SCIENTIFIC PUBLICATIONS in Microgravity Research (1995 – 2014)

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A. Original Articles

1. Sebastian C, **Horn E**, Eßeling K, Neubert J (1995) Readaptation of the vestibuloocular reflex to 1g-condition in immature lower vertebrates (Xenopus laevis) after micro- or hypergravity exposure. ***Acta Astronautica*** 36:487-503
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3. Sebastian C, Eßeling K, **Horn E** (1996) Altered gravitational experience during early periods of life affects the static vestibulo-ocular reflex of tadpoles of the Southern Clawed Toad, Xenopus laevis. ***Exp Brain Res*** 112:213-222
4. **Horn E**, Sebastian C (1996) A hypergravity related sensitive period during the early development of the roll induced vestibuloocular reflex in the Southern Clawed Toad (Xenopus laevis). ***Neurosci Lett*** 216:25-28
5. Sebastian C, Pfau K, **Horn E** (1998) An age-dependent sensitivity of the roll-induced vestibuloocular reflex to hypergravity exposure of several days in an amphibian (Xenopus laevis). ***Acta Astronautica*** 42:419-430
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8. Sebastian C, **Horn E** (1999) Light-dependent supression of the vestibulo-ocular reflex during development. ***NeuroReport*** 10:171-176
9. Sebastian C, Esseling K, **Horn E** (2001) Altered gravitational forces affect the development ofthe static vestibuloocular reflex in fish (Oreochromis mossambicus). ***J Neurobiol*** 46:59-72
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12. **Horn E**, Böser S, Förster S, Riewe P, Sebastian C, Agricola H (2001) Crickets in Space. ***Acta Astronautica*** 49:345-363
13. **Horn E**, Agricola H, Böser S, Förster S, Kämper G, Riewe P, Sebastian C (2002) Crickets in Space: Morphological, physiological and behavioral alterations induced by space flight and hypergravity. ***Adv Space Res*** 30:819-828
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15. **Horn ER** (2004) ”Critical periods” in vestibular development or adaptation of gravity sensory systems to altered gravitational conditions? ***Arch Ital Biol*** 142:155-174.
16. Böser S, **Horn ER** (2006) Hypergravity susceptibility of ventral root activity during fictive swimming in tadpoles (Xenopus laevis). ***Arch Ital Biol*** 144: 99-113
17. **ER Horn** (2006) Microgravity-induced modifications of the vestibuloocular reflex in Xenopus Laevis tadpoles are related to development and the occurrence of tail lordosis. ***J Exp Biol*** 209:2847-2858
18. **Horn E**, Böser S, Membre H, Dournon C, Husson D, Gualandris-Parisot L (2006) Morphometric investigations of sensory vestibular structures in tadpoles (*Xenopus laevis*) after a space flight: implications for microgravity-induced alterations of the vestibuloocular reflex. ***Protoplasma*** 229:193-203
19. S Böser, Dournon C, Gualandris-Pariso L. Horn E (2008) Altered gravity affects ventral root activity during fictive swimming and the static vestibuloocular reflex in young tadpoles (Xenopus laevis) ***Arch Ital Biol*** 146:1-20
20. **Horn ER**, Gabriel M (2011) Gravity-related critical periods in vestibular and tail development of Xenopus laevis ***J Exp Zool*** 315: 505-511

21. **Horn ER,** Böser S, Franz M, Gabriel M, Hiesgen N, Kübler U, Porciani M, Schwarzwälder A, Zolesi V (2011) Development of the flight hardware for the experiment XENOPUS on the Kubik BIO4-Mission. ***Microgravity Sci. Technol***. 23:243-248
22. **Horn ER,** Gabriel M (2014) Gender-related sensitivity of development and growth to real microgravity in Xenopus laevis ***J Exp Zool*** 321A:1-12

