and others, pumpkin flour helps to increase the biological value of the dish. It enriches the dough with nutrients and makes the lemon tart even more delicious and nutritious.

Pumpkin flour has a wide range of beneficial properties, including anti-allergic, immune-stimulating, tonic, anti-cancer, bactericidal, anti-inflammatory and anti-parasitic effects. It is a significant source of complete and easily digestible vegetable protein containing many essential and non-essential amino acids necessary for maintaining a strong immune system and healthy body functions. Pumpkin flour also speeds up metabolism, stabilizes blood sugar levels and helps to prevent diabetes.

Fruit or vegetable flour is added to dishes at the amount of 5-20%, thus replacing a part of the recipe component of the dish with such flour. This results in the reduction of the calorie content of food and increase in its biological value. The addition of fruit and vegetable flour to culinary products and dishes will encourage the development of a significant number of new recipes [1].

Thus, based on the analysis, it can be determined that pumpkin flour has the advantages for use in tart dough. It not only enriches the dish with nutrients, but also improves its taste and nutritional value, making it more attractive to consumers.

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SEARCH FOR NEW EGFR INHIBITORS AMONG SUBSTITUTED PTERIDINE DERIVATIVES AS POTENTIAL ANTITUMOR AGENTS USING AFFINITY CALCULATIONS

Among the promising low-molecular-weight anticancer agents there is a group of heterocyclic compounds that contain a wide variety of substitutions with diverse biological roles. The compounds based on pteridine have been reported to perform various biological actions, such as anti-inflammatory activity and analgesic effect, as well as to play a potent role as inhibitors of the hepatitis virus,

immunosuppressive effect, and anti-nematode activity, glyoxylase inhibitory and antimicrobial activity [1].

J. Lin *et al.* synthesized a series of novel EGFR T790M mutant-targeted inhibitors and analyzed the binding model of 6,7-dioxo-6,7-dihydropyridine scaffold and its hydrophobic modifications at N5-position. Among the group of analyzed compounds, the most representative compound with the 5-isopropyl group at N-5 moiety was identified [2].

Thus, a series of 6,7-disubstituted-2-oxo-(imino-, thioxo-)-2,3-dihydropyridine-4(1H)-*ones* (**1-19**) has been selected and studied on biological targets. The results of the affinity calculations of the compounds were compared with the results of the previously calculated data by W. Zhou *et al* [3] for EGFR T790M (PDB code 3IKA)-bioactive WZ4002 compound (Table 1). The results show that the compound **8** has the highest affinity for EGFR T790M. Introduction of F- to the heterocyclic fragments (**1, 2, 8**) to *para*- and *ortho*-positions of the benzene ring leads to a significant increase in their affinity for the corresponding protein indicating the need for further investigation of these compounds concerning their physicochemical properties.

Table 1. Affinity of compounds 1-19 to binding sites of EGFR T790M (3IKA), kcal/mol

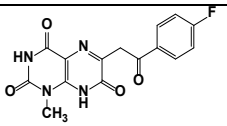
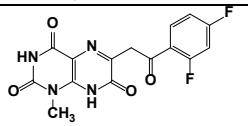
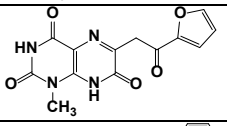
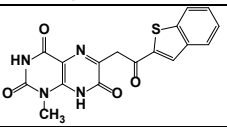
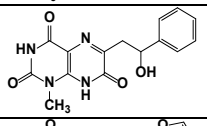
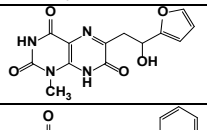
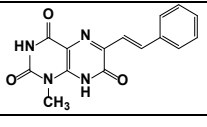
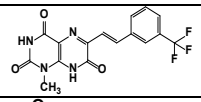
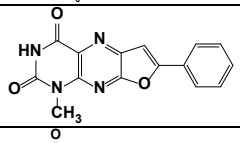
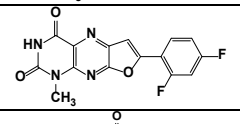
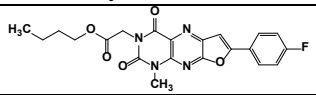
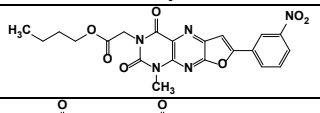
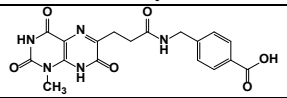
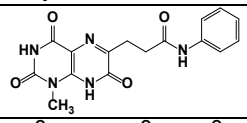
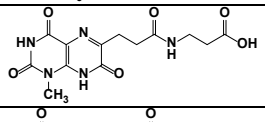
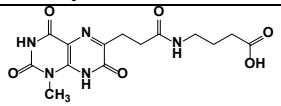
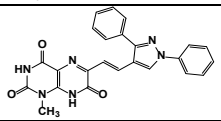
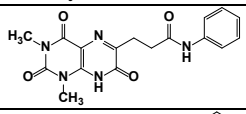
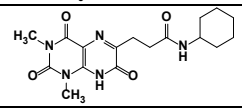
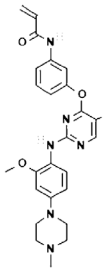
Compound	Code	Structure	Affinity (kcal/mol) for EGFR T790M, PDB ID – 3IKA
1	1K-29		**-7.8**
2	1K-31		**-7.6**
3	1K-121		-7.0
4	1K-123		**-7.5**
5	1K-194		-7.1
6	1K-195		-7.0
7	1K-97		-7.3

Table 1 (continuation)

Compound	Code	Structure	Affinity (kcal/mol) for EGFR T790M, PDB ID – 3IKA
8	1K-96		**-8.3**
9	1K-90		**-7.7**
10	1K-88		**-7.6**
11	1K-80		**-7.8**
12	1K-61B		**-7.8**
13	1K-61A		**-7.7**
14	1K-45		-7.2
15	1K-49		-6.0
16	1K-33		-5.9
17	1K-24		-7.6
18	1K-24A		-7.7
19	1K-23		-7.7
WZ4002			**-8.3**

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MODERN CONCEPTS AND TRENDS OF CHEMICAL APPROACHES TO ENVIRONMENTAL ISSUES

In recent years there have appeared certain approaches aimed at reducing environmental pollution – "green" analytical chemistry. Its goal is the application of analytical procedures that produce less hazardous waste, are safer to use, and are more environmentally friendly.

Analytical methods are based on chemical reactions and electrochemical processes, as well as on interaction with all forms of energy (in particular, radiation), which give unambiguous signals directly from the place where something important for the chemist happens in the volume or on the surface: solid substance, liquid or gas. As is known, the analytical procedure for obtaining data consists of several stages: field sampling and sample processing, quartification, preparation and separation of laboratory samples, detection and identification [1]. All the above-mentioned must be done with high metrological quality, which means ensuring the above-mentioned parameters with the results of measurements. Whenever analytical methods are improved or replaced, the goal should be to improve the metrological quality of the procedure. Applying the principles of green chemistry to analytical procedures almost always leads to an improvement in the quality of the method – an increase in value and importance. Besides this, we can witness [4]:

- reduction of the number of solvents and other compounds in the process, which reduces the possible negative impact on the analyte;
- reduction of the stages in the process of sample preparation or separation, which reduces the sources of measurement errors and uncertainties;
- miniaturization and energy savings, which lead to a more reliable and simple analytical process.