

2025

Kettenmann, H.*, B. Ugursu, B.R. Ransom, C. Steinhäuser* (2025) The concept of neuroglia. The state of the art circa 1900. *Glia* 73:890-904.

Eberhard, J., L. Henning, L. Fülle, K. Knöpper, J. Böhringer, F.J.Graelmann, L. Hänschke, J. Kenzler, F. Brosseron, M.T. Heneka, A.I. Domingos, S. Eyrich, M. Lochner, H. Weighardt, P. Bedner, C. Steinhäuser*, I. Förster* (2025) Ablation of CCL-17 positive hippocampal neurons induces inflammation-dependent epilepsy. *Epilepsia* 66:554-568.

2024

Baum, P., A. Beinhauer, L. Zirwes, L. Loenneker, R. Jabs, R.T. Narayanan, M. Oberlaender, G. Seifert, H. Kettenmann, C. Steinhäuser (2024) Activity dependent modulation of glial gap junction coupling in the thalamus. *iScience* 27:111043.

Kompier, N., M. Semtner, S. Walter, N. Kakabadze, C. Steinhäuser, C. Nolte, H. Kettenmann (2024) Membrane properties and coupling of macroglial in the optic nerve. *Current Res. Neurobiol.* 7:100137.

Anders, S., B. Breithausen, P. Unichenko, M.K. Herde, D. Minge, A. Abramian, C. Behringer, T. Deshpande, A. Boehlen, C. Domingos, L. Henning, J. Pitsch, Y.-B. Kim, P. Bedner, C. Steinhäuser, C. Henneberger (2024) Epileptic activity triggers ROCK1-dependent astrocyte morphological changes. *Glia*, 72:643-659.

2023

Patt L, D. Tascio, C. Domingos, A. Timmermann, R. Jabs, C. Henneberger, C. Steinhäuser*, G. Seifert (2023) Impact of developmental changes of GABA_A receptors on interneuron-NG2 glia transmission in the hippocampus. *Int. J. Mol. Sci* 24:13490.

Timmermann, A., D. Tascio, R. Jabs, A. Boehlen, C. Domingos, M. Skubal, W. Huang, F. Kirchhoff, C. Henneberger, A. Bilkei-Gorzo, G. Seifert, C. Steinhäuser (2023) Dysfunction of NG2 glial cells affects neuronal plasticity and behavior. *Glia* 71:1481-1501.

Khan, D, P. Bedner, F. Lülberg, L. Henning, M. Prinz, C. Steinhäuser, S. Muhammad (2023) TGF- β activated kinase 1 (TAK1) is activated in microglia after experimental epilepsy and contributes to epileptogenesis. *Mol Neurobiol* 60:3413-3422.

Henning, L, Antony H, Breuer A, Müller J, Seifert G, Audinat E, Singh P, Brosseron F, Heneka MT, Steinhäuser C, Bedner P (2023) Reactive microglia are the major source of tumor necrosis factor alpha and contribute to astrocyte dysfunction and acute seizures in experimental temporal lobe epilepsy. *Glia* 71(2):168-186.

Oishi M, Passlick S, Yamazaki Y, Uekawa M, Adachi R, Yamada M., Imayoshi I, Abe Y, Steinhäuser C., Tanaka KF (2023) Separate optogenetic manipulation of NG2 glia and mural cells using the NG2 promoter. *Glia* 71 (2):317-333.

Henning L, Unichenko P, Bedner P, Steinhäuser C, Henneberger C (2023) Overview Article Astrocytes as Initiators of Epilepsy. *Neurochem Res* 48(4):1091-1099

Bedner, P., C. Steinhäuser (2023) Role of impaired astrocyte gap junction coupling in epileptogenesis. *Cells*, 12(12):1669.

2022

Huffels, CFM, Osborn LM, Hulshof LA, Kooijman L, Henning L, Steinhäuser C, Hol EM (2022) Amyloid- β plaques affect astrocyte Kir41 protein expression but not function in the dentate gyrus of APP/PS1 mice. *Glia* 70(4):748-767.

Aronica E, Binder DK, Drexel M, Ikonomidou C, Kadam SD, Sperk G, Steinhäuser C (2022) A companion to the preclinical common data elements and case report forms for neuropathology studies in epilepsy research A report of the TASK3 Neuropathology Working Group of the ILAE/AES Joint Translational Task Force. *Epilepsia Open*, in press.

Vezzani A, Ravizza T, Bedner P, Aronica E, Steinhäuser C, Boison D (2022) Contributions of astrocytes to the initiation and progression of epilepsy. *Nat Rev Neurol* 18(12):702-722.

de Bock M, de Smet M, Verwaerde S, Tahari H, Schumacher S, van Haver V, Witschas K, Steinhäuser C, Rouach N, Vandenbroucke RE, Leybaert L(2022) Targeting gliovascular connexins prevents inflammatory blood-brain barrier leakage and astrogliosis. *JCI Insight* 7(16):e135263.

2021

Philippot C, Griemsmann S, Jabs R, Seifert G, Kettenmann H, Steinhäuser C (2021) Astrocytes and oligodendrocytes in the thalamus jointly maintain synaptic activity by supplying metabolites. *Cell Rep* 34:108642.

Hardt S, Tascio D, Passlick S, Timmermann A, Jabs R, Steinhäuser C, Seifert G (2021) Auxiliary Subunits Control Function and Subcellular Distribution of AMPA Receptor Complexes in NG2 Glia of the Developing Hippocampus. *Front Cell Neurosci* 15:669717.

Wu Z, Deshpande T, Henning L, Bedner P, Seifert G, Steinhäuser C (2021) Cell death of hippocampal CA1 astrocytes during early epileptogenesis. *Epilepsia* 62(7):1569-1583.

Henning L, Steinhäuser C, Bedner P (2021) Initiation of Experimental Temporal Lobe Epilepsy by Early Astrocyte Uncoupling Is Independent of TGF β R1/ALK5 Signaling. *Front Neurol* 12:660591.

