


# JCSM Rapid Communications: from basic science to clinical research

Stephan von Haehling<sup>1,2\*</sup> and Nicole Ebner<sup>1,2</sup> 

<sup>1</sup>Department of Cardiology and Pneumology, University of Göttingen Medical Center, Göttingen, Germany, <sup>2</sup>German Center for Cardiovascular Research (DZHK), partner site Göttingen, Göttingen, Germany

\*Correspondence to: Prof. Stephan von Haehling, MD PhD FESC FHFA, Department of Cardiology and Pneumology, University of Göttingen Medical Center, Robert-Koch-Strasse 40, Göttingen, D - 37075 Göttingen, Germany. Phone: +49 551 39 20911, Fax: +49 551 39 20918, Email: stephan.von.haehling@web.de

The *Journal of Cachexia, Sarcopenia and Muscle - Rapid Communications (JCSM Rapid Commun)* has already been launched more than one year ago and has started to publish several papers from across the spectrum of cachexia, sarcopenia, and other wasting disorders, from muscle disease

like neuromuscular illness to clinical syndromes like frailty. As can be seen from the table below, the articles published so far cover a broad spectrum of topics from clinical to basic research.

Issue	Article type	Category	First author	Title
01/2018 <sup>1</sup>	Original research	Basic research	Busquets	Omega-3 and omega-3/curcumin-enriched fruit juices decrease tumour growth and improve muscle wasting in tumour-bearing mice
01/2018 <sup>2</sup>	Original research	Basic research	Klose	Castration induces satellite cell activation that contributes to skeletal muscle maintenance
01/2018 <sup>3</sup>	Original research	Clinical research	Wilson	Impaired oxygen demand during exercise is related to oxidative stress and muscle function in FSHD
01/2018 <sup>4</sup>	Original research	Basic research	Viana	Leucine-rich diet minimises liver glycogen mobilisation and modulates liver gluconeogenesis enzyme expression in tumor-bearing cachectic rats
02/2018 <sup>5</sup>	Review	Basic research	Freeman	Cachexia and sarcopenia in companion animals: an under-utilized natural animal model of human disease
02/2018 <sup>6</sup>	Original research	Basic research	Marmonti	Immobilization in diabetic rats, results in altered glucose tolerance: a model of reduced locomotion/activity in diabetes
02/2018 <sup>7</sup>	Original research	Basic research	Alves	High-intensity interval training slows down tumor progression in mice bearing Lewis lung carcinoma
02/2018 <sup>8</sup>	Original research	Clinical research	Bekki	The association between sarcopenia and decorin, an exercise-induced myokine, in patients with chronic liver disease
01/2019 <sup>9</sup>	Original research	Basic research	Ikemoto-Uezumi	Reduced expression of calcitonin receptor is closely associated with age-related loss of the muscle stem cell pool
01/2019 <sup>10</sup>	Original research	Basic research	Morisicot	MuRF1 and MuRF2 are key players in skeletal muscle regeneration involving myogenic deficit and deregulation of the chromatin-remodeling complex
01/2019 <sup>11</sup>	Original research	Basic research	Hain	Chemotherapy-induced loss of bone and muscle mass in a mouse model of breast cancer bone metastases and cachexia
02/2019 <sup>12</sup>	Review	Clinical research	Ishida	Growth hormone secretagogues: history, mechanism of action and clinical development
02/2019 <sup>13</sup>	Original research	Clinical research	Rogers	Auckland's Cancer Cachexia evaluating Resistance Training (ACCeRT) main study results
02/2019 <sup>14</sup>	Original research	Basic research	Suzuki	Progesterone improves survival in hepatoma cachexia rat model

