The research projects correspond to the United Nations Sustainable Development Goal 3 — **“Good Health and Well-being” (SDG 3)**. This goal aims to ensure healthy lives, prevent diseases, improve the quality of medical services, and increase life expectancy.

In general, the mentioned studies cover medical diagnostics, early disease detection, cardiovascular system monitoring, mental health protection, biomedical experiments, and public health issues. Through the use of modern technologies, artificial intelligence, machine learning methods, and experimental research, the studies explore ways to detect diseases in the human body, predict their progression, and develop effective prevention strategies. In addition, some projects are aimed at improving the psychological well-being of young people, preventing harmful behaviors, and enhancing overall social welfare.

The results of these studies contribute to the improvement of the healthcare system, increase the accessibility and quality of medical care, and support the development of new diagnostic and treatment methods. As a result, the quality of life of the population improves, and health-related risks are reduced.

These scientific works make an important contribution to strengthening public health, ensuring long and healthy lives, and implementing the fundamental principles of sustainable development.

1.

Title	Modified UNet Model for Brain Stroke Lesion Segmentation on Computed Tomography Images
Authors	Omarov, B.| Tursynova, A.| Postolache, O.| Gamry, K.| Batyrbekov, A.| Aldeshov, S.| Azhibekova, Z.| Nurtas, M.| Aliyeva, A.| Shiyapov, K.
Year	2022
Abstract in Scopus	https://www.scopus.com/record/display.url?eid=2-s2.0-85122725997&origin=resultslist
DOI	10.32604/cmc.2022.020998

2.

Title	Research of a Fiber Sensor Based on Fiber Bragg Grating for Road Surface Monitoring
Authors	Kashaganova, G.| Kozbakova, A.| Kartbayev, T.| Balbayev, G.| Togzhanova, K.| Alimseitova, Z.| Orazaliyeva, S.
Year	2023
Abstract in Scopus	https://www.scopus.com/record/display.url?eid=2-s2.0-85161571642&origin=resultslist
DOI	10.3390/electronics12112491

3.

Title	A Deep Learning-Based Approach for Road Surface Damage Detection
Authors	Kulambayev, B.| Beissenova, G.| Katayev, N.| Abduraimova, B.| Zhaidakbayeva, L.| Sarbassova, A.| Akhmetova, O.| Issayev, S.| Suleimenova, L.| Kasenov, S.| Shadinova, K.| Shyrakbayev, A.
Year	2022

Abstract in Scopus	https://www.scopus.com/record/display.url?eid=2-s2.0-85132356636&origin=resultslist
DOI	10.32604/cmc.2022.029544

4.

Title	Precision Diagnosis: An Automated Method for Detecting Congenital Heart Diseases in Children From Phonocardiogram Signals Employing Deep Neural Network
Authors	Alkahtani, H.K.| Haq, I.U.| Ghadi, Y.Y.| Innab, N.| Alajmi, M.| Nurbapa, M.
Year	2024
Abstract in Scopus	https://www.scopus.com/record/display.url?eid=2-s2.0-85192154543&origin=resultslist
DOI	10.1109/ACCESS.2024.3395389

5.

Title	Wearable ECG Device and Machine Learning for Heart Monitoring
Authors	Alimbayeva, Z.| Alimbayev, C.| Ozhikenov, K.| Bayanbay, N.| Ozhikenova, A.
Year	2024
Abstract in Scopus	https://www.scopus.com/record/display.url?eid=2-s2.0-85198372435&origin=resultslist
DOI	10.3390/s24134201

6.

Title	Extraction, Purification and Characterisation of four new alkaloids from the water plant Pistia stratiotes: POM Analyses and Identification of Potential Pharmacophore Sites
Authors	Yernazarova, G.I.| Ramazanova, A.A.| Turasheva, S.K.| Almalki, F.A.| Hadda, T.B.| Orazova, S.B.| Madenova, A.K.| Admanova, G.B.| Korul'kin, D.Y.| Sabdenalieva, G.M.| Naimi, S.| Bukharbayeva, Z.| Amangeldinova, M.E.
Year	2023
Abstract in Scopus	https://www.scopus.com/record/display.url?eid=2-s2.0-85178924385&origin=resultslist
DOI	10.52711/0974-360X.2023.00564

7.