B. Short Communications, Abstracts, Extended Abstracts, Conference Contributions

1. **Horn E**, Eßeling K (1991) Development of vestibuloocular reflexes in amphibia and fishes with micro-gravity experience. In: *Research program of the German spacelab mission D-2,* Sahm PR, Keller MH, Schiewe B (eds). Bonn: WPF, pp 93-94
2. Rahmann H, Slenzka K, Neubert J, Briegleb W, Schatz A, Bromeis B, **Horn E**, Eßeling K, Schachner M, Martini R (1991) Gravireception and neuronal plasticity. A joint project of four individual experimenter groups. In: *Research program of the German spacelab mission D-2*, Sahm PR, Keller MH, Schiewe B (eds). Bonn: WPF, pp 85-89
3. Sebastian C, Eßeling K, **Horn E** (1993) The development of the static vestibuloocular reflex in a fish after a transient change of the gravitational force. In: *Gene - Brain - Behaviour*, Elsner N, Heisenberg M (eds). Georg Thieme Verlag, Stuttgart New York, p295
4. **Horn E**, Sebastian C, Eßeling K, Rahmann H, Slenzka K, Neubert J, Briegleb W, Schatz A (1993) Effects of a transient change of the gravitational force on the development of the static vestibulo-ocular reflex in a fish. ***ESA SP***-366:383-386
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6. Wörner C, Born K, **Horn E** (1994) The development of cortical multifocal patterns induced by local injections of penicillin into different brain areas in the awake rat. In: *Göttingen Neurobiology Report 1994*, Elsner N, Breer H (eds). Georg Thieme Verlag, Stuttgart New York, p804
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8. Sebastian C, Eßeling K, **Horn E** (1994) Effects of gravity deprivation on the development of the static vestibuloocular reflex in two lower vertebrate species. ***Eur J Neurosci,*** Suppl 7: p218
9. Eßeling K, Sebastian C, Neubert J, **Horn E** (1994) Divergent effects of near-weightlessness exposure on the static and dynamic vestibuloocular reflex in tadpoles, failure of effects in fish youngsters. In: *Göttingen Neurobiology Report 1994*, Elsner N, Breer H (eds). Georg Thieme Verlag, Stuttgart New York, p399
10. Eßeling K, Sebastian C, Neubert J, **Horn E** (1994) Independent functional development of the vestibular acceleration detectors in young tadpoles (Xenopus laevis). ***Eur J Neurosci***, Suppl 7: p218
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12. **Horn E**, Sebastian C, Eßeling K (1995) The static vestibuloocular reflex in lower vertebrates after a transient gravity deprivation during an early period of life. ***Naturwissenschaften*** 82:289-291
13. **Horn E**, Sebastian C (1995) The static vestibulo-ocular reflex in fish youngsters (Oreochromis mossambicus) after altered gravitational conditions. ***Proc CEBAS Workshops*** 1995: 233-243
14. **Horn E**, Sebastian C, Neubert J, Kämper G (1996) Development of an insect gravity sensory system in space. ***ESA SP***-390, p267-272
15. **Horn E**, Sebastian S, Eßeling K (1996) Altered gravitational conditions affect the early development of the static vestibulo-ocular reflex in lower vertebrates. In: *New Directions in Vestibular Research*, Highstein SM, Cohen B, Büttner-Ennever JA (eds). ***Ann NY Acad Sci*** 781:635-638
16. Sebastian C, **Horn E** (1996) Determination of the sensitive period during the development of the gravity sensory system in lower vertebrates. ***ESA SP***-390:247-252

