## STUDY OF THE INFLUENCE OF UNUTILIZED PESTICIDES RESIDUES ON HEALTH AND THE GENETIC STATUS OF POPULATION OF THE ALMATY REGION

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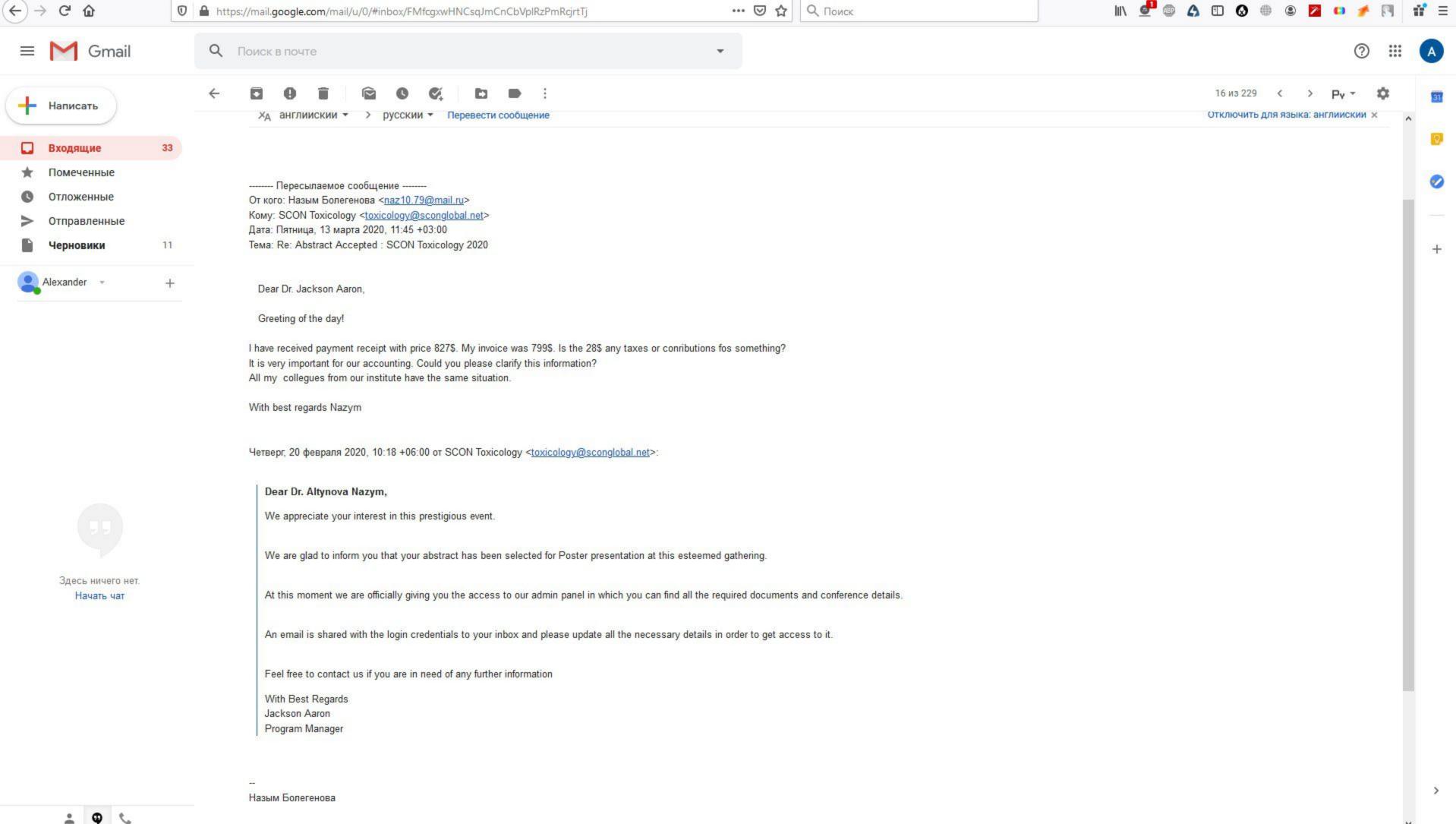
Environmental pollution is the reason for the increase in rate of mutation process and in genetic load in human populations, as evidenced by the increase in the number of hereditary and multifactorial diseases, congenital pathologies and malformations. In Kazakhstan, the problem of obsolete, unusable pesticides is very relevant. In the territory of the Almaty region there are 64 now abandoned storages of pesticides that pollute the environment for many years.

