

Prof. Dr. Carola Förster

## 1. Publications in peer-reviewed journals

- (98) Kirchner J, Völker E, Shityakov S, Saji S, Förster CY. Protecting the Brain: Novel Strategies for Preventing Breast Cancer Brain Metastases through Selective Estrogen Receptor  $\beta$  Agonists and In Vitro Blood-Brain Barrier Models. *Int J Mol Sci*. 2024 Mar 16;25(6):3379. doi: 10.3390/ijms25063379.
- (97) Nagai M; Shityakov, S., Smetak, M.; Bär, C., Schlegel, N., Thum, T., Förster C.Y. (2023) Blood biomarkers in Takotsubo syndrome and their role in diagnosis and management, *Biomolecules special issue Regulation of the Endothelial barrier, Biomolecules*. 2023 Jun 15;13(6):995. doi: 10.3390/biom13060995.
- (96) Nagai, M., Dote, K., Kato, M., Sasaki, S., Oda, N., Förster, C.Y. (2023) Afterload reduction after non-invasive vagus nerve stimulation in acute heart failure *Front. Hum. Neurosci., section Brain Health and Clinical Neuroscience*, Mar 23;17:1149449. doi: 10.3389/fnhum.2023.1149449.
- (95) Ellaine Salvador, Almuth F. Kessler, Dominik Domröse, Julia Hörmann, Clara Schaeffer, Aiste Giniunaite, Malgorzata Burek, Tali Voloshin, Catherine Tempel-Brami, Alexandra Volodin, Adel Zeidan, Moshe Giladi, Ralf-Ingo Ernestus, Mario Löhr, Carola Y. Förster, Carsten Hagemann (2022) Tumor Treating Fields (TTFields) Reversibly Permeabilize the Blood–Brain Barrier In Vitro and In Vivo *Biomolecules special issue Regulation of the Endothelial barrier, Biomolecules*. 2022 12(10), 1348; <https://doi.org/10.3390/biom12101348>
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- (91) Nagai, M., Dote, K., Förster, CY (2022) Is unrecognized cognitive impairment in hypertension unmasked by diabetes mellitus? *Hypertens Res*. 45(6):1082-1084. doi: 10.1038/s41440-022-00906-3. Epub 2022 Apr 8.
- (90) Nagai, M. and Förster, C.Y. (2022) Day-to-day blood pressure variability in COVID-19: A biomarker of disrupted central autonomic network? *J. Clin. Hypertension*, 2022;1–3. <https://doi.org/10.1111/jch.14438>.

(89) Karnati, S., Rajenderan, R., Shityakov, S., Güntas, G., Liebisch, G., Kosanovic, D., Ergün, S., Nagai, M., Förster, C.Y. (2021) Lipid profiling of Takotsubo syndrome patient blood – does a disturbed equilibrium of lipid accumulation and immune response contribute to disease predisposition? *Frontiers Cardiovasc. Med.*, 19 April 2022 <https://doi.org/10.3389/fcvm.2022.797154>

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(85) Shityakov, S., Skorb, E.V., Förster, C.Y., Dandekar, T. (2021) Scaffold searching of FDA and EMA-approved drugs identifies lead candidates for drug repurposing in Alzheimer's disease *Frontiers in Chemistry*, Front. Chem. 22 October 21, doi: 10.3389/fchem.2021.736509

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## 5. Invention announcements and patents

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(4) Schaible E, Schwarzmaier S, Yang D, Neuhaus W, Burek M, Förster CY, Trabold R, Plesnila N, Engelhard K, Schäfer M and Thal SC (2018) Inhibition of plasminogen activator inhibitor-1 (PAI-1) attenuates posttraumatic brain damage progression by enhanced fibrinolysis, submitted

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## 7. Invited lectures

(62) Nagai M and Förster C, "Sudden unexpected death: How we could prevent?," 9th Citizen Open Lecture in Okayama, July 21st, 2018, Okayama, Japan

(61) Förster C, "The causal contribution of selective blood-brain barrier glucose transport processes to brain edema formation and functional deterioration after experimental focal brain ischemia and traumatic brain injury," 7th Edition of International Conference on Internal Medicine and Patient Care, 2018, Vienne, Austria