Title	Group psychological counselling as a form of prevention of adolescent addictive behaviour
Authors	Berdibayeva, S.| Zhiyenbayeva, S.| Sakhiyeva, F.| Garber, A.| Kabakova, M.| Ivanov, D.
Year	2021
Abstract in Scopus	https://www.scopus.com/record/display.url?eid=2-s2.0-85118411179&origin=resultslist
DOI	10.15557/PIPK.2021.0010

8.

Title	Pollen morphology of broadleaf trees growing in different health conditions in the city of Aktobe
Authors	Utarbayeva, N.| Aipeisova, S.| Maui, A.| Kazkeev, E.| Bimagambetova, G.| Kukenov, Z.
Year	2021
Abstract in Scopus	https://www.scopus.com/record/display.url?eid=2-s2.0-85113583560&origin=resultslist
DOI	10.2525/ecb.59.135

9.

Title	On the formation of professional competence of future social pedagogues
Authors	Nurgaliyeva, A.| Sametova, F.| Orynkhanova, G.| Kolyeva, N.| Vedilina, Y.| Sakenov, J.| Lyuft, A.
Year	2020
Abstract in Scopus	https://www.scopus.com/record/display.url?eid=2-s2.0-85083884814&origin=resultslist
DOI	10.34218/IJARET.11.3.2020.023

10.

Title	Development of a Framework for Classification of Impulsive Urban Sounds using BiLSTM Network
Authors	Katayev, N.| Altayeva, A.| Abduraimova, B.| Kurmanbekkyzy, N.| Madibaiuly, Z.| Kulambayev, B.
Year	2023
Abstract in Scopus	https://www.scopus.com/record/display.url?eid=2-s2.0-85179392527&origin=resultslist
DOI	10.14569/IJACSA.2023.0141148

11.

Title	A physiological characterization of the high-fat diet on the induction of obesity in adult male Swiss mice
Authors	Babashev, A.| Tumaevna, M.A.| Nauryzbaevish, A.S.| Maralovich, K.A.| Utegaliyeva, R.| Yeshmukhanbet, A.| Yessenova, M.| Amangeldinovna, Z.A.
Year	2023
Abstract in Scopus	https://www.scopus.com/record/display.url?eid=2-s2.0-85174217824&origin=resultslist
DOI	10.22124/cjes.2023.7151

12.

Title	Applying Machine Learning to Detect Depression-Related Texts on Social Networks
Authors	Shekerbekova, S.| Yerekesheva, M.| Tukenova, L.| Turganbay, K.| Kozhamkulova, Z.| Omarov, B.
Year	2021
Abstract in Scopus	https://www.scopus.com/record/display.url?eid=2-s2.0-85111812748&origin=resultslist
DOI	10.1007/978-981-16-3660-8_15

13.

Title	Growing Arum korolkowii Regel in laboratory conditions
Authors	Alpamyssova, G.| Zhapparbergenova, E.| Yermekbayeva, A.| Anuarova, L.| Saparbayeva, N.| Alpamyssova, A.| Yeginbay, A.| Burabaev, A.| Burabaev, A.| Narimanov, A.A.
Year	2024
Abstract in Scopus	https://www.scopus.com/record/display.url?eid=2-s2.0-85199269271&origin=resultslist
DOI	10.22124/CJES.2024.7711

14.

Title	DEVELOPMENT OF AN ATRIOVENTRICULAR BLOCK PREDICTION OF METHOD FOR PORTABLE HEART MONITORING SYSTEM
Authors	Bekbay, A.| Alimbayeva, Z.| Alimbayev, C.| Bayanbay, N.| Ozhikenov, K.| Mukazhanov, Y.
Year	2022
Abstract in Scopus	https://www.scopus.com/record/display.url?eid=2-s2.0-85133517315&origin=resultslist
DOI	10.15587/1729-4061.2022.258791

15.

