

**CURRICULUM VITAE**

<b>NAME</b> Niddam, David Meier		<b>POSITION TITLE/AFFILIATIONS</b> Researcher/ Brain Research Center	
<b>EDUCATION/TRAINING</b>			
<b>INSTITUTION AND LOCATION</b>	<b>DEGREE</b>	<b>YEAR(s)</b>	<b>FIELD OF STUDY</b>
University of Copenhagen, Denmark	B.Sc.	1992-1996	Physics/ Biophysics
University of Copenhagen, Denmark	M.Sc.	1996-1998	Physics/ Biophysics
University of Aalborg, Denmark	Ph.D.	1998-2002	Biomedical Science and Engineering

**A. Current Research**

The primary focus of my research is on understanding how the brain contributes to the development and maintenance of chronic pain, in particular in patients with chronic migraine and chronic myofascial pain. To advance this research, I apply state-of-the-art MRI-based techniques to measure alterations in brain function, metabolism and structure. Novel techniques are developed and implemented both with respect to MRI sequences and data analysis approaches. Recent research is focused on three inter-linked topics: (1) brainstem functional imaging and its application to migraine patients; (2) investigation of the role of the reward system in chronic migraine patients with medication overuse headache (MOH); (3) brain changes across the different migraine phases. In the first line of research, brainstem imaging will be applied in patients with episodic and chronic migraine. In the second line of research, the brain mechanisms underlying MOH in chronic migraine patients is explored with task-based functional magnetic resonance imaging. The intertemporal choice task (ITC) is used to probe the reward system or more specifically the processing of the subjective temporal discount factor. In addition, transcranial direct current stimulation of the dorsolateral prefrontal cortex is applied to explore whether the subjective discount factor can be modulated. In the third line of research, cross-sectional data from episodic migraine patients in inter-ictal, pre-ictal, ictal, and post-ictal phases are analyzed using structural MRI measures, such as voxel- and surface-based morphometry, as well as resting-state functional connectivity measures. All research is performed in close collaboration with clinicians and MR physicists.

**B. Positions and Honors.****Positions and Employment**

2021- Present	Researcher, Brain Research Center, National Yang Ming Chiao Tung University, Taiwan
2021- Present	Adjunct Professor, Institute of Brain Science, National Yang-Ming University, Taiwan

2010- 2021	Adjunct Associate Professor, Institute of Brain Science, National Yang-Ming University, Taiwan
2008- 2021	Associate Researcher, Brain Research Center, National Yang-Ming University, Taiwan
2003- 2008	Assistant Researcher, Brain Research Center, National Yang-Ming University, Taiwan
2002- 2003	Post-Doctoral Fellow, Center for Neuroscience, National Yang-Ming University, Taiwan
2001	Guest researcher at Taipei Veterans General Hospital, Taiwan

## **Honors**

2017 Second place of the best articles of the year, Veterans General Hospitals and University System of Taiwan Joint Research Program, (第12屆榮台聯大研究優秀論文獎第三名)  
 "Niddam DM, Lai KL, Fuh JL, Chuang CY, Chen WT, Wang SJ. Reduced functional connectivity between salience and visual networks in migraine with aura. *Cephalalgia* 2016 Jan;36(1):53-66."