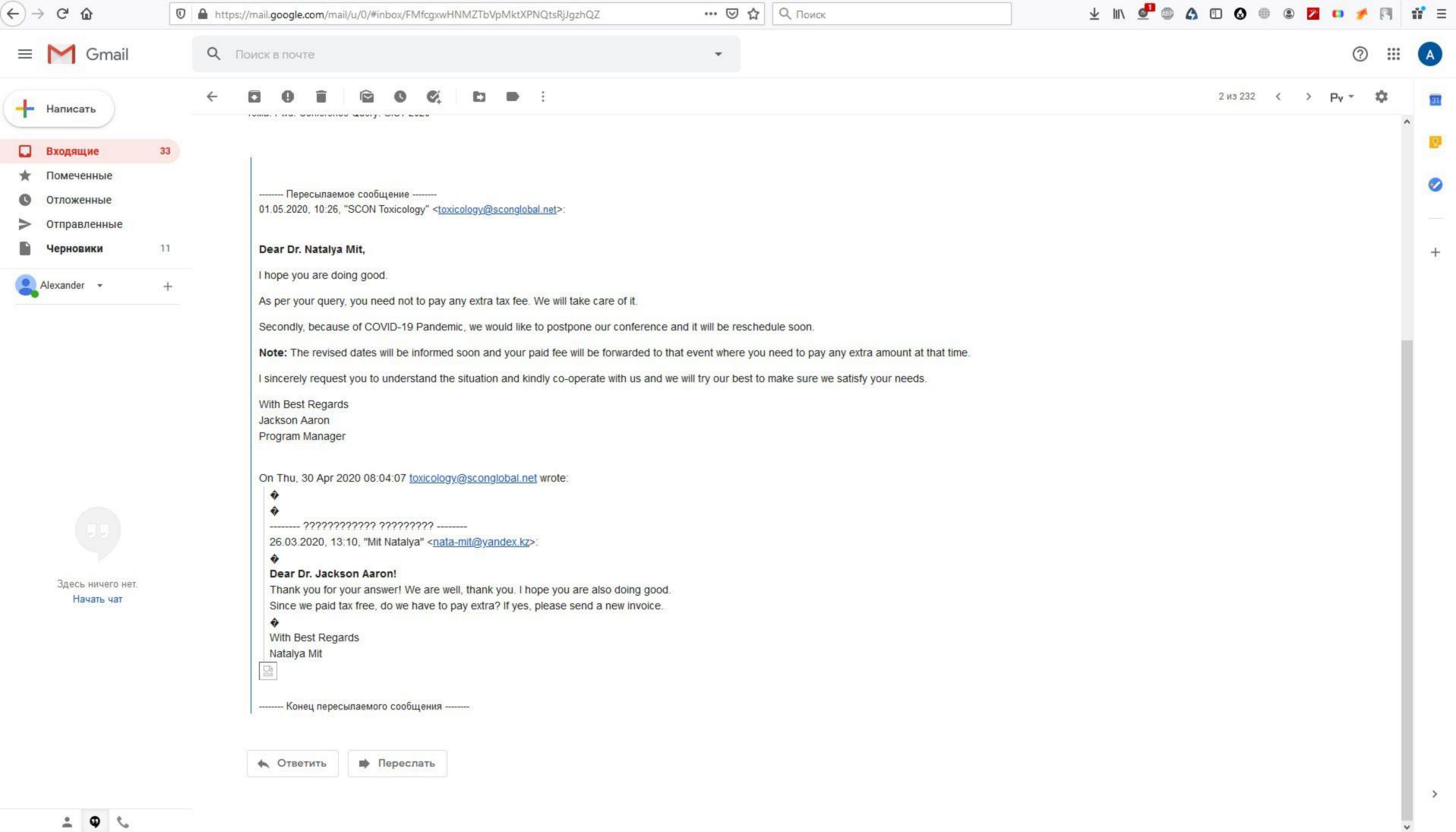
The aim of our research is to study the effect of non-utilized obsolete pesticides on the health and genetic status of the population using the example of residents of the Talgar district of Almaty region. In our studies, the determination of pesticides in foods of plant (fruit, vegetables) and animal (meat, milk, honey) origin was carried out in 5 villages: Beskainar, Kyzylkairat, Amangeldy, Belbulak, Taukaraturyk (control). The monitoring revealed food products and pesticide groups that accumulate in high and unacceptably high concentrations. It was found that the main pollutants are pesticides of the DDT, HCH and aldrin groups. For fruits, an unacceptably high accumulation of pesticides is observed mainly in pears, for vegetables - in cucumbers, and for products of animal origin - in meat. Cytogenetic analysis showed a reliably high level of chromosomal aberrations for residents of Belbulak ( $3.00 \pm 0.33\%$ ) and Kyzylkairat  $(2.84 \pm 0.37\%)$ , increased for residents of Amangeldy  $(1.96 \pm 0.2\% 7)$  and Beskainar  $(1.88 \pm 0.37\%)$ 0.23%) and low - for residents of Taukaraturyk (0.85  $\pm$  0.12%). The results of the research showed that for all groups of studied pesticides from plant products, the strongest direct correlation between the frequency of aberrations and the accumulation of pesticides in plant products is typical of pears, tomatoes and cucumbers. The analysis of the general level of health and the frequency of chromosomal aberrations showed the presence of a correlation interdependence of these indicators. For residents of villages living near places of pesticidal pollution, a high level of health was observed for 2%, medium - for 25.5% and low - for 72.5% of residents. The results will allow to develop the necessary measures for the practice of using pesticides, food safety control and improving the health status of the population.

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Paid Date: 05-03-2020

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