

Dr. Euan R. Brown
Associate Professor
School of Engineering & Physical Sciences
Institute of Biological Chemistry, Biophysics and Bioengineering
Type of address: Postal address.
Riccarton
Edinburgh
United Kingdom
Email: Euan.R.Brown@hw.ac.uk



Qualifications

... → 1992 PhD Physiology University of London

... → 1987 BSc (Hons) Physiology, King's College University of London

Research output

Neuronal cholesterol synthesis is essential for repair of chronically demyelinated lesions in mice

Berghoff, S. A., Spieth, L., Sun, T., Hosang, L., Depp, C., Sasmita, A. O., Vasileva, M. H., Scholz, P., Zhao, Y., Krueger-Burg, D., Wichert, S., Brown, E. R., Michail, K., Nave, K.-A., Bonn, S., Odoardi, F., Rossner, M., Ischebeck, T., Edgar, J. M. & Saher, G., 26 Oct 2021, In: *Cell Reports*. 37, 4, 109889.

Neuronal cholesterol synthesis is essential for repair of chronically demyelinated lesions in mice

Berghoff, S. A., Spieth, L., Sun, T., Hosang, L., Depp, C., Sasmita, A. O., Vasileva, M. H., Scholz, P., Zhao, Y., Krueger-Burg, D., Wichert, S., Brown, E. R., Michael, K., Nave, K.-A., Bonn, S., Odoardi, F., Rossner, M., Ischebeck, T., Edgar, J. M. & Saher, G., 13 Aug 2021.

An in vitro model for studying CNS white matter: functional properties and experimental approaches

Bijland, S., Thomson, G., Euston, M., Michail, K., Thümmeler, K., Mücklich, S., Crawford, C. L., Barnett, S. C., McLaughlin, M., Anderson, T. J., Linington, C., Brown, E. R., Kalkman, E. R. & Edgar, J. M., 29 Jan 2019, In: *F1000Research*. 8, 117.

Zinc Oxide Nanoparticles and Voltage-Gated Human Kv11.1 Potassium Channels Interact through a Novel Mechanism

Piscopo, S. & Brown, E. R., 12 Apr 2018, In: *Small*. 14, 15, 1703403.

Chapter 6: Primary Production, Cycling of Nutrients, Surface Layer and Plankton

Malone, T., Azzaro, M., Bode, A., Brown, E. R., Duce, R., Kamykowski, D., Sung-Ho, K., Kedong, Y., Thorndyke, M., Wang, J., Park, C., Calumpong, H. & Egtesadi Araghi, P., 23 Dec 2015, *First Global Integrated Marine Assessment, also known as the first World Ocean Assessment: World Ocean Assessment I*. United Nations, 67 p.

Class I PI 3-kinases: Function and evolution

Kriplani, N., Hermida Ayala, M., Brown, E. R. & Leslie, N. R., Sept 2015, In: *Advances in Biological Regulation*. 59, p. 53-64 12 p.

Mechanism of neutrophil activation and toxicity elicited by engineered nanomaterials

Johnston, H. J., Brown, D. M., Kanase, N., Euston, M., Gaiser, B. K., Robb, C. T., Dyrzynda, E., Rossi, A. G., Brown, E. R. & Stone, V., Aug 2015, In: *Toxicology in Vitro*. 29, 5, p. 1172-1184 13 p.

A molecular toggle after exocytosis sequesters the presynaptic syntaxin1a molecules involved in prior vesicle fusion

Kavanagh, D., Smyth, A. M., Martin, K. J., Dun, A., Brown, E. R., Gordon, S., Smillie, K. J., Chamberlain, L. H., Wilson, R. S., Yang, L., Lu, W., Cousin, M. A., Rickman, C. & Duncan, R. R., 2014, In: *Nature Communications*. 5, 5774.

Synaptic plasticity in cephalopods; more than just learning and memory?

Brown, E. R. & Piscopo, S., Jun 2013, In: *Invertebrate Neuroscience*. 13, 1, p. 35-44 10 p.

Highly conserved elements discovered in vertebrates are present in non-syntenic loci of tunicates, act as enhancers and can be transcribed during development

Sanges, R., Hadzhiev, Y., Gueroult-Bellone, M., Roure, A., Ferg, M., Meola, N., Amore, G., Basu, S., Brown, E. R., De Simone, M., Petrer, F., Licastro, D., Strahle, U., Banfi, S., Lemaire, P., Birney, E., Muller, F. & Stupka, E., Apr 2013, In:

Nucleic Acids Research. 41, 6, p. 3600-3618 19 p., 1.

Evidence for dynamic and multiple roles for huntingtin in *Ciona intestinalis*

Idris, M. M., Thorndyke, M. C. & Brown, E. R., 2013, In: Invertebrate Neuroscience. 13, 2, p. 151-165 15 p.

