

Andrew Plested

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Curriculum vitae

Since 2017	Professor (W3) of Cellular Biophysics, Humboldt-Universität zu Berlin
2015	Visiting Scholar, Interdisciplinary Institute for NeuroScience, University of Bordeaux, FR
2008 – 2017	Junior research group leader, FMP, Berlin
2005 – 2008	Postdoctoral fellow, Neurophysiology and Biophysics, National Institutes of Health (NIH), US
2002 – 2005	Postdoctoral fellow, Department of Pharmacology, University College London, UK
1998 – 2002	PhD thesis, Biophysics Group, Imperial College London, UK
1994 – 1998	MSc degree in Physics, Imperial College London, UK

Research fields

Our group is active in the field of molecular neuroscience and biophysics with the following major areas:

- Biophysics and computational biology of AMPA receptors
- Optical methods for control and report of receptor signalling and enzyme activity
- Synaptic physiology of glutamate receptors
- Single channel recording and analysis of neurotransmitter receptors
- Structure and biophysics of activation mechanisms of glutamate receptors
- Photocontrol of receptors and enzymes in mammalian cells
- Optical reporters of signaling and activity
- Single channel recording and analysis of neurotransmitter receptors

Activities in the scientific community, honors, awards

2014-2020	Member, Editorial Board, Biophysical Journal
2018	Gary Price Memorial Lecture, British Pharmacological Society
2018	Chair, Membrane Biophysics, Biophysical Society
2017	Heisenberg Professorship, German Research Foundation (DFG)
2016	Senior Research Fellowship, Wellcome Trust, UK (declined)
2015	ERC Consolidator Grant, European Research Council
2015	IdEx Visiting Scholar and LabEx Brain sabbatical stay fellowship, Bordeaux, FR
Since 2014	Member, editorial board, Biophysical Journal
2008	Career Development Fellowship, Wellcome Trust, UK (declined)
2008	Career Development Award, Medical Research Council (MRC), UK (declined)

Selected publications

- Pampaloni, N. P., I. Riva, A. L. Carbone, and A. J. R. Plested. 2021. 'Slow AMPA receptors in hippocampal principal cells', *Cell Rep*, 36: 109496.
- Biedermann, J., S. Braunbeck, A. J. R. Plested, and H. Sun. 2021. 'Nonselective cation permeation in an AMPA-type glutamate receptor', *Proc Natl Acad Sci U S A*, 118.
- Poulsen, M. H., A. Poshtiban, V. Klippenstein, V. Ghisi, and A. J. R. Plested. 2019. 'Gating modules of the AMPA receptor pore domain revealed by unnatural amino acid mutagenesis', *Proc Natl Acad Sci U S A*, 116: 13358-67.
- Baranovic, J., and A. J. Plested. 2018. 'Auxiliary subunits keep AMPA receptors compact during activation and desensitization', *Elife*, 7.
- Riva, I., C. Eibl, R. Volkmer, A. L. Carbone, and A. J. Plested. 2017. 'Control of AMPA receptor activity by the extracellular loops of auxiliary proteins', *Elife*, 6.
- Yu, A., H. Salazar, A. J. R. Plested, and A. Y. Lau. 2017. 'Neurotransmitter Funneling Optimizes Glutamate Receptor Kinetics', *Neuron*.
- Carbone, A. L., and A. J. Plested. 2016. 'Superactivation of AMPA receptors by auxiliary proteins', *Nat Commun*, 7: 10178.
- Zachariassen, L. G., L. Katchan, A. G. Jensen, D. S. Pickering, A. J. Plested, and A. S. Kristensen. 2016. 'Structural rearrangement of the intracellular domains during AMPA receptor activation', *Proc Natl Acad Sci U S A*, 113: E3950-9.
- Lau, A. Y., H. Salazar, L. Blachowicz, V. Ghisi, A. J. Plested, and B. Roux. 2013. 'A conformational intermediate in glutamate receptor activation', *Neuron*, 79: 492-503.
- Carbone, A. L., and A. J. Plested. 2012. 'Coupled control of desensitization and gating by the ligand binding domain of glutamate receptors', *Neuron*, 74: 845-57.