Escartin C*, Galea E*, Lakatos A*, O'Callaghan J*, Petzold GC*, Serrano-Pozo A*, Steinhäuser C*, Volterra A*, Carmignoto G*, Agarwal A, Allen NJ, Araque A, Barbeito L, Barzilai A, Bergles DE, Bonvento G, Butt AM, Chen WT, Cohen-Salmon M, Cunningham C, Deneen B, De Strooper B, Díaz-Castro B, Farina C, Freeman M, Gallo V, Goldman JE, Goldman SA, Götz M, Gutiérrez A, Haydon PG, Heiland DH, Hol EM, Holt MG, Iino M, Kastanenka KV, Kettenmann H, Khakh BS, Koizumi S, Lee CJ, Liddelow SA, MacVicar BA, Magistretti P, Messing A, Mishra A, Molofsky AV, Murai K, Norris CM, Okada S, Oliet SHR, Oliveira JF, Panatier A, Parpura V, Pekna M, Pekny M, Pellerin L, Perea G, Pérez-Nievas BG, Pfrieger FW, Poskanzer KE, Quintana FJ, Ransohoff RM, Riquelme-Perez M, Robel S, Rose CR, Rothstein J, Rouach N, Rowitch DH, Semyanov A, Sirko S, Sontheimer H, Swanson RA, Vitorica J, Wanner IB, Wood LB, Wu J, Zheng B, Zimmer ER, Zorec R, Sofroniew MV*, Verkhratsky A* (2021) Working consensus on reactive astrocyte nomenclature, definitions and future directions. *Nat Neurosci* 24: 2013-325.

Binder DK, Steinhäuser C (2021) Astrocytes and epilepsy. *Neurochemical Research* 46(10):2687-2695.

Tanaka H, Mitsui R, Oishi, S Passlick M, Jabs R, Steinhäuser C, Tanaka KF, Hashitani H (2021) Nitregic neurotransmission in rodent bladder vasculature as a therapeutic target of PDE5 inhibitors. *Br J Neuropharmacol* 178(5):1073-1094.

Danish A, Gedschold R, Hinz S, Schiedel AC, Thimm D, Bedner P, Steinhäuser C, Müller (2021) A Cellular Assay for the Identification and Characterization of Connexin Gap Junction Modulators. *Int J Mol Sci* 22(3):1417.

Bedner P, Wu Z, Steinhäuser C (2021) Response: Astrocytes as alternative targets for more efficient anti-epileptogenic drugs. *Epilepsia* 62:2299-2300.

Heuser K, de Curtis M, Steinhäuser C (2021) Editorial: Glial dysfunction in epileptogenesis. *Front Neurol* 12: 716308.

Timmermann A, Jabs R, Boehlen A, Domingos C, Skubal M, Huang W, Kirchhoff F, Henneberger C, Bilkei-Gorzo A, Seifert G, Steinhäuser C (2021) Dysfunction of grey matter NG2 glial cells affects neuronal plasticity and behavior bioRxiv 20210820457086; doi: <https://doi.org/10.1101/20210820457086>.

Cibelli, A, Stout R, Timmermann A, de Menezes L, Guo P, Maass K, Seifert G, Steinhäuser C, Spray DC, Scemes E (2021) Cx43 carboxyl terminal domain determines AQP4 and Cx30 endfoot organization and blood brain barrier permeability. *Sci Rep* 11:24334.

Müller J, Timmermann A, Henning L, Müller H, Steinhäuser C *, Bedner P (2020) Astrocytic GABA accumulation in experimental temporal lobe epilepsy. *Frontiers Neurol* 11:614923.

Felix L, Ziemens D, Seifert G, Rose CR (2020) Spontaneous Ultraslow Na⁺ Fluctuations in the Neonatal Mouse Brain. *Cells* 9, 102.

Bres EE, Safina D, Müller J, Bedner P, Yang H, Helluy X, Shchyglo O, Jansen S, Mark MD, Esser A, Steinhäuser C, Herlitze S, Pietrzik CU, Sirko S, Manahan-Vaughan D, Faissner A (2020) Lipoprotein receptor loss in forebrain radial glia results in neurological deficits and severe seizures. *Glia* 86:2517-2549.

Deshpande T, Tingsong L, Henning L, Wu Z, Müller J, Seifert G, Steinhäuser C*, Bedner P (2020) Constitutive deletion of astrocytic connexins aggravates kainate-induced epilepsy. *Glia* 68:2136-2147.

Bedner P, Jabs R, Steinhäuser C (2020) Properties of human astrocytes and NG2 glia. *Glia* 68:756-767.

Breithausen B, Kautzmann S, Boehlen A, Steinhäuser C, Henneberger C (2020) Limited contribution of astroglial gap junction coupling to buffering of extracellular K⁺ in CA1 stratum radiatum. *Glia* 68:918-931.

Katoozi S, Skauli N, Zahl S, Deshpande T, Ezan P, Palazzo C, Steinhäuser C, Frigeri A, Cohen-Salmon M, Ottersen OP, Amiry-Moghaddam M (2020) Uncoupling of the astrocyte syncytium differentially affects AQP4 isoforms. *Cells* 9:382.

2019

Hoss F, Mueller JL, Rojas Ringeling F, Rodriguez-Alcazar JF, Brinkschulte R, Seifert G, Stahl R, Broderick L, Putnam CD, Kolodner RD, Canzar S, Geyer M, Hoffman HM, Latz E (2019) Alternative splicing regulates stochastic NLRP3 activity. *Nat Commun.* 10(1):3238. doi: 10.1038/s41467-019-11076-1.

Chaudhry SR, Frede S, Seifert G, Kiefe TM, Niemelä M, Lamprecht A, Muhammad S (2019) Temporal profile of serum mitochondrial DNA (mtDNA) in patients with aneurysmal subarachnoid hemorrhage (aSAH), *Mitochondrion* 47: 218-226.

Bedner P, Steinhäuser C (2019) TNF α -Driven Astrocyte Purinergic Signaling during Epileptogenesis. *Trends Mol Med* 25(2):70-72.

Amira AHA, Stahr A, Ingenwerth M, Theis M, Steinhäuser C, von Gall C (2019) Connexin30 and Connexin43 show a time-of-day dependent expression in the mouse suprachiasmatic nucleus and modulate rhythmic locomotor activity in the context of chronodisruption . *J Cell Commun Signal* 17:61.

Ali, AAH, Stahr A, Ingenwerth M, Theis M, Steinhäuser C, von Gall, C (2019) Connexin 30 and connexin 43 show a time-of-day dependent expression in the mouse suprachiasmatic nucleus and modulate rhythmic locomotor activity in the context of chronodisruption. *Cell Commun Signal* 17:61.

2018

Wadle SL, Augustin V, Langer J, Jabs R, Philippot C, Weingarten DJ, Rose CR, Steinhäuser C, Stephan J (2018) Anisotropic Panglial Coupling Reflects Tonotopic Organization in the Inferior Colliculus. *Front Cell Neurosci* 12:431.