Imaging large cohorts of single ion channels and their activity

Hiersemenzel, K., Brown, E. R. & Duncan, R. R., 2013, In: Frontiers in Endocrinology. 4, p. 114

Monoaminergic modulation of photoreception in ascidian: evidence for a proto-hypothalamo-retinal territory

Razy-Krajka, F., Brown, E. R., Horie, T., Callebert, J., Sasakura, Y., Joly, J.-S., Kusakabe, T. G. & Vernier, P., 19 May 2012, In: BMC Biology. 10, n/a, 14 p., 45.

Ion channels in key marine invertebrates; their diversity and potential for applications in biotechnology

Brown, E. R. & Piscopo, S., 2011, In: Biotechnology Advances. 29, 5, p. 457-467 11 p.

A glycine receptor is involved in the organization of swimming movements in an invertebrate chordate

Nishino, A., Okamura, Y., Piscopo, S. & Brown, E. R., 19 Jan 2010, In: BMC Neuroscience. 11, n/a, 6.

Nitric oxide mediates the glutamate-dependent pathway for neurotransmission in *Sepia officinalis* chromatophore organs

Mattiello, T., Fiore, G., Brown, E. R., d'Ischia, M. & Palumbo, A., 2010, In: Journal of Biological Chemistry. 285, 31, p. 24154-63 10 p.

Morphology of antennular sensors in *Clausocalanus furcatus* (Copepoda : Calanoida)

Uttieri, M., Brown, E. R., Boxshall, G. A. & Mazzocchii, M. G., May 2008, In: Journal of the Marine Biological Association of the United Kingdom. 88, 3, p. 535-541 7 p.

Natural variation of model mutant phenotypes in *Ciona intestinalis*

Sordino, P., Andreakis, N., Brown, E. R., Leccia, N. I., Squarzoni, P., Tarallo, R., Alfano, C., Caputi, L., D'Ambrosio, P., Daniele, P., D'Aniello, E., D'Aniello, S., Maiella, S., Miraglia, V., Russo, M. T., Sorrenti, G., Branno, M., Cariello, L., Cirino, P. & Locascio, A. & 3 others, Spagnuolo, A., Zanetti, L. & Ristatore, F., 2008, In: PLoS ONE. 3, 6, e2344.

Primary cultures of nervous system cells from the larva of the ascidian *Ciona intestinalis*

Zanetti, L., Ristatore, F., Francone, M., Piscopo, S. & Brown, E. R., 30 Sept 2007, In: Journal of Neuroscience Methods. 165, 2, p. 191-197 7 p.

Ammonium channel expression is essential for brain development and function in the larva of *Ciona intestinalis*

Marino, R., Melillo, D., Di Filippo, M., Yamada, A., Pinto, M. R., De Santis, R., Brown, E. R. & Matassi, G., 1 Jul 2007, In: Journal of Comparative Neurology. 503, 1, p. 135-147 13 p.

Modulation of an AMPA-like glutamate receptor (SqGluR) gating by L- and D-aspartic acids

Brown, E. R., Piscopo, S., Chun, J. T., Francone, M., Mirabile, I. & D'Aniello, A., 1 Jan 2007, In: Amino Acids. 32, 1, p. 53-57 5 p.

Pre- and postsynaptic excitation and inhibition at octopus optic lobe photoreceptor terminals; implications for the function of the 'presynaptic bags'

Piscopo, S., Moccia, F., Di Cristo, C., Caputi, L., Di Cosmo, A. & Brown, E. R., 2007, In: European Journal of Neuroscience. 26, 8, p. 2196-203 8 p.

The genome of the sea urchin *Strongylocentrotus purpuratus*

Sodergren, E., Weinstock, G. M., Davidson, E. H., Cameron, R. A., Gibbs, R. A., Angerer, R. C., Angerer, L. M., Arnone, M. I., Burgess, D. R., Burke, R. D., Coffman, J. A., Dean, M., Elphick, M. R., Ettensohn, C. A., Foltz, K. R., Hamdoun, A., Hynes, R. O., Klein, W. H., Marzluff, W. & McClay, D. R. & 31 others, Morris, R. L., Mushegian, A., Rast, J. P., Smith, L. C., Thorndyke, M. C., Vacquier, V. D., Wessel, G. M., Wray, G., Zhang, L., Elsik, C. G., Ermolaeva, O., Hlavina, W., Hofmann, G., Kitts, P., Landrum, M. J., Mackey, A. J., Maglott, D., Panopoulou, G., Poustka, A. J., Pruitt, K., Sapojnikov, V., Song, X., Souvorov, A., Solovyev, V., Wei, Z., Whittaker, C. A., Worley, K., Durbin, K. J., Shen, Y., Brown, E. R. & Sea Urchin Genome Sequencing Consortium, 10 Nov 2006, In: Science. 314, 5801, p. 941-952 12 p.

