

Relevant own publications

- HALLE, I., TZSCHENTKE, B. (2011): Influence of temperature manipulation during the last 4 days of incubation on hatching results, post-hatching performance and adaptability to warm growing conditions in broiler chickens. *J. Poult. Sci.* **48**: 97-105.
- INTERNATIONAL INNOVATION (2013): The significance of prenatal conditions. *Research Media Ltd., Healthcare*, Issue 21: 112-114.
- JANKE, O., TZSCHENTKE, B. (2010): Long-lasting effect of changes in incubation temperature on heat stress induced neuronal hypothalamic c-Fos expression in chickens. Hot topic: Early development and epigenetic programming of body functions in birds (Ed. TZSCHENTKE, B.). *Open Ornithol. J.* **3**: 150-155.
- JANKE, O., TZSCHENTKE, B., HÖCHEL, J., NICHELMANN, M. (2002): Metabolic responses of chicken and Muscovy duck embryos to high incubation temperatures. *Comp. Biochem. Physiol. A* **131**: 741-750.
- JANKE, O., TZSCHENTKE, B. (2006): Hypothalamic c-fos expression of temperature experienced chick embryos after acute heat exposure. In: New insights into fundamental physiology and peri-natal adaption of domestic fowl, eds. YAHAV, S., TZSCHENTKE, B., Nottingham University Press, pp. 109-115
- JANKE, O., TZSCHENTKE, B. (2010): Long-lasting effect of changes in incubation temperature on heat stress induced neuronal hypothalamic c-Fos expression in chickens. Special Issue: Early development and epigenetic programming of body functions in birds (Ed. TZSCHENTKE, B.). *The Open Ornithology Journal* **3**, 150-155.
- LOH, B., MAIER, I., WINAR, A., JANKE, O., TZSCHENTKE, B. (2004): Prenatal development of epigenetic adaptation processes in poultry: Changes in metabolic and neuronal thermoregulatory mechanisms. *Avian Poultry Biol. Rev.* **15**: 119-128.
- NICHELMANN, M., TZSCHENTKE, B. (1999): Thermoregulatory heat production in precocial avian embryos. *Ornis Fennica* **76**: 177-187.
- NICHELMANN, M., TZSCHENTKE, B. (2002): Ontogeny of thermoregulation in precocial birds. *Comp. Biochem. Physiol. A* **131**: 751-763.
- NICHELMANN, M., TZSCHENTKE, B. (2003): Efficiency of thermoregulatory control elements in precocial avian embryos (Review). *Avian Poultry Biol. Rev.* **14**: 1-19.
- RUMPF, M., TZSCHENTKE, B. (2010): Perinatal acoustic communication in birds: why do birds vocalize in the egg? Special Issue: Early development and epigenetic programming of body functions in birds (Ed. TZSCHENTKE, B.). *Open Ornithol. J.* **3**: 141-149.
- TZSCHENTKE, B., NICHELMANN, M. (1997): Influence of prenatal and postnatal acclimation on nervous and peripheral thermoregulation. *Ann. NY Acad. Sci.* **813**: 87-94.
- TZSCHENTKE, B., BASTA, D. (2002): Early development of neuronal hypothalamic thermosensitivity in birds: influence of epigenetic temperature adaptation. *Comparative Biochemistry and Physiology A* **131**: 825-832.
- TZSCHENTKE, B., PLAGEMANN, A. (2006): Imprinting and critical periods in early development. (invited review). *World's Poult. Sci. J.* **62**: 626-637.
- TZSCHENTKE, B., BASTA, D., NICHELMANN, M. (2001): Epigenetic temperature adaptation in birds: peculiarities and similarities in comparison to acclimation. *News Biomed. Sci.* **1**: 26-31.
- TZSCHENTKE, B., BASTA, D., JANKE, O., MAIER, I. (2004): Characteristics of early development of body functions and epigenetic adaptation to the environment in poultry: focused on development of central nervous mechanisms. *Avian Poultry Biol. Rev.* **15**: 107-118.
- TZSCHENTKE, B., HALLE, I. (2009): Influence of temperature stimulation during the last 4 days of incubation on secondary sex ratio and later performance in male and female broiler chickens. *Brit. Poult. Sci.* **50**: 634-640.

- TZSCHEINTKE, B., RUMPF, M. (2011): Embryonic development of endothermy (invited review). *Respir. Physiol. Neurobiol.* **178**, 97-107.
- TZSCHEINTKE, B. (2007): Attainment of thermoregulation as affected by environmental factors. (invited review). *Poult. Sci.* **86**: 1025-1036.
- TZSCHEINTKE, B., TATGE, S. (2012): Embryonic temperature training for robust chicks. *World Poultry (Special Issue on Incubation)* **03/28**: 8-10.
- TZSCHEINTKE, B. (2014): Prägung physiologischer Regelsysteme: Wie die perinatale Umwelt Weichen stellt. In: LUX, V., RICHTER, J.T. (Hrsg.), *Kulturen der Epigenetik: vererbt, codiert, übertragen*. De Gruyter (in press).