Recabal A, Elizondo-Vega R, Philippot C, Salgado M, Lopez S, Palma A, Tarifeno-Saldivia E, Timmermann A, Seifert G, Caprile T, Steinhäuser C, Garcia-Robles MA (2018) Connexin-43 gap junctions are responsible for the hypothalamic tanycyte-coupled network. *Front Cell Neurosci* 12:406.

Shtaya A, Sadek AR, Zaben M, Seifert G, Pringle A, Steinhäuser C, Gray WP (2018) AMPA receptors and seizures mediate hippocampal radial glia-like stem cell proliferation. *Glia* 66:2397-2413.

Schmidt T, Ghaffarian N, Philippot C, Seifert G, Steinhäuser C, Pape HC, Blaesse P (2018) Differential regulation of chloride homeostasis and GABAergic transmission in the thalamus. *Sci Rep* 8:13929.

Ghirardini E, Wadle SL, Augustin V, Becker J, Brill S, Hammerich J, Seifert G, Stephan J (2018) Expression of functional inhibitory neurotransmitter transporters GlyT1, GAT-1, and GAT-3 by astrocytes of inferior colliculus and hippocampus. *Mol Brain*, 11(1):4

Plescher M, Seifert G, Hansen JN, Bedner P, Steinhäuser C, Halle A (2018) Plaque-dependent morphological and electrophysiological heterogeneity of microglia in an Alzheimer's disease mouse model. *Glia* 66:1464-1480.

Meyer N, Richter N, Fan Z, Siemonsmeier G, Pivneva T, Jordan P, Steinhäuser C, Semtner M, Nolte C, Kettenmann H (2018) Oligodendrocytes in mouse corpus callosum maintain axonal function by predominant delivery of glucose. *Cell Rep* 22:2383-2394.

Seifert G, Steinhäuser C (2018) Heterogeneity and function of hippocampal macroglia. *Cell Tissue Res* 373:653-670.

Boison D, Steinhäuser C (2018) Epilepsy and astrocyte energy metabolism. *Glia* 66:1235-1241.

Wefers AK, Haberlandt C, Surchev L, Steinhäuser C, Jabs R, Schilling K (2018) Migration of Interneuron Precursors in the Nascent Cerebellar Cortex. *Cerebellum* 17(1):62-71.

Seifert G, Henneberger C, Steinhäuser C (2018) Diversity of astrocyte potassium channels: An update. *Brain Res Bull* 136:26-36.

Claus L, Philippot C, Griemsmann S, Timmermann A, Jabs R, Henneberger C, Kettenmann H, Steinhäuser C (2018) Barreloid Borders and Neuronal Activity Shape Panglial Gap Junction-Coupled Networks in the Mouse Thalamus. *Cereb Cortex* 28:213-222.

Zhang J, Griemsmann S, Wu Z, Dobrowolski R, Willecke K, Theis M, Steinhäuser C, Bedner P (2018) Connexin43, but not connexin30, contributes to adult neurogenesis in the dentate gyrus. *Brain Res Bull* 136:91-100.

Klein P, Dingleline R, Aronica E, Christophe Bernard C, Blümcke I, Boison D, Brodie M J, Brooks-Kayal R, Engel Jr J, Forcelli P A, Hirsch L J, Kaminski R M, Klitgaard H, Kobow K, Lowenstein D H, Pearl PL, Pitkänen A, Puhakka N, Rogawski M A, Schmidt D, Sillanpää M, Sloviter R S, Steinhäuser C, Vezzani A, Walker M C, Löscher W (2018) Commonalities in epileptogenic processes from different acute brain insults: Do they translate? *Epilepsia* 59:37-66.

2017

Moshrefi-Ravasdjani B, Dublin P, Seifert G, Jennissen K, Steinhäuser C, Kafitz KW, Rose CR (2017) Changes in the proliferative capacity of NG2 cell subpopulations during postnatal development of the mouse hippocampus. *Brain Struct Funct*, 222(2):831-847.

Minge D, Senkov O, Kaushik R, Herde M K, Tikhobrazova O, Wulff A B, Mironov A, van Kuppevelt T H, Oosterhof A, Kochlamazashvili G, Dityatev A, Henneberger C (2017) Heparan Sulfates Support Pyramidal Cell Excitability, Synaptic Plasticity, and Context Discrimination. *Cereb Cortex*. 27(2): 903-918.

Malik S, Theis M, Eugenin E A (2017) Connexin43 Containing Gap Junction Channels Facilitate HIV Bystander Toxicity: Implications in NeuroHIV. *Front Mol Neurosci*. 10: 404.

Jennings A, Tyurikova O, Bard L, Zheng K, Semyanov A, Henneberger C, Rusakov D A (2017) Dopamine elevates and lowers astroglial Ca through distinct pathways depending on local synaptic circuitry. *Glia*. 65(3): 447-459.

Henneberger C (2017) Does rapid and physiological astrocyte-neuron signalling amplify epileptic activity? *J Physiol*. 595(6): 1917-1927.

Papouin T, Henneberger C, Rusakov D A, Oliet S H R (2017) Astroglial versus Neuronal D-Serine: Fact Checking. *Trends Neurosci*. 40(9): 517-520.

Theofilas P, Steinhäuser C, Theis M, Derouiche A (2017) Morphological study of a connexin 43-GFP reporter mouse highlights glial heterogeneity, amacrine cells, and olfactory ensheathing cells. *J Neurosci Res* 95:2182-2194.

Deshpande T, Li T, Herde M K, Becker A, Vatter H, Schwarz M K, Henneberger C, Steinhäuser C, Bedner P (2017) Subcellular reorganization and altered phosphorylation of the astrocytic gap

junction protein connexin43 in human and experimental temporal lobe epilepsy. *Glia* 65(11):1809-1820.

Wefers A K, Haberlandt C, Tekin N B, Fedorov D A, Timmermann A, van der Want J J L, Chaudhry F A, Steinhäuser C, Schilling K, Jabs R (2017) Synaptic input as a directional cue for migrating interneuron precursors. *Development* 144(22):4125-4136.

Droste D, Seifert G, Seddar L, Jädke O, Steinhäuser C, Lohr C (2017) Ca²⁺-permeable AMPA receptors in mouse olfactory bulb astrocytes. *Sci Rep* 7:444817.

Langer J, Gerkau NJ, Derouiche A, Kleinhans C, Moshrefi-Ravasdjani B, Fredrich M, Kafitz KW, Seifert G, Steinhäuser C, Rose CR (2017) Rapid sodium signaling couples glutamate uptake to breakdown of ATP in perivascular astrocyte endfeet. *Glia*, 65(2):293-308.

