

BRAIN

A JOURNAL OF NEUROLOGY



Cover image: The cascading network failure model of Alzheimer's disease incorporates both macro- and micro-scale physiology into a single biomarker and pathophysiologic framework. The illustration makes an analogy with the earth viewed from space, with a rolling blackout of lights representing the microscale. From Jones *et al.* Cascading network failure across the Alzheimer's disease spectrum. Pp. 547–562.

Contents

Editorial

- D. M. Kullmann
303

Scientific Commentaries

- 'Moonlighting' surface antigens: a paradigm for autoantibody pathogenicity in neurology?

S. R. Irani
304

- A fatty acid in the MCT ketogenic diet for epilepsy treatment blocks AMPA receptors

M. A. Rogawski
306

- When is temporal lobe epilepsy not temporal lobe epilepsy?

J. Engel
309

- Habitual and goal-directed behaviours and Tourette syndrome

H. S. Singer
312

Review

- Congenital disorders of autophagy: an emerging novel class of inborn errors of neuro-metabolism

D. Ebrahimi-Fakhari, A. Saffari, L. Wahlster, J. Lu, S. Byrne, G. F. Hoffmann, H. Jungbluth and M. Sahin
317



Reports

- Loss of the smallest subunit of cytochrome c oxidase, COX8A, causes Leigh-like syndrome and epilepsy**
K. Hallmann, A. P. Kudin, G. Zsurka, C. Kornblum, J. Reimann, B. Stüve, S. Waltz, E. Hattingen, H. Thiele, P. Nürnberg, C. Rub, W. Voos, J. Kopatz, H. Neumann and W. S. Kunz
338
- Human thioredoxin 2 deficiency impairs mitochondrial redox homeostasis and causes early-onset neurodegeneration**
E. Holzerova, K. Danhauser, T. B. Haack, L. S. Kremer, M. Melcher, I. Ingold, S. Kobayashi, C. Terrile, P. Wolf, J. Schaper, E. Mayatepek, F. Baertling, J. P. Friedmann Angeli, M. Conrad, T. M. Strom, T. Meitinger, H. Prokisch and F. Distelmaier
346
- Dopamine selectively remediates 'model-based' reward learning: a computational approach**
M. E. Sharp, K. Foerde, N. D. Daw and D. Shohamy
355
- Original Articles**
- Human autoantibodies to amphiphysin induce defective presynaptic vesicle dynamics and composition**
C. Werner, M. Paull, S. Doose, A. Weishaupl, H. Haselmann, B. Grünewald, M. Sauer, M. Heckmann, K. V. Toyka, E. Asan, C. Sommer and C. Geis
365
- In vivo impact of presynaptic calcium channel dysfunction on motor axons in episodic ataxia type 2**
S. E. Tomlinson, S. Veronica Tan, D. Burke, R. W. Labrum, A. Haworth, V. S. Gibbons, M. G. Sweeney, R. C. Griggs, D. M. Kullmann, H. Bostock and M. G. Hanna
380
- Temporoparietal encoding of space and time during vestibular-guided orientation**
D. Kaski, S. Quadir, Y. Nigmatullina, P. A. Malhotra, A. M. Bronstein and B. M. Seemungal
392
- Nerve growth factor improves visual loss in childhood optic gliomas: a randomized, double-blind, phase II clinical trial**
B. Falsini, A. Chiaretti, D. Rizzo, M. Piccardi, A. Ruggiero, L. Manni, M. Soligo, A. Dickmann, M. Federici, A. Salerni, L. Timelli, G. Guglielmi, I. Lazzareschi, M. Caldarelli, L. Galli-Resta, C. Colosimo and R. Riccardi
404
- Memory network plasticity after temporal lobe resection: a longitudinal functional imaging study**
M. K. Sidhu, J. Stretton, G. P. Winston, A. W. McEvoy, M. Symms, P. J. Thompson, M. J. Koepp and J. S. Duncan
415
- Seizure control by decanoic acid through direct AMPA receptor inhibition**
P. Chang, K. Augustin, K. Bodrum, S. Williams, M. Sun, J. A. Terschak, J. D. Hardege, P. E. Chen, M. C. Walker and R. S. B. Williams
431
- Temporal plus epilepsy is a major determinant of temporal lobe surgery failures**
C. Barba, S. Rheims, L. Minotti, M. Guénot, D. Hoffmann, S. Chabardès, J. Isnard, P. Kahane and P. Ryvlin
444
- Clinical features of TBK1 carriers compared with C9orf72, GRN and non-mutation carriers in a Belgian cohort**
S. Van Meschelede, J. van der Zee, I. Gijselinck, S. Engelborghs, A. Sieben, T. Van Langenhove, J. De Bleecker, J. Baets, M. Vandebulcke, K. Van Laere, S. Ceyssens, M. Van den Broeck, K. Peeters, M. Mattheijssens, P. Cras, R. Vandenberghe, P. De Jonghe, J.-J. Martin, P. P. De Deyn, M. Cruts and C. Van Broeckhoven on behalf of the Belgian Neurology consortium
452
- Enhanced phasic GABA inhibition during the repair phase of stroke: a novel therapeutic target**
T. Hiu, Z. Farzampour, J. T. Paz, E. H. J. Wang, C. Badgely, A. Olson, K. D. Micheva, G. Wang, R. Lemmens, K. V. Tran, Y. Nishiyama, X. Liang, S. A. Hamilton, N. O'Rourke, S. J. Smith, J. R. Huguenard, T. M. Bliss and G. K. Steinberg
468
- Induction of α -synuclein aggregate formation by CSF exosomes from patients with Parkinson's disease and dementia with Lewy bodies**
A. Stuendl, M. Kunadt, N. Kruse, C. Bartels, W. Moebius, K. M. Danzer, B. Mollenhauer and A. Schneider
481
- Free-water imaging in Parkinson's disease and atypical parkinsonism**
P. J. Planetta, E. Ofori, O. Pasternak, R. G. Burciu, P. Shukla, J. C. DeSimone, M. S. Okun, N. R. McFarland and D. E. Vaillancourt
495
- Amyloid- β dimers in the absence of plaque pathology impair learning and synaptic plasticity**
A. Müller-Schiffmann, A. Herring, L. Abdel-Hafiz, A. N. Chepkova, S. Schäble, D. Wedel, A. H. C. Horn, H. Sticht, M. A. de Souza Silva, K. Gottmann, O. A. Sergeeva, J. P. Huston, K. Keyvani and C. Korth
509
- Metabotropic glutamate receptor 5 couples cellular prion protein to intracellular signalling in Alzheimer's disease**
L. T. Haas, S. V. Salazar, M. A. Kostylev, J. W. Um, A. C. Kaufman and S. M. Strittmatter
526
- Cascading network failure across the Alzheimer's disease spectrum**
D. T. Jones, D. S. Knopman, J. L. Gunter, J. Graff-Radford, P. Vemuri, B. F. Boeve, R. C. Petersen, M. W. Weiner and C. R. Jack Jr on behalf of the Alzheimer's Disease Neuroimaging Initiative
547

