

Dear Colleagues,

here is the ASL Newsletter No. 84 with an update on recent publications on ASL. Are you looking for a new position? You will find some information on an **open position** in the field of ASL in the *Job Offerings*. Or do you know students willing to get started in ASL? Amsterdam Neuroscience is offering a **student's project**, check out the details below, too.

The latest version of **BAZIL**, a powerful toolbox to analyse ASL data, is now released, some highlights can be found in *Featured Articles*.

Looking ahead to the ISMRM in Paris, please, feel invited to join the **ASL Network Dinner** on Monday, 18<sup>th</sup> June. Send an e-mail to editor[at]asl-network.org to register by Sunday, 6<sup>th</sup> May!

Kind regards,  
Klaus

## Recent publications

### April 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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# Cerebral Blood Flow Studies

## Studies on Special Disease

*new*

### Comparative study of pulsed-continuous arterial spin labeling and dynamic susceptibility contrast imaging by histogram analysis in evaluation of glial tumors.

Arisawa A, Watanabe Y, Tanaka H, Takahashi H, Matsuo C, Fujiwara T, Fujiwara M, Fujimoto Y, Tomiyama N.

Neuroradiology. 2018 Apr 29. doi: 10.1007/s00234-018-2024-2. [Epub ahead of print]

*new*

### Increased resting cerebral blood flow in adult Fabry disease: MRI arterial spin labeling study.

Phyu P, Merwick A, Davagnanam I, Bolsover F, Jichi F, Wheeler-Kingshott C, Golay X, Hughes D, Cipolotti L, Murphy E, Lachmann RH, Werring DJ.

Neurology. 2018 Apr 17;90(16):e1379-e1385. doi: 10.1212/WNL.0000000000005330. Epub 2018 Mar 21.

*new*

### Pathological factors contributing to crossed cerebellar diaschisis in cerebral gliomas: a study combining perfusion, diffusion, and structural MR imaging.

Liu X, Li J, Xu Q, Mantini D, Wang P, Xie Y, Weng Y, Ma C, Sun K, Zhang Z, Lu G.

Neuroradiology. 2018 Apr 17. doi: 10.1007/s00234-018-2015-3. [Epub ahead of print]

*new*

### Arterial spin-labeling is useful for the diagnosis of residual or recurrent meningiomas.

Kikuchi K, Hiwatashi A, Togao O, Yamashita K, Kamei R, Yoshimoto K, Iihara K, Suzuki SO, Iwaki T, Suzuki Y, Honda H.

Eur Radiol. 2018 Apr 13. doi: 10.1007/s00330-018-5404-4. [Epub ahead of print]

*new*

### Cardiovascular Response to Mental Stress in Mild Cognitive Impairment and its Association with Cerebral Perfusion.

Henley BC, Shokouhi M, Mahajan AY, Inan OT, Hajjar I.

J Alzheimers Dis. 2018 Apr 11. doi: 10.3233/JAD-180036. [Epub ahead of print]

*new*

### Early Evidence of Sepsis-Associated Hyperperfusion-A Study of Cerebral Blood Flow Measured With MRI Arterial Spin Labeling in Critically Ill Septic Patients and Control Subjects.

Masse MH, Richard MA, D'Aragnon F, St-Arnaud C, Mayette M, Adhikari NKJ, Fraser W, Carpentier A, Palanchuck S, Gauthier D, Lanthier L, Touchette M, Lamontagne A, Chénard J, Mehta S, Sansoucy Y, Croteau E, Lepage M, Lamontagne F.

Crit Care Med. 2018 Apr 6. doi: 10.1097/CCM.0000000000003147. [Epub ahead of print]

*new*

**Differentiation between primary CNS lymphoma and glioblastoma: qualitative and quantitative analysis using arterial spin labeling MR imaging.**

You SH, Yun TJ, Choi HJ, Yoo RE, Kang KM, Choi SH, Kim JH, Sohn CH.  
Eur Radiol. 2018 Apr 4. doi: 10.1007/s00330-018-5359-5. [Epub ahead of print]

*new*

**Vascular Abnormalities within Normal Appearing Tissue in Chronic Traumatic Brain Injury.**

Haber M, Amyot F, Kenney K, Meredith-Duliba T, Moore C, Silverman E, Podell J, Chou YY, Pham DL, Butman J, Lu H, Diaz-Arrastia R, Sandsmark D.  
J Neurotrauma. 2018 Apr 2. doi: 10.1089/neu.2018.5684. [Epub ahead of print]

*new*

**Magnetic resonance imaging in children presenting migraine with aura: Association of hypoperfusion detected by arterial spin labelling and vasospasm on MR angiography findings.**

Cadiot D, Longuet R, Bruneau B, Treguier C, Carsin-Vu A, Corouge I, Gomes C, Proisy M.  
Cephalalgia. 2018 Apr;38(5):949-958. doi: 10.1177/0333102417723570. Epub 2017 Jul 24.