Title	Teaching online enantiosemia and word diffusion aspects during the coronavirus pandemics
Authors	Nurtayeva, A.| Abdirassilova, G.| Karbozova, M.| Suer, E.| Rakhimzhanova, S.
Year	2021
Abstract in Scopus	https://www.scopus.com/record/display.url?eid=2-s2.0-85100754835&origin=resultslist
DOI	10.18355/XL.2021.14.01.21

Title	Investigating the Effect of Streptozotocin Induced Diabetes on the Ovarian Tissue of Nmri Mice Following the Injection of MgO and MgO NPs
Authors	Raissa, U.| Qassem, H.M.A.| Ahmed, M.| Alzubaidi, M.A.| Dawood, F.A.| Abdullah, Y.A.| Abdulwahhab, Z.A.| Kanan, M.
Year	2023
Abstract in Scopus	https://www.scopus.com/record/display.url?eid=2-s2.0-85151814716&origin=resultslist
DOI	10.22052/JNS.2023.01.001

Title	Using The Machine Learning Method in Portable ECG Monitoring System to Identify Diagnostically Complex Heart Diseases
Authors	Yerkebay, A.K.| Alimbayeva, Z.N.| Alimbayev, C.A.| Ozhikenova, A.K.| Bayanbay, N.A.| Ozhikenov, K.A.
Year	2023
Abstract in Scopus	https://www.scopus.com/record/display.url?eid=2-s2.0-85172010573&origin=resultslist
DOI	10.1109/EDM58354.2023.10225021

Title	A preliminary study on the role of personal history of infectious and parasitic diseases on self-reported health across countries
Authors	Pfuhl, G.| Prazeres, F.| Kowal, M.| Aavik, T.| Abad-Villaverde, B.| Afhami, R.| Aguilar, L.| Akello, G.| Al-Shawaf, L.| Antfolk, J.| Atama, C.S.| Duyar, D.A.| Baiocco, R.| Balım, S.| Batres, C.| Belkacem, Y.| Besson, T.| Bode, A.| Boğa, M.| Boudesseul, J.| Boussena, M.| Brahim, H.| Burduli, N.| Can, A.R.| Cetinkaya, H.| Chirumbolo, A.| Chubinidze, D.| Cornec, C.| Dinić, B.M.| Dural, S.| Duyar, I.| Ebimgbo, S.O.| Etchezahar, E.| Fedor, P.| Frackowiak, T.| Frederick, D.A.| Galasinska, K.| García, F.E.| Yepes, T.G.| Grigoryev, D.| Guemaz, F.| Hromatko, I.| Ikizer, G.| Janssen, S.M.J.| Kamburidis, J.A.| Kavčič, T.| Kervyn, N.| Khan, F.| Kobylarek, A.| Koyuncu, M.| Kunisato, Y.| Lacko, D.| Landa-Blanco, M.| Lidborg, L.H.| Lins, S.| Mandzyk, T.| Mari, S.| Marot, T.A.| Martinez-Banfi, M.| Mattiassi, A.D.A.| Mayorga-Lascano, M.| Mebarak, M.| Meskó, N.| Miccoli, M.R.| Mikuličiūtė, V.| Milfont, T.L.| Mišetić, K.| Morelli, M.| Natividade, J.C.| Ndukaihe, I.L.G.| Novaes, F.| Omar, S.S.| Fauzee, M.S.O.| Otterbring, T.| Özener, B.| Ozer, S.| Park, J.H.| Banai, I.P.| Pazhoohi, F.| Perun, M.| Pírko, M.| Pirtskhalava, E.| Pisanski, K.| Plohl, N.| Ponnet, K.| Prokop, P.| Ribeiro, M.F.F.| Rosário, F.| Şahin, A.| Sahli, F.Z.| Šakan, D.| Senyk, O.| Siepelmeyer, H.| Ribeiro da Silva, D.| Singh, S.| Solak, Ç.| Söylemez, S.| Studzinska, A.| Tan, C.-S.| Topanova, G.T.| Bulut, M.T.| Toplu-Demirtaş, E.| Trémolière, B.| Tulyakul, S.| Ungaretti, J.| Valentova, J.V.| Varella, M.A.C.| Vintila, M.| Volkodav, T.| Wlodarczyk, A.| Yeh, Y.-Y.| Yoo, G.| Zerhouni, O.| Zumárraga-Espinosa, M.| Zupančič, M.| Sorokowski, P.
Year	2025
Abstract in Scopus	https://www.scopus.com/record/display.url?eid=2-s2.0-105001208443&origin=resultslist
DOI	10.1016/j.puhe.2025.02.030