## **C. Selected Publications (2016-2021)**

1. **Niddam DM\***, Wang SJ, Tsai SY\*. Pain sensitivity and the primary sensorimotor cortices: a multimodal neuroimaging study. *PAIN* 2021 Mar 1;162(3):846-855
2. Lai KL, **Niddam DM\***. Brain metabolism and structure in chronic migraine. *Curr Pain Headache Rep.* 2020 Nov;24(11):69
3. **Niddam DM\***, Wang SJ. Reply to Letter to the Editor, "Creatine loading for chronic migraine". *Cephalalgia* 2020 Jul;40(8):880-881
4. Lai KL, **Niddam DM**, Fuh JL, Chen WT, Wu JC, Wang SJ. Reply to Letter to the Editor: Insights into chronic migraine pathophysiology-what measure of gray matter reveal. *Cephalalgia* 2020 Sep;40(10):1138-1139
5. Lai KL, **Niddam DM**, Fuh JL, Chen WT, Wu JC, Wang SJ. Cortical morphological changes in chronic migraine in a Taiwanese cohort: Surface- and voxel-based analyses. *Cephalalgia* 2020 May;40(6):575-585.
6. **Niddam DM**, Lai KL, Tsai SY, Lin YR, Chen WT, Fuh JL, Wang SJ\*. Brain metabolites in chronic migraine patients with medication overuse headache. *Cephalalgia* 2020 Jul;40(8):851-862
7. **Niddam DM\***, Lee SH, Su YT, Chan RC. Altered cortical morphology in patients with chronic shoulder pain. *Neurosci Lett* 2019 Nov 1; 712:134515.
8. **Niddam DM\***, Lai KL, Tsai SY, Lin YR, Chen WT, Fuh JL, Wang SJ\*. Neurochemical changes in the medial wall of the brain in chronic migraine. *Brain* 2018 Feb 1;141(2):377-390.
9. Cheng CH\*, Tsai SY, Liu CY, **Niddam DM\***. Automatic inhibitory function in the human somatosensory and motor cortices: An MEG-MRS study. *Sci Rep* 2017 Jun 26;7(1):4234.
10. Cheng CH, **Niddam DM**, Hsu SC, Liu CY, Tsai SY. Resting GABA concentration predicts inhibitory control during an auditory Go-Nogo task. *Exp Brain Res* 2017 Oct 9
11. **Niddam DM\***, Lee SH, Su YT, Chan RC. Brain structural changes in patients with chronic myofascial pain. *Eur J Pain* 2017 Jan;21(1):148-158.
12. Lai KL, **Niddam DM**, Fuh JL, Chen SP, Wang YF, Chen WT, Wu JC, Wang SJ. Flunarizine *versus* topiramate for chronic migraine prophylaxis: a randomized trial. *Acta Neurol Scand.* 2017 Apr;135(4):476-483.
13. **Niddam DM**, Lai KL, Fuh JL, Chuang CY, Chen WT, Wang SJ. Reduced functional connectivity between salience and visual networks in migraine with aura. *Cephalalgia* 2016 Jan;36(1):53-66.

#### D. Research Grant Support in the past 5 years (2016-2021)

1. Ministry of Science and Technology, MOST 110-2314-B-A49A-536, David M. Niddam (PI)  
2021/08/01 - 2022/07/31  
Task-related and resting-state brainstem networks in chronic migraine patients with medication overuse headache
2. Ministry of Science and Technology, MOST 107-2314-B-010 -018 -MY3, David M. Niddam (PI)  
2018/08/01 - 2021/07/31  
Neural mechanisms of reward-based decision making in chronic migraine with medication overuse headache
3. Ministry of Science and Technology, MOST 105-2628-B-010 -011 -MY2, David M. Niddam (PI)  
2016/08/01 - 2018/07/31  
Predicting the response to preventive medication in patients with chronic migraine using magnetic resonance spectroscopy
4. Ministry of Science and Technology, MOST 102-2628-B-010-004-MY3, David M. Niddam (PI)  
2013/08/01 - 2016/07/31  
Neuroimaging and neuromodulation of pain in refractory tension type headache
5. Ministry of Science and Technology, MOST 111-2321-B-A49-004, Role: Co-PI  
Decoding pain sensitivity in migraine with multimodal brainstem imaging markers/ 以多模組腦幹神經標誌解碼偏頭痛的痛覺敏感性－以多模組腦幹神經標誌解碼偏頭痛的痛覺敏感性(2/2)
6. Ministry of Science and Technology, MOST 110-2321-B-010 -005, Role: Co-PI  
Decoding pain sensitivity in migraine with multimodal brainstem imaging markers/ 以多模組腦幹神經標誌解碼偏頭痛的痛覺敏感性-以多模組腦幹神經標誌解碼偏頭痛的痛覺敏感性(1/2)  
2021/01/01- 2021/12/31
7. Ministry of Science and Technology, MOST 109-2314-B-075 -049 -, Role: Co-PI  
慢性偏頭痛患者之預防性治療：臨床與多模神經影像學之相關性  
2020/08/01 - 2021/07/31
8. Ministry of Science and Technology, MOST 105-2321-B-010-002-, Role: Co-PI  
2016/08/01 - 2017/07/31  
穿顱直流電刺激於嚴重難治型原發性痛經之療效：臨床及基因神經造影研究(3/3)