Brain and behavioural evidence for rest-activity cycles in *Octopus vulgaris*

Brown, E. R., Piscopo, S., De Stefano, R. & Giuditta, A., 25 Sept 2006, In: Behavioural Brain Research. 172, 2, p. 355-359 5 p.

Development of swimming behaviour in the larva of the ascidian *Ciona intestinalis*

Zega, G., Thorndyke, M. C. & Brown, E. R., Sept 2006, In: Journal of Experimental Biology. 209, 17, p. 3405-3412 8 p.

The ascidian homolog of the vertebrate homeobox gene *Rx* is essential for ocellus development and function

D'Aniello, S., D'Aniello, E., Locascio, A., Memoli, A., Corrado, M., Russo, M. T., Aniello, F., Fucci, L., Brown, E. R. & Branno, M., Jun 2006, In: Differentiation. 74, 5, p. 222-234 13 p.

D-aspartic acid in the nervous system of *Aplysia limacina*: possible role in neurotransmission

Spinelli, P., Brown, E. R., Ferrandino, G., Branno, M., Montarolo, P. G., D'Aniello, E., Rastogi, R. K., D'Aniello, B., Baccari, G. C., Fisher, G. & D'Aniello, A., Mar 2006, In: Journal of Cellular Physiology. 206, 3, p. 672-681 10 p.

GABAergic synaptic transmission modulates swimming in the ascidian larva

Brown, E. R., Nishino, A., Bone, Q., Meinertzhagen, I. A. & Okamura, Y., Nov 2005, In: European Journal of Neuroscience. 22, 10, p. 2541-2548 8 p.

Alteration and recovery of appetitive behaviour following nerve section in the starfish *Asterias rubens*

Piscopo, S., De Stefano, R., Thorndyke, M. C. & Brown, E. R., 14 Oct 2005, In: Behavioural Brain Research. 164, 1, p. 36-41 6 p.

Functional recovery of locomotion in denervated starfish (*Asterias rubens*)

Piscopo, S., De Stefano, R., Thorndyke, M. C. & Brown, E. R., Jul 2005, In: Comparative Biochemistry and Physiology Part A: Molecular and Integrative Physiology. 141, 3, p. S123 1 p.

A learning and memory area in the octopus brain manifests a vertebrate-like long-term potentiation

Hochner, B., Brown, E. R., Langella, M., Shomrat, T. & Fiorito, G., 1 Nov 2003, In: Journal of Neurophysiology. 90, 5, p. 3547-3554 8 p.

Ca²⁺ signalling and membrane current activated by cADPr in starfish oocytes

Moccia, F., Nusco, G. A., Lim, D., Ercolano, E., Gagnaniello, G., Brown, E. R. & Santella, L., 1 Aug 2003, In: Pflügers Archiv European Journal of Physiology. 446, 5, p. 541-552 12 p.

AMPA/kainate and NMDA-like glutamate receptors at the chromatophore neuromuscular junction of the squid: role in synaptic transmission and skin patterning

Lima, P. A., Nardi, G. & Brown, E. R., Feb 2003, In: European Journal of Neuroscience. 17, 3, p. 507-516 10 p.

Ionic currents in isolated and in situ squid Schwann cells

Inoue, I., Tsutsui, I., Abbott, N. J. & Brown, E. R., 15 Jun 2002, In: Journal of Physiology. 541, 3, p. 769-778 10 p.

Effect of glycine on synaptic transmission at the third order giant synapse of the squids *Alloteuthis subulata* and *Loligo vulgaris*

Vinogradova, I. M., Zajicek, J., Gentile, S. & Brown, E. R., 31 May 2002, In: Neuroscience letters. 325, 1, p. 42-46 5 p.

Differential sensitivity to calcisepetine of L-type Ca²⁺ currents in a 'lower' vertebrate (*Scyliorhinus canicula*), a protochordate (*Branchiostoma lanceolatum*) and an invertebrate (*Alloteuthis subulata*)

Rogers, C. M. & Brown, E. R., Nov 2001, In: Experimental Physiology. 86, 6, p. 689-694 6 p.

Ca²⁺ dynamics in synaptosomes isolated from the squid optic lobe

Benech, J. C., Lima, P. A., Sotelo, J. R. & Brown, E. R., 15 Dec 2000, In: Journal of Neuroscience Research. 62, 6, p. 840-846 7 p.

Different excitation-contraction coupling mechanisms exist in squid, cuttlefish and octopod mantle muscle

Rogers, C. M., Nelson, L., Milligan, B. J. & Brown, E. R., Dec 1997, In: Journal of Experimental Biology. 200, 23, p. 3033-3041 9 p.

