



## Dr. med. Christian Burkhardt

### Contact

Dr. med. Christian Burkhardt  
Rorschacherstr. 95  
9007 St. Gallen  
Switzerland

T 071 494 3589  
christian.burkhardt@kssg.ch

### Units

Muskelzentrum | ALS Clinic

### Profile Function

scientist (post doc)

## Publications (25)

Alix J, Nandedkar S, Stålberg E, Barkhaus P, Furtula J, van Dijk J, Baldinger R, Costa J, Otto M, Sandberg A, Schrooten M, Omer T, Moglia C, Neuwirth C, Gelder L, Burkhardt C, Castro J, de Carvalho M, Gawel M, Goedee S, Grosskreutz J, Lenglet T, Weber M. Assessment of the reliability of the motor unit size index (MUSIX) in single subject "round-robin" and multi-centre settings. *Clin Neurophysiol* 2019; 130:666-674.

Burkhardt C, Neuwirth C, Sommacal A, Andersen P, Weber M. Is survival improved by the use of NIV and PEG in amyotrophic lateral sclerosis (ALS)? A post-mortem study of 80 ALS patients. *PLoS one* 2017; 12:e0177555.

Burkhardt C, Neuwirth C, Weber M. Longitudinal assessment of the Edinburgh Cognitive and Behavioural Amyotrophic Lateral Sclerosis Screen (ECAS): lack of practice effect in ALS patients?. *Amyotroph Lateral Scler Frontotemporal Degener* 2017:1-8.

Neuwirth C, Barkhaus P, Burkhardt C, Castro J, Czell D, de Carvalho M, Nandedkar S, Stålberg E, Weber M. Motor Unit Number Index (MUNIX) detects motor neuron loss in pre-symptomatic muscles in Amyotrophic Lateral Sclerosis. *Clin Neurophysiol* 2016

Nordin A, Burkhardt C, Neuwirth C, Holmøy T, Morita M, Tysnes O, Benatar M, Wu J, Lange D, Bisgård C, Asgari N, Tarvainen I, Brännström T, Weber M, Schweikert K, Grehl T, Akimoto C, Wuolikainen A, Alstermark H, Forsberg K, Baumann P, Pinto S, de Carvalho M, Hübers A, Nordin F, Ludolph A, Weishaupt J, Meyer T, Andersen P. Sequence variations in C9orf72 downstream of the hexanucleotide repeat region and its effect on repeat-primed PCR interpretation: a large multinational screening study. *Amyotroph Lateral Scler Frontotemporal Degener* 2016; 18:256-264.

Neuwirth C, Schrooten M, Omer T, Moglia C, Lenglet T, Grosskreutz J, Goedee S, Gawel M, de Carvalho M, Castro J, Alix J, Burkhardt C, Weber M. Quality Control of Motor Unit Number Index (MUNIX) Measurements in 6 Muscles in a Single-Subject "Round-Robin" Setup. *PLoS one* 2016; 11:e0153948.

Loose M, Weber M, Ludolph A, Petri S, Abrahams S, Uttner I, Kollwe K, Böhm S, Keller J, Aho-Özhan H, Burkhardt C, Lule D. Age and education-matched cut-off scores for the revised German/Swiss-German version of ECAS. *Amyotrophic Lateral Sclerosis and Frontotemporal Degeneration* 2016; Published online: 30 Mar 2016

Neuwirth C, Burkhardt C, Weber M. Motor unit number index (MUNIX) in the nasalis muscle in healthy subjects and patients with amyotrophic lateral sclerosis. *Muscle Nerve* 2016

Burkhardt C, Neuwirth C, Weber M. Screening von Kognitions- und Verhaltensänderungen bei ALS. *Swiss Medical Forum* 2016; 2016;16:249-252.

Burkhardt C, Neuwirth C, Weber M (2015). Longitudinal assessment of the Edinburgh Cognitive and Behavioural ALS Screen (ECAS) - Is there a learning effect in ALS patients?.

Neuwirth C, Barkhaus P, Burkhardt C, Castro J, Czell D, de Carvalho M, Nandedkar S, Stålberg E, Weber M. Tracking motor neuron loss in a set of six muscles in amyotrophic lateral sclerosis using the Motor Unit Number Index (MUNIX): a 15-month longitudinal multicentre trial. *J Neurol Neurosurg Psychiatr* 2015; 86:1172-9.

Dorst J, Dupuis L, Petri S, Kollwe K, Meyer T, Burkhardt C, Czell D, Weber M, Ludolph A. Percutaneous endoscopic gastrostomy in amyotrophic lateral sclerosis: a prospective observational study. *Journal of neurology* 2015; [Epub ahead of print]

Dorst J, Schrank B, Grehl T, Kettemann D, Frisch G, Meyer T, Vielhaber S, Hanisch F, Burkhardt C, Czell D, Weber M, Wolf J, Abdulla S, Kollwe K, Petri S, Dupuis L, Ludolph A. Percutaneous endoscopic gastrostomy in amyotrophic lateral sclerosis: a prospective observational study. *J Neurol* 2015; 262:849-58.

Neuwirth C, Burkhardt C, Czell D, Weber M, CASTRO J, DE CARVALHO M, NANDEDKAR S, STÅLBERG E, Barkhaus P (2014). MOTOR UNIT NUMBER INDEX (MUNIX): READY FOR CLINICAL ALS TRIALS – A 15 MONTHS LONGITUDINAL MULTICENTRE TRIAL. Presented at: 25th International Symposium on ALS/MND, Brussels

Burkhardt C, Neuwirth C, Weber M, Sommacal A, Andersen P (2014). WHAT DO ALS PATIENTS DIE OF? – AN AUTOPSY STUDY OF 70 ALS PATIENTS.

