Publications

Harbers, K., Schnieke, A., Stuhlmann, H., Jähner, D. and Jaenisch, R. (1981). DNA methylation and gene expression: Endogenous retroviral genome becomes infectious after molecular cloning. *Proc. Natl. Acad. Sci. USA* 78, 7609-7613.

Harbers, K., Schnieke, A., Stuhlmann, H. and Jaenisch, R. (1982). Infectivity and structure of molecular clones obtained from two genetically transmitted Moloney leukemia proviral genomes. *Nuc. Acids. Res*. 10, 2521-2537.

Schnieke, A., Stuhlmann, H., Harbers, K., Chumakov, I. and Jaenisch, R. (1983). Endogenous Moloney leukemia virus in nonviremic Mov substrains of mice carries defects in the proviral genome. *J. Virol.* 45, 505-513.

Jaenisch, R., Harbers, K., Schnieke, A., Chumakov, I., Jähner, D., Löhler, J., Grotkopp, D. and Hoffmann, E. (1983). Germline integration of Moloney leukemia at the Mov-13 locus leads to recessive lethal mutation and early embryonic death. *Cell* 32, 209-216.

Schnieke, A., Harbers, K. and Jaenisch, R. (1983). Embryonic lethal mutation in mice induced by retroviral insertion into the α1(I) collagen gene. *Nature* 304, 315-324.

Jaenisch, R., Schnieke, A. and Harbers, K. (1985). Treatment of mice with 5-azacytidine efficiently activates silent retroviral genomes in different tissues. *Proc. Natl. Acad. Sci. USA* 82, 1451-1455.

Schnieke, A., Dziadek, M., Bateman, J.F., Mascara, T., Harbers, K., Gelinas, R. and Jaenisch, R. (1987). Introduction of the human pro α1(I) collagen gene into collagen deficient Mov-13 mouse cells leads to formation of functional mouse:human hybrid type I collagen. *Proc. Natl. Acad. Sci. USA* 84, 764-768.

Wu, H., Bateman, J.F., Schnieke, A., Sharpe, A., Barker, D., Mascara, T., Eyre, D., Bruns, R., Krimpenfort, P., Berns, A. and Jaenisch, R. (1990). Human-mouse interspecies collagen I heterotrimer is functional during embryonic development of Mov-13 mutant mouse embryos. *Mol. Cell. Biol.* 10, 1452-1460.

Stacey, A.J. and Schnieke, A.E. (1990). SVpoly: A versatile mammalian expression vector. *Nuc Acids Res*. 18, 2829.

Wu, H., Fässler, R., Schnieke, A., Barker, D., Lee, K., Chapman, V., Francke, U. and Jaenisch, R. (1992). An X-linked human collagen transgene escapes X inactivation in a subset of cells. *Development* 116, 687-695.

Bowen, R.A., Reed, M., Schnieke, A., Seidel, G.E., Brink, Z. and Stacey, A.J. (1993). Production of transgenic cattle from PCR screened embryos. *Theriogenology* 39, 194.

Thomas, W.K., Schnieke, A. and Seidel, G.E. (1993). Methods for producing transgenic bovine embryos from in-vitro matured and fertilized oocytes. *Theriogenology* 40, 679-688.

Stacey, A.J., Schnieke, A., McWhir, J., Cooper, J., Colman, A. and Melton, D.W. (1994). Use of double replacement gene targeting to replace the murine α-lactalbumin gene with its human counterpart in embryonic stem cells and mice. *Mol. Cell. Biol.* 14, 1009-1016.

Bowen, R.A., Reed, M.L., Schnieke, A., Seidel, G.E., Stacey, A.J., Thomas, W.K. and Kajikawa, O. (1994). Production of transgenic cattle from biopsied embryos and expression of c-ski. *Biol. Reprod.* 50, 664-668.

Stacey, A.J. and Schnieke, A.E. (1994). Murine α-lactalbumin gene inactivation and replacement. In: *Intercellular Signalling in the Mammary Gland.* (Eds. Wilde, C.J., Knight, C.H., Peaker, M.) Pub. Plenum press, New York. pp.187-188.

