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## **Bioinformatics Opportunities in Central Asia**

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### **Abstract**

At present Central Asia is severely under-represented in bioinformatics related to biomedical and environmental research, data sampling (e.g. population samples) and scientists. There are few institutions with the ability to build research capacity and even fewer with demonstrated local excellence and expertise. Kazakhstan is a middle-income country which joined the Bologna Process in 2010 and has educational and socio-economic policies in place to develop new strategies for improving human health, biotechnology, agricultural and economic development through innovation (e.g. Kazakhstan Strategy 2050; <http://strategy2050.kz/en/>). Institutions such as Nazarbayev University (<http://www.nu.edu.kz/>), established in 2010, which aims to integrate education, research and clinical practice started programs in fundamental and applied genomics, translational medicine and biomedical engineering in context of local needs (e.g. *M. tuberculosis* genomics and susceptibility, genetic architecture of local population, etc.), and seeding of bioinformatics capabilities across the region for the long term.

Asia-Pacific Bioinformatics Network (APBioNet; <http://www.apbionet.org/>) seeks to strengthen regional bioinformatics capacity building through training workshops in key bioinformatic areas. Since 2012, training and educational activities are coordinated with Global Organization for Bioinformatics Learning, Education and Training (GOBLET; <http://mygoblet.org>) of which APBioNet is a founding member. Nazarbayev University which initiated strategies and programs to integrate research and teaching in natural sciences and technologies, biomedicine and data analytics is seen by APBioNet as a first-choice partner in Central Asia to promote regional bioinformatics training and assist in developing advanced bioinformatics research capacities.