Further references

- BAILY, D.B., BRUER, J.T., SYMONS, F.J. U.A. (2001): Critical thinking about critical periods. P H Brookes Publishing Co.
- DECUYPERE, E. (1984): Incubation temperature in relation to postnatal performance in chickens. *Arch. Exper. Vet.med.* **38**: 439-449.
- DÖRNER, G. (1974): Environment-dependent brain differentiation and fundamental processes of life. *Acta Biologica and Medica Germanica* **33**: 129-148.
- DÖRNER, G. (1975) Perinatal hormone levels and brain organization. *Anatomical Neuroendocrinology* **1**: 245-252.
- DÖRNER, G. (1976) Hormones and brain differentiation. Amsterdam: Elsevier.
- DÖRNER, G., GÖTZ, F., ROHDE, W., PLAGEMANN, A., LINDNER, R., PETERS, H. AND GHANAATI, Z. (2001): Genetic and epigenetic effects on sexual brain organization mediated by sex hormones. *Neuroendocrinology Letters* **22**: 403-409.
- GROOTHUIS, T.G.G., SCHWABL, H. (2008): Hormone-mediated maternal effects in birds: mechanisms matter but what do we know of them? *Phil. Trans. R. Soc. B* **363**: 1647-1661.
- HASSANZADEH, M., FARD, M.H.B., BUYSE, J., BRUGGEMAN, V., DECUYPERE, E. (2004): Effect of chronic hypoxia during embryonic development on physiological functioning and on hatching and post-hatching parameters related to ascites syndrome in broiler chickens. *Avian Pathology* **33**: 558-564.
- Hensch, T.K. (2005): Critical period plasticity in local cortical circuits. *Nature Reviews, Neuroscience* **6**: 877-888.
- HO, D.H., BURGGREN, W.W. (2010): Epigenetics and transgenerational transfer: a physiological perspective. *J. Exper. Biol.* **213**: 3-16.
- LOYAU, T., BERRI, C., BEDRANI, L., MÉTAYER-COUSTARD, S., PRAUD, C., DUCLOS, M.J., TESSERAUD, S., RIDEAU, N., EVERAERT, N., YAHAV, S., MIGNON-GRASSTEAU, S., COLLIN, A. (2013): Thermal manipulation of the embryo modifies the physiology and body composition of broiler chickens reared in floor pens without affecting breast meat processing quality. *Animal Sci.* **91**:3674–3685.
- LORENZ, K. (1935) Der Kumpan in der Umwelt des Vogels. *Journal für Ornithologie* **83**: 137-213.
- MINNE, B., DECUYPERE, E. (1984): Effects of late prenatal temperatures on some thermoregulatory aspects in young chickens. *Arch. Exper. Vet.med.* **38**: 374-383.
- MORAES, V.M.B., MALHEIROS, R.D., BRUGGEMAN, V., COLLIN, A., TONA, K., VAN AS, P., ONAGBESAN, O.M., BUYSE, J., DECUYPERE, E., MACARI, M (2004): The effect of timing of thermal conditioning during incubation on embryo physiological parameters and its relationship to thermotolerance in adult broiler chickens. *J. Therm. Biol.* **29**: 55–61.

- PIESTUN, Y., HALEVY, O., YAHAV, S., (2009): Thermal manipulations of broiler embryos: the effect on thermoregulation and development during embryogenesis. *Poult. Sci.*, **88**: 2677-2688.
- PIESTUN, Y., HALEVY, O., SHINDER, D., Ruzal, M., DRUYAN, S., YAHAV, S. (2011): Thermal manipulations during broiler embryogenesis improves post-hatch performance under hot conditions. *J. Therm. Biol.* **36**:469–474.
- PLAGEMANN, A. (2004): ‘Fetal Programming’ and ‘functional teratogenesis’: on epigenetic mechanisms and prevention of perinatally acquired lasting health risks. *Journal of Perinatal Medicine* **32**: 297-305.
- PLAGEMANN A. (2006): Perinatal nutrition and hormone-dependent programming of food intake. *Horm. Re.* **65**(Suppl 3): 83-89.
- ROGERS, L.J. (2012): The two hemispheres of the avian brain: their differing roles in perceptual processing and the expression of behaviour. *Journal of Ornithology* **153**, 61-74.
- RUITENBEEK, K., LE NOBLE, F.A.C., JANSSEN, G.M.J., KESSELS, C.G.A., FAZZI, G.E., BLANCO, C.E., DE MEY, J.G.R. (2000): Chronic hypoxia stimulates periarterial sympathetic nerve development in the chicken embryo. *Circulation* **102**: 2892-2897.
- DE ROOIJ, S.R., WOUTERSA,H., YONKERB, J.E., PAINTERC,R.C., ROSEBOOM, T.J. (2010): Prenatal undernutrition and cognitive function in late adulthood. *PNAS* **39**: 16881–16886.
- SCHULZ, L.C. (2010): The Dutch Hunger Winter and the developmental origins of health and disease. *PNAS* **39**: 16757–16758.
- SCHWABL, H. (1996): Maternal testosterone in avian egg enhances postnatal growth. *Comparative Biochemistry and Physiology* **114A**: 271 - 276.
- SCHWABL, H. (1997): Maternal steroid hormones in the egg. In: HARVEY, S., ETCHE, R.J. (eds.) *Perspectives in avian endocrinology*. Bristol; Society for Endocrinology, pp. 3 – 13.