Stacey, A.J., Schnieke, A.E., Kerr, M., Scott, A., McKee, C., Cottingham, I., Binas, B., Wilde, C.J. and Colman, A. (1994). Lactation is disrupted by α-lactalbumin deficiency and can be restored by human α-lactalbumin gene replacement in mice. *Proc Natl. Acad. Sci. USA* 92, 2835-2839.

Finch, L.M.B., Craig, V., Kind, A.J., Schnieke, A., Scott, A., Wells, M. and Wilde, C.J. (1996). Primary culture of ovine mammary epithelial cells. *Biochemical Society Transactions* 24, 369S.

McWhir, J., Schnieke, A.E., Ansell, R., Wallace, H. Scott, A.R. and Kind, A.J. (1996). Selective ablation of differentiated cells permits isolation of ES lines from murine embryos with a non-permissive genetic background. *Nature Genetics,* 14, 223-226.

Finch, L.M.B., Craig, V., Kind, A.J., Schnieke, A., Scott, A., Wells, M. and Wilde, C.J. (1997). Genetic manipulation of mammary epithelial cells in primary culture. In: *Animal Cell Technology: basic and applied aspects* (Eds. Funatsu, K., Shirai, Y., Matsushita,T.) Vol 8, Pub. Kluwer Academic, pp. 347-350.

Wilmut, I. Schnieke, A. McWhir, J., Kind, A.J. and Campbell, K.H.S. (1997). Viable offspring derived from foetal and adult mammalian cells. *Nature* 385, 810-813.

Schnieke, A.E., Kind, A.J., Ritchie,W. A., Mycock, K., Scott, A. R., Ritchie, M., Wilmut, I, Colman, A and Campbell, K.H.S. (1997). Human factor IX transgenic sheep produced by transfer of nuclei from transfected fetal fibroblasts. *Science* 278, 2130-2133.

Ashworth, D., Bishop, M., Campbell, K., Colman, A., Kind, A., Schnieke, A., Blott, S., Griffin, H., Haley, C., McWhir, J. and Wilmut, I. (1998). DNA microsatellite analysis of Dolly. *Nature* 394, 329.

Huett, A.S., Innes, D.A., Moore, M.J., Schnieke, A.E. and Shiels, P.G. (1999). Identification of a novel HaeIII PCR-RFLP in the SLA DQB gene. *Animal Genetics* 30, 397.

Shiels, P.G., Kind, A.J., Campbell, K.H., Waddington, D., Wilmut, I., Colman, A. and Schnieke, A.E. Analysis of telomere lengths in cloned sheep. (1999). *Nature* 399, 316-317.

Evans, M.J., Gurer, C., Loike, J.D., Wilmut, I., Schnieke, A.E. and Schon, E.A. (1999). Mitochondrial genotypes in nuclear transfer derived cloned sheep. *Nature Genetics* 23, 90-93.

Shiels, P.G., Kind, A.J., Campbell, K.H., Wilmut, I., Waddington, D., Colman, A. and Schnieke, A.E. (1999). Analysis of telomere lengths in Dolly, a sheep derived by nuclear transfer. *Cloning* 1, 119-125.

Wilmut, I., Schnieke, A., McWhir, J., Kind, A.J., Colman, A., and Campbell, K.H.S. (1999). Nuclear transfer in the production of transgenic farm animals. In: *Transgenic Animals in Agriculture.* (Eds. Murray, J.D., Anderson, G.B., Oberbauber, A.M., McGloughlin, M.M) Pub. CAB International, Oxon, pp. 67-78.

Temperley, S.M., Kind, A.J., Schnieke, A. and Garner, I. (2000). Transgenic animal technology. In: *Encyclopaedia of Microbiology 2nd edition.* (Ed. Lederberg. J.) Pub. Academic Press, pp. 666-689.

McCreath, K.J., Howcroft, J., Campbell, K.H.S., Colman, A., Schnieke, A.E. and Kind, A.J. (2000). Production of gene-targeted sheep by nuclear transfer from cultured somatic cells. *Nature* 405, 1066-1069.

