Prof. Zeresenay “Zeray” Alemseged
Professor

Paleoanthropologist Zeresenay “Zeray” Alemseged was born in 1969 in Axum, Ethiopia and is currently the Donald N. Pritzker Professor in the Department of Organismal Biology and Anatomy at the University of Chicago, USA. Before moving to Chicago, he served as a senior scientist at the California Academy of Sciences in San Francisco, the Max Planck Institute in Leipzig, Germany and a postdoc at Arizona State University. His work focuses on the investigation of fundamental question of how we became humans through the process of evolution after our separation from the chimpanzees around seven million years ago. He has published over 70 peer reviewed scientific papers, contributed to several books and has done extensive scientific and public presentations. Besides, his work has been featured on highly rated platforms including TED, CNN, BBC, NOVA PBS etc. He is a member/fellow of the American Association for the Avancement of Science, the American Academy of Arts and Sciences, the California Academy of Sciences and the Ethiopian Academy of Science.

Professor Alemseged undertakes cutting edge field and laboratory research in the field of human evolution and paleoanthropology. To achieve these goals, he conduct multidisciplinary paleoanthropological field work in some of the hominin fossil hotspots in Africa while also applying novel imaging and visualization methods to analyze and interpret fossils of early human ancestors. The main theme of his research revolves around elucidating the milestone events that shaped the

course of human evolution after the human lineage separated from the chimpanzee lineage around 7 million years ago. Among the top questions he asks and has contributed answer to are: 1) what was the tempo, mode and patterns of upright walking at different stages of our evolution; 2) when and where did our lineage start to use and make stone tools to interact with nature and other species; 3) when and how did we acquire childhood, the extended dependence of young individuals on care givers, which makes H.sapiens infants highly dependent but facilitates strong bonding; 4) what evolutionary processes led to the emergence of our genus Homo around 3 million years ago and ultimately the advent of our species, Homo sapiens around 300,000 years ago; 5) what are the key environmental and climatic factors that have shaped the aforementioned key events and many other aspects of human evolution through time and space.

Main publications

2021: Alemseged, Z. Earliest Stone Tool Use in Hominins and the Significance of the Dikika Cutmarks: Beyond the Cuts! In: Coppens, Y., Vialet, A. (Eds.), *Un Bouquet d'ancêtres. Premiers Humains: Qui Était Qui, Qui a Fait Quoi, Où et Quand?* Nouvelle Impremerie Laballery, Clamecy, France, pp. 101–122.

2020: Alemseged, Z., Wynn, J.G., Geraads, D., Reed, D., Barr, W.A., Bobe, R., McPherron, S.P., Deino, A., Alene, M., Sier, M.J., Roman, D., Mohan, J. Fossils from Mille-Logya, Afar, Ethiopia, elucidate the link between Pliocene environmental changes and Homo origins. *Nature Communications*. (2020)11:2480.

2020: Gunz, P., Neubauer, S., Faulk, D., Tafforeau, P., Le Cabec, A., Smith, T.M., Kimbel, W.H., Spoor, F., Alemseged, Z., Australopithecus afarensis endocasts suggest ape-like brain organization and prolonged brain growth. *Science Advances*. 6: eaaz4729.

2019: Du, A. & Alemseged, Z., Temporal evidence shows Australopithecus sediba is unlikely to be the ancestor of Homo. *Science Advances*. 5: eaav9038.

2019: Thompson, J.C., Carvalho, S., Marean, C.W., Alemseged, Z. Origins of the human predatory pattern: The transition to large animal exploitation by early hominins. *Current Anthropology*. 60(1).

2018: DeSilva, J.M., Gill, C.M., Prang, T.C., Bredella, M.A., Alemseged, Z. A nearly complete foot from Dikika, Ethiopia and its implications for the ontogeny and function of Australopithecus afarensis. *Sci Adv.* 4(7), eaar7723.

2015: Alemseged, Z. Stable isotopes serving as a checkpoint. PNAS 112:12232-12233.

2013: Sponheimer, M., Alemseged, Z., Cerling, T.E., Grine, F.G., Kimbel, W.H., Leakey, M.G., Lee-Thorp, J., Manthi, F.K., Reed, K. Wood, B., Wynn, J.G. Isotopic evidence of early hominin diets. PNAS 110(26):10513-10518.

2012: Green, D.J., Alemseged, Z. Australopithecus afarensis scapular ontogeny, function, and the role of climbing in human evolution. *Science* 338:514-517.

2010: McPherron, S.P., Alemseged, Z., Marean, C.W., Wynn, J.G., Reed, D., Geraads, D., Bobe, R., Béarat, H. Evidence for stone tool-assisted consumption of animal tissues prior to 3.39 million years ago at Dikika, Ethiopia. *Nature* 466:857-860.

2006: Alemseged, Z., Spoor, F., Kimbel, W.H., Bobe, R., Geraads, D., Reed, D., Wynn, J.G. A juvenile early hominin skeleton from Dikika, Ethiopia. *Nature* 443:296-301.

2003: Alemseged, Z. An integrated approach to taphonomy and faunal change in the Shungura Formation (Ethiopia) and its implication for hominid evolution. *J. Hum. Evol.* 44:1-28.