Lobastova L, Kraus D, Glassmann A, Khan D, Steinhäuser C, Wolff C, Veit N, Winter J, Probstmeier R (2017) Collective cell migration of thyroid carcinoma cells: a beneficial ability to override unfavourable substrates. *Cell Oncol*, 40(1):63-76.

2016

Boehlen A, Heinemann U, Henneberger C (2016) Hierarchical spike clustering analysis for investigation of interneuron heterogeneity. *Neurosci Lett*, 619:86-91.

Seifert G, Henneberger C, Steinhäuser C (2016) Diversity of astrocyte potassium channels: An update. *Brain Res Bull*, in press.

Henneberger C, Steinhäuser C (2016) Astrocytic TLR4 at the crossroads of inflammation and seizure susceptibility. *J Cell Biol*, 215(5):607-609.

Augustin V, Bold C, Wadle SL, Langer J, Jabs R, Philippot C, Weingarten DJ, Rose CR, Steinhäuser C, Stephan J (2016) Functional anisotropic panglial networks in the lateral superior olive. *Glia*, 64(11):1892-1911.

Khan D, Dupper A, Deshpande T, Graan PN, Steinhäuser C, Bedner P (2016) Experimental febrile seizures impair interastrocytic gap junction coupling in juvenile mice. *J Neurosci Res*, 94:804-813.

Skubal M, Gielen GH, Waha A, Gessi M, Kaczmarczyk L(1), Seifert G, Freihoff D, Freihoff J, Pietsch T, Simon M, Theis M, Steinhäuser C, Waha A (2016) Altered splicing leads to reduced activation of CPEB3 in high-grade gliomas. *Oncotarget*. 7:41898-41912.

Bedner P, Steinhäuser C (2016) Neuron-Glia Interaction in Epilepsy. *J Neurosci Res*, 94:779-780.

Moshrefi-Ravasdjani B, Dublin P, Seifert G, Jennissen K, Steinhäuser C, Kafitz KW, Rose CR (2016) Changes in the proliferative capacity of NG2 cell subpopulations during postnatal development of the mouse hippocampus. *Brain Struct Funct*, 222(2):831-847.

Steinhäuser C, Grunnet M, Carmignoto G (2016) Crucial role of astrocytes in temporal lobe epilepsy. *Neuroscience*, 323:157-169.

Albayram Ö, Passlick S, Bilkei-Gorzo A, Zimmer A, Steinhäuser C (2016) Physiological impact of CB1 receptor expression by hippocampal GABAergic interneurons. *Pflugers Arch*, 468:727-737.

Pekny M, Pekna M, Messing A, Steinhäuser C, Lee JM, Parpura V, Hol EM, Sofroniew MV, Verkhratsky A (2016) Astrocytes: a central element in neurological diseases. *Acta Neuropathol* 131(3):323-45.

Kaczmarczyk L, Labrie-Dion É, Sehgal K, Sylvester M, Skubal M, Josten M, Steinhäuser C, De Koninck P, Theis M (2016) New Phosphospecific Antibody Reveals Isoform-Specific Phosphorylation of CPEB3 Protein. *PLoS One* 11(2):e0150000.

Weller J, Steinhäuser C, Seifert G (2016) pH-Sensitive K(+) Currents and Properties of K2P Channels in Murine Hippocampal Astrocytes. *Adv Protein Chem Struct Biol*, 103:263-294.

Jefferys J, Steinhäuser C, Bedner P (2016) Chemically-induced TLE models: Topical application. *J Neurosci Methods*, 260:53-61.

Passlick S, Trotter J, Seifert G, Steinhäuser C, Jabs R (2016) The NG2 Protein Is Not Required for Glutamatergic Neuron-NG2 Cell Synaptic Signaling. *Cereb Cortex* 26:51-57.

2015

Osswald M, Jung E, Sahn F, Solecki G, Venkataramani V, Blaes J, Weil S, Horstmann H, Wiestler B, Syed M, Huang L, Ratliff M, Karimian Jazi K, Kurz FT, Schmenger T, Lemke D, Gömmel M, Pauli M, Liao Y, Häring P, Pusch S, Herl V, Steinhäuser C, Kronic D, Jarahian M, Miletic H, Berghoff AS, Griesbeck O, Kalamakis G, Garaschuk O, Preusser M, Weiss S, Liu H, Heiland S, Platten M, Huber PE, Kuner T, von Deimling A, Wick W, Winkler F (2015) Brain tumour cells interconnect to a functional and resistant network. *Nature* 528:93-98.

Griemsmann S, Höft SP, Bedner P, Zhang J, von Staden E, Beinhauer A, Degen J, Dublin P, Cope DW, Richter N, Crunelli V, Jabs R, Willecke K, Theis M, Seifert G, Kettenmann H, Steinhäuser C (2015) Characterization of Panglial Gap Junction Networks in the Thalamus, Neocortex, and Hippocampus Reveals a Unique Population of Glial Cells. *Cereb Cortex* 25:3420-3433.

Glebov K, Löchner M, Jabs R, Lau T, Merkel O, Schloss P, Steinhäuser C, Walter J (2015) Serotonin stimulates secretion of exosomes from microglia cells. *Glia* 63(4):626-34.

Balia M, Vélez-Fort M, Passlick S, Schäfer C, Audinat E, Steinhäuser C, Seifert G, Angulo MC (2015) Postnatal down-regulation of the GAGAA receptor $\gamma 2$ subunit in neocortical NG2 cells accompanies synaptic-to-extrasynaptic switch in GABAergic transmission mode. *Cereb Cortex* 25(4):1114-23.

Turimella SL, Bedner P, Skubal M, Vangoor VR, Kaczmarczyk L, Karl K, Zoidl G, Gieselmann V, Seifert G, Steinhäuser C, Kandel E, Theis M (2015) Characterization of Cytoplasmic Polyadenylation Element Binding 2 Protein Expression and its RNA Binding Activity. *Hippocampus* 25:630-642.

Bedner P, Dupper A, Hüttmann K, Müller J, Herde MK, Dublin P, Deshpande T, Schramm J, Häußler U, Haas C, Henneberger C, Theis M, Steinhäuser C (2015) Astrocyte uncoupling as a cause of human temporal lobe epilepsy. *Brain* 138:1208-1222.

Crunelli V, Carmignoto G, Steinhäuser C (2015) Novel astrocyte targets: New Avenues for the Therapeutic Treatment of Epilepsy. *Neuroscientist* 21:62.83.