*new*

**Recent advances in magnetic resonance imaging for peripheral artery disease.**

Mathew RC, Kramer CM.  
Vasc Med. 2018 Apr;23(2):143-152. doi: 10.1177/1358863X18754694. [Free PMC Article](#)

## Comparison of ASL Techniques / ASL Compared with Other Imaging Methods / ASL Combined with Other Imaging Methods

*new*

**Comparative study of pulsed-continuous arterial spin labeling and dynamic susceptibility contrast imaging by histogram analysis in evaluation of glial tumors.**

Arisawa A, Watanabe Y, Tanaka H, Takahashi H, Matsuo C, Fujiwara T, Fujiwara M, Fujimoto Y, Tomiyama N.  
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J Neurotrauma. 2018 Apr 2. doi: 10.1089/neu.2018.5684. [Epub ahead of print]

*new*

[Magnetic resonance imaging in children presenting migraine with aura: Association of hypoperfusion detected by arterial spin labelling and vasospasm on MR angiography findings.](#)  
Cadiot D, Longuet R, Bruneau B, Treguier C, Carsin-Vu A, Corouge I, Gomes C, Proisy M.  
Cephalalgia. 2018 Apr;38(5):949-958. doi: 10.1177/0333102417723570. Epub 2017 Jul 24.

## Functional Imaging / BOLD

*new*

[Thirst dependent activity of the insular cortex reflects its emotion related subdivision: a cerebral blood flow study.](#)

Meier L, Federspiel A, Jann K, Wiest R, Strik W, Dierks T.  
Neuroscience. 2018 Apr 25. pii: S0306-4522(18)30273-2. doi:  
10.1016/j.neuroscience.2018.04.022. [Epub ahead of print]

*new*

[Cardiovascular Response to Mental Stress in Mild Cognitive Impairment and its Association with Cerebral Perfusion.](#)

Henley BC, Shokouhi M, Mahajan AY, Inan OT, Hajjar I.  
J Alzheimers Dis. 2018 Apr 11. doi: 10.3233/JAD-180036. [Epub ahead of print]

*new*

[Vascular Abnormalities within Normal Appearing Tissue in Chronic Traumatic Brain Injury.](#)

Haber M, Amyot F, Kenney K, Meredith-Duliba T, Moore C, Silverman E, Podell J, Chou YY,  
Pham DL, Butman J, Lu H, Diaz-Arrastia R, Sandsmark D.  
J Neurotrauma. 2018 Apr 2. doi: 10.1089/neu.2018.5684. [Epub ahead of print]

## Others CBF Related

*new*

[Multimodal Neuroimaging Differences in Nicotine Abstinent vs. Satiated Smokers.](#)

Chaarani B, Spechler PA, Ivanciu A, Snowe M, Nickerson JP, Higgins ST, Garavan H.  
Nicotine Tob Res. 2018 Apr 6. doi: 10.1093/ntr/nty070. [Epub ahead of print]

## Case Reports

*new*

[Hyperperfusion syndrome after trapping with high-flow bypass for a giant paraclinoid internal carotid artery aneurysm.](#)

Mohri M, Ichinose T, Uchiyama N, Misaki K, Nambu I, Takabatake Y, Nakada M.  
World Neurosurg. 2018 Apr 21. pii: S1878-8750(18)30800-3. doi: 10.1016/j.wneu.2018.04.081.  
[Epub ahead of print]

## Cohort Studies / Gender- and Age Dependencies

*new*

### [Measurement of pediatric regional cerebral blood flow from 6 months to 15 years of age in a clinical population.](#)

Carsin-Vu A, Corouge I, Commowick O, Bouzillé G, Barillot C, Ferré JC, Proisy M.  
Eur J Radiol. 2018 Apr;101:38-44. doi: 10.1016/j.ejrad.2018.02.003. Epub 2018 Feb 6.

## Pharmacological / Drug Studies / Studies on the Effects of Therapies

*new*

### [Hyperperfusion syndrome after trapping with high-flow bypass for a giant paraclinoid internal carotid artery aneurysm.](#)

Mohri M, Ichinose T, Uchiyama N, Misaki K, Nambu I, Takabatake Y, Nakada M.  
World Neurosurg. 2018 Apr 21. pii: S1878-8750(18)30800-3. doi: 10.1016/j.wneu.2018.04.081.  
[Epub ahead of print]

*new*

### [Network-wise cerebral blood flow redistribution after 20 Hz rTMS on left dorso-lateral prefrontal cortex.](#)

Shang YQ, Xie J, Peng W, Zhang J, Chang D, Wang Z.  
Eur J Radiol. 2018 Apr;101:144-148. doi: 10.1016/j.ejrad.2018.02.018. Epub 2018 Feb 19.

## Screening / Prognosis / Prevention

*new*

### [Measurement of pediatric regional cerebral blood flow from 6 months to 15 years of age in a clinical population.](#)

Carsin-Vu A, Corouge I, Commowick O, Bouzillé G, Barillot C, Ferré JC, Proisy M.  
Eur J Radiol. 2018 Apr;101:38-44. doi: 10.1016/j.ejrad.2018.02.003. Epub 2018 Feb 6.

