

Dear Colleagues,
hello 2018!

Here comes the ASL Newsletter No. 81 with new publications on ASL in December '17 and January '18.

Obviously, this is the time to review and summarize, but also to start new things. Exceptionally many review articles can be found in the last section of this newsletter, while the future of a second [COST Action](#) will be formed. After a first meeting, a new core team is now creating ideas and perspectives, if you are interested to join, just let me know (editorATasl-network.org). The next COST core team meeting via skype is on Friday, 2nd February at 10 am (UTC).

Something else has changed: Since former newsletters are archived [online](#), we will reduce the listed articles to the newly published ones from now on (often Epub only). This eases readability and shortens the newsletter overall.

Kind regards,
Klaus

Recent publications December 2017 & January 2018, (Epub & Print)

Note: The '*new*-flag' is assigned to articles which haven't been in earlier newsletters (e.g. as e-publications). Additionally you will find titles printed in bold letters which indicates that they are listed for the first time in this particular newsletter. For articles listed multiple times in different sections the bold letters disappear in the later sections.

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Animal Studies

new

[Preclinical Arterial Spin Labeling Measurement of Cerebral Blood Flow.](#)

Muir ER.

Methods Mol Biol. 2018;1718:59-70. doi: 10.1007/978-1-4939-7531-0_4.

new

[Effects of total saponins from Trillium tschonoskii rhizome on grey and white matter injury evaluated by quantitative multiparametric MRI in a rat model of ischemic stroke.](#)

Li M, Ouyang J, Zhang Y, Cheng BCY, Zhan Y, Yang L, Zou H, Zhao H.

J Ethnopharmacol. 2018 Jan 5;215:199-209. doi: 10.1016/j.jep.2018.01.006. [Epub ahead of print]

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new

[Simultaneous PET-MRI Confirms That Cerebral Blood Flow Does Not Confound PET Neuroreceptor Activation Studies.](#)

Nummenmaa L, Tuominen L, Hirvonen J.

ACS Chem Neurosci. 2018 Jan 5. doi: 10.1021/acschemneuro.7b00489. [Epub ahead of print]

new

Hyperpolarized ^{13}C , $^{15}\text{N}_2$ -urea T_2 relaxation changes in acute kidney injury.

Mariager CØ, Nielsen PM, Qi H, Ringgaard S, Laustsen C.

Magn Reson Med. 2017 Dec 28. doi: 10.1002/mrm.27050. [Epub ahead of print]

new

Analysis of the vasculature by immunohistochemistry in paraffin-embedded brains.

Decker Y, Müller A, Németh E, Schulz-Schaeffer WJ, Fatar M, Menger MD, Liu Y, Fassbender K.

Brain Struct Funct. 2017 Dec 19. doi: 10.1007/s00429-017-1595-8. [Epub ahead of print]

new

Reduced Cerebrovascular Reactivity and Increased Resting Cerebral Perfusion in Rats Exposed to a Cafeteria Diet.

Gomez-Smith M, Janik R, Adams C, Lake EM, Thomason LAM, Jeffers MS, Stefanovic B, Corbett D.

Neuroscience. 2017 Dec 8;371:166-177. doi: 10.1016/j.neuroscience.2017.11.054. [Epub ahead of print]

Pharmacological / Drug Studies / Studies on the Effects of Therapies

new

Photon vs. proton radiochemotherapy: Effects on brain tissue volume and perfusion.

Petr J, Platzek I, Hofheinz F, Mutsaerts HJMM, Asllani I, van Osch MJP, Seidlitz A, Krukowski P, Gommlich A, Beuthien-Baumann B, Jentsch C, Maus J, Troost EGC, Baumann M, Krause M, van den Hoff J.

Radiother Oncol. 2018 Jan 19. pii: S0167-8140(18)30018-5. doi: 10.1016/j.radonc.2017.11.033. [Epub ahead of print]

new

Brain substrates of early (4h) cigarette abstinence: Identification of treatment targets.

Franklin TR, Jagannathan K, Hager N, Fang Z, Xu S, Wong J, Childress AR, Detre JA, Rao H, Wetherill R.

Drug Alcohol Depend. 2018 Jan 1;182:78-85. doi: 10.1016/j.drugalcdep.2017.10.010. Epub 2017 Nov 20.

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Red cell exchange transfusions lower cerebral blood flow and oxygen extraction fraction in pediatric sickle cell anemia.

Guilliams KP, Fields ME, Ragan DK, Eldeniz C, Binkley MM, Chen Y, Comiskey LS, Doctor A, Hulbert ML, Shimony JS, Vo KD, McKinstry RC, An H, Lee JM, Ford AL.
Blood. 2017 Dec 18. pii: blood-2017-06-789842. doi: 10.1182/blood-2017-06-789842. [Epub ahead of print]

new

Cerebral blood flow changes after radiation therapy identifies pseudo-progression in diffuse intrinsic pontine gliomas.