(60) Förster C, "Exploring New Innovations and Frontiers in Heart Care," 23rd World Cardiology Conference, 2018, Dubai, UAE

- (59) Förster C and Nagai M, "Estrogen Receptor-Beta Activation: A Novel Approach to Prevent Ischemic Brain Damage as a comorbidity of heart failure"; 2nd World Heart Congress, May 14-16, 2018, Tokyo, Japan
- (58) Krämer T, Neuhaus W, Thal S, Neuhoff A, Förster C, Gözl C, "Die Stabilisierung der Blut-Hirn-Schranke nach Schädel-Hirn-Trauma mit WY-14643 erfolgt nicht nur über PPAR $\alpha$ "; 19. Hauptstadtkongress der DGAI für Anästhesiologie und Intensivtherapie, September 21-23, 2017, Berlin
- (57) Förster C, "Exploring New Innovations and Frontiers in Heart Care"; 21st International Conference on Clinical and Experimental Cardiology, November 06-07, 2017, Las Vegas, Nevada, USA
- (56) Förster C, "Exploring New Innovations and Frontiers in Heart Care"; National Congress of Cardiology, May 31, 2018, Mendoza, Argentinien
- (55) Förster C and Burek M, "MicroRNA based therapy in disease models of heart failure and stroke"; World Heart Congress, May 22-24, 2017, Osaka, Japan
- (54) Oerter S, Grieb-Porsch S, Monoranu C, Förster CY, Koepsell H, Bohnert M "Nachweis und Lokalisierung der Expression von Natrium-Glukosetransportern im menschlichen Gehirn post mortem." 95. Jahrestagung der Deutschen Gesellschaft für Rechtsmedizin (DGRM), August 30 – September 3, 2016, Heidelberg, Germany
- (53) Förster C, "Evaluation of the potential toxicity of unmodified and modified cyclodextrins on murine blood-brain barrier endothelial cells." EMN Meeting on Structural Nanomaterials-2016, November, 14-17th, 2016 at Dubai, United Arab Emirates
- (52) Shityakov, S. and Förster, C, "In silico predictive model to determine vector-mediated transport properties for the blood-brain barrier choline transporter"; Fourth International Conference on Advances in Bio-Informatics and Environmental Engineering - ICABEE 2016, August 18-19, 2016, Rome, Italy
- (51) Förster C, "Advancements and Challenges in Neurosciences & Neurological Disorders"; 6th World Neurological Conference during June 8-10, 2016, at Dallas, USA
- (50) Förster C, "Sevoflurane-Sulfobutylether- $\beta$ -Cyclodextrin Complex: Preparation, Characterization, Cellular Toxicity, Molecular Modeling and Blood-Brain Barrier Transport Studies"; International Conference on Pharmaceutical Chemistry-2016, September 08-10, 2016, Frankfurt, Germany
- (49) Förster C, "Stretch and/or oxygen glucose deprivation (OGD) in an in vitro traumatic brain injury (TBI) model induces calcium alteration and inflammatory cascade"; 7th Global Neurologists Annual Meeting on Neurology and Neurosurgery on August 22-24, 2016, Vienna, Austria
- (48) Förster C, "Inhibition of proteasome-mediated glucocorticoid receptor degradation restores nitric oxide bioavailability in myocardial endothelial cells in vitro"; Biotechnology World Convention 2016, August 15-17, 2016, Sao Paulo, Brazil



