

GenBank and antimicrobial resistance databases, as well as the BLAST program, were used in the research.

Results obtained detected that genome of *L.acidophilus* strains contained a gene of bile acid resistance and genes involved in the processes of bacterial adhesion to the intestinal epithelium. In *L.rhamnosus* strains only the gene encoding resistance to bile acid salts was detected. Besides several antibiotic resistance genes were defined in *L.rhamnosus* genome. Therefore, based on the identified lactobacilli genomes peculiarities *L.acidophilus* strains can be promising for their use in the biotechnological industry, in particular for the production of probiotic preparations and in food industry.

Economic research of the sports nutrition market in the world and Morocco

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Sports nutrition (SN) means products and drinks that include dietary supplements - L-carnitine, vitamins, minerals, fats, carbohydrates and proteins, due to which their consumption increases performance several times.

To conduct an analysis of the development trends of the SN market in the Kingdom of Morocco. The object of analysis is the world market of SN. Subject of the study: literary sources, sites on the topic under analysis in the world and Morocco, key players of sports nutrition in the country. Methods of analysis: retrospective, systematic analysis, comparison.

According to «Zion Market Research», it follows that during the years 2016-2020, a decrease in the growth of consumption of SN was recorded by 8.41 billion US dollars. This is due to the outbreak of COVID-19, which has adversely affected the growth and development of the SN market worldwide. Thanks to the stabilization of the spread of the coronavirus infection, by 2022 the market turnover is forecast to increase by 25.31 billion dollars.

It has been established that in the Kingdom of Morocco, American-made SN prevails. In 2012, the American company «Sport One Nutrition», USA, opened the first store for athletes in Casablanca. You can sell sports nutrition in the country on the basis of the following documents: permission from the National Food Safety Authority (Royaume de Maroc Office National de Securite des Produits Alimentaries (ONSSA)) and permission from the Ministry of Health of the Kingdom of Morocco (Ministère de la Santé du Royaume du Maroc).

Today, the main channels for the sale of SN in the country include:

- specialty shops (ESNAPHARM Casablanca – MAROC, FOOD GROUP TRADING-FGT Casablanca – MAROC, DISTRIMAR Casablanca – MAROC, DISTRIBIO. Casablanca – MAROC);
- fitness centers (Wellness Centers – Rabat, Wellness Centers – Meknès);
- large retail and mass merchandisers;
- pharmacies (Pharmacie.ma, Mapara.ma, Jumia.ma).
- online shopping: Zoneprot, FitnessBoutique, Prodiét Nutrition
- internet sites: Jumia, Hmall, GoProt, PRODIET.

An analysis of the assortment of the PRODIET nutrition.ma online store revealed that SN for athletes from Sport One Nutrition, USA is quite expensive. For example, a protein program aimed at body transformation (fat burning and muscle building) for 6 months costs Dirhams 2,000 per month (\$199.27). In this connection, in order to attract new customers, Sport One Nutrition began to reduce prices. So today, O limp Sport Nutrition Creatine Monohydrate Powder, 550g is priced from Dirhams 350 (\$34.87) and protein bars (Protein bar Optimum Nutrition Protein Cake Bites 62g) from Dirhams 30 (\$2.99).

After analyzing the average pricing policy in different countries on 01.11.2022 and their capitals for SN, it was found that proteins are the most expensive in the Kingdom of Morocco, in the capital Rabat (\$86.48) and Ukraine, in the capital Kiev (\$73.35), and the cheapest capital in Germany is Berlin (\$60.88). Gainers are the cheapest in the US in the capital New York (\$28.87), and the most expensive in

Morocco, in the capital Rabat (\$48.02). This trend can be seen among other types of sports nutrition: amino acids, creatine, BCAA, fat burner and L-carnitine.

It is predicted that by 2022 the market turnover will increase by 25.31 billion US dollars. After analyzing the average pricing policy in different countries on 01.11.2022, and their capitals, it should be noted that in the Kingdom of Morocco in the city of Rabat, the highest prices for all types of joint ventures were recorded compared to European countries.

**The manifestation of characteristics of problems and achievements issues
of osteogenesis stimulation during complex treatment
of chronic periodontitis diseases**

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Introduction: Observation of the regeneration of damaged human bone has a long history. There are many treatments or methods for regulating and stimulating reparative osteogenesis, but the search for their perfection continues. In dentistry, full-fledged treatment of such diseases as periodontitis and periodontitis is very relevant, because solving the mentioned problems goes beyond the scope of stomatology. Periodontitis and periodontitis are the most common among dental diseases in the population and they may have both local and general complications.