Calmon R, Puget S, Varlet P, Dangouloff-Ros V, Blauwblomme T, Beccaria K, Grevent D, Sainte-Rose C, Castel D, Debily MA, Dufour C, Bolle S, Dhermain F, Saitovitch A, Zilbovicius M, Brunelle F, Grill J, Boddaert N.
Neuro Oncol. 2017 Dec 13. doi: 10.1093/neuonc/nox227. [Epub ahead of print]

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Cerebral Blood Flow Studies

CBF Regional Comparison / Regional ASL

new

Altered cerebral hemodynamics and cortical thinning in asymptomatic carotid artery stenosis.

Marshall RS, Asllani I, Pavol MA, Cheung YK, Lazar RM.

PLoS One. 2017 Dec 14;12(12):e0189727. doi: 10.1371/journal.pone.0189727. eCollection 2017.

[Free PMC Article](#)

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Aberrant resting-state cerebellar blood flow in major depression.

Depping MS, Wolf ND, Vasic N, Sasic-Vasic Z, Schmitgen MM, Sambataro F, Wolf RC.

J Affect Disord. 2018 Jan 15;226:227-231. doi: 10.1016/j.jad.2017.09.028. Epub 2017 Sep 28.

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Increased Striatal and Reduced Prefrontal Cerebral Blood Flow in Clinical High Risk for Psychosis.

Kindler J, Schultze-Lutter F, Hauf M, Dierks T, Federspiel A, Walther S, Schimmelmann BG, Hubl D.

Schizophr Bull. 2018 Jan 13;44(1):182-192. doi: 10.1093/schbul/sbx070.

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Association between leukoaraiosis and cerebral blood flow territory alteration in asymptomatic internal carotid artery stenosis.

Chen YF, Kuo YS, Wu WC, Tang SC, Jiang SF.

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Cole JH, Caan MWA, Underwood J, De Francesco D, van Zoest RA, Wit FWNM, Mutsaerts HJMM, Leech R, Geurtsen GJ, Portegies P, Majoie CBLM, Schim van der Loeff MF, Sabin CA, Reiss P, Winston A, Sharp DJ; COBRA collaboration.

Clin Infect Dis. 2018 Jan 4. doi: 10.1093/cid/cix1124. [Epub ahead of print]

new

What Have We Learned from MR Imaging in Multiple Sclerosis?

Lapointe E, Li DKB, Traboulsee AL, Rauscher A.

AJNR Am J Neuroradiol. 2018 Jan 4. doi: 10.3174/ajnr.A5504. [Epub ahead of print] Review.

new

Increased Resting Hippocampal and Basal Ganglia Perfusion in People at Ultra High Risk for Psychosis: Replication in a Second Cohort.

Allen P, Azis M, Modinos G, Bossong MG, Bonoldi I, Samson C, Quinn B, Kempton MJ, Howes OD, Stone JM, Calem M, Perez J, Bhattacharayya S, Broome MR, Grace AA, Zelaya F, McGuire P.

Schizophr Bull. 2017 Dec 27. doi: 10.1093/schbul/sbx169. [Epub ahead of print]

new

3D pseudocontinuous arterial spin-labeling perfusion imaging detected crossed cerebellar diaschisis in acute, subacute and chronic intracerebral hemorrhage.

Yin L, Cheng S, Xiao J, Zhu Y, Bu S, Zhang X, Liu R, Huang Y, Xie S.

Clin Imaging. 2017 Dec 15;50:37-42. doi: 10.1016/j.clinimag.2017.12.007. [Epub ahead of print]

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Red cell exchange transfusions lower cerebral blood flow and oxygen extraction fraction in pediatric sickle cell anemia.

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[Free PMC Article](#)

new

Diagnostic Performance of Arterial Spin Labeling for Grading Nonenhancing Astrocytic Tumors.

Khashbat D, Harada M, Abe T, Ganbold M, Iwamoto S, Uyama N, Irahara S, Otomi Y, Kageji T, Nagahiro S.

Magn Reson Med Sci. 2017 Dec 12. doi: 10.2463/mrms.mp.2017-0065. [Epub ahead of print]

[Free Article](#)

new

Pseudo continuous arterial spin labeling quantification in anemic subjects with hyperemic cerebral blood flow.

Bush A, Chai Y, Choi SY, Vaclavu L, Holland S, Nederveen A, Coates T, Wood J.
Magn Reson Imaging. 2017 Dec 9;47:137-146. doi: 10.1016/j.mri.2017.12.011. [Epub ahead of print]

new

Brain functional and perfusional alterations in schizophrenia: an arterial spin labeling study.

