

Publication list of S. Galler

Full papers

(* means correspondence author)

- 1) *Galler, S. & H. Moser (1986): The ionic mechanism of intracellular pH-regulation in crayfish muscle fibres. *J. Physiol.* 374: 137 - 151. (SCI 1986: Impactfactor 3.97)
- 2) *Galler, S., C. Hutzler & T. Haller (1990): Effects of taurine on Ca^{2+} -dependent force development of skinned muscle fibre preparations. *J.Exp.Biol.* 152, 255-264. (SCI 1991: Impactfactor 2.16)
- 3) Günzel D. & *Galler S. (1991). Intracellular free Mg^{2+} concentration in skeletal muscle fibres of frog and crayfish. *Pflügers Archiv* 417: 446-453. (SCI 1991: Impactfactor 3.16)
- 4) *Galler S. & W.Rathmayer (1992): Shortening velocity and force/pCa relationship in skinned crab muscle fibers of different type. *Pflügers Archiv* 420: 187-193. (SCI 1992: Impactfactor 3.12)
- 5) A.Müller, H.Wolf, S.Galler and *W.Rathmayer (1992). Correlation of electrophysiological, histochemical and contractional properties in fibres of the coxal rotator of the locust, *Locusta migratoria*. *J.Comp.Physiol. B* 162: 5-15. (SCI 1992: Impactfactor 1.34)
- 6) *Günzel, D., S. Galler & W. Rathmayer (1993): Fibre heterogeneity in the closer and opener muscles of crayfish walking legs. *J. Exp. Biol.* 175, 267-281. (SCI 1993: Impactfactor 1.59)
- 7) *S. Galler (1994). Stretch activation of skeletal muscle fibre types. *Pflügers Archiv* 427: 384-386. (SCI 1994: Impactfactor 2.92)
- 8) *Galler S., Schmitt T.L. & Pette D. (1994). Stretch activation, unloaded shortening velocity, and myosin heavy chain isoforms of rat skeletal muscle fibres. *J. Physiol. (Lond.)* 478.3, pp. 513-521. (SCI 1994: Impactfactor 4.74)
- 9) *Galler, S. & Neil D.M. (1994). Calcium-activated and stretch-induced force responses in two biochemically defined muscle fibre types of the Norway lobster. *J. Musc. Res. Cell Motil.* 15, 390-399. (SCI 1994: Impactfactor 2.76)
- 10) *Galler, S. & Hilber, K. (1994). Unloaded shortening of skinned mammalian skeletal muscle fibres. Effects of the experimental approach and passive force. *J. Muscle Res. Cell Motil.* 15, 400-412. (SCI 1994: Impactfactor 2.76)
- 11) *Galler S., Hilber K. & Pette (1996). Force responses following stepwise length changes of rat skeletal muscle fibre types. *J. Physiol. (Lond.)* 493.1, 219-227. (SCI 1996: Impactfactor 3.904)
- 12) Bothe G. & *Galler S. (1996). Mechanical properties of active and degenerating eclosion muscles of the flesh fly, *Sarcophaga bullata*. *J. Insect. Physiol.* 42, 749-754. (SCI 1996: Impactfactor 1.749)
- 13) Hilber K., Pette D. & *Galler S. (1997) Functional differences of myosin heavy chain isoforms in skeletal muscle. *Naturwissenschaften* 84, 201-204. (SCI 1997: Impactfactor 1.171)
- 14) *Galler S., Hilber K. & Pette D. (1997). Stretch activation and myosin heavy chain isoforms of rat, rabbit and human skeletal muscle fibres. *J. Musc. Res. Cell Motil.* 18, 441-448. (SCI 1997: Impact 2.038)
- 15) *Galler S., Hilber, K. & Göbesberger A. (1997) Effects of nitric oxide on force-generating proteins of skeletal muscle. *Pflügers Archiv* 434(3), 242-245. (SCI 1997: Impactfactor 2.580)
- 16) *Galler S, Hilber K. Gohlsch B. & Pette D. (1997) Two functionally distinct myosin heavy chain isoforms in slow skeletal muscle fibres. *FEBS Letters* vol. 410, pp. 150-152 (SCI 1997: Impactfactor 3.504).
- 17) Hilber, K., *Galler, S. (1997) Mechanical properties and myosin heavy chain isoform composition of skinned skeletal muscle fibres from a human biopsy. *Pflügers Archiv* 434, pp. 551-558. (SCI 1997: Impactfactor 2.580)

