

RNA therapeutic OT101 inhibits the immunosuppressive effects of transforming growth factor beta 2, subsequently resulting in clinically relevant single-agent activity. At the same time, several DEC procedures and device-related complications are being identified that require risk mitigation strategies to determine how to proceed in this area of practice.

Conclusion. Personalized medicine or precision medicine in oncology is a new approach to the treatment and prevention of tumors, taking into account inter and intratumorally genetic variability, the tumor (immunological) environment, as well as lifestyle. and patient morbidity. each individual tumor. A person diagnosed with cancer, personalized medicine has the potential to adapt treatment to tumor oncogenic factors and modulate the tumor immune environment. Additionally, Personalized medicine strives to optimize tumor response, taking into account treatment-related toxicities for each patient. In this way, optimization of the tumor response is combined with the preservation of organic functions and therefore quality of life. In addition, this ultimately guarantees better patient care, which is obviously the desired objective.

ANTIMICROBIAL ACTIVITY OF THE RAW MATERIALS OF THE MEDICINAL PLANT “MOMORDICA CHARANTIA L” AGAINST HELICOBACTER PYLORI

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Plants have been used as medicines since ancient times. Nowadays, this type of therapy is beginning to develop more and more actively, which has a number of advantages over chemotherapy. Herbal medicines with certain pharmacological properties have a milder effect on the human body than their chemical analogues, are well absorbed and practically non-toxic. One of the promising plants with a wide range of pharmacological activity is *Momordica charantia* L.

The plant *Momordica charantia* (*Momordica charantia* L.) from the pumpkin family (Cucurbitaceae) is widespread in tropical and subtropical regions of Asia, Amazonia, East Africa and the Caribbean. It is a vine with yellow-orange fruits containing seeds. Various species of this plant are cultivated because of their edible properties. In addition, plants of this family have many pharmacological properties, such as: antimicrobial, antidiabetic, anthelmintic, antimalarial, antiviral, anticancer, immunostimulating and others. It is also known to use the components in the treatment of skin problems such as eczema, acne, hemorrhoids and other diseases.

The authors are attracted by the antihelicobacteric activity of the plant. The microorganism *Helicobacter pylori* is a spiral-shaped gram-negative bacterium, considered a first-class carcinogen adapted to the acidic environment of the human

stomach. Many diseases, such as stomach ulcers, gastritis, duodenitis, stomach cancer and possibly some cases of gastric lymphoma, are associated with infection with this bacterium. Despite the fact that in most cases (up to 90%) *H. pylori* carriage is asymptomatic, there is a direct link between the infection and the listed diseases.

The role of *H. pylori* in the development of diseases of the stomach and intestines was initially not recognized by the medical community due to the belief that no microorganism can survive in the acidic environment of the stomach. However, subsequent studies, including experiments involving Barry Marshall, have convincingly proved the link between the *H. pylori* bacterium and the development of gastritis. The effectiveness of antibiotics in the treatment of gastritis and ulcers has also been shown, which confirms the bacterial cause of the disease.

Studies of the antimicrobial activity of the medicinal plant *Momordica charantia* have been conducted by various authors. The average antimicrobial activity of some parts of the plant has been proven. Pharmacologically active components were detected in different parts of the plant: fruits, seeds, leaves.

Extracts and fractions of *Momordica* leaves showed activity against a wide range of bacteria. According to research by Omoregbe and colleagues (1996), extracts of *Momordica* leaves in various solvents (water, ethanol, methanol) showed activity against various bacteria, including *E. coli*, *Salmonella*, *Shigella* and *Mycobacterium tuberculosis*.

Chloroform and ethyl acetate fractions have also shown good results against some bacteria. Interestingly, chemical analysis showed similarities in the composition of secondary metabolites in extracts of fresh and dry leaves. These metabolites have various biological properties, including antimicrobial ones.

Chemical analysis showed the presence of various secondary metabolites in the plant, such as steroids, flavonoids, alkaloids and tannins with antimicrobial activity.