Szokol K, Heuser K, Tang W, Jensen V, Enger R, Bedner P, Steinhäuser C, Taubøll E, Ottersen OP, Nagelhus EA (2015) Augmentation of Ca^{2+} signaling in astrocytic endfeet in the latent phase of temporal lobe epilepsy. *Front. Cell. Neurosci.* 9:49.

Coulter DA, Steinhäuser C (2015) Role of astrocytes in epilepsy. *Cold Spring Harb Perspect Med.* 5(3):a022434

Whitfield JH, Zhang WH, Herde MK, Clifton BE, Radziejewski J, Janovjak H, Henneberger C, Jackson CJ (2015) Construction of a robust and sensitive arginine biosensor through ancestral protein reconstruction. *Protein Sci.* 24(9):1412-22

Derouiche A, Haseleu J, Korf H W (2015) Fine Astrocyte Processes Contain Very Small Mitochondria: Glial Oxidative Capability May Fuel Transmitter Metabolism. *Neurochem Res.* 40(12): 2402-13.

Höft S, Griemsmann S, Seifert G, Steinhäuser C (2014) Heterogeneity in expression of functional ionotropic glutamate and GABA receptors in astrocytes across brain regions: insights from the thalamus. *Phil. Trans. R. Soc. B* 369:1654.

Anders S, Minge D, Griemsmann S, Herde MK, Steinhäuser C, Henneberger C (2014) Spatial properties of astrocyte gap junction coupling in the rat hippocampus. *Phil Trans R Soc B* 69:1654.

Scott RS, Henneberger C, Padmashri R, Anders S, Jensen T P, Rusakov D A (2014) Neuronal adaptation involves rapid expansion of the action potential initiation site. *Nat Commun.* 5: 3817.

Davydova D, Marini C, King C, Klueva J, Bischof F, Romorini S, Montenegro-Venegas C, Heine M, Schneider R, Schröder M S, Altmann W D, Henneberger C, Rusakov D A, Gundelfinger E D, Fejtova A (2014) Bassoon specifically controls presynaptic P/Q-type Ca(2+) channels via RIM-binding protein. *Neuron.* 82(1): 181-94.

Medvedev N, Popov V, Henneberger C, Kraev I, Rusakov D A, Stewart M G (2014) Glia selectively approach synapses on thin dendritic spines. *Philos Trans R Soc Lond B Biol Sci.* 369(1654): 20140047.

Rusakov D A, Bard L, Stewart M G, Henneberger C (2014) Diversity of astroglial functions alludes to subcellular specialisation. *Trends Neurosci.* 37(4): 228-42.

2013

Zhang J, Dublin P, Griemsmann S, Klein A, Brehm R, Bedner P, Fleischmann B, Steinhäuser C, Theis M (2013) Germ-line recombination activity of the widely used hGFAP-Cre and nestin-Cre transgenes. *PLOS one* 8(12):e82818.

Passlick S, Grauer M, Schäfer C, Jabs R, Seifert G, Steinhäuser C (2013) Expression of the γ 2-Subunit Distinguishes Synaptic and Extrasynaptic GABA_A Receptors in NG2 Cells of the Hippocampus. *J Neurosci* 33(29):12030-40.

May D, Tress O, Seifert G, Willecke K. (2013) Connexin47 protein phosphorylation and stability in oligodendrocytes depend on expression of Connexin43 protein in astrocytes. *J Neurosci.* 33(18):7985-96.

Bedner P, Steinhäuser C (2013) Altered Kir and gap junction channels in temporal lobe epilepsy. *Neurochem Int* 63: 682-687.

Renzel R, Sadek AR, Chang CH, Gray WP, Seifert G, Steinhäuser C. (2013) Polarized distribution of AMPA, but not GABAA, receptors in radial-like cells of the adult dentate gyrus. *Glia* 61(7):1146-1154.

Lübke-meier I, Requardt RP, Lin X, Sasse P, Andrié R, Schrickel JW, Chkourko H, Bukauskas FF, Kim JS, Frank M, Malan D, Zhang J, Wirth A, Dobrowolski R, Mohler PJ, Offermanns S, Fleischmann BK, Delmar M, Willecke K. (2013) Deletion of the last five C-terminal amino acid residues of connexin43 leads to lethal ventricular arrhythmias in mice without affecting coupling via gap junction channels. *Basic Res Cardiol.* 108(3): 348.

Seifert G, Steinhäuser C (2013) Neuron–astrocyte signaling and epilepsy. *Exp Neurol.* 244:4-10.

Haseleu J, Anlauf E, Blaess S, Endl E, Derouiche A. (2013) Studying subcellular detail in fixed astrocytes: dissociation of morphologically intact glial cells (DIMIGs). *Front Cell Neurosci.* 7:54.

Frinchi M, Di Liberto V, Turimella S, D'Antoni F, Theis M, Belluardo N, Mudò G (2013) Connexin36 (Cx36) expression and protein detection in the mouse carotid body and myenteric plexus. *Acta Histochem.* 115(3): 252-6.

Boehlen A, Henneberger C, Heinemann U, Erchova I (2013) Contribution of near-threshold currents to intrinsic oscillatory activity in rat medial entorhinal cortex layer II stellate cells. *J Neurophysiol.* 109(2): 445-63.

Henneberger C, Bard L, King C, Jennings A, Rusakov DA (2013) NMDA receptor activation: two targets for two co-agonists. *Neurochem Res.* 38(6): 1156-62.

Grosche A, Grosche J, Tackenberg M, Scheller D, Gerstner G, Gumprecht A, Pannicke T, Hirrlinger P G, Wilhelmsson U, Hüttmann K, Härtig W, Steinhäuser C, Pekny M, Reichenbach A (2013) Versatile and simple approach to determine astrocyte territories in mouse neocortex and hippocampus. *PLoS ONE.* 8(7): e69143.

2012

Frank M, Wirth A, Andriacute RE, Segschneider S, Kreuzberg MM, Dobrowolski R, Seifert G, Offermanns S, Nickenig G, Willecke K, Schrickel JW. (2012) Connexin45 Provides Optimal AV-Nodal Conduction in the Adult Mouse Heart. *Circ Res.* 111:1528-38.

Hesse M, Raulf A, Pilz GA, Haberlandt C, Klein AM, Jabs R, Zaehres H, Fügemann CJ, Zimmermann K, Trebicka J, Welz A, Pfeifer A, Röhl W, Kotlikoff MI, Steinhäuser C, Götz M, Schöler HR, Fleischmann BK. (2012) Direct visualization of cell division using high-resolution imaging of M-phase of the cell cycle. *Nat Commun.* 3:1076.