K⁺ accumulation and K⁺ conductance inactivation during action potential trains in giant axons of the squid *Sepioteuthis*

Inoue, I., Tsutsui, I. & Brown, E. R., 15 Apr 1997, In: Journal of Physiology. 500, 2, p. 355-366 12 p.

Coupling between giant axon Schwann cells in the squid

Brown, E. R. & Kukita, F., 22 May 1996, In: Proceedings of the Royal Society B: Biological Sciences. 263, 1370, p. 667-672 6 p.

On the respiratory flow in the cuttlefish *sepia officinalis*

Bone, Q., Brown, E. & Travers, G., Sept 1994, In: Journal of Experimental Biology. 194, p. 153-165 13 p.

Evolution of skeletal muscle excitation-contraction coupling and the appearance of dihydropyridine-sensitive intramembrane charge movement

Inoue, I., Tsutsui, I., Bone, Q. & Brown, E. R., 22 Feb 1994, In: Proceedings of the Royal Society B: Biological Sciences. 255, 1343, p. 181-187 7 p.

Ultrastructure and permeability of the Schwann cell layer surrounding the giant axon of the squid

Brown, E. R. & Abbott, N. J., Apr 1993, In: Journal of Neurocytology. 22, 4, p. 283-298 16 p.

K⁺ accumulation around the giant axon of the squid: comparison of electrical and morphological measurements.

Brown, E. R., 1993, In: The Japanese Journal of Physiology. 43, Suppl. 1, p. S279-284 6 p.

Membrane potential in squid Schwann cells: Stable impalements in the split open giant axon preparation of *Loligo*

Brown, E. R. & Abbott, N. J., 1992, In: Journal of Physiology. 446, p. 320P

Electrophysiological Properties of Squid Giant Axon Schwann Cells: Relevance to K⁺ Clearance

Abbott, N. J., Pichon, Y., Brown, E. R., Inoue, I., Kukita, F., Revest, P. A. & Smith, I. C. H., Dec 1991, In: Annals of the New York Academy of Sciences. 633, 1, p. 607-609 3 p.

Morphology and electrical properties of Schwann cells around the giant axon of the squids *Loligo forbesi* and *Loligo vulgaris*

Brown, E. R., Bone, Q., Ryan, K. P. & Abbott, N. J., 22 Mar 1991, In: Proceedings of the Royal Society B: Biological Sciences. 243, 1308, p. 255-262 8 p.

Schwann cell morphology in the squid *Loligo*; implications for physiology

Brown, E. R., Bone, Q. & Abbott, N. J., Mar 1991, In: Journal of Physiology. 434, Suppl., 28P.

Long-term microelectrode recording from Schwann cells surrounding the isolated giant axon of the squid; steady and oscillating potentials

Abbot, N. J., Pichon, Y. & Brown, E. R., 1990, In: Journal of Physiology. 430, 128P.

Role of Schwann cells in periaxonal ion regulation in the squid

Abbott, N. J., Pichon, Y., Inoue, I., Brown, E. R., Lieberman, E. M., Revest, P. A. & Smith, I. C., 1989, In: Acta physiologica Scandinavica, Supplementum. 582, p. 42 1 p.

Activities

European Commission (External organisation)

Brown, E. R. (Member)

1 Jun 2016 → 19 Jul 2016

UN Division for Ocean Affairs and the Law of the Sea (External organisation)

Brown, E. R. (Member)
23 Dec 2015

European Commission (External organisation)

Brown, E. R. (Member)
11 Nov 2015 → 11 Dec 2015

Explorathon'15

Brown, E. R. (Speaker)
3 Sept 2015

Frontiers in Cellular Neuroscience (Journal)

Brown, E. R. (Editorial board member)
2015 → ...

Frontiers in Cellular Neuroscience (Journal)

Brown, E. R. (Editorial board member)
1 Jun 2013 → ...

European Commission (External organisation)

Brown, E. R. (Advisor)
4 Jun 2012 → 14 Jun 2012

Biotechnology and Biological Sciences Research Council (External organisation)

Brown, E. R. (Member)
13 Dec 2010

Presentations at Brain Awareness Week 2010

Brown, E. R. (Speaker)
2010

Presentations at Brain Awareness Week 2009

Brown, E. R. (Speaker)
2009

European Marine Biological Resource Centre (External organisation)

Brown, E. R. (Member)
Jan 2008 → 1 Sept 2012

Invertebrate Neuroscience (Journal)

Brown, E. R. (Editorial board member)
2008 → 2010

Presentations at Brain Awareness Week 2008

Brown, E. R. (Speaker)
2008