

BERNICA Results: Advancing Nutrition Research in Central Asia

The primary goal of the Erasmus+ BERNICA project is to enhance the potential of medical universities in Central Asia in the fields of nutrition and dietetics. A key outcome of this collaboration is the creation of comprehensive academic guidelines, designed to support high-quality education and research.

A key achievement of the Erasmus+ BERNICA project is the significant scholarly output produced by young researchers and doctoral candidates from partner universities, applying the methodologies and frameworks developed within the project. This body of work addresses critical public health issues across Central Asia. Publications include studies on the medical and social aspects of metabolic syndrome, overweight and obesity in adolescents in Kyrgyzstan with a focus on lifestyle and nutrition, and detailed anthropometric and body composition analyses in both young children and adults, utilizing bioimpedance methods. Further contributions explore bioimpedance analysis in patients with chronic lung diseases and comparative characteristics of body composition across obesity phenotypes. This growing collection of peer-reviewed articles, published in journals such as *PLOS ONE*, *International Health*, the *Iranian Journal of Public Health*, and the *Turkish Journal of Medical Sciences*, demonstrates the project's success in fostering a new generation of researchers equipped to tackle regional nutrition challenges. Additionally, a manuscript titled "Enhancing Educational and Research Capacities in Nutrition and Dietetics Across Central Asian Universities" has been accepted for publication in the *Turkish Journal of Public Health*, further reflecting the project's broader impact on institutional capacity building.

We are proud to present a collection of scientific articles authored by the next generation of regional experts—our young scientists and doctoral students. These studies directly apply the methodological framework and knowledge provided by the BERNICA project's guidelines. This work not only contributes to the global body of knowledge in nutrition science but also addresses critical public health challenges specific to Central Asia:

1. Chyngyshpaeva, Y., Dzhaliyev, Z., Derbishaliev, Z., Ibrahim, M., III Lucero-Prisno, D. E., & Dzhusupov, K. (2024). The state of iodine deficiency in Kyrgyzstan: Insights from studies of knowledge, attitudes and practices. *PLOS ONE*, *19*(11), e0313869. <https://doi.org/10.1371/journal.pone.0313869>
2. Iuliia Chyngyshpaeva, Zhyparkul Derbishaliev, Zhokhongir Dzhaliyev, Don Eliseo Lucero-Prisno, Kenesh Dzhusupov, Cross-sectional study of maternal iodine nutrition and salt iodization in Kyrgyzstan: urban–rural and socioeconomic factors, *International Health*, Volume 18, Issue 2, March 2026, Pages 218–229, <https://doi.org/10.1093/inthealth/ihaf076>
3. Asel, Z. K., Nurlanovna, O. A., Maratbekovna, M. A., Rysbekovna, A. A., Abduhalilovich, Q. Q., & Nasirdinovna, B. E. (2025). Medical and Social Aspects of Metabolic Syndrome: Narrative Review and Case Study. *Journal of Biochemical Technology*, *16*(2), 16-24. <https://doi.org/10.51847/nktalEL9vH>
4. Saltanat Abazbekova, Tursun Mamyrbayeva, Aida Anarbayeva, Gulshara Myrzabekova, Asylkan Moldobaeva (2025). Overweight and Obesity in Adolescents in Kyrgyzstan: The Impact of Lifestyle, Nutrition, and Physical Activity: A Narrative Review. *The Iranian Journal of Public Health*, *54*(5).<https://doi.org/10.18502/ijph.v54i5.18625>
5. Zhanybekkyzy, K., Shatmanov, S., Abdurakhmanova, C., Kadyr, Z., & Gulzhon, A. (2024). Height and Weight Characteristics of 4-7-Year-Old Kyrgyz Children: Constitutional, Age, and Gender Differences. *International Journal of Child Health and Nutrition*, *13*(4), 206–219. <https://doi.org/10.6000/1929-4247.2024.13.04.2>
6. Rakhima, A., Diloramkhan, A., Feruza, T., Chynara, T., Aizat, K., Mamatova, S., Kalmatov, R., & Rana, S. (2025). Nutritional status in patients with COPD and its impact on biochemical status: A narrative review. *Journal of Advanced Pharmacy Education and Research*, *15*(2), 31-39. <https://doi.org/10.51847/qfEaYyPqMP>
7. Lyazat K. Ibrayeva, Dina Kh. Rybalkina, Asel R. Alina, Irina V. Bacheva, Meruert K. Aubakirova, Olga S. Klassen, & Pavel V. Ovt Synov (2024). Bioimpedance analysis in patients with chronic lung diseases in the context of the pulmocardiorenal continuum. *Problems of Nutrition*, *93*(6 (556)), 105-116. doi: 10.33029/0042-8833-2024-93-6-105-116
8. Rano K.Dadabaeva, Elnora A.Abduganieva, Kenesh O.Djusupov, Indrani Kalkan, Oybek F.Eshmamatov. Comparative Characteristics of Body Composition In Obesity Phenotypes. (2025). *Texas Journal of Medical Science*, *42*, 29-35. <https://doi.org/10.62480/tjms.2025.vol42.pp29-35>
9. Rano K.Dadabaeva, Oybek F.Eshmamatov, F. Mirzaeva. The Significance of the Arg223gln Lepr Gene Polymorphism in Obesity. (2025). *Texas Journal of Medical Science*, *49*, 20-24. <https://doi.org/10.62480/tjms.2025.vol49.pp20-24>