



Cover image: Cover relates to the article “Neuro-immunobiology and treatment assessment in a mouse model of anti-NMDAR encephalitis”, and features a wooden model of a mouse, representing the active immunization model used in the study. The key symbolizes the immunization process that resulted in an immune response associated with antibodies against the NMDA receptor. The cylindrical tetramer in the foreground represents the NMDAR and shows an antibody interacting with the GluN1 subunit. The varying tones of the antibodies represent epitope spreading, indicating the diversity of the antibody response. Image designed by Jesús Planagumà. *Brain*. 2025; 148(6):2023–2037.

Contents

Editorial

Models of autoantibody mediated diseases: actively nearing the human gold standard

S. R. Irani
1845

Essays

Snatches of time. Fragments

M. Butler
1847

Finitude and melancholy

J. Ramirez-Bermudez
1850

Scientific Commentaries

Overcoming the dopamine-centric model of impulse control disorders in Parkinson’s disease: the role of 5-HT

R. Cilia and V. Kaasinen
1853

More is more: combining therapies to enhance spinal cord injury recovery

P. S. Scheuren, E. Ogalo, M. J. Berger and J. L. K. Kramer
1857

Beyond a syndrome: a mechanism for depression in Parkinson’s disease

C. Le Heron and T. T.-J. Chong
1859

Opinion

Harnessing psychedelics for stroke recovery: therapeutic potential and mechanisms

Y. Yang, Y. Wang and X. Wang
1862



Review Articles

The impact of resective epilepsy surgery on the brain network: evidence from post-surgical imaging

L. E. Sainburg, D. J. Englot and V. L. Morgan

1866

Myopathic aggregation-prone variants in the TDP-43 prion-like domain: genetics paving the way

P. Ervilha Pereira, J. L. De Bleecker, E. Bogaert and B. Dermaut

1876

Fetal malformations of cortical development: review and clinical guidance

J. B. Russ, S. Agarwal, C. Venkatesan, B. Scelsa, B. Vollmer, T. Tarui, A. C. Pardo, M. E. Lemmon, S. B. Mulkey, A. R. Hart, U. D. Nagaraj, J. A. Kuller, M. T. Whitehead, J. L. Cohen, J. S. Gebb, O. A. Glenn, M. E. Norton and D. Gano

1888

Report

Post-mortem validation of in vivo TSPO PET as a microglial biomarker

S. S. Wijesinghe, J. B. Rowe, H. D. Mason, K. S. J. Allinson, R. Thomas, D. S. Vontobel, T. D. Fryer, Y. T. Hong, M. Bacioglu, M. G. Spillantini, J. van den Ameele, J. T. O'Brien, S. Kaalund, M. Malpetti and A. Quaegebeur

1904

Clinical Trial

Combinatorial approaches increasing neuronal activity accelerate recovery after spinal cord injury

B. Chen, S. Gaikwad, R. H. Powell, H. J. Jo, A. B. Kessler, D. Chen, C. J. Heckman, L. Jones, J. D. Guest, J. R. Wolpaw, M. Oudega, A. R. Blight and M. A. Perez

1911

Original Articles

Reduced brain oxygen response to spreading depolarization predicts worse outcome in ischaemic stroke

N. Hecht, D. Haddad, K. Neumann, L. Schumm, N. F. Dengler, L. Wessels, P. Dömer, S. Helgers, F. Meinert, S. Major, C. L. Lemale, J. P. Dreier, P. Vajkoczy and J. Woitzik

1924

Optimizing treatment of cardiovascular risk factors in cerebral small vessel disease using genetics

F. Koohi, E. L. Harshfield, D. Gill, W. Ge, S. Burgess and H. S. Markus

1936

Oxygen extraction fraction in small vessel disease: relationship to disease burden and progression

R. Zhang, M. Lin, J. Cho, X. Yu, Y. Jiaerken, S. Wang, H. Hong, X. Guan, Y. Zhang, L. Xie, L. Liu, L. Cui, M. Zhang, G. J. Biessels, J. C. W. Siero and P. Huang