- 18) *Galler S., Schmitt T., Hilber K. & Pette D. (1997). Stretch activation and isoforms of myosin heavy chain and troponin T of rat skeletal muscle fibres. *J. Musc. Res. Cell Motil.* 18, 555-561. (SCI 1997: Impactfactor 2.038)
- 19) Hilber K. & *Galler S. (1998). Effects of myofibrillar bundle diameter on unloaded shortening velocity of skinned skeletal muscle fibres. *J. Musc. Res. Cell Motil.* 19, 143-155. (SCI 1998: Impactfactor 2.905)
- 20) *Galler S. & Hilber K. (1998). Tension/stiffness ratio of skinned rat skeletal muscle fibre types at various temperatures. *Acta Physiol. Scand.* 162, 119-126. (SCI 1998: Impactfaktor 1.258)
- 21) Hilber K. *Galler S. (1998). Improvement of measurements on skinned muscle fibres by fixation of the fibre ends with glutaraldehyde. *J. Muscle Res. Cell Motil.* 19, 365-372. (SCI 1998: Impactfactor 2.905)
- 22) Holmes J.*, Hilber K., Galler S. Neil D.M. (1998) Activation of skinned muscle fibres from the Norway lobster *Nephrops norvegicus* by manganese ions. *J. Muscle Res. Cell Motil.* 19, 537-548 (SCI 1998: Impactfactor 2.905)
- 23) Holmes J.*, Hilber K., Galler S. Neil D.M. (1999) Shortening properties of two biochemically defined muscle fibre types of the Norway lobster *Nephrops norvegicus* L. *J. Muscle Res. Cell Motil.* 20(3):265-78. (SCI 1999: Impactfactor 2.214)
- 24) Galler S*, Kögler H, Ivemeyer M, Rüegg JC (1999) Force responses of skinned molluscan catch muscle following photoliberation of ATP. *Pflügers Archiv* 438/4: 525-530. (SCI 1999: Impactfactor 2.352)
- 25) Hilber K. Galler S.*, Gohlsch B. Pette D. (1999) Kinetic properties of myosin heavy chain isoforms in single fibers from human skeletal muscle. *FEBS Letters* 455: 267-270 (SCI 1999: Impactfactor 3.720).
- 26) *Galler S. (1999) Ca^{2+} -, Sr^{2+} -tension relationships and kinetic properties of fast-twitch rat leg muscle fibre subtypes. *Acta Physiologica Scandinavica.* 167: 131-141 (SCI 1999: Impactfaktor 1.411)
- 27) D. Günzel, S. Galler* (2000) Intracellular pH of crab and crayfish muscle fibre types during GABA application and inhibitory nerve stimulation *J Comp Physiol B* 170: 523-529 (SCI 2000: Impactfactor 1.324)
- 28) Galler S*. Puchert E. Gohlsch B. Schmid D. Pette D. (2002) Kinetic properties of cardiac myosin heavy chain isoforms in rat. *Pflügers Archiv*, 445: 218-223. (SCI 2002: Impactfactor 1.695)
- 29) Andruchov O., Andruchova O., Wang Y., Galler S*. (2003). Functional differences in type-I fibres from two slow skeletal muscles of rabbit. *Pflügers Archiv, European J Physiology* 446: 752-759 (SCI 2002: Impactfactor 1.695)
- 30) Puchert E, Andruchov O, Wagner A, Grassberger H, Lahnsteiner F, Sobieszek A, Galler S*. (2003). Slowing effects of Mg^{2+} on contractile kinetics of skinned preparations of rat hearts depending on myosin heavy chain isoform content. *Pflügers Archiv, European Journal of Physiology* 447: 135-141. (SCI 2002: Impactfactor 1.695)
- 31) Andruchov O, Wang Y, Andruchova O, Galler S* (2004). Functional properties of skinned rabbit skeletal and cardiac muscle preparations containing β -cardiac myosin heavy chain. *Pflügers Archiv, European Journal of Physiology* 448: 44-53. (SCI 2002: Impactfactor 1.695)
- 32) Zebedin E, Sandtner W, Galler S, Szendroedi J, Just H, Todt H, Hilber K* (2004). Fiber type conversion alters inactivation of voltage-dependent sodium currents in mouse C2C12 skeletal muscle cells. *American Journal of Physiology Cell Physiol.* 287(2):C270-80

