

MAOLAC Manifesto

For many years the biomed industry has "frozen on its guard" in regards to technological innovation and the era has come when we will see substantial breakthroughs in this field as well, the wonder and wonder of the most useful tool comes precisely from the high-tech world which is experiencing a substantial boom precisely because of the maturity of AI tools and now it's our turn.

MAOLAC is a food tech company that uses tools of bioinformatics and computational biology to produce dedicated target-protein formulas with a wide range of health capabilities as a basis for preventive nutrition.

In the world of biological drugs, there is an understanding that the higher the structural and molecular (sequential) similarity of a protein to the original protein in humans - that is, the activity and biological availability of that protein will increase.

MAOLAC decided to apply this understanding to find proteins with 80-95% identity to human proteins in natural sources (plants, mushrooms, beef colostrum, etc.).

Using the computational platform we developed, we don't only identify a dataset of proteins with a high level of similarity, we also practically "predict" who are the key proteins in metabolic pathways in the human body. Our computerized prediction system studies all the proteins participating in these metabolic/immunological pathways by a broad literature survey and search according to keywords (AI+ML+NLP). Doing so, we can produce new protein mixtures, which will be active and precise for any desired effect, such as anti-inflammation, gut health, and many more.

In MAOLAC, we decided to develop a product to improve and optimize the functioning of the digestive system of people, including those suffering from IBD/IBS (chronic diseases of the digestive system).

The next step is to find those key proteins in a data set of existing materials, sourced from nature (plant/animal-based) while comparing sequentially and structurally those proteins according to a controlled threshold.

Our process makes use of cleaning, separation, and enrichment of these proteins from the selected raw material. Thus, concentrating them and creating specific batches and combinations depending on the need.

The final mixture is then coated in the form of a "nanoparticle", as part of MAOLAC's technology to increase the bioavailability and absorption of these proteins when administered orally (implemented in everyday products such as food, drinks, nutritional supplements, etc.)

Due to their precision and targeting properties, our new mixtures have a variety of advantages:

1. Activity at a relatively low and practical daily dose of 250-500 mg, therefore easily submittable to existing products.
2. There is no effect on the taste, smell, texture, or color of the final food product. Allowing the brands to retain their products' signature characteristics, whilst adding them new beneficial properties. (Snacks, drinks, yogurts, ice creams, pastries, etc.)
3. Powered by AI, the mixtures have increased and accurate activity, focusing on desired organs\metabolic pathways.



4. Our clinically tested absorption systems' mechanism increases absorption and stability of the proteins in food, allowing them to reach their target with ease.
5. The simplicity of this 100% natural, non-chemical purification process makes it low-cost and affordable, especially in large scale.