Cottingham, I.R., Millar, A., Emslie, E., Colman, A., Schnieke, A.E. and McKee, C. A. (2001). A method for the amidation of recombinant peptides expressed as intein fusion proteins in Escherichia coli. *Nature Biotechnol*. 19, 974-977.

Chen, S.H., Vaught, T.D., Monahan, J.A., Boone, J., Emslie, E., Jobst, P.M., Lamborn, A.E., Schnieke, A., Robertson, L., Colman, A., Dai, Y., Polejaeva, I.A. and Ayares, D.L. (2002). Efficient production of transgenic cloned calves using preimplantation screening. *Biol. Reprod.* 67, 1488-1492.

Young, L.E., Schnieke, A.E., McCreath, K.J., Wieckowski, S., Konfortova, G., Fernandes, K., Ptak, G., Kind, A.J., Wilmut, I., Loi, P. and Feil, R. (2003). Conservation of IGF2-H19 and IGF2R imprinting in sheep: effects of somatic cell nuclear transfer. *Mech. Dev.* 120, 1433-1442.

Barrow, J., Bernardo, A.S., Hay, C.W. Blaylock, M., Duncan, L., MacKenzie, A, McCreath, K., Kind, A.J., Schnieke, A.E., Colman, A., Hart, A.W. and Docherty, K. (2005). Purification and characterisation of a population of EGFP-expressing cells from the developing pancreas of a neurogenin3/EGFP transgenic mouse. *Organogenesis* 2, 22-27.

Bernardo, A.S., Barrow, J., Hay, C.W., McCreath, K., Kind, A.J., Schnieke, A.E., Colman, A., Hart, A.W. and Docherty, K. (2006). Presence of endocrine and exocrine markers in EGFP-positive cells from the developing pancreas of a nestin/EGFP mouse. *Mol. Cell. Endocrinol.* 253, 14-21.

Wilmut, I., Schnieke, A.E., McWhir, J., Kind, A.J., Campbell, K.H. (2007). Viable offspring derived from fetal and adult mammalian cells. *Cloning Stem Cells* 9, 3-7.

Kind, A. and Schnieke, A. (2008). Animal pharming, two decades on. *Transgenic Res.* 17, 1025-1033.

Rehbinder E., Engelhard, M., Hagen, K., Jørgensen, R.B., Pardo-Avellaneda, R., Schnieke, A. and Thiele, F. (2008). *Pharming. Promises and risks of biopharmaceuticals derived from genetically modified animals.* Pub. Springer Berlin, Heidelberg.

Schnieke, A. (2008). Animal pharming: past experience and future prospects. In: *Genetic engineering in livestock.* (Eds. Engelhard M., Hagen K., Boysen M.) Pub. Springer Berlin, Heidelberg. pp. 49-67.

Von Burstin, J., Eser, S., Seidler, B., Meining, A., Bajbouj, M., Mages, J., Lang, R., Kind, A.J., Schnieke, A.E., Schmid, R.M., Schneider, G. and Saur, D. (2008). Highly sensitive detection of early-stage pancreatic cancer by multimodal near-infrared molecular imaging in living mice. *Int. J. Cancer.* 123, 2138-2147.

Kind, A. and Schnieke, A. (2008). Cloning mammals: more than just another sheep. In: *Frontiers of Knowledge*. Pub. BBVA, Madrid. pp. 185-201.

Schnieke, A. (2008). Gene technology in raising livestock. Tagungsband 7. *BOKU Symposium Tierernährung.* pp 26-33.

Schnieke, A. (2008). Large animal models for biomedicine. *Acta Biochimica Polonica* S4, L5.1

Von Burstin, J., Eser, S., Paul, M.C., Seidler, B., Brandl, M., Messer, M., von Werder, A., Schmidt, A., Mages, J., Pagel, P., Schnieke, A.E., Schmid, R.M., Schneider, G., and Saur, D. (2009). E-cadherin regulates metastasis of pancreatic cancer in vivo and is suppressed by a SNAIL/HDAC2 repressor complex. *Gastroenterology* 137, 361-71.