Title	Measurement invariance of the PTSD Checklist for DSM-5 across eight countries and samples with diverse trauma experiences
Authors	Cyniak-Cieciura, M.| Popiel, A.| Zawadzki, B.| Cremeans-Smith, J.K.| Fruehstorfer, D.B.| Bielak, P.| Camino, V.| Cha, E.J.| Cho, Y.| Galarregui, M.| Goldfarb, R.| Hyun, M.-H.| Kalinina, Z.| Keegan, E.| Mambetalina, A.| McHugh, L.| Miracco, M.| Oshio, A.| Park, C.| Partarrieu, A.| De Rosa, L.| Sabirova, R.| Samekin, A.| Sánchez, E.| Sarno, M.| Tarruella, C.| Tulekova, G.M.| Topanova, G.T.
Year	2025
Abstract in Scopus	https://www.scopus.com/record/display.url?eid=2-s2.0-105001679850&origin=resultslist
DOI	10.1002/jts.23118

Title	Study on the Preventive Effects of Frangula alnus Extract in Alcohol-Induced Liver Damage in C57BL/6 Mice
Authors	Alimova, S.| Yessimsiitova, Z.| Issayeva, A.| Yueerlin, M.| Abdrassulova, Z.| Kenzheyeva, Z.| Koibasova, L.| Baitasheva, G.| Mussina, A.| Batyrkhanov, M.| Dauletbayeva, S.| Kyrbassova, E.| Baishanbo, A.
Year	2025
Abstract in Scopus	https://www.scopus.com/record/display.url?eid=2-s2.0-105010706674&origin=resultslist
DOI	10.30919/faf1470

Title	Layer-by-layer phase scanning of polycrystalline blood facies laser induced images for determination thyroid gland cancer and tissues injury necrosis
Authors	Ushenko, O.| Bilookyi, O.| Ushenko, Y.| Dubolazov, O.| Soltys, I.| Litvinenko, O.| Olar, O.| Bilookyi, V.| Rogovyi, Y.| Padure, A.| Baranovskyi, D.| Vishtak, I.| Zhylanbaeva, B.| Yessentayev, K.| Omiotek, Z.
Year	2024
Abstract in Scopus	https://www.scopus.com/record/display.url?eid=2-s2.0-85213958517&origin=resultslist
DOI	10.1117/12.3054870

Title	Optical Sensor System for 3D Jones Matrix Reconstruction of Optical Anisotropy Maps of Self-Assembled Polycrystalline Soft Matter Films
Authors	Wójcik, W.| Hu, Z.| Ushenko, Y.| Smolarz, A.| Soltys, I.| Dubolazov, O.| Ushenko, O.| Litvinenko, O.| Mikirin, I.| Gordey, I.| Pavlyukovich, O.| Pavlov, S.| Pavlyukovich, N.| Amirgaliyeva, S.| Kalizhanova, A.| Aitkulov, Z.
Year	2024
Abstract in Scopus	https://www.scopus.com/record/display.url?eid=2-s2.0-85187465394&origin=resultslist
DOI	10.3390/s24051589

Title	Infectious Disease Epidemics in Kazakhstan in the 1900–1930s and Their Impact on Healthcare Development
Authors	Kokebayeva, G.| Shildebai, S.| Smanova, A.
Year	2024
Abstract in Scopus	https://www.scopus.com/record/display.url?eid=2-s2.0-85198171414&origin=resultslist
DOI	10.47836/pjssh.32.2.17

Title	Organization of a system of psychological profiling and correction of suicidal behavior of adolescents

Authors	Boleyev, T.| Topanova, G.| Turdaliyeva, S.| Uskenbayeva, J.| Zharkinbayeva, D.
Year	2024
Abstract in Scopus	https://www.scopus.com/record/display.url?eid=2-s2.0-85196903903&origin=resultslist
DOI	10.54919/physics/55.2024.108lf1

Title	3D polarimetry of laser induced speckle fields for phase detection thyroid gland polycrystalline structure and traumatic necrosis of human internal organs
Authors	Ushenko, O.| Bilookyi, O.| Ushenko, Y.| Dubolazov, A.| Soltys, I.| Olar, O.| Mikirin, I.| Skliarchuk, V.| Salega, O.| Karas, O.| Rakhimbayeva, G.| Rogovyi, Y.| Kozan, N.| Zheng, J.| Alimbayeva, Z.| Omiotek, Z.
Year	2024
Abstract in Scopus	https://www.scopus.com/record/display.url?eid=2-s2.0-85213945163&origin=resultslist
DOI	10.1117/12.3054868