- 33)** Oleg Andrukhov, Olena Andrukhova, Yishu Wang, Stefan **Galler*** (2004). Kinetic properties of myosin heavy chain isoforms in mouse skeletal muscle: Comparison with rat, rabbit and human and correlation with amino acid sequence. *American Journal of Physiology Cell Physiol*; 287:C1725-32
- 34)** Stefan **Galler***, Marion Christine Höpflinger, Oleg Andrukhov, Olena Andrukhova, Herbert Grassberger (2005). Effects of vanadate, phosphate and 2,3-butanedione monoxime (BDM) on skinned molluscan catch muscle. *European Journal of Physiology, Pflügers Archiv* 449: 372-383
- 35)** Olena Andrukhova, Marion C. Hoepflinger, Oleg Andrukhov, Stefan **Galler*** (2005). Investigation of the effect of twitchin phosphorylation on myosin head detachment in molluscan catch muscle: Overestimated role of myosin head involvement in catch state? *European Journal of Physiology, Pflügers Archiv*, 450: 326-334.
- 36)** Stefan **Galler**, Brant Gang Wang, and Masataka Kawai* (2005) Elementary steps of the cross-bridge cycle in fast-twitch fiber types from rabbit skeletal muscles. *Biophysical Journal* 89:1-13
- 37)** Marion Christine Höpflinger, Olena Andrukhova, Oleg Andrukhov, Herbert Grassberger, Stefan **Galler*** (2006). Effect of pH on the rate of myosin head detachment in molluscan catch muscle: are myosin heads involved in the catch state? *J Exp Biology* 209: 668-676
- 38)** Andrukhov O., Andrukhova O. and **Galler S.*** (2006) Fine-tuning of cross-bridge kinetics in cardiac muscle of rat and mouse by myosin light chain isoforms. *Pflügers Archiv* 452: 667-673
- 39)** Andrukhova O, Stephenson GM, Andrukhov O, Stephenson DG, **Galler S.*** (2006). Myosin heavy chain isoform composition and stretch-activation kinetics in single fibres of *Xenopus laevis* iliofibularis muscle. *J. Physiol. (Lond.)* 574.1: 307-317.
- 40)** Oleg Andrukhov, Olena Andrukhova, Stefan **Galler*** (2006). The catch state of mollusc catch muscle is established during activation: Experiments on skinned fibre preparations of the anterior byssus retractor muscle of *Mytilus edulis* L. using the myosin inhibitors orthovanadate and blebbistatin. *J. Exp. Biol.* 209: 4319-4328.
- 41)** Andrukhov O., Andrukhova O, Y. Wang, **Galler S*** (2006) Dependence of cross-bridge kinetics on myosin light chain isoforms in rabbit and rat skeletal muscle fibres *J Physiol* 571.1 pp 231–242
- 42)** Andrukhov O, **Galler S***. (2008). Influence of fast and slow alkali myosin light chain isoforms on the kinetics of stretch-induced force transients of fast-twitch type IIA fibres of rat. *Pflugers Arch* 455:1165–1172
- 43)** **Galler S***, Andrukhov O, Stephenson GMM, Stephenson DG (2009). Qualitatively different cross-bridge attachments in fast and slow muscle fiber types. *Biochemical and Biophysical Research Communications* 385: 44–48
- 44)** Avrova SV, Shelud'ko NS, Borovikov YS, **Galler S***. (2009) Twitchin of mollusc smooth muscles can induce "catch"-like properties in human skeletal muscle: support for the assumption that the "catch" state involves twitchin linkages between myofilaments. *J Comp Physiol B.* 179:945–950
- 45)** **Galler S***, Litzlbauer J, Kröss M, Grassberger H. (2009/2010). The highly efficient holding function of the mollusc 'catch' muscle is not based on decelerated myosin head cross-bridge cycles. *Proceedings of the Royal Society B*, Vol. 277, 803–808 (doi:10.1098/rspb.2009.1618)
- 46)** Neunhäuserer D, Zebedin M, Obermoser M, Moser G, Tauber M, Niebauer J, Resch H, **Galler S*** (2011). Human skeletal muscle: transition between fast and slow fibre types. *European Journal of Physiology, Pflügers Archiv* 461:537-43.
- 47)** **Galler S** (2015). Forgotten research from 19th century: Science should not follow fashion. *J. Muscle Res. Cell Motil.* 36: 5-9 (2015) <http://link.springer.com/article/10.1007/s10974-014-9399-4>
- 48)** Kawai M, Lamb G, **Galler S** (2015). Editorial on EMC 2014 special issue. *J Muscle Res Cell Motil.* 36: 1-3 (2015) <http://link.springer.com/article/10.1007/s10974-014-9401-1>