Fritsche, P., Seidler, B., Schüler, S., Schnieke, A., Göttlicher, M., Schmid, R.M., Saur, D. and Schneider, G. (2009). HDAC2 mediates therapeutic resistance of pancreatic cancer cells via the BH3-only protein NOXA. *Gut* 58, 1399-1409.

Pardo, P., Engelhard, M., Hagen, K., Jørgensen, R.B., Rehbinder, E., Schnieke, A., Szmulewicz, M. and Thiele, F. (2009). The role of means and goals in technology acceptance. A differentiated landscape of public perceptions of pharming. *EMBO reports* 10, 1069-1075.

Zakhartchenko, V., Flisikowska, T., Li, S., Richter, T., Wieland, H., Durkovic, M., Rottmann, O., Kessler, B., Gungor, T., Brem, G., Kind, A., Wolf, E. and Schnieke, A. (2011). Cell-mediated transgenesis in rabbits: chimeric and nuclear transfer animals. *Biol. Reprod*. 84, 229-237.

Merkl, C., Leuchs, S., Saalfrank, A., Kind, A. and Schnieke, A. (2011). RNA interference in pigs: comparison of RNAi test systems and expression vectors. *Mol. Biotechnol.* 48, 38-48.

Flisikowska, T., Thorey, I.S., Offner, S., Ros, F., Lifke, V., Zeitler, B., Rottmann, O., Vincent, A., Zhang, L., Jenkins, S., Niersbach, H., Kind, A.J., Gregory, P.D., Schnieke, A.E. and Platzer, J. (2011). Efficient immunoglobulin gene disruption and targeted replacement in rabbit using zinc finger nucleases. *PLoS ONE* 6, e21045.

Eser, S., Messer, M., Eser, P., von Werder, A., Seidler, B., Bajbouj, M., Vogelmann, R., Meining, A., von Burstin, J., Alguel, H., Pagel, P., Schnieke, A., Schmid, R., Schneider, G. and Saur, D. (2011). In vivo diagnosis of murine pancreatic intraepithelial neoplasia and early-stage pancreatic cancer by molecular imaging. *Proc. Natl. Acad. Sci. USA* 108, 9945-9950.

Conradt, L., Godl, K., Schaab, C., Tebbe, A., Eser, S., Diersch, S., Michalski, C.W., Kleeff, J., Schnieke, A., Schmid, R.M., Saur, D. and Schneider, G. (2011). Disclosure of Erlotinib targets in pancreatic ductal adenocarcinoma. *Neoplasia* 13, 1026-1034.

Niemann, H., Kind, A. and Schnieke, A. (2012). The production of biopharmaceuticals in transgenic animals. In: *Pharmaceutical Biotechnology, Drug Discovery and Clinical Applications* (Eds. Kayser, O., Warzecha, H.) Pub. Wiley-VCH, Weinheim.

Hagen, K., Schnieke, A. and Thiele, F. (2012). (Editors) *Large Animals as Biomedical Models: Ethical, Societal, Legal and Biological Aspects*. Pub. European Academy, Bad Neuenahr.

Labisso, W. L., Wirth, M., Stojanovic, N., Stauber, R., Schnieke, A., Schmid, R., Kraemer, O. Saur, D. and Schneider, G. (2012). MYC directs transcription of MCL1 and eIF4E genes to control sensitivity of gastric cancer cells towards HDAC inhibitors. *Cell Cycle* 11, 1593-1602.

Mohr, H., Mohr, C.A., Schneider, M.R., Scrivano, L., Adler, B., Kraner-Scheiber, S., Schnieke, A., Dahlhoff, M., Wolf, E., Koszinowski, U. and Ruzsics Z. (2012). Cytomegalovirus replicon based regulation of gene expression in vitro and in vivo. *PLoS Pathogens* 8, e1002728.