Oliveira ÍAF, Guimarães TM, Souza RM, Dos Santos AC, Machado-de-Sousa JP, Hallak JEC, Leoni RF.
Psychiatry Res. 2017 Dec 5. pii: S0925-4927(17)30214-7. doi: 10.1016/j.psychres.2017.12.001. [Epub ahead of print]

new

Differentiation of residual/recurrent gliomas from postradiation necrosis with arterial spin labeling and diffusion tensor magnetic resonance imaging-derived metrics.

Razek AAKA, El-Serougy L, Abdelsalam M, Gaballa G, Talaat M.
Neuroradiology. 2018 Feb;60(2):169-177. doi: 10.1007/s00234-017-1955-3. Epub 2017 Dec 7.

new

Clinical and Arterial Spin Labeling Brain MRI Features of Transitional Venous Anomalies.

Zhang M, Telischak NA, Fischbein NJ, Steinberg GK, Marks M, Zaharchuk G, Heit JJ, Iv M.
J Neuroimaging. 2017 Dec 4. doi: 10.1111/jon.12487. [Epub ahead of print]

new

Using simultaneous PET/MRI to compare the accuracy of diagnosing frontotemporal dementia by arterial spin labelling MRI and FDG-PET.

Anazodo UC, Finger E, Kwan BYM, Pavlosky W, Warrington JC, Günther M, Prato FS, Thiessen JD, St Lawrence KS.
Neuroimage Clin. 2017 Oct 31;17:405-414. doi: 10.1016/j.nicl.2017.10.033. eCollection 2018.
[Free PMC Article](#)

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Arterial Spin Labeling Cerebral Perfusion Magnetic Resonance Imaging in Migraine Aura: An Observational Study.

Wolf ME, Okazaki S, Eisele P, Rossmannith C, Gregori J, Griebel M, Günther M, Gass A, Hennerici MG, Szabo K, Kern R.

J Stroke Cerebrovasc Dis. 2018 Jan 10. pii: S1052-3057(17)30664-X. doi: 10.1016/j.jstrokecerebrovasdis.2017.12.002. [Epub ahead of print]

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Association between leukoaraiosis and cerebral blood flow territory alteration in asymptomatic internal carotid artery stenosis.

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new

Hybrid PET/MRI imaging in healthy unsedated newborn infants with quantitative rCBF measurements using ¹⁵O-water PET.

Andersen JB, Lindberg U, Olesen OV, Benoit D, Ladefoged CN, Larsson HB, Højgaard L, Greisen G, Law I.

J Cereb Blood Flow Metab. 2018 Jan 1:271678X17751835. doi: 10.1177/0271678X17751835. [Epub ahead of print]

Functional Imaging / BOLD

new

[No evidence for accelerated ageing-related brain pathology in treated HIV: longitudinal neuroimaging results from the Comorbidity in Relation to AIDS \(COBRA\) project.](#)

Cole JH, Caan MWA, Underwood J, De Francesco D, van Zoest RA, Wit FWNM, Mutsaerts HJMM, Leech R, Geurtsen GJ, Portegies P, Majoie CBLM, Schim van der Loeff MF, Sabin CA, Reiss P, Winston A, Sharp DJ; COBRA collaboration.

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Drug Alcohol Depend. 2018 Jan 1;182:78-85. doi: 10.1016/j.drugalcdep.2017.10.010. Epub 2017 Nov 20.

new

[Static and dynamic functional connectivity in patients with chronic fatigue syndrome: use of arterial spin labelling fMRI.](#)

Boissoneault J, Letzen J, Lai S, Robinson ME, Staud R.

Clin Physiol Funct Imaging. 2018 Jan;38(1):128-137. doi: 10.1111/cpf.12393. Epub 2016 Sep 28.

Others CBF Related

new

[Diffusion sensitivity of 3D-GRASE in arterial spin labeling perfusion.](#)

He X, Wengler K, Schweitzer ME.

Magn Reson Med. 2018 Jan 7. doi: 10.1002/mrm.27058. [Epub ahead of print]

Physiological Parameters besides CBF

new

[Increased variability of watershed areas in patients with high-grade carotid stenosis.](#)

Kaczmarz S, Griese V, Preibisch C, Kallmayer M, Helle M, Wustrow I, Petersen ET, Eckstein HH, Zimmer C, Sorg C, Göttler J.

Neuroradiology. 2018 Jan 3. doi: 10.1007/s00234-017-1970-4. [Epub ahead of print]

Perfusion Studies others than on Brain

new

Dynamic non-invasive ASL perfusion imaging of a normal pancreas with secretin augmented MR imaging.

Schawkat K, Ith M, Christe A, Kühn W, Chittazhathu Y, Bains L, Runge VM, Heverhagen JT. Eur Radiol. 2018 Jan 4. doi: 10.1007/s00330-017-5227-8. [Epub ahead of print]

ASL for Angiography

new

Noncontrast-enhanced time-resolved 4D dynamic intracranial MR angiography at 7T: A feasibility study.