Braganza O, Bedner P, Hüttmann K, von Staden E, Friedman A, Seifert G, Steinhäuser C. (2012) Albumin is taken up by hippocampal NG2 cells and astrocytes and decreases gap junction coupling. *Epilepsia* 53:1898-906.

Theis M, Giaume C. (2012) Connexin-based intercellular communication and astrocyte heterogeneity. *Brain Res.* 1487: 88-98.

Frinchi M, Di Liberto V, Turimella S, D'Antoni F, Theis M, Belluardo N, Mudò G. (2012) Connexin36 (Cx36) expression and protein detection in the mouse carotid body and myenteric plexus. *Acta Histochem.* 115 (3): 252-6.

Unger T, Bette S, Zhang J, Theis M, Engele J. (2012) Connexin-deficiency affects expression levels of glial glutamate transporters within the cerebrum. *Neurosci Lett.* 506(1):12-6.

Henneberger C, Bard L, Rusakov DA. (2012) D-Serine: a key to synaptic plasticity? *Int J Biochem Cell Biol.*, 44(4):587-90.

Steinhäuser C, Boison D. (2012) Epilepsy: crucial role for astrocytes. *Glia.* 60(8):1191.

Derouiche A, Pannicke T, Haseleu J, Blaess S, Grosche J, Reichenbach A. (2012) Beyond polarity: functional membrane domains in astrocytes and müller cells. *Neurochem Res.* 37(11):2513-23.

Degen J, Dublin P, Zhang J, Dobrowolski R, Jokwitz M, Karram K, Trotter J, Jabs R, Willecke K, Steinhäuser C, Theis M. (2012) Dual reporter approaches for identification of Cre efficacy and astrocyte heterogeneity. *FASEB J.* 26(11):4576-83.

Brockschmidt A, Trost D, Peterziel H, Zimmermann K, Ehrler M, Grassmann H, Pfenning PN, Waha A, Wohlleber D, Brockschmidt FF, Jugold M, Hoischen A, Kalla C, Waha A, Seifert G, Knolle PA, Latz E,

Hans VH, Wick W, Pfeifer A, Angel P, Weber RG. (2012) KIAA1797/FOCAD encodes a novel focal adhesion protein with tumour suppressor function in gliomas. *Brain* 135(4):1027-41.

Tress O, Maglione M, May D, Pivneva T, Richter N, Seyfarth J, Binder S, Zlomuzica A, Seifert G, Theis M, Dere E, Kettenmann H, Willecke K. (2012) Panglial Gap Junctional Communication is Essential for Maintenance of Myelin in the CNS. *J Neurosci.* 32(22):7499-7518.

Langer J, Stephan J, Theis M, Rose CR. (2012) Gap junctions mediate intercellular spread of sodium between hippocampal astrocytes in situ. *Glia* 60(2):239-52.

Ermolyuk YS, Alder FG, Henneberger C, Rusakov DA, Kullmann DM, Volynski KE. (2012) Independent regulation of Basal neurotransmitter release efficacy by variable Ca^{2+} influx and bouton size at small central synapses. *PLoS Biol.* 10(9):e1001396.

Stephan J, Haack N, Kafitz KW, Durry S, Koch D, Hochstrate P, Seifert G, Steinhäuser C, Rose CR. (2012) Kir4.1 channels mediate a depolarization of hippocampal astrocytes under hyperammonemic conditions in situ. *Glia* 60(6):965-78.

Steinhäuser C, Seifert G, Bedner P. (2012) Astrocyte dysfunction in temporal lobe epilepsy: K^{+} channels and gap junction coupling. *Glia* 60(8): 1192-202.

Bedner P, Steinhäuser C, Theis M. (2012) Functional redundancy and compensation among members of gap junction protein families? *Biochim Biophys Acta.* 1818(8):1971-84.

Steinhäuser C, Seifert G. (2012) Astrocyte dysfunction in epilepsy. In: Noebels JL, Avoli M, Rogawski MA, Olsen RW, Delgado-Escueta AV, editors. *Source: Jasper's Basic Mechanisms of the Epilepsies.* 4th edition. Bethesda (MD): National Center for Biotechnology Information (US); 2012.

Steinbeck J A, Koch P, Derouiche A, Brüstle O (2012) Human embryonic stem cell-derived neurons establish region-specific, long-range projections in the adult brain. *Cell Mol Life Sci.* 69(3): 461-70.

Kovacs R, Heinemann U, Steinhauser C (2012) Mechanisms underlying blood-brain barrier dysfunction in brain pathology and epileptogenesis: Role of astroglia. *Epilepsia.* 53 6: 53-59

Hsu MS, Seldin M, Lee DJ, Seifert G, Steinhäuser C, Binder DK (2011) Laminar-specific and developmental expression of aquaporin-4 in the mouse hippocampus. *Neuroscience*. 178:21-32.

Strohschein S, Hüttmann K, Gabriel S, Binder DK, Heinemann U, Steinhäuser C.(2011) Impact of aquaporin-4 channels on K(+) buffering and gap junction coupling in the hippocampus.*Glia*. 2011 Jun;59(6):973-80

Haberlandt C, Derouiche A, Wyczynski A, Haseleu J, Pohle J, Karram K, Trotter J, Seifert G, Frotscher M, Steinhäuser C, Jabs R.(2011) Gray Matter NG2 Cells Display Multiple Ca-Signaling Pathways and Highly Motile Processes. *PLoS One*. 2011 Mar 24;6(3):e17575.

Gosejacob D, Dublin P, Bedner P, Hüttmann K, Zhang J, Tress O, Willecke K, Pfrieger F, Steinhäuser C, Theis M. (2011) Role of astroglial connexin30 in hippocampal gap junction coupling. *Glia*. 59:511-9.

Draaken M, Giesen CA, Kesselheim AL, Jabs R, Aretz S, Kugaud M, Chrzanowska KH, Krajewska-Walasek M, Ludwig M. (2011) Maternal de novo triple mosaicism for two single OCRL nucleotide substitutions (c.1736A>T, c.1736A>G) in a Lowe syndrome family. *Hum Genet*. 129:513-9.

Blaess S, Bodea GO, Kabanova A, Chanet S, Mugniery E, Derouiche A, Stephen D, Joyner AL. (2011) Temporal-spatial changes in Sonic Hedgehog expression and signaling reveal different potentials of ventral mesencephalic progenitors to populate distinct ventral midbrain nuclei. *Neural Dev*. 20;6:29.