Leuchs, S., Saalfrank, A., Merkl, C., Flisikowska, T., Edlinger, M., Durkovic, M., Rezaei, N., Kurome, M., Zakhartchenko, V., Kessler, B., Flisikowski, K., Kind, A., Wolf E. and Schnieke, A. (2012). Inactivation and inducible oncogenic mutation of p53 in gene targeted pigs. *PLoS ONE* 7, e43323.

Flisikowska, T., Merkl, C., Landmann, T, Eser, S., Rezaei, N., Cui, X., Kurome, M., Zakhartchenko, V., Kessler, B., Wieland, H., Rottmann, O., Schmid, R.M., Schneider, G., Kind, A., Wolf, E., Saur, D. and Schnieke, A. (2012). A porcine model of familial adenomatous polyposis. *Gastroenterology* 143, 1173-1175.

Flisikowski, K., Venhoranta, H., Bauersachs, S., Hänninen, R., Fürst, R.W., Saalfrank, A., Ulbrich, S.E., Taponen, J., Lohi, H., Wolf, E., Kind, A., Andersson, M. and Schnieke, A. (2012). Truncation of MIMT1 gene in the PEG3 domain leads to major changes in placental gene expression and stillbirth in cattle. *Biol. Reprod.* 87, 140.

Cieslak, J., Flisikowska, T., Schnieke, A., Kind, A., Szydlowski, M., Switonski, M. and Flisikowski, K. (2013). Polymorphisms in the promoter region of adiponectin (ADIPOQ) gene are associated with transcription level and carcass traits. *Animal Genetics* 44, 340-343.

Kind, A. and Schnieke, A. (2013). Nuclear transfer to produce transgenic mammals. In: *Encyclopedia of Sustainability Science and Technology*. *Sustainable Food Production.* (Ed. Meyers, R.A). Pub. Springer-Verlag, New York, pp. 1240-1251.

Merkl, C., Saalfrank, A., Riesen, N., Kühn, R., Pertek, A., Eser, S., Hardt, M., Kind, A., Saur, D., Wurst, W., Iglesias, A. and Schnieke, A. (2013). Efficient generation of rat induced pluripotent stem cells using a non-viral inducible vector. *PLoS ONE* 8, e55170.

Eser, S., Reiff, N., Messer, M., Seidler, B., Gottschalk, K., Dobler, M., Hieber, H., Arbeiter, A., Klein, S., Kong, B., Michalski, C.W., Schlitter, A.M., Esposito, I., Kind, A.J., Rad, L., Schnieke, A.E., Baccarini, M., Alessi, D.R., Rad, R., Schmid, R.M., Schneider, G. and Saur, D. (2013). Selective requirement of PI3K/PDK1 signalling for KRAS oncogene-driven pancreatic cell plasticity and cancer. *Cancer Cell* 23, 406-420.

Kurome, M., Geistlinger, L., Kessler, B., Zakhartchenko, V., Klymiuk, N., Wuensch, A., Richter, A., Baehr, A., Kraehe, K., Burkhardt, K., Flisikowski, K., Flisikowska, T., Merkl, C., Landmann, M., Durkovic, M., Tschukes, A., Kraner, S., Schindelhauer, D., Petri, T., Kind, A., Nagashima, H., Schnieke, A., Zimmer, R. and Wolf, E. (2013). Factors influencing the efficiency of generating genetically engineered pigs by nuclear transfer: multi-factorial analysis of a large data set. *BMC Biotechnology* 13, 43.

Venhoranta, H., Bauersachs, S., Taponen, J., Lohi, H., Taira, T., Andersson, M., Kind, A., Schnieke, A. and Flisikowski, K. (2013). Fetal growth restriction caused by *MIMT1* deletion alters brain transcriptome in cattle. *Int. J. Dev. Neurosci*. 31, 463-467.

Flisikowska, T., Kind, A. and Schnieke, A. (2013). The new pig on the block: modelling cancer in pigs. *Transgenic Res.* 22, 673-680.