Cong F, Zhuo Y, Yu S, Zhang X, Miao X, An J, Wang S, Cao Y, Zhang Y, Song HK, Wang DJ, Yan L.

J Magn Reson Imaging. 2017 Dec 12. doi: 10.1002/jmri.25923. [Epub ahead of print]

new

Non-contrast enhanced 4D intracranial MR angiography based on pseudo-continuous arterial spin labeling with the keyhole and view-sharing technique.

Obara M, Togao O, Beck GM, Shibukawa S, Okuaki T, Yoneyama M, Nakamura M, Honda H, Van Cauteren M.

Magn Reson Med. 2018 Jan 25. doi: 10.1002/mrm.27074. [Epub ahead of print]

ASL in Kidneys

new

Non-Invasive Renal Perfusion Imaging Using Arterial Spin Labeling MRI: Challenges and Opportunities.

Nery F, Gordon I, Thomas DL.

Diagnostics (Basel). 2018 Jan 5;8(1). pii: E2. doi: 10.3390/diagnostics8010002. Review.

[Free Article](#)

new

Hyperpolarized ^{13}C , $^{15}\text{N}_2$ -urea T_2 relaxation changes in acute kidney injury.

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new

[Transit time corrected arterial spin labeling technique aids to overcome delayed transit time effect.](#)

Yun TJ, Sohn CH, Yoo RE, Kang KM, Choi SH, Kim JH, Park SW, Hwang M, Lebel RM.

Neuroradiology. 2017 Dec 29. doi: 10.1007/s00234-017-1969-x. [Epub ahead of print]

new

[Improving Arterial Spin Labeling by Using Deep Learning.](#)

Kim KH, Choi SH, Park SH.

Radiology. 2017 Dec 21:171154. doi: 10.1148/radiol.2017171154. [Epub ahead of print]

new

[A novel perspective to calibrate temporal delays in cerebrovascular reactivity using hypercapnic and hyperoxic respiratory challenges.](#)

Champagne AA, Bhogal AA, Coverdale NS, Mark CI, Cook DJ.

Neuroimage. 2017 Dec 4. pii: S1053-8119(17)30978-3. doi: 10.1016/j.neuroimage.2017.11.044.

[Epub ahead of print]

Technical Improvement / Parameter Optimization

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[Dynamic non-invasive ASL perfusion imaging of a normal pancreas with secretin augmented MR imaging.](#)

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new

[Cardiac-triggered pseudo-continuous arterial-spin-labeling: A cost-effective scheme to further enhance the reliability of arterial-spin-labeling MRI.](#)

Li Y, Mao D, Li Z, Schär M, Pillai JJ, Pipe JG, Lu H. Magn Reson Med. 2018 Jan 25. doi: 10.1002/mrm.27090. [Epub ahead of print]

Screening / Prognosis / Prevention

new

[Arterial-spin-labeling \(ASL\) perfusion MRI predicts cognitive function in elderly individuals: A 4-year longitudinal study.](#)

De Vis JB, Peng SL, Chen X, Li Y, Liu P, Sur S, Rodrigue KM, Park DC, Lu H. J Magn Reson Imaging. 2018 Jan 2. doi: 10.1002/jmri.25938. [Epub ahead of print]

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ASL at Field Strength > 3T

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Case Reports

new

[Dural Arteriovenous Fistula at the Cavernous Sinus Diagnosed by Arterial Spin-labeled Imaging.](#)

Yamamoto N, Yamamoto Y, Izumi Y, Kaji R.

Intern Med. 2017 Dec 21. doi: 10.2169/internalmedicine.9315-17. [Epub ahead of print]

Reproducibility Studies

new

[Increased Resting Hippocampal and Basal Ganglia Perfusion in People at Ultra High Risk for Psychosis: Replication in a Second Cohort.](#)

Allen P, Azis M, Modinos G, Bossong MG, Bonoldi I, Samson C, Quinn B, Kempton MJ, Howes OD, Stone JM, Calem M, Perez J, Bhattacharayya S, Broome MR, Grace AA, Zelaya F, McGuire P.

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Cohort Studies / Gender- and Age Dependencies

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new

[Investigating structural and perfusion deficits due to repeated head trauma in active professional fighters.](#)

Mishra V, Sreenivasan K, Banks SJ, Zhuang X, Yang Z, Cordes D, Bernick C.

Neuroimage Clin. 2017 Nov 21;17:616-627. doi: 10.1016/j.nicl.2017.11.013. eCollection 2018.

[Free PMC Article](#)

new

[Increased Striatal and Reduced Prefrontal Cerebral Blood Flow in Clinical High Risk for Psychosis.](#)

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