Lavialle M, Aumann G, Anlauf E, Pröls F, Arpin M, Derouiche A. (2011) Structural plasticity of perisynaptic astrocyte processes involves ezrin and metabotropic glutamate receptors. *Proc Natl Acad Sci U S A*. 108:12915-9.

2010

Bergles D, Jabs R and Steinhäuser C (2010) Neuron-glia synapses in the brain. *Brain Res. Rev.* 63:130-137.

Deitmer J and Steinhäuser C (2010). Synaptic processes – The role of glial cells. *Brain Res. Rev.* 63:1.

Giaume C and Theis M. (2010) Pharmacological and genetic approaches to study connexin-mediated channels in glial cells of the central nervous system. *Brain Res Rev.* 63(1-2):160-76.

Pannicke T, Wurm A, Iandiev I, Hollborn M, Linnertz R, Binder DK, Kohen L, Wiedemann P, Steinhäuser C, Reichenbach A, Bringmann A (2010) Deletion of aquaporin-4 renders retinal glial cells more susceptible to osmotic stress. *J. Neurosci. Res.* 88:2877-2888.

Seifert G, Carmignoto G and Steinhäuser C (2010) Astrocyte dysfunction in epilepsy. *Brain Res. Rev.* 63:212-221.

Steinhäuser C and Seifert G (2010) Astrocyte dysfunction in temporal lobe epilepsy. *Epilepsia* 51 Suppl.: 54.

Reichenbach A, Derouiche A, Kirchhoff F. (2010) Morphology and dynamics of perisynaptic glia. *Brain Res Rev.* 63:11-25.

Brunne B, Zhao S, Derouiche A, Herz J, May P, Frotscher M, Bock HH. (2010) Origin, maturation, and astroglial transformation of secondary radial glial cells in the developing dentate gyrus. *Glia.* 58:1553-69.

2009

Kunze A., Congreso M.R., Hartmann C., Wallraff-Beck A., Hüttmann K., Bedner P., Requardt R., Seifert G., Redecker C., Willecke K., Hofmann A., Pfeifer A., Theis M. and Steinhäuser C.(2009) Connexin expression by radial glia-like cells is required for neurogenesis in the adult dentate gyrus, *Proc. Natl. Acad. Sci. USA* 106 (27): 11336-11341.

Seifert G., Hüttmann K., Binder D.K., Hartmann C., Wyczynski A., Neusch C., Steinhäuser C. (2009) Analysis of astroglial K⁺ channel expression in the developing hippocampus reveals a predominant role of the Kir4.1 subunit, *J Neurosci* 29: 7474-7488.

Faber-Zuschratter H., Hüttmann K., Steinhäuser C., Becker A., Schramm J., Okafo U., Shanley D., Yilmazer-Hanke D.M. (2009) Ultrastructural and Functional Characterisation of Satellitosis in the Human Lateral Amygdala Associated With Ammon's Horn Sclerosis, *Acta Neuropathol*, 117: 545 - 555

Binder, D.K. and C. Steinhäuser (2008) Role of astrocyte dysfunction in epilepsy. In: *Encyclopedia of Basic Epilepsy Research*, Vol.1, 412-417.

Steinhäuser C., Kettenmann H. (2009) Astrocyte: Neurotransmitter and Hormone Receptors. *Encyclopedia of Neurosciences*,1: 579-585.

Mittelstaedt, T., G. Seifert, E. Alvarez-Baron, C. Steinhäuser, A. Becker, S. Schoch (2009) Differential mRNA Expression Patterns of Synaptotagmin Gene Family in the Rodent Brain. *J Comp Neurol.*, 512:514-528

Theofilas, P., B. Bedner, K. Hüttmann, M. Theis, C. Steinhäuser, S. Frank (2009) The pro-apoptotic BCL-2 homology domain 3 (BH3)-only protein Bim is not critical for acute excitotoxic cell death. *J. Neuropath. Exp. Neurol.*, Vol 68 (1), 102-110

Requardt R.P., L. Kaczmarczyk, P. Dublin, A. Wallraff-Beck, T. Mikeska, J. Degen, A. Waha, C. Steinhäuser, K. Willecke, M. Theis (2009) Quality control of astrocyte-directed Cre transgenic mice: The benefits of a direct link between loss of gene expression and reporter activation. *Glia* 57: 680-692

2008

Husseini, L., T. Schmandt, B. Scheffler, W. Schröder, G. Seifert, O. Brüstle, C. Steinhäuser (2008) Functional Analysis of Embryonic Stem Cell-Derived Glial Cells after Integration into Hippocampal Slice Cultures. *Stem Cells Dev.*, 17:1141-1152

Karram, K., S. Goebbels, M. Schwab, K. Jennissen, G. Seifert, C. Steinhäuser, K.-A. Nave, J. Trotter (2008) NG2-expressing cells in the nervous system revealed by NG2-EYFP-knockin mouse. *Genesis*, 46:743-757

Grote, A., M. Hans, Z. Boldogkoi, A. Zimmer, C. Steinhäuser, R. Jabs (2008) Nanomolar ambient ATP decelerates P2X3 receptor kinetics. *Neuropharmacology* 55:1212-1218.

Jabs, R., G. Seifert and C. Steinhäuser (2008) Astrocytic function and its alteration in the epileptic brain. *Epilepsia* 49(S2-3): 3-12.

2007

Jabs, R., K. Matthias, A. Grote, M. Grauer, G. Seifert, C. Steinhäuser (2007) Lack of P2X receptor mediated currents in astrocytes and GluR type glial cells of the hippocampal CA1 region. *Glia* 55:1648-1655.

2006

Binder, D. and C. Steinhäuser (2006) Functional changes in astroglial cells in epilepsy. *Glia* 54:358-368.

Seifert, G., K. Schilling and C. Steinhäuser (2006) Astrocyte dysfunction in neurological disorders: A molecular perspective. *Nat. Rev. Neurosci.* 7:194-206.

Lu, Y.-B., K. Franze, G. Seifert, C. Steinhäuser, F. Kirchhoff, H. Wolburg, J. Guck, P. Jammey, E.-Q. Wie, J. Käs, A. Reichenbach (2006) Viscoelastic properties of individual glial cells and neurons in the CNS. *Proc. Natl. Acad. Sci. USA* 103:17759-17764.