Review articles

Galler S. (2001). Molekulare Muskelmaschinen. *Spektrum der Wissenschaft (German edition of Scientific American)* 2/2001: 36-41

Galler S. (2008). Molecular basis of the catch state in molluscan smooth muscles: a catchy challenge. *Journal of Muscle Research and Cell Motility*, Volume 29, Numbers 2-5, pp. 73-99 (DOI 10.1007/s10974-008-9149-6)

Book contributions and contributions in non-peer-reviewed Journals:

- 1) Galler S. (1995). "Noch Kraft in den Muskeln des Tiroler Eismanns?" - Eine physiologische Zustandsanalyse der Skelettmuskulatur". "Der Mann im Eis", Band 2, eds. K. Spindler et al. Springer Verlag.
- 2) Galler S. & Hilber, K. (1997): „Beiträge zur Aufklärung von Muskelkraft“ In: Jahrbuch der Universität Salzburg, 1997.
- 3) Galler S. (1997): „Physiologische Zustandsanalyse an Muskelresten des Tiroler Eismanns“. In: Jahrbuch der Universität Salzburg, 1997.
- 4) Galler S. (1998). Nobelpreisträger Sir Andrew F. Huxley zu Gast an der Universität Salzburg – Verleihung der ÖGN-Ehrenmitgliedschaft. ÖGN-Newsletter, Jahrgang 1998/2, Seite 11-14.
- 5) Galler S. (1998). Diversität von Skelettmuskeln - ein neuer Fasertyp. Labor Aktuell 6/98. Seite 1-11.
- 6) Galler S. & Hilber K. (1999): „Muskeldiversität – Ein neuer Fasertyp“, In: Jahrbuch der Universität Salzburg 1995-1997, S. 353-362.
- 7) Galler S. (1999): „Nobelpreisträger Sir Andrew F. Huxley zu Besuch an der Universität Salzburg“, In: Jahrbuch der Universität Salzburg 1995-1997; S. 371-378.
- 8) Galler S. (2002): Machina Carnis. Streiflichter aus der Muskelforschung – Studien am Motor Muskel in Salzburg. NOEO 03/2002, 6-10.
- 9) Holmes, J.M., Neil, D.M., Galler S. & Hilber K. (2002). Correlation of the synaptic and mechanical properties of two slow fibre phenotypes in a crustacean muscle. In „Crustacean nervous system“ (eds. K. Wiese and M. Schmidt). John Wiley & Sons, New York., 292-304."
- 10) Galler S. (2005): „Kampf dem Krampf“ Sportphysiotherapie, Oktober 2005, 16. Jahrgang, Heft 3.
- 11) Galler S. (2006): Trendwende in der Erklärung energiesparender Halteleistungen. ÖGN-Newsletter. Nummer 22, Jahrgang 2006/2. Seite 13-14.