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## Tail regeneration in the Tokay Gecko (*Gekko gecko*)

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## ***Curriculum vitae***

Luthfi Nurhidayat was born on November 14, 1987, in Sragen, Central Java, Indonesia. After completing his secondary education at State Senior High School in Gemolong, Sragen Regency, he pursued both his bachelor's (2005–2010) and master's (2010–2012) degrees at the Faculty of Biology, Universitas Gadjah Mada, Yogyakarta. For his bachelor's thesis, he conducted research at the Laboratory of Animal Structure and Development on the topic, *Cranial Muscle and Skeleton Structure and Head Movement Pattern of Malayemys subtrijuga (Schlegel & Müller, 1844) and Cuora amboinensis (Daudin, 1802)*, under the supervision of Zuliyati Rohmah, M.Si., Ph.D. Eng. Luthfi continued his research on turtle anatomy at the same laboratory for his master's thesis, titled *Structural and Functional Adaptation of Amyda cartilaginea (Boddaert, 1770) and Cuora amboinensis (Daudin, 1802) to the Aquatic Environment*, under the supervision of Prof. Dr. Nyoman Puniawati Soesilo, S.U.

After earning his master's degree, Luthfi joined the Animal Structure and Development Laboratory as a research and academic assistant. In 2014, he was appointed as a lecturer and researcher at the same laboratory. As a lecturer, he taught various undergraduate courses, including Animal Structure and Development, Animal Anatomy, Animal Pathoanatomy, Animal Microtechnique, Animal Embryology, and Animal Histology. His research focused on the structure and function of reptiles and amphibians, as well as on histopathology.

In September 2020, Luthfi began his Ph.D. studies at the Institute of Biology Leiden, Leiden University, The Netherlands, with a scholarship from LPDP (Indonesia Endowment Fund for Education). These studies form the basis of this Ph.D studies and focused on tail regeneration in the adult Tokay Gecko (*Gekko gekko*) and comparing it with embryonic tail development. He combined bulk transcriptomics, single-cell sequencing, and an extensive panel of *in situ* hybridization experiments on tissue sections to characterize tail regeneration in the Tokay Gecko. Additionally, he conducted whole-genome sequencing and analysis of the Tokay Gecko as part of his doctoral research. His work was selected for a talk at the International Society for Regenerative Biology Inaugural Meeting held in Vienna from September 3–6, 2023. The results of his research at Leiden University are presented in this thesis.

## List of Publications

Nuriliani A., **Nurhidayat L.**, Fatmasari H., Afina D., Alamsyah F., Taruno W. P., & Pratiwi R. (2024). Non-Contact Electric Field May Induced Higher CD4, CD8, Caspase-8, and Caspase-9 Protein Expression in Breast Tumor Tissue of Rats (*Rattus norvegicus* Berkenhout, 1769). *Malaysian Journal of Fundamental and Applied Sciences* **20**: 74-88

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Wang M., Rücklin M., Poelmann R.E., Mooij C.L. de, Fokkema M., Lamers G.E.M., Bakker M.A.G. de, Chin E., Bakos L.J., Marone F., Wisse B.J., Ruiten M.C. de, Cheng S., **Nurhidayat L.**, Vijver M.G. & Richardson M.K. (2023). Nanoplastics causes extensive congenital malformations during embryonic development by passively targeting neural crest cells. *Environment International* **173**: 107865.

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Nuriliani A., Wulandari R., **Nurhidayat L.** 2022. Tongue Structure of *Rhinolophus pusillus* and *Miniopterus schreibersii*. *Acta Veterinaria Indonesiana* **10**: 211–21

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**Nurhidayat L.**, Kurniawan Pratama D., Devi N.A. & Rohmah Z. (2020). The development of integument and muscle in regenerated tail of Tokay gecko (*Gekko gecko* Linnaeus, 1758). Trisakti Saragih H., Ilmi M., Nopitasari S., Audinah L., Widyasari A., Arum Sari M., Masri M., Toban Palilu P., Prabowo B.P., Soleha S., Solikhah A. & Fitriana N. (Eds.). AIP Conference Proceedings. THE 6TH INTERNATIONAL CONFERENCE ON BIOLOGICAL SCIENCE ICBS 2019: "Biodiversity as a Cornerstone for Embracing Future Humanity" 10 October 2019 – 11 October 2019 no. 2260: AIP Publishing. 030009.

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