Wallraff, A., R. Köhling, U. Heinemann, M. Theis, K. Willecke, C. Steinhäuser (2006) The impact of astrocytic gap junctional coupling on potassium buffering in the hippocampus. *J. Neurosci.* 26:5438-5447.

Hüttmann, K., D. Yilmazer-Hanke, G. Seifert, J. Schramm, H.-C. Pape, C. Steinhäuser (2006) Molecular and functional properties of neurons in the human lateral amygdala. *Mol. Cell. Neurosci.* 31:210-217.

2005

Jabs, R., T. Pivneva, K. Hüttmann, A. Wyczynski, C. Nolte, H. Kettenmann, C. Steinhäuser (2005) Synaptic transmission onto hippocampal glial cells with hGFAP promoter activity. *J. Cell Sci.* 118:3791-3803.

2004

Vaithianathan, T., K. Matthias, B. Bahr, M. Schachner, V. Suppiramaniam, A. Dityatev, C. Steinhäuser (2004) Neural cell adhesion molecule-associated polysialic acid potentiates AMPA receptor currents. *J. Biol. Chem.* 279: 47975-47984.

Bezzi, P., V. Gundersen, J.L. Galbete, G. Seifert, C. Steinhäuser, F. Pilati and A. Volterra (2004) Astrocytes contain a vesicular compartment that is competent for regulated exocytosis of glutamate. *Nat. Neurosci.* 7: 613-620.

Volterra A. and C. Steinhäuser (2004) Glial modulation of synaptic transmission in the hippocampus. *Glia* 47:249-257.

Wallraff, A., B. Odermatt, K., Willecke and C. Steinhäuser (2004) Distinct types of astroglial cells in the hippocampus differ in gap junction coupling. *Glia* 48: 36-43.

Seifert, G., K. Hüttmann, J. Schramm and C. Steinhäuser (2004) Enhanced relative expression of GluR1 flip AMPA receptor subunits in hippocampal astrocytes of epilepsy patients with Ammon's horn sclerosis. *J. Neurosci.* 24:1996-2003.

2003

Matthias, K., F. Kirchhoff, G. Seifert, K. Hüttmann, M. Matyash, H. Kettenmann and C. Steinhäuser (2003) Segregated expression of AMPA-type glutamate receptors and glutamate transporters defines distinct astrocyte populations in the mouse hippocampus. *J. Neurosci* 23:1750-1758.

Scheffler, B., T. Schmandt, W. Schröder, B. Steinfarz, L. Husseini, J. Wellmer, G. Seifert, K. Karam, H. Beck, I. Blümcke, O.D. Wiestler, C. Steinhäuser and O. Brüstle (2003) Functional network integration of embryonic stem cell-derived astrocytes in hippocampal slice cultures. *Development* 130: 5533-5541.

Hüttmann, K., M. Sadgrove, A. Wallraff, S. Hinterkeuser, F. Kirchhoff, C. Steinhäuser* and W.P. Gray (2003) Seizures preferentially stimulate proliferation of radial glia-like astrocytes in the adult dentate gyrus: Functional and immunocytochemical analysis. *Eur. J. Neurosci.* 18: 2769-2778.

Seifert, G., M. Weber, J. Schramm and C. Steinhäuser (2003) Changes in splice variant expression and subunit assembly of AMPA receptors during maturation of hippocampal astrocytes. *Mol. Cell. Neurosci.* 22:248-258.

2002

Schröder, W., G. Seifert, K. Hüttmann, S. Hinterkeuser, and C. Steinhäuser (2002) AMPA-receptor mediated modulation of inward rectifier K⁺ channels in astrocytes of developing mouse hippocampus. *Mol. Cell. Neurosci.* 19:447-458.

2001

Weber, M., D. Dietrich, I. Gräsel, G. Reuter, G. Seifert and C. Steinhäuser (2001) 6-Hydroxykynurenic acid and kynurenic acid differentially antagonise AMPA and NMDA receptors in hippocampal neurons. *J. Neurochem.* 77:1108-1115.

2000

Verkhatsky, A. and C. Steinhäuser (2000) Ion channels in glial cells. *Brain Res. Rev.* 32:380-412.

Hinterkeuser, S., W. Schröder, G. Hager, G. Seifert, I. Blümcke, C.E. Elger, J. Schramm and C. Steinhäuser (2000) Astrocytes in the hippocampus of patients with temporal lobe epilepsy display changes in potassium conductances. *Eur. J. Neurosci.* 12:2087-2096.

1999

Schröder, W., G. Hager, E. Kouprijanova, M. Weber, A. Schmitt, G. Seifert and C. Steinhäuser (1999) Lesion-induced changes of electrophysiological properties in astrocytes of rat dentate gyrus. *Glia* 28:166-174.

1997

Akopian, G., E. Kuprijanova, K. Kressin and C. Steinhäuser (1997) Analysis of ion channel expression by astrocytes in red nucleus brain stem slices of the rat. *Glia* 19:234-246.

Seifert, G., M. Zhou and C. Steinhäuser (1997) Analysis of AMPA receptor properties during postnatal development of mouse hippocampal astrocytes. *J. Neurophysiol.* 78:2916-2923.

1996

Steinhäuser, C. and Gallo, V. (1996) News on glutamate receptors in glial cells. *Trends Neurosci.* 19:339-345.

Akopian, G., K. Kressin, A. Derouiche and C. Steinhäuser (1996) Identified glial cells in the early postnatal mouse hippocampus display different types of Ca²⁺ currents. *Glia* 17: 181-194.

1995

Seifert, G. and C. Steinhäuser (1995) Glial cells in the mouse hippocampus express AMPA receptors with an intermediate Ca²⁺ permeability. *Eur. J. Neurosci.* 7:1872-1881.

Kressin, K., E. Kuprijanova, R. Jabs, G. Seifert and C. Steinhäuser (1995) Developmental regulation of Na⁺ and K⁺ conductances in glial cells of mouse hippocampal brain slices. *Glia* 15:173-187.

1994

Steinhäuser, C., R. Jabs and H. Kettenmann (1994) Properties of GABA and glutamate responses in identified glial cells of the mouse hippocampal slice. *Hippocampus* 4:19-36.

1993

Steinhäuser, C. (1993) Electrophysiologic characteristics of glial cells. *Hippocampus* 3S: 113-124.

1992

Steinhäuser, C., T. Berger, M. Frotscher and H. Kettenmann (1992) Heterogeneity in the membrane current pattern of identified glial cells in the hippocampal slice. *Eur. J. Neurosci.* 4:472-484.