Abrahams S, Weber M, Mora Padina J, Hardiman O, Chio A, Silani V, Polleti B, Newton J, Van den Bergh L, Niven E, Lule D, Ludolph A, Bak T, Burkhardt C (2014). COGNITIVE PHENOTYPES IN EUROPE.

Burkhardt C. The Edinburgh Cognitive and Behavioural Amyotrophic Lateral Sclerosis Screen: A cross-sectional comparison of established screening tools in a German-Swiss population. *Amyotrophic Lateral Sclerosis and Frontotemporal Degeneration* 2014; 2014; Early Online: 1-8

Lule D, Weber M, Petri S, Bak T, Abrahams S, Uttner I, Kollwe K, Böhm S, Abdulla S, Burkhardt C, Ludolph A. The Edinburgh Cognitive and Behavioural Amyotrophic Lateral Sclerosis Screen: A cross-sectional comparison of established screening tools in a German-Swiss population. *Amyotroph Lateral Scler Frontotemporal Degener* 2014:1-8.

Burkhardt C (2014). What do ALS patients die of? – An autopsy study of 70 ALS patients. Presented at: European Network for the Cure of ALS (ENCALS), Leuven 2014

Abrahams S, Weber M, Lule D, Hardiman O, Ludolph A, Silani V, Van den Bergh L, Newton J, Niven E, Bak T, Burkhardt C (2014). Harmonisation of cognitive screening for ALS in Europe.

Burkhardt C (2013). Validation of the German version of the Edinburgh Cognitive Assessment (ECAS) in Amyotrophic lateral sclerosis – Dorothée Lulé \*, Christian Burkhardt\*, Sarah Böhm, Katharina Kneer, Katja Kollwe, Susanne Abdullah, Susanne Petri, Markus Weber, Albert C Ludolph. Presented at: ENCALLS Meeting, 24 th International Symposium on ALS/MND, Mailand

Burkhardt C. Encephalopathy in traumatic fat embolism syndrome. *SCHWEIZERARCHIVFÜRNEUROLOGIEUNDPSYCHIATRIE* 2009; 2009:162-169.

Burkhardt C. Spontaneous multifocal cervical liquor leakage causing an intracranial hypotension syndrome – case report. *SCHWEIZERARCHIVFÜRNEUROLOGIEUNDPSYCHIATRIE* 2007; 2007:182-193.

Burkhardt C. Histamine upregulates gene expression of endothelial nitric oxide synthase in human vascular endothelial cells – Li H, Burkhardt C, Heinrich UR, Brausch I, Xia N, Förstermann U. *Circulation* 2003; 2003 May 13:2348-2354.

Burkhardt C. Dual effect of ceramide on human endothelial cells: induction of oxidative stress and transcriptional upregulation of endothelial nitric oxide synthase – Li H, Junk P, Huwiler A, Burkhardt C, Wallerath T, Pfeilschifter J, Förstermann U. *Circulation* 2002; 106:2250-2256.

## Projects (9)

### **SNIP-Test in patients with Amyotrophic Lateral sclerosis: How many does it need?"**

*Clinical Studies - Mar 20, 2022 - Mar 20, 2024*

*Aborted*

### **Methodologische Studie neuartiger elektrophysiologischer, physikalischer und bildgebender Messgrößen zur Beurteilung der Krankheitsprogression bei amyotropher Lateralsklerose**

*Clinical Studies - May 1, 2016 - Jun 1, 2018*

*Automatically Closed*

### **Survival, Trigger and Risk, Epigenetic, eNviromental and Genetic Targets for motor neuron Health (STRENGTH)**

*Clinical Studies - Jan 1, 2015 - Dec 31, 2017*

*Completed*

### **Randomized placebo-controlled crossover trial with quinine sulfate for the treatment of cramps in amyotrophic lateral sclerosis (ALS)**

*Clinical Studies - Nov 1, 2013 - Mar 26, 2020*

*Automatically Closed*

### **Validierung des Edinburgh Cognitive ALS -Screen (ECAS) zur Aufdeckung von kognitiven Beeinträchtigungen oder Verhaltensänderungen bei der Amyotrophen Lateralsklerose (Screening for Cognitive and Behavioural Change in ALS)**

*Clinical Studies - Jul 17, 2013 - Jul 15, 2015*

*Completed*

### **A novel neurophysiological measurement (MUNIX) in neuromuscular disorders**

*Clinical Studies - Mar 26, 2011 - Mar 26, 2020*

*Automatically Closed*

### **Validierung der Awaji-Kriterien**

*Clinical Studies - Mar 20, 2011 - Mar 20, 2014*

*Completed*

### **Benutzung eines ALS-spezifischen Lebensqualitäts-Fragebogens (ALSSQOL-R) zur Evaluation der Lebensqualität bei Patienten mit Amyotropher Lateralsklerose (ALS)**

*Clinical Studies - Sep 20, 2010 - Mar 20, 2015*

*Automatically Closed*

### **Autopsy study in ALS**

*Clinical Studies - Jan 1, 1999 - Jan 1, 2003*

*Automatically Closed*

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Kantonsspital St.Gallen

Rorschacher Strasse 95

CH-9007 St.Gallen

T: +41 71 494 11 11

[support.forschung@kssg.ch](mailto:support.forschung@kssg.ch)