

CREW's Most Recent Peer-reviewed Rhino Scientific Publications

- Roth TL, M Philpott and J Wojtusik. 2022. Rhinoceros serum labile plasma iron and associated redox potential: interspecific variation, sex bias and iron overload disorder disconnect. *Conservation Physiology* 10(1), <https://doi.org/10.1093/conphys/coac025>
- Wojtusik J, E Curry and TL Roth. 2021. Rhinoceros serum microRNAs: Identification, characterization, and evaluation of potential iron overload biomarkers. *Frontiers in Veterinary Science* 8:711576.
- Pollock, KE, JK O'Brien, TL Roth, J Proudfoot, J Niederlander, L Micheas, TR Robeck and MA Stoops. 2020. Anti-Müllerian hormone in managed African and Asian rhino species. *General and Comparative Endocrinology* 294, DOI: <https://doi.org/10.1016/j.ygcen.2020.113487>
- Roth TL, A Switzer, M Watanabe-Chailland, EM Bik, DA Relman, LE Romick-Rosendale and NJ Ollberding. 2019. Reduced gut microbiome diversity and metabolome differences in rhinoceros species at risk for iron overload disorder. *Frontiers in Microbiology*, DOI: <https://doi.org/10.3389/fmicb.2019.02291>
- Wojtusik J, MA Stoops and TL Roth. 2019. Animal protein-free OptiXcell and shortened equilibration periods can replace egg yolk-based extender and slow cooling for rhinoceros semen cryopreservation. *Cryobiology*, DOI: <https://doi.org/10.1016/j.cryobiol.2019.06.003>
- Mays Jr. HL, Chih-Ming Hung, PJ Shaner, J Denvir, M Justice, Shang-Fang Yang, TL Roth, DA Oehler, Jun Fan, S Rekulapally and DA Primerano. 2018. Genomic analysis of demographic history and ecological niche modeling in the endangered Sumatran Rhinoceros *Dicerorhinus sumatrensis*. *Current Biology* 28(1):70-76. DOI: <https://doi.org/10.1016/j.cub.2017.11.021>
- Stoops MA, GD Winget, CJ DeChant, RL Ball and TL Roth. 2018. Early fetal sexing in the rhinoceros by detection of male-specific genes in maternal serum. *Molecular Reproduction & Development* 85(3):197-204. <https://doi.org/10.1002/mrd.22953>
- Wojtusik J, MA Stoops and TL Roth. 2018. Comparison of soy lecithin, coconut water, and coconut milk as substitutes for egg-yolk in semen cryodiluent for black rhinoceros (*Diceros bicornis*) and Indian rhinoceros (*Rhinoceros unicornis*). *Theriogenology* 121:72- 77.
- Wojtusik J and TL Roth. 2018. Investigation of factors potentially associated with serum ferritin concentrations in the black rhinoceros (*Diceros bicornis*) using a validated rhinoceros-specific assay. *Journal of Zoo and Wildlife Medicine* 49(2):297-306.
- Roth TL, MW Schook and MA Stoops. 2017. Monitoring and controlling ovarian function in the rhinoceros. *Theriogenology* 109:14-21. DOI: <https://doi.org/10.1016/j.theriogenology.2017.12.007>
- Roth TL, PR Reinhart and JL Kroll. 2017. Serum ferritin concentration is not a reliable biomarker of iron overload disorder progression or hemochromatosis in the Sumatran rhinoceros (*Dicerorhinus sumatrensis*). *Journal of Zoo and Wildlife Medicine* 48(3):645-658.
- Roth TL, MA Stoops, TR Robeck and JK O'Brien. 2016. Factors impacting the success of post-mortem sperm rescue in the rhinoceros. *Animal Reproduction Science* 167:22-30.

- Stoops MA, Campbell MK, DeChant CJ, Hauser J, Kottwitz J, Pairan RD, Shaffstall W, Volle K and TL Roth. 2016. Enhancing captive Indian rhinoceros genetics via artificial insemination of cryopreserved sperm. *Animal Reproduction Science* 172:60-75.
- Watanabe M, TL Roth, SJ Bauer, A Lane and LE Romick-Rosendale. 2016. Feasibility study of NMR based serum metabolomic profiling to animal health monitoring: a case study on iron storage disease in captive Sumatran rhinoceros (*Dicerorhinus sumatrensis*). *PLoS ONE* 11(5): e0156318. doi:10.1371/journal.pone.0156318.
- O'Brien JK, TL Roth, MA Stoops, RL Ball, KJ Steinman, GA Montano, CC Love and TR Robeck. 2015. Sperm sex-sorting and preservation for managing the sex ratio and genetic diversity of the southern white rhinoceros (*Ceratotherium simum simum*). *Animal Reproduction Science* 152:137-153.
- Caprio JM, Stoops MA, Freeman EW, Clawson D and MW Schook. 2014. Effects of management strategies on glucocorticoids and behavior in Indian rhinoceros (*Rhinoceros unicornis*): translocation and operant conditioning. *Zoo Biology* 33:131-143.
- Stoops MA, West GD, Roth TL and NP Lung. 2014. Use of urinary biomarkers of ovarian function and altrenogest supplementation to enhance captive breeding success in the Indian rhinoceros (*Rhinoceros unicornis*). *Zoo Biology* 33:83-88. DOI:10.1002/zoo.21106
- Roth TL, PR Reinhart, JS Romo, D Candra, Andriansyah and MA Stoops. 2013. Sexual maturation in the Sumatran rhinoceros (*Dicerorhinus sumatrensis*). *Zoo Biology* 32: 549-555.
- Ganz, T, J Goff, K Klasing, E Nemeth and T Roth. 2012. IOD in rhinos – immunity group report: Report from the immunity, genetics and toxicology working group of the international workshop on iron overload disorder in browsing rhinoceros (February 2011). *Journal of Zoo and Wildlife Medicine* 43(3): S117-S119.
- Stoops, MA, HL Bateman, MK Campbell and TL Roth. 2011. Attempted gamete rescue in a female Sumatran rhinoceros (*Dicerorhinus sumatrensis*). *Journal of Zoo and Wildlife Medicine* 42(4): 723- 726.
- Stoops, MA, JK O'Brien and TL Roth. 2011. Gamete rescue in the African black rhinoceros (*Diceros bicornis*). *Theriogenology* 76: 1258–1265.
- Plair, BL, PR Reinhart and TL Roth. 2011. Neonatal milestones, behavior and growth rate of Sumatran rhinoceros calves (*Dicerorhinus sumatrensis*) bred and born in captivity. *Zoo Biology* 30: 1-15.
- Roth, TL, MA Stoops, TR Robeck, RL Ball, BA Wolfe, MV Finnegan and JK O'Brien. 2010. Alkaline phosphatase as an indicator of true ejaculation in the rhinoceros. *Theriogenology* 74: 1701-1706.
- Stoops, MA, MW Atkinson, ES Blumer, MK Campbell and TL Roth. 2010. Semen cryopreservation in the Indian rhinoceros (*Rhinoceros unicornis*). *Therio.* 73: 1104-1115.
- Roth, TL and CK Vance. 2007. Corticosteroid-induced suppression of in vitro lymphocyte proliferation in four captive rhinoceros species. *J. Zoo Wildl. Med.* 38(4): 518-525.