1950

Deep learning reveals pathology-confirmed neuroimaging signatures in Alzheimer's, vascular and Lewy body dementias

D. Wang, N. Honnorat, J. B. Toledo, K. Li, S. Charisis, T. Rashid, A. Benet Nirmala, S. R. Brandigampala, M. Mojtabei, S. Seshadri, the Alzheimer's Disease Neuroimaging Initiative and M. Habes

1963

Activation of XBP1s attenuates disease severity in models of proteotoxic Charcot-Marie-Tooth type 1B

T. Touvier, F. A. Veneri, A. Claessens, C. Ferri, R. Mastrangelo, N. Sorgiati, F. Bianchi, S. Valenzano, U. Del Carro, C. Rivellini, P. Duong, M. E. Shy, J. W. Kelly, J. Svaren, R. L. Wiseman and M. D'Antonio

1978

Modelling pathological spread through the structural connectome in the frontotemporal dementia clinical spectrum

F. Agosta, S. Basaia, E. G. Spinelli, F. Facente, L. Lumaca, A. Ghirelli, E. Canu, V. Castelnovo, E. Sibilla, C. Tripodi, F. Freri, G. Cecchetti, G. Magnani, F. Caso, F. Verde, N. Ticozzi, V. Silani, P. Caroppo, S. Prioni, C. Villa, L. Tremolizzo, I. Appollonio, A. Raj and M. Filippi

1994

Anterior-temporal network hyperconnectivity is key to Alzheimer's disease: from ageing to dementia

L. Chauveau, B. Landeau, S. Dautricourt, A.-L. Turpin, M. Delarue, O. Hébert, V. de La Sayette, G. Chételat and R. de Flores

2008

Neuro-immunobiology and treatment assessment in a mouse model of anti-NMDAR encephalitis

E. Maudes, J. Planagumà, L. Marmolejo, M. Radosevic, A. B. Serafim, E. Aguilar, C. Sindreu, J. Landa, A. García-Serra, F. Mannara, M. Cunqueiro, A. Smit, C. Milano, P. Peixoto-Moledo, M. Guasp, R. Ruiz-García, S. M. Gray, M. Spatola, P. Loza-Alvarez, L. Sabater, C. Matute and J. Dalmau

2023

Alpha-synuclein seed amplification assay longitudinal outcomes in Lewy body disease spectrum

A. Mastrangelo, A. Mammana, S. Hall, E. Stomrud, C. Zenesini, M. Rossi, S. Janelidze, A. Ticca, S. Palmqvist, F. Magliocchetti, S. Baiardi, N. Mattsson-Carlsson, O. Hansson and P. Parchi

2038

Plasma pTau181 and amyloid markers predict conversion to dementia in idiopathic REM sleep behaviour disorder

A. Delva, A. Pelletier, E. Somerville, J. Montplaisir, J.-F. Gagnon, G. Kollmorgen, T. Kam-Thong, T. Kustermann, V. Machado, Z. Gan-Or and R. B. Postuma

2049

Genome-wide epistasis analysis reveals significant epistatic signals associated with Parkinson's disease risk
A. Cisterna-García, B. I. Bustos, S. Bandres-Ciga, T. P. Leal, E. I. Sarihan, C. Jok, D. Krainc, International Parkinson's Disease Genomics Consortium (IPDGC), I. F. Mata, S. J. Lubbe and J. A. Botia
2060

In-depth mass-spectrometry reveals phospho-RAB12 as a blood biomarker of G2019S LRRK2-driven Parkinson's disease