Kraner-Scheiber, S. and Schnieke, A. (2013). Perspektiven der Roten Gentechnik. Rolle der Wissenschaft im Globalen Wandel, *Nova Acta Leopoldina*, 118, No. 400.

Schnieke, A. and Kupatt, C. (2013). Transplantation, Stammzellen und Tissue Engineering. In: *Zukunft der biomedizinische Wissenschaften*. (Eds. Albrecht, C., Kersten, J., Kummer, C., Raabe, G., Rauck, H., Schleissing, S.). Pub. Nomos, Baden-Baden, pp. 37-45.

Flisikowska, T., Kind, A. and Schnieke, A. (2014). Genetically modified pigs to model human diseases. *J. Appl. Genet.* 55, 53-64.

Venhoranta, H., Li, L., Salamon, S., Flisikowska, T., Andersson, M., Switonski, M., Kind, A. and Schnieke, A. (2014). Non-CpG hypermethylation in placenta of mutation-induced intrauterine growth restricted bovine foetuses. *Biochem. Bioph. Res. Commun.* 444, 391-394.

Stachowiak, M., Szydlowski, M., Flisikowski, K., Flisikowska, T., Bartz, M., Schnieke, A., Switonski, M. (2014). Polymorphism in 3'UTR of the pig *PPARA* gene influences on its transcript level and is associated with adipose tissue accumulation. *J. Anim. Sci*. 92, 2363-2371.

Flisikowska T, Kind, A. and Schnieke, A. (2014). Production of genetically modified rabbits. In: *Transgenic Animal Technology: A Laboratory Handbook*. 3rd Edition (Ed. Pinkert, C.A). Pub. Elsevier Science, USA. pp. 277-306.

Eser, S., Rad, R., Schnieke, A., Schneider, G. and Saur, D. (2014). Oncogenic *KRAS* signalling in pancreatic cancer. *Br. J. Cancer* 111, 817-822.

Li, S., Flisikowska, T., Kurome, M., Zakhartchenko, V., Kessler, B., Saur, D., Kind, A., Wolf, E., Flisikowski, K. and Schnieke, A. (2014) Dual fluorescent reporter pig for Cre recombination; transgene placement at the *ROSA26* locus. *PLoS ONE* 9, e102455.

Weigel, S., Flisikowska, T., Schnieke, A. and Luksch, H. (2014). Hybrid voltage sensor imaging of eGFP-F expressing neurons in chicken midbrain slices. *J. Neuroscience Methods* 233, 28-33.

Schönhuber, N., Seidler, B., Schuck, K., Veltkamp, C., Schachtler, C., Zukowska, M., Eser, S., Feyerabend, T.B., Paul, M.C., Eser, P., Klein, S., Lowy, A.M., Banerjee, R., Yang, F.T., Lee, C-L.,

Moding, E.J., Kirsch, D.G., Scheideler, A., Alessi, D.R., Varella, I., Bradley, A., Kind, A., Schnieke, A.E., Rodewald, H-R., Rad, R., Schmid, R.M., Schneider, G. and Saur, D. (2014). A next generation dual-recombination system resource for sequential time and host specific genetic manipulation of pancreatic cancer. *Nature Medicine*. 20, 1340-1347.

Venhoranta, H., Pausch, P., Flisikowski, K., Wurmser, C., Taponen, J., Rautala, H., Kind, A., Schnieke, A., Fries, R., Lohi, H. and Andersson, M. (2014). In frame exon skipping in UBE3B causes developmental disorders and increased mortality in cattle. *BMC Genomics* 15, 890.

Reichart, B.R., Niemann, H., Chavakis, T., Denner, J., Jaeckel, E., Ludwig, B., Marckmann, G., Schnieke, A., Schwinzer, R., Seissler, J., Tönjes, R., Wolf, E. and Bornstein, R. (2014). Xenotransplantation of porcine islet cells as a potential option for the treatment of type-1-diabetes in the future. *Horm. Metab. Res.* 47, 31-35.