- (47) Shityakov, S. and Förster, C, "Characterization and in vivo evaluation of different propofol-cyclodextrin complexes to assess their drug delivery potential at blood-brain barrier level"; 18th Barrier- and Transporter-Meeting, May 02-04, 2016, Karlsruhe, Germany
- (46) Förster C and Salvador E, "Stretch and/or oxygen glucose deprivation (OGD) in an in vitro traumatic brain injury (TBI) model induces calcium alteration and inflammatory cascade"; 4th Global Experts Meeting on Neuropharmacology scheduled on September 15-17, 2016 at San Antonio, USA
- (45) Förster C and Burek M, "Mechanisms of transcriptional activation of the mouse claudin-5 promoter by estrogen receptor alpha and beta"; 3rd International Conference on Endocrinology, Dates: November 02-04, 2015, Atlanta, USA
- (44) Förster C and Salvador E, "Anti-diabetic Effects of Breast-feeding at the Blood Brain Barrier (BBB)"; Diabetes: New Insights into Molecular Mechanisms and Therapeutic Strategies October 25—29, 2015, Westin Miyako Kyoto, Kyoto, Japan
- (43) Förster C and Salvador E, "Anti-diabetic Effects of Breast-feeding at the Blood Brain Barrier (BBB)"; 9th Intl Congress on Vascular dementia: October 16—19, 2015, Ljubljana, Slovenia
- (42) Förster C, "Glucocorticoid regulation perinatal medicine." Global Summit on Steroids July 13-15, 2015 at Baltimore, USA
- (41) Shityakov, S and Förster, C, „In silico predictive model to determine vector-mediated transport properties for the blood–brain barrier choline transporter,, Bloodsurf Workshop, 03.- 07. November 2014, Fréjus, France
- (40) Förster C, "Rolle der Blut-Hirn-Schranke in der neurobiologischen Physiologie und Pathologie". Entwicklungsbiologisches Seminar, Technische Universität Braunschweig, 02.-03.06.2014
- (39) Förster C, "Targeting the blood brain barrier in neurological disorders"; Pharmaceutical colloquium, University of Linköping, Sweden, 21.-22.01.2014
- (38) Förster C, "Causal contribution of BBB glucose transport to brain edema formation after brain injury"; Barriers of the CNS conference 2013, Lanzarote, Spain, 10.02.2013 – 13.02.2013
- (37) Förster C, "Investigation of the causal contribution of selective blood-brain barrier glucose transport processes to brain edema formation and functional deterioration after experimental focal brain ischemia and traumatic brain injury"; Jahrestagung der Gesellschaft für Mikrozirkulation und Vasculäre Biologie, Mannheim, Germany, 27.09.2012 - 29.09.2012
- (36) Förster C, "Effects of synthetic glucocorticoids on fetal and newborn BBB maturation: implications in adverse health consequences"; 15th International Symposium Signal Transduction in the Blood-Brain-Barriers, Potsdam, Germany, 13.09.2012 – 16.09.2012

(35) Förster C, "Role of the blood brain barrier in secondary brain injury development - folly adaptations for survival?"; The 10th WORLD CONGRESS of the International Society For ADAPTIVE MEDICINE, Bucharest, Romania, 07.06.2012 – 10.06.2012

(34) Förster C, "Glucocorticoid signalling and resistance at the blood-brain barrier in central nervous system disorders"; 14th Symposium on Signal Transduction in the Blood Brain Barriers 2011, Istanbul, Turkey, 07.09.2011 – 09.09.2011

(33) Förster C, "Glukokortikoid-Effekte und -Resistenzen an der Blut-Hirn Schranke in Erkrankungen des Zentralen Nervensystems"; 13. Bad Herrenalber Transporter-Tage, Bad Herrenalb, 30.05.2011 – 01.06.2011

(32) Förster C, "Glucocorticoid signalling and resistance at the BBB in central nervous system disorders"; Gordon Research Conference, Barriers of the CNS, New London, New Hampshire, USA 20.06.2010 – 25.06.2010

(31) Förster C, "Going nuclear – novel targets for molecular glucocorticoid action at the blood brain barrier"; Universität Würzburg, Klinik und Poliklinik für Anästhesiologie, 09.12.2008

(30) Förster C, "Going nuclear – novel targets for molecular glucocorticoid action at the blood brain barrier"; Universität Erlangen-Nurnberg, Institut für Anatomie, 26.07.2008

(29) Förster C, "Molecular mechanisms of glucocorticoid-mediated regulation of BBB permeability"; Biochem. Kolloquium der WWU Münster, Institut für Biochemie, WWU Münster, 29.05.2008

(28) Förster C, "Molekulare Mechanismen der Glucocorticoid-vermittelten Regulation der Blut-Hirn-Schranke"; 21. Blut-Hirn-Schranke-Expertentreffen, Universität Heidelberg, 19.05.2008

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