

## REVIEW OF FOREIGN SCIENTIFIC CONSULTANT

on the doctoral dissertation of Oralkhan Zhibek on the topic "Oral Health Status and Adverse Pregnancy Outcomes", submitted for defense in the specialty 8D10102 - Medicine

I am pleased to provide this review for Oralkhan Zhibek, who pursued her Doctorate in Medicine from 2020 to 2023 at the Faculty of Health Policy and Organization, Kazakh National University named after Al-Farabi. During her doctoral studies, she conducted in-depth research on the topic "Oral Health Status and Adverse Pregnancy Outcomes" and successfully fulfilled all requirements of the doctoral program.

Her dissertation is a comprehensive and independent research work exploring the relationship between oral health status and adverse pregnancy outcomes. This study is of great relevance to both modern obstetrics and dentistry, as maternal oral health is increasingly recognized as a significant factor influencing pregnancy and fetal development. In particular, periodontal disease has been identified as a potential risk factor for preterm birth and low birth weight. The dissertation thoroughly examines morphological and functional changes in the oral cavity under the influence of systemic maternal conditions, providing valuable insights into the mechanisms through which infections and inflammatory processes contribute to adverse pregnancy outcomes. A key strength of Oralkhan Zhibek's research is its multidisciplinary approach, incorporating social, clinical, and microbiological analyses. She effectively utilized clinical diagnostics, biochemical markers, and microbiological studies to assess the impact of oral infections on maternal and fetal health and successfully expanded existing knowledge on the subject by identifying new aspects of the interaction between oral microbiota and placental function.

As part of her academic training, she completed a scientific internship at Semmelweis University, from October 29, 2022, to December 28, 2022. In a laboratory setting, she learned and applied DNA extraction and PCR techniques to detect *Fusobacterium nucleatum* in human placental tissue, following her research protocol. Throughout her internship, she demonstrated discipline, punctuality, and responsibility in all assigned tasks, strictly adhering to the schedule.

Oralkhan Zhibek demonstrated a serious and diligent approach to clinical research, carefully analyzing observation results and conducting an extensive review of scientific literature. She actively presented her findings and independently authored several articles, which were published in highly rated international medical journals. Her dissertation research resulted in a total of five publications: Three publications in peer-

reviewed journals recommended by the Committee for Quality Assurance in Education and Science of the Ministry of Science and Higher Education of the Republic of Kazakhstan. Two publications in high-impact journals indexed in Scopus/Web of Science. Two abstract presented in the proceedings of international congresses.

Oralkhan Zhibek's commitment to her research, her strong analytical skills, and her ability to work independently and methodically make her an exceptional candidate in the field of medical science. Her work not only enriches our understanding of maternal and fetal health but also holds practical implications for improving healthcare strategies.

I have no doubt that Oralkhan Zhibek will continue to make significant contributions to medical research and clinical practice. I strongly support her future endeavors and highly recommend her for any academic or professional opportunities in her field.

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