The results of some authors have shown the synergistic potential of extracts and fractions, which may be related to their modulating activity. In many cases, a synergistic effect is observed when using fresh leaves with gentamicin or kanamycin against *S. aureus*, as well as methanol fractions with any aminoglycosides against *E. coli*. This synergistic effect is explained by the toxic effect on the membrane of bacteria caused by the lipophilic structure of the membrane and the antimicrobial effect of essential oils and extracts. Such results suggest the presence of synergistic activity in the treatment of *Helicobacter pylori* infection, which requires study.

Based on the studies of Gürbüz I. (2000) and co-authors, it was shown that *M. charantia* L. fruit extract has anti-ulcer activity. And Satishsekar et al. (2019) reported that essential oils prevent the formation of ulcers of the gastric mucosa in rats. The author of Abu Bakar (2021) proved that the methanol extract of *Momordica charantia* L. fruits is effective in accelerating the healing of gastric ulcers caused by acetic acid. Methanol extract of the fruit also reduced the development of gastric ulcers in rats, stomach ulcers caused by ethanol, stomach ulcers caused by indomethacin, stomach ulcers caused by stress, and duodenal ulcers caused by cysteamine. Thus, these studies have proven that fruit extracts and essential oils of the plant have anti-ulcer potential

by suppressing free radicals, enhancing prostaglandin synthesis and mucus secretion, which contributes to the healing process of stomach ulcers.

In our study, the goal is to develop another dosage form based on the localized medicinal plant *Momordica charantia* L. cultivated in the Bukhara region of the Republic of Uzbekistan. To obtain the necessary information on the study of antimicrobial and antihelicobacteric activity of medicinal plants from various types of raw materials and chemical components, an analysis of the scientific literature on the research topic was carried out and further directions of our research were identified.

MYCOBACTERIUM MARINUM IN FISH AND HUMANS

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Fish mycobacteriosis is a chronic progressive disease caused by ubiquitous acid-fast bacilli, identified as *Nontuberculous mycobacteria* (NTM). NTM could be classified into slowly and rapidly growing mycobacteria, where *Mycobacterium marinum* is affiliated to the first class. *Mycobacterium marinum*, *M. fortuitum* and *M. chelonae* are among the most identified NTM mycobacterial species associated with fish mycobacteriosis. Piscine mycobacteriosis is a common disease of marine, brackish and freshwater fish infecting more than 200 species of freshwater and marine fish in a vast region extending from the subarctic zone to the tropical one. This disease also infects tropical aquarium fish and is considered a major cause of morbidity and mortality in free-living fish. *Mycobacterium marinum* is an environmental, aerobic waterborne bacterium, belonging to photochromogenic Group I non-tuberculous *Mycobacteria* according to Runyon's classification. *M. marinum* is one of the most common atypical *Mycobacteria* that cause human opportunistic infection. It is considered as the most important fish pathogen, associated with multiple symptoms, e.g. uncoordinated swimming, abdominal swelling, loss of weight, skin ulceration, white nodule formation as granuloma in liver, kidney, spleen in both fresh and marine water fish. *M. marinum* is an ubiquitous waterborne bacterium with an optimal growth temperature around 30°C, which causes the infection of bats, fish, mice and amphibians after its inoculation. Experimental infection of mice with *M. marinum* at a temperature below 30°C developed pulmonary lesions, but not at 34°C. *M. marinum* is prevalent all over the world in marine water, brackish water, and fresh water and naturally infects more than 150 species of fish, frog, freshwater eels and oyster. In Africa, *M. marinum* has been isolated from normal humans' skin and also from soil. It grows on Lowenstein-Jensen media at 30 °C within duration of 2-3 weeks.

Mycobacterium sp. have been identified as one of the most important microorganisms causing morbidity and mortality in cultivated and wild fishes all over the world. It has been recorded in fresh water and marine fish in the tropical and subarctic