



O'zbekiston Respublikasi Oliy ta'lim, fan va innovatsiyalar vazirligi

Toshkent kimyo-texnologiya instituti

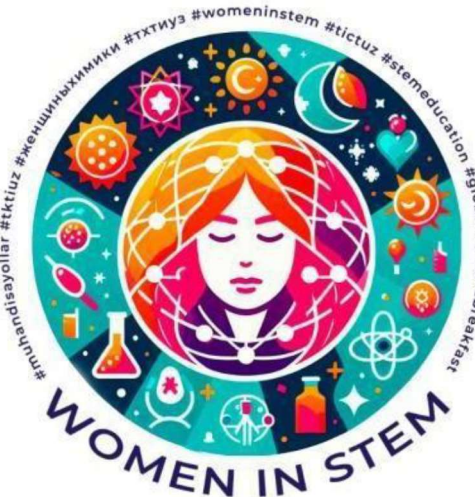
"O'zkimyosanoat" Aksiyadorlik Jamiyati

O'zbekiston Respublikasi Oila va xotin-qizlar qo'mitasi

Oila va gender ilmiy-tadqiqot instituti

Integral Universiteti (Hindiston)

"Neofit Rilski" Janubiy-G'arbiy Universiteti (Bolgariya)



"WOMEN IN STEM"

**XALQARO FORUM
ILMIY ISHLAR TO'PLAMI
BOOK OF PROCEEDINGS**

TOSHKENT, 2026-yil, 14-17-FEVRAL



“Women in STEM-2026” ilmiy haftaligi “Innovator ayollar: Ko‘plab ovoz — bitta kelajak” xalqaro ilmiy forumi materiallari. Maqolalar to‘plami. –Toshkent, TKTI, 2026, 572 b. <https://doi.org/10.5281/zenodo.18826650>

Ushbu to‘plam “11-fevral – BMTning fandagi ayol va qizlar xalqaro kuni” nishonlash doirasida Toshkent kimyo-texnologiya instituti tomonidan 2026 yil 14-17 fevral kunlari tashkil etilgan “Women in STEM-2026” ilmiy haftaligi va “Innovator ayollar: Ko‘plab ovoz — bitta kelajak” mavzusidagi xalqaro ilmiy forumi materiallaridan tashkil topgan.

To‘plam materiallaridan mutaxassis, o‘qituvchi, tadqiqotchi hamda magistratura va bakalavriyat talabari foydalanishi mumkin.

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This collection consists of materials of the international scientific forum “Women-Innovators: Many voices — one future”, organized by the Tashkent Institute of Chemical Technology on February 14-17, 2026, within the framework of scientific week “Women in STEM-2026” and celebration of United Nations “February 11 - International Day of Women and Girls in Science”.

The Book of proceedings can be used by specialists, teachers, researchers, as well as master's and bachelor's degree students.

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PURINE DERIVATIVES IN MEDICINAL CHEMISTRY: DESIGN, SYNTHESIS, AND APPLICATION IN CANCER TREATMENT

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Abstract

Many often-used anti-cancer medications are based on heterocyclic compounds, which are fundamental to modern medicinal chemistry. Among these are purine derivatives, which are becoming well-known because of their structural resemblance to natural nucleobases. This likeness lets them interface with biological targets promoting cancer development. Purine-based substances have shown great anticancer potential in studies on breast cancer by affecting key cellular processes including signal transduction, cell cycle control, programmed cell death, and neovascularization.

By precisely altering the purine structure at sites such as C-6, N-9, and C-8, new derivatives and hybrid compounds with superior activity, selectivity, and suitable drug-like properties have been created.

These substances finally restrict the development and spread of tumor cells by targeting vital molecular targets including heat shock proteins, cyclin-dependent kinases, and enzymes engaged in purine synthesis. Several purine derivatives in particular have shown amazing efficacy against aggressive and therapy-resistant types of breast cancer including triple-negative breast cancer.

Keywords: Heterocyclic compounds, Purine derivatives, Breast cancer, Anticancer agents, Medicinal chemistry, Targeted therapy.

- Naziya Anjum**
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