17. **Horn E**, Sebastian C (1999) A comparison of normal vestibulo-ocular reflex development under gravity and in the absence of gravity. ***ESA SP***-1222:127-138
18. **Horn E**, Sebastian C (1999) Stability of rVOR modifications induced by hypergravity. In: *Göttingen Neurobiology Report 1999, vol II* (Elsner N, Eysel U, eds), Thieme, Stuttgart New York, p801 (*abstract*)
19. Sebastian C, **Horn E** (1999) Susceptibility of the vestibular system to altered gravitational forces. Studies on the roll-induced vestibuloocular reflex in a fish and an amphibian. In: *Göttingen Neurobiology Report 1999, vol II* (Elsner N, Eysel U, eds), Thieme, Stuttgart New York, p802 (*abstract*)
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22. Förster S, Sebastian C, **Horn E** (1999) Functional Regeneration of the Cercal Gravity Sensory System of Crickets (*Acheta domesticus*) in the Absence of Gravity. In: *Göttingen Neurobiology Report 1999, vol II* (Elsner N, Eysel U, eds), Thieme, Stuttgart New York, p798 (*abstract*)
23. Agricola HJ, **Horn E** (1999) Expression of Peptidergic Neuronal Patterns in the Brain of Crickets (*Acheta domesticus*) with Microgravity Experience. In: *Göttingen Neurobiology Report 1999, vol II*, (Elsner N, Eysel U, eds), Thieme, Stuttgart New York, p797 (*abstract*)
24. Riewe P, **Horn E**, Kämper G (1999) Physiological Effects of Microgravity on the Developing Gravity Sensory System in Crickets. In: *Göttingen Neurobiology Report 1999, vol II* (Elsner N, Eysel U, eds), Thieme, Stuttgart New York, p800 (*abstract*)
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32. Böser S, **Horn E** (2001) Effects of hypergravity on the development of the motor system in crickets (Acheta domesticus). In: *Göttingen Neurobiology Report 2001, vol II* (Elsner N, Kreutzberg GW, eds), Thieme, Stuttgart New York, p959 (*abstract*)
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49. Sallam EA, Schmäh M, **Horn ER** (2005) Hardware development for electrophysiological long-term studies in space. ***J Gravit Physiol*** 12: P271-P272.
50. Serafini L, Ramacciotti T, Vigano W, Donati A, Porciani M, Zolesi V, Schulze-Varnholt D, Manieri P, Sallam EA, Schmäh M, **Horn ER** (2005) SCORPI and SCORPI-T: Neurophysiologcial experiments on animals in space. ***J Gravit Physiol*** 12: P273-P274.
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54. **Horn ER, Dournon C:** Experiences from a French-German Project - On the Integration of Pupils in an Actual Space Experiment. ***Microgravity Science Technol*** XIX/5-6:230-234.
55. **Horn ER** (2007) Life Science Research in Space - Risks and Chances for Young Scientists. ***Microgravity Science Technol*** XIX/5-6:260-265.
56. deJuan E, Benguría A, Villa A, Leandro LJ, Herranz R, Duque P, **Horn E**, Medina FJ, van Loon J, Marco R (2007) The "AGEING" experiment in the Spanish Soyuz Mission to the Inbternational Space Station. ***Microgravity Science Technol*** XIX/5-6:170-174.
57. **Horn ER**, Gabriel M, Frippiat J-P (2008) Development of the roll-induced vestibuloocular reflex in the absence of vestibular experience in salamander tadpoles (Pleurodeles waltl). ***Proc. of the 'Life***

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C. Reviews

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2. **Horn E** (2001) Neurowissenschaftliche Forschung unter Schwerelosigkeit. In: *Lexikon der Neurowissenschaften*, Vol. 4. Spektrum Akademischer Verlag, Heidelberg, pp 101-115
3. **Horn E** (2001) Gravitationsbiologie. In: *Lexikon der Biologie*, Vol. 6. Spektrum Akademischer Verlag, Heidelberg, pp 441-450
4. **Horn** ER (2003) The development of gravity sensory systems during periods of altered gravity dependent sensory input. In *Developmental Biology Research in Space* (H.-J. Marthy ed.) (***Adv Space Biol Med*** 9:133-171) Elsevier, Amsterdam etc pp 133-171
5. **Horn ER** (2005) Gravity effects in life processes in aquatic animals. In: *Experimentation with Animal Models in Space* (Sonnenfeld G, ed) (***Adv Space Biol Med*** 10: 247-301), Elsevier, Amsterdam etc, pp247-301
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8. **Horn ER** (2007) Signal transduction in vestibular adaptation to microgravity - A still unsolved problem. ***Signal Transduction*** 7: 240-247
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11. **Horn ER** (2014) Development of vestibular systems in altered gravity. In*: Development of Auditory and Vestibular Systems* (Romand R, Varela-Nieto I eds.; **Academic Press**) Elsevier, Amsterdam pp489-533

D. Textbooks, Edited Volumes

1. Hanke W, Hamdorf K, **Horn E**, Schlieper C (1977) *Praktikum der Zoophysiologie*. Gustav Fischer Verlag, Stuttgart New York, 350p.
2. **Horn E** (1982) *Vergleichende Sinnesphysiologie*. Gustav Fischer Verlag, Stuttgart New York, 399p.
3. **Horn E**, ed (1983) *Multimodal convergences in sensory systems*. (Fortschr Zool 28) Gustav Fischer Verlag, Stuttgart New York, 401p.
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