Synthesis of anti-tuberculosis drugs in a microwave flow reactor

<u>Azamat Yedrissov¹</u>, Dmitriy Khrustalev², Anastassiya Khrustaleva², Marlen Mustafin²

¹Nazarbayev University, 010000 Nur-Sultan, Kazakhstan ²Medical University of Karaganda, 100000, Karaganda, Kazakhstan *E-mail: aedrisov@gmail.com, **E-mail: khrustalev@bk.ru

According to the World Health Organization, one in every third person in the world is infected with Koch's bacillus. About 10 million people contract tuberculosis every year and about 1 million die from it. Therefore, the development of efficient and cost-effective ways to produce antituberculosis drugs remains an urgent task. In our previous studies, highly efficient methods for the synthesis of such high-demand anti-tuberculosis drugs as Metazide and Ftivazide in microwave bath reactors have been developed. For the development of an industrial method for the production of Metazid and Ftivazid, we have developed an advanced technology for their synthesis in a microwave flow reactor.





The use of a microwave flow reactor has demonstrated the efficiency and prospects of industrialscale production of Metazide and Ftivazide.

Acknowledgement

The study was conducted as part of the grant "Development of full synthesis of Aciclovir and Abacavir under microwave activation conditions" (2022). Karaganda Medical University. Scientific advisor- D.Sc. (Chemistry) Khrustalev D.P.