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RESEARCH AREA

Our research project, which was carried out in collaboration with colleagues from the Paediatric Centre, Semmelweis University, started in August 2025. The title of the topic, which includes a longitudinal study of chronically ill children for at least 5 years, is: Monitoring the physical development of infants with achondroplasia receiving Vosorotide treatment.

My goal in the project is to announce thesis and TDK (Student Research Conference) topics at the Department of Anthropology of ELTE in this academic year. In these projects, students can be involved in

- developing a protocol for the physical development examination of children with achondroplasia (this is not yet available to professionals in our country),
- anthropological examinations of children with achondroplasia,
- preparing growth references based on examinations of healthy children necessary for the examination of this special patient group,
- statistical evaluation of longitudinal data,
- publishing the results of the project in scientific journals.

TECHNIQUES AVAILABLE IN THE LAB

- anthropometric examinations
- body composition and body shape analyses
- biological age estimations
- construction of growth references
- ELISA method for determining the concentration of proteins in saliva samples
- methodology of growth studies: recruitment, study design, fieldworks, data collection, questionnaires, database construction
- methodology of biostatistical analyses

SELECTED PUBLICATIONS

Zsakai, A., Annar, D., Koronczai, B., Molnar, K., Varro, P., Toth, E., Szarvas, S., Tauber, T., Karkus, Z., Varnai, D., & Muzsnai, A. (2023). A new monitoring system for nutritional status assessment in children at home. **Sci Rep 13(1):** 4155.

Kalabiska, I., Annar, D., Babszky, G., Jokai, M., Borbas, Z., Hajdu, G., Ratz-Sulyok, F. Z., Jang-Kapuy, C., Palinkas, G., Bhattoa, H. P., & **Zsakai, A.** (2025). The Skin Microbiome Profile of Contact Sports Athletes-Focus on Sexual Dimorphism and Athlete-Non-Athlete Differences. **Sports (Basel) 13(9):** 288.

Zsakai, A., Zselyke Ratz-Sulyok, F., Jang-Kapuy, C., Petridis, L., Bakonyi, P., Dobronyi, T., Juhasz, I., & Szabo, T. (2024). Muscular robusticity and strength in the lower extremities in elite handball players. **Sci Rep 14(1):** 28883.