Li, S., Edlinger, M., Saalfrank, A., Flisikowski, K., Tschukes, A., Kurome, M., Zakhartchenko, V., Kessler, B., Saur, D., Kind, A., Wolf, E., Schnieke, A. and Flisikowska T. (2015). Viable pigs with a conditionally-activated oncogenic KRAS mutation. *Transgenic Res.* 24, 509-517.

Pausch, H., Schwarzenbacher, H., Burgstaller, J., Flisikowski, K., Wurmser, C., Jansen, S., Jung, S., Schnieke, A., Wittek, T. and Fries, R. (2015). Homozygous haplotype deficiency reveals deleterious mutations compromising reproductive and rearing success in cattle. *BMC Genomics* 16, 312.

Dutta, R., Li, S., Fischer, K., Kind, A., Flisikowska T., Flisikowski K., Rottman, O. and Schnieke, A. (2016). Non-invasive assessment of porcine oocyte quality by supravital staining of cumulus-oocyte complexes with lissamine green B. *Zygote* 24, 418-27.

Li, S., Pausch, H., Venhoranta, H., Adamowicz, K., Andersson, M., Zwierzchowski, L., Kind, A., Schnieke, A. and Flisikowski, K. (2016). PEG3 domain gene expression in maternal and foetal placenta in intrauterine growth restricted bovine foetuses. *Animal Genetics* 47, 106-109.

Saalfrank, A., Janssen, K-P., Ravon, M., Flisikowski, K., Eser, S., Steiger, K., Flisikowska, T., Müller-Fliedner, P., Schulze, E., Brönner, C., Gnann, A., Kappe, E., Böhm, B., Schade, B., Certa, U., Saur, D., Esposito, I., Kind, A. and Schnieke. A. (2016). A porcine model of osteosarcoma. *Oncogenesis* 5, e210.

Schwarzenbacher, H., Wurmser, C., Flisikowski, K., Misurova, L., Jung, S., Langenmayer, M., Schnieke, A., Knubben-Schweizer, G., Fries, R. and Pausch H. (2016). A frameshift mutation in the GON4L gene is associated with dwarfism in Fleckvieh cattle. *Genet. Sel. Evol.* 48, 25.

Flisikowska, T., Kind, A. and Schnieke, A. (2016). Pigs as models of human cancers. *Theriogenology* 86, 433-437.

Fischer, K., Kraner-Scheiber, S., Petersen, B., Rieblinger, B., Buermann, A., Flisikowska, T., Flisikowski, K., Christan, S., Edlinger, M., Baars, W., Kurome, M., Zakhartchenko, V., Kessler, B., Plotzki, E., Szczerbal, I., Switonski, M., Denner, J., Wolf, E., Schwinzer, R., Niemann, H., Kind A. and Schnieke A. (2016). Efficient production of multi-modified pigs for xenotransplantation by 'combineering', gene stacking and gene editing. *Scientific Reports* 6, 29081.

Lin, H.L., Dutta, R., Mandal, S., Kind, A., Schnieke, A. and Razansky, D. (2016). Advancing ovarian folliculometry with selective plane illumination microscopy. *Scientific Reports* 6, 38057.

Flisikowski K., Flisikowska T., Sikorska A., Perkowska A., Kind A., Schnieke A. and Switonski M. (2017). Germline gene polymorphisms predisposing domestic mammals to carcinogenesis. *Vet. Comp. Oncol*. 15, 289-298.

Marx, H., Hahne, H., Ulbrich, S., Schnieke, A., Rottmann, O., Frishman, D. and Kuster, B. (2017). Annotation of the domestic pig genome by quantitative proteomics. *J Proteome Res*. 6, 2887-2898.

Flisikowska, T., Stachowiak, M., Xu, H., Wagner, A., Hernandez Caceres, A., Wurmser, C., Wander, C., Pausch, H., Perkowska, A., Fischer, K., Frishman, D., Fries, R., Switonski, M., Kind, A., Saur, D., Schnieke, A. and Flisikowski, K. (2017). Porcine familial adenomatous polyposis model enables systematic analysis of early events in adenoma progression. *Scientific Reports* 7, 6613.