A. Cortés, T. K. Phung, L. de Mena, A. Garrido, J. Infante, J. Ruíz-Martínez, M. À. Galmés-Ordinas, S. Glendinning, J. Pérez, A. Roig, M. Soto, M. Cosgaya, V. Ravasi, M. Fernández, A. Rubiano-Castro, R. Díaz, H. Hernández-Eguiazu, C. Sánchez-Quintana, A. Vinagre-Aragón, E. Mondragón, I. Croitoru, M. Rivera-Sánchez, A. Corrales-Pardo, M. Sierra, E. Tolosa, C. Malagelada, R. S. Nirujogi, J. Fernández-Irigoyen, E. Santamaría, D. R. Alessi, M. J. Martí, M. Ezquerro and R. Fernández-Santiago
2075

Cortico-thalamic tremor circuits and their associations with deep brain stimulation effects in essential tremor

S. He, T. O. West, F. R. Plazas, L. Wehmeyer, A. Pogosyan, A. Deli, C. Wiest, D. M. Herz, T. G. Simpson, P. Andrade, F. Baig, M. G. Hart, F. Morgante, J. J. FitzGerald, M. T. Barbe, V. Visser-Vandewalle, A. L. Green, E. A. Pereira, H. Cagnan and H. Tan
2093

Serotonergic dysfunction in patients with impulse control disorders in Parkinson's disease

S. Prange, E. Metereau, H. Klinger, M. Huddleston, M. De Oliveira, S. Duperrier, P. Courault, J. Redoute, L. Tremblay, V. Sgambato, S. Lancelot and S. Thobois
2108

Impaired reward sensitivity in Parkinson's depression is unresponsive to dopamine treatment

H. Costello, Y. Yamamori, K. Kieslich, M. Murphy, K. Bobyrev, A.-E. Schrag, R. Howard and J. P. Roiser
2122

Decoupling of motor cortex to movement in Parkinson's dyskinesia rescued by sub-anaesthetic ketamine

A. Vishwanath, M. J. Bartlett, T. Falk and S. L. Cowen
2135

Enhanced behavioural and neural sensitivity to punishments in chronic pain and fatigue

F. Mancini, P. Mahajan, A. V. Guttesen, J. Onysk, I. Scholtes, N. Shenker, M. Lee and B. Seymour
2151

Raised intracranial pressure alters cortical vascular function and cephalic allodynia

O. Grech, E. Rubio-Beltran, E. C. Stanyer, A. Labastida-Ramirez, G. G. Lavery, L. J. Hill, P. R. Holland and A. J. Sinclair
2163

Composite microRNA-genetic risk score model links to migraine and implicates its pathogenesis

S.-P. Chen, Y.-H. Chang, Y.-F. Wang, H.-Y. Chen and S.-J. Wang
2178

Redefining diagnostic lesional status in temporal lobe epilepsy with artificial intelligence

E. Gleichgerrcht, E. Kaestner, R. Hassanzadeh, R. W. Roth, A. Parashos, K. A. Davis, A. Bagić, S. S. Keller, T. Rüber, T. Stoub, H. R. Pardoe, P. Dugan, D. L. Drane, A. Abrol, V. Calhoun, R. I. Kuzniecky, C. R. McDonald and L. Bonilha
2189

Distinct transcriptional changes distinguish efficient and poor remyelination in multiple sclerosis

J. Q. A. Chen, N. B. McNamara, H. J. Engelenburg, A. Jongejan, D. D. Wever, K. Hopman, E. van Rixel, P. J. H. Nijhuis, F. de Winter, P. D. Moerland, J. Smolders, J. Verhaagen, J. Hamann and I. Huitinga
2201

Deciphering the temporal transcriptional landscape of human fetal leptomeninges

L. Sun, P. Liu, J. Guo, C. Fang, L. Li, Y. Liu, Y. Tan, Y. Zhang, R. Zhao, F. Zhang, J. Xiao, R. Dong, S. Ma, X. Mei and D. Qi
2218

Letters to the Editor

Overstating harms can have consequences

R. S. Bedlack
e52

Reply: Overstating harms can have consequences

M. Benatar, C. J. McDermott, M. R. Turner and R. P. A. van Eijk
e54

Correction

Correction to: Sex-specific modulation of amyloid- β on tau phosphorylation underlies faster tangle accumulation in females

e55