Lambon Ralph

931

Inferring a dual-stream model of mentalizing from associative white matter fibres disconnection

G. Herbert, G. Lafargue, F. Bonnetblanc, S. Moritz-Gasser, N. Menjot de Champfleury and H. Duffau

944

Dorsal Column

Occasional Paper

Revealing the invisible: the paradox of picturing a phantom limb

G. D. Schott

960

Book Review

Memories are made of this

J. R. Hodges

970