Xu. H., Pausch, H., Venhoranta, H., Rutkowska, K., Wurmser, C., Rieblinger, B., Flisikowska, T., Frishman, D., Zwierzchowski, L., Fries, R., Andersson, M., Kind, A., Schnieke, A. and Flisikowski, K. (2017). Maternal placenta modulates a deleterious fetal mutation. *Biol. Reprod*. 97, 249-257.

Stachowiak, M., Flisikowska, T., Bauersachs, S., Perleberg, C., Pausch, H., Switonski, M., Kind, A., Saur, D., Schnieke, A. and Flisikowski, K. (2017). Altered microRNA profiles during early colon adenoma progression in a porcine model of familial adenomatous polyposis. *Oncotarget* 8, 96154-96160.

Rieblinger, B., Fischer, K., Saller, B.S., Baars, W., Schuster, M., Wolf-van Buerck, L., Schäffler, A., Flisikowska, T., Kurome, M., Zakhartchenko, V., Kessler, B., Flisikowski, K., Kind, A., Wolf, E., Seissler, J., Schwinzer, R. and Schnieke, A. (2018). Strong xenoprotective function by single copy transgenes placed sequentially at a permissive locus. *Xenotransplantation* 25, e12382.

Perleberg, C., Kind, A. and Schnieke, A. (2018). Genetically engineered pigs as models for human diseases. *Dis. Model. Mech.* 11, dmm030783.

Dahlmann. J., Awad, G, Dolny, C., Weinert, S., Richter, K., Fischer, K-D., Munsch, T., Leßmann, V., Volleth, M., Zenker, M., Chen, Y., Merkl, C., Schnieke, A., Baraki, H., Kutschka, I. and Kensah, G. (2018). Generation of functional cardiomyocytes from rat embryonic and induced pluripotent stem cells using feeder-free expansion and differentiation in suspension culture. *PLoS ONE* 13, e0192652.

Fischer, K., Kind, A. and Schnieke, A. (2018). Assembling multiple xenoprotective transgenes in pigs. *Xenotransplantation* 28, e12431.

Fiebig, U., Fischer, K., Bähr, A., Runge, C., Schnieke, A., Wolf, E. and Denner, J. (2018). Porcine endogenous retroviruses: Quantification of the copy number in cell lines, pig breeds and organs. *Xenotransplantation* 25, e12445.

Wolf, E., Kind, A., Aigner, B. and Schnieke, A. (2018) Genetically engineered large animals in biomedicine. In: Niemann H, Wrenzycki C (eds.) Animal Biotechnology, in 2 volumes (Reproductive biotechnologies, Emerging breeding technologies) Springer International Publishing AG, ISBN 978-3-319-92326-0 ISBN 978-3-319-92327-7.

Sikorska, A., Flisikowska, T., Stachowiak, M., Kind, A., Schnieke, A., Flisikowski, K. and Switonski, M. (2018). Elevated expression of p53 in early colon polyps in a pig model of human familial adenomatous polyposis. *J. Appl. Genet.* 59, 485-491.

Perkowska, A, Flisikowska, T., Perleberg, C., Flisikowski, K., Stachowiak, M., Nowacka-Woszuk, J., Saur, D., Kind, A., Schnieke, A. and Switonski, M. (2019). The expression of TAP1 candidate gene, but not its polymorphism and methylation, is associated with colonic polyp formation in a porcine model of human familial adenomatous polyposis. *Anim Biotechnol* Apr 5:1-8.

Fischer, K., Rieblinger, B., Hein, R., Sfriso, R., Zuber, J., Schäffler, A., Klinger, B., Liang, W., Flisikowski, K., Kurome, M., Zakhartchenko, V., Kessler, B., Wolf, E., Rieben, R., Schwinzer, R., Kind, A. and Schnieke, A. Viable pigs after simultaneous inactivation of porcine MHC class I and three xenoreactive antigen genes GGTA1, CMAH and B4GALNT2. *Xenotransplantation* Oct 8, e12560. doi: 10.1111/xen.12560. [Epub ahead of print].