Passive immunotherapy targeting amyloid-β reduces cerebral amyloid angiopathy and improves vascular reactivity	K. R. Bales, S. M. O'Neill, N. Pozdnyakov, F. Pan, D. Caouette, Y. Q. Pi, K. M. Wood, D. Volfson, J. R. Cirrito, B.-H. Han, A. W. Johnson, G. J. Zipfel and T. A. Samad	563
Neuroeconomic dissociation of semantic dementia and behavioural variant frontotemporal dementia	W. Chiong, K. A. Wood, A. J. Beagle, M. Hsu, A. S. Kayser, B. L. Miller and J. H. Kramer	578
Neural bases of orthographic long-term memory and working memory in dysgraphia	B. Rapp, J. Purcell, A. E. Hills, R. Capasso and G. Miceli	588
Enhanced habit formation in Gilles de la Tourette syndrome	C. Delorme, A. Salvador, R. Valabregue, E. Roze, S. Palminteri, M. Vidailhet, S. de Wit, T. Robbins, A. Hartmann and Y. Worbe	605
Frontal networks in adults with autism spectrum disorder	M. Catani, F. Dell'Acqua, S. Budisavljevic, H. Howells, M. Thiebaut de Schotten, S. Froudist-Walsh, L. D'Anna, A. Thompson, S. Sandrone, E. T. Bullmore, J. Suckling, S. Baron-Cohen, M. V. Lombardo, S. J. Wheelwright, B. Chakrabarti, M.-C. Lai, A. N. V. Ruigrok, A. Leemans, C. Ecker, MRC AIMS Consortium, M. C. Craig and D. G. M. Murphy	616
Dorsal Column		
Grey Matter		
Sir Victor Horsley at the birth of neurosurgery	M. P. Powell	631
Book Review		
Understanding madness?	C. D. Frith	635
Letters to the Editor		
Screening for CHCHD10 mutations in a large cohort of sporadic ALS patients: no evidence for pathogenicity of the p.P34S variant	N. Marroquin, S. Stranz, K. Müller, T. Wieland, W. P. Ruf, S. J. Brockmann, K. M. Danzer, G. Borck, A. Hübers, P. Weydt, T. Meitinger, T.-M. Strom, A. Rosenbohm, A. C. Ludolph and J. H. Weishaupt	e8
CHCHD10 Pro34Ser is not a highly penetrant pathogenic variant for amyotrophic lateral sclerosis and frontotemporal dementia	S. Abdelkarim, S. Morgan, V. Plagnol, C.-H. Lu, G. Adamson, R. Howard, A. Malaspina, R. Orrell, N. Sharma, K. Sidle, J. Clarke, N. C. Fox, M. N. Rossor, J. D. Warren, C. N. Clark, J. D. Rohrer, E. M. C. Fisher, S. Mead, A. Pittman and P. Fratta	e9
Strategy and suppression impairments after right lateral prefrontal and orbito-frontal lesions	L. Cipolotti, C. Healy, B. Spanò, F. Lecce, F. Biondo, G. Robinson, E. Chan, J. Duncan, T. Shallice and M. Bozzali	e10
Reply: Strategy and suppression impairments after right lateral and orbito-frontal lesions	M. Hornberger and M. Bertoux	e11
The challenges for research on deep brain stimulation and memory	M. van den Noort, P. Bosch, S. Yeo and S. Lim	e12
Reply: The challenges for research on deep brain stimulation and memory	P. S. Fastenau, C. M. Bailey, J. A. Sweet, C. N. Munyon, H. O. Lüders and J. P. Miller	e13
Corrigendum		
	e14	