Even though the table suggests that most manuscripts stem from the basic research arena, it is our aim to cover the entire spectrum of research in wasting and muscle diseases and to provide a platform for researchers from around

the globe for this area that still remains a niche of research. Indeed, topics include randomized trials such as the Auckland's Cancer Cachexia evaluating Resistance Training (ACCeRT) trial that evaluated the effects of eicosapentaenoic

acid and celecoxib vs. eicosapentaenoic acid and celecoxib plus progressive resistance training followed by ingestion of essential amino acids high in leucine in patients with non-small cell lung cancer.<sup>13</sup> Other studies also cover aspects of nutritional intake like omega-3 and omega-3/curcumin-enriched fruit juices<sup>1</sup> and their effects on muscle wasting or the effects of a leucine-rich diet in tumour-bearing animals.<sup>4</sup> Klose *et al.* studied stem cell activation,<sup>2</sup> whereas Alves *et al.* and Bekki *et al.* studied different aspects of exercise training in animal models.<sup>7, 8</sup> Apart from publishing original research, one of our ideas is to cover different pharmacological approaches to muscle wasting in a series of dedicated review articles, one of which is presented in the current issue covering growth hormone secretagogues like anamorelin,<sup>12</sup> a substance that has received much attention recently for its ability to improve muscle mass in the ROMANA trial.<sup>15, 16</sup> Unfortunately, anamorelin failed to improve muscle strength. Nevertheless, anamorelin follows a pharmacological concept that is used in fields as diverse as growth retardation, improvement of body composition, and gastrointestinal function, all of which are covered in the review article by Ishida *et al.*<sup>12</sup>

*JCSM Rapid Commun* started out of dedication to the field of wasting disorders, but also out of necessity. When we launched the mother journal, the *Journal of Cachexia, Sarcopenia and Muscle* in 2010, we did not expect such an avalanche of papers that it is currently receiving. Many very good papers still have to be rejected, simply for lack of space. However, we decided that these papers should not leave the realm of cachexia and wasting research, which gave birth to the idea of a daughter journal, *JCSM Clinical Reports (JCSM Clin Rep)*, that was launched already in 2016 and published the first article of the pharmacotherapy in muscle wasting

series entitled Myostatin inhibitors as pharmacological treatment for muscle wasting and muscular dystrophy.<sup>17</sup> Since the main journal has a respectable impact factor of currently over 10, the number of submissions has further increased, which buttressed the need for a second daughter journal, *JCSM Rapid Commun*, started in January 2018. Whilst *JCSM Clin Rep* is dedicated to clinical research, *JCSM Rapid Commun* aims to cover the entire spectrum of research, as discussed already above.

The family is growing, or as Jeremy Sisto once said: 'I knew I was going to love my daughter, but I had no idea how much I would love her.'<sup>18</sup> With Wiley now on board as a publishing house for all three journals, our aims are now full indexing in Medline and—of course—indexing in the Web of Knowledge. With this background knowledge, we would like to request your submissions and again would like to wish a warm welcome to *JCSM Rapid Communications*!

## Acknowledgement

The authors certify that they comply with the ethical guidelines for authorship and publishing of the *Journal of Cachexia, Sarcopenia and Muscle - Rapid Communications*.<sup>19</sup>

## Conflict of interest

None declared.