# Review Paper / Historical Review / Guidelines

*new*

## Cerebral Blood Flow Measurements in Adults: A Review on the Effects of Dietary Factors and Exercise.

Joris PJ, Mensink RP, Adam TC, Liu TT.

Nutrients. 2018 Apr 25;10(5). pii: E530. doi: 10.3390/nu10050530. Review.

[Free Article](#)

*new*

## Fundamentals of functional imaging II: emerging MR techniques and new methods of analysis.

Luna A, Martín Noguerol T, Mata LA.

Radiologia. 2018 Apr 12. pii: S0033-8338(18)30044-4. doi: 10.1016/j.rx.2018.03.001. [Epub ahead of print] English, Spanish.

*new*

## Arterial spin labeling for the measurement of cerebral perfusion and angiography.

Jeppard P, Chappell MA, Okell TW.

J Cereb Blood Flow Metab. 2018 Apr;38(4):603-626. doi: 10.1177/0271678X17743240. Epub 2017 Nov 23.

*new*

## Recent advances in magnetic resonance imaging for peripheral artery disease.

Mathew RC, Kramer CM.

Vasc Med. 2018 Apr;23(2):143-152. doi: 10.1177/1358863X18754694. [Free PMC Article](#)

## Job Offerings

### **Postdoc in Quantitative MRI, Dallas, Texas / US**

<http://asl-network.org/jobs/postdoc-in-quantitative-mri>

### **Student Project, Amsterdam, NL**

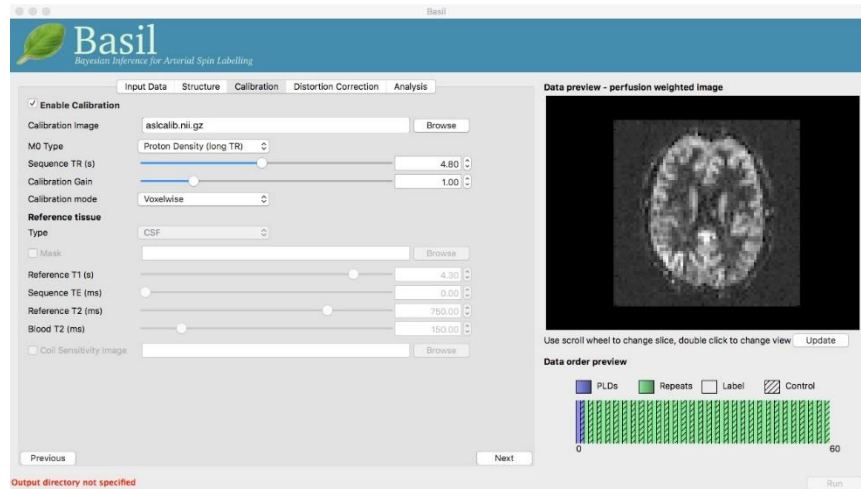
Amsterdam Neuroscience is searching for an enthusiastic medical informatics MSc student for the following project: IMPLEMENTATION AND VALIDATION OF BIDS IN ASL. In this project, the student will adapt the MRI perfusion image processing pipeline *ExploreASL* to the worldwide accepted Brain Imaging Data Structure (BIDS). *ExploreASL* is a European initiative for standardized (multi-center) arterial spin labeling (ASL) perfusion MRI image processing. This project is a unique opportunity to work with large MRI ASL datasets from different scanners, with different data structure, use BIDS to harmonize these datasets, and to optimize the BIDS ASL extension to facilitate the ASL data structure differences between MRI vendors. Experience with Matlab and HTML is a pre. Candidates can contact via [henkjanmutsaerts\[AT\]gmail.com](mailto:henkjanmutsaerts[AT]gmail.com). - by Henk-Jan Mutsaerts -

If you have any vacancies please send them to [jobs\[AT\]asl-network.org](mailto:jobs[AT]asl-network.org).

## Featured Articles

### **Analysing ASL data with BAZIL**

**BASIL** is a complete toolbox for the analysis of almost any ASL data for both single subject or group studies. As part of the FMRIB Software Library it exploits a range of widely-used tools for registration, motion and distortion correction and adds a fully Bayesian inference of perfusion and other haemodynamic parameters from data from practically any ASL acquisition. The latest wholly revised version of the BASIL tools are now available as a pre-release and include a range of new functionality and a brand-



new graphical user interface. New online documentation is also available, along with a growing number of tutorial exercises and examples of ASL analysis.

<https://fsl.fmrib.ox.ac.uk/fsl/fslwiki/BASIL>

<http://asl-docs.readthedocs.io/en/latest/basil.html>

- by Michael Chappell -

If you would like to write a comment on an interesting article, present software or work of common interest, e-mail some information to editor[AT]asl-network.org.