## References

1. Busquets S, Marmonti E, Oliva F, Simoes E, Luna D, Mathisen JS, et al. Omega-3 and omega-3/curcumin-enriched fruit juices decrease tumour growth and reduce muscle wasting in tumour-bearing mice. *JCSM Rapid Commun* 2018; 1:e25, 1–10.
2. Klose A, Liu W, Paris ND, Forman S, Krolewski JJ, Nastiuk KL, et al. Castration induces satellite cell activation that contributes to skeletal muscle maintenance. *JCSM Rapid Commun* 2018; 1:e40, 1–13.
3. Wilson VD, Thomas C, Passerieux E, Hugon G, Pillard F, Andrade AG, et al. Impaired oxygen demand during exercise is related to oxidative stress and muscle function in facioscapulohumeral muscular dystrophy. *JCSM Rapid Commun* 2018; 1:e29, 1–13.
4. Viana LR, Perina Luiz AC, Favero-Santos BC, de Moraes SC, Gomes-Marcondes MCC. Leucine-rich diet minimises liver glycogen mobilisation and modulates liver gluconeogenesis enzyme expression in tumour-bearing cachectic rats. *JCSM Rapid Commun* 2018; 1:e32, 1–9.
5. Freeman LM. Cachexia and sarcopenia in companion animals: an under utilized natural animal model of human disease. *JCSM Rapid Commun* 2018; 1:e47, 1–17.
6. Marmonti E, Busquets S, Toledo M, Ricci M, Bria J, Oliva F, et al. Immobilization in diabetic rats results in altered glucose tolerance A model of reduced locomotion/activity in diabetes. *JCSM Rapid Commun* 2018; 1:e54, 1–15.
7. Alves CRR, das Neves W, Tobias GC, de Almeida NR, Barreto RF, Melo CM, et al. High-intensity interval training slows down tumor progression in mice bearing Lewis lung carcinoma. *JCSM Rapid Commun* 2018; 1:e60, 1–10.
8. Bekki M, Hashida R, Kawaguchi T, Goshima N, Yoshiyama T, Otsuka T, et al. The association between sarcopenia and decorin, an exercise-induced myokine, in patients with liver cirrhosis: a pilot study. *JCSM Rapid Commun* 2018; 1:e68, 1–10.
9. Ikemoto-Uezumi M, Uezumi A, Zhang L, Zhou H, Hashimoto N, Okamura K, et al. Reduced expression of calcitonin receptor is closely associated with age-related loss of the muscle stem cell pool. *JCSM Rapid Commun* 2019; 2:e81, 1–13.
10. Moriscot AS, Baptista IL, Silva WJ, Silvestre JG, Adams V, Gasch A, et al. MuRF1 and MuRF2 are key players in skeletal muscle regeneration involving myogenic deficit and deregulation of the chromatin-remodeling complex. *JCSM Rapid Commun* 2019; 2:e61, 1–25.
11. Hain BA, Xu H, Wilcox JR, Mutua D, Waning DL. Chemotherapy-induced loss of bone and muscle mass in a mouse model of breast cancer bone metastases and cachexia. *JCSM Rapid Commun* 2019; 2:e75, 1–12.

12. Ishida J, Saitoh M, Ebner N, Springer J, Anker SD, von Haehling S. Growth hormone secretagogues: history, mechanism of action and clinical development. *JCSM Rapid Commun* 2019; **2**:e77, 1–10.
13. Rogers ES, Sasidharan R, Sequeira GM, Wood MR, Bird SP, Keogh JW, et al. Auckland's Cancer Cachexia evaluating Resistance Training (ACCeRT) main study results. *JCSM Rapid Commun* 2019; **2**:e84, 1–25.
14. Suzuki T, Ebner N, Palus S, von Haehling S, Springer S. Progesterone improves survival in hepatoma cachexia rat model. *JCSM Rapid Commun* 2019; **2**:e85, 1–9.
15. Temel JS, Abernethy AP, Currow DC, Friend J, Duus EM, Yan Y, et al. Anamorelin in patients with non-small-cell lung cancer and cachexia (ROMANA 1 and ROMANA 2): results from two randomised, double-blind, phase 3 trials. *Lancet Oncol* 2016; **17**:519–531.
16. Pietra C, Takeda Y, Tazawa-Ogata N, Minami M, Yuanfeng X, Duus EM, et al. Anamorelin HCl (ONO-7643), a novel ghrelin receptor agonist, for the treatment of cancer anorexia-cachexia syndrome: preclinical profile. *J Cachexia Sarcopenia Muscle*. 2014; **5**:329–337.
17. Saitoh M., Ishida J, Ebner N, Anker SD, von Haehling S, Myostatin inhibitors as pharmacological treatment for muscle wasting and muscular dystrophy. *JCSM Clin Rep*. 2017; **2**(1).
18. <https://www.brainyquote.com>
19. von Haehling S, Ebner N, Morley JE, Coats AJS, Anker SD. Ethical guidelines for authorship and publishing in the *Journal of Cachexia, Sarcopenia and Muscle – Rapid Communications*. *JCSM Rapid Commun* 2018; **1**:e44, 1–2.