

Fifth Decade of Biotechnology in Croatia

The beginning of the long-term development of modern biotechnology is connected with the establishment of Biotechnological Studies at the Faculty of Technology of the University of Zagreb in 1956. Since 1980, the Studies have been functioning as the independent Faculty of Food Science and Biotechnology. It represents the core of the higher education in the field of biotechnical sciences and encompasses biotechnology and food processing technologies with all associated branches and disciplines.

Many industrially developed countries realised much later that biotechnology is equally a challenge for scientists, and a driving force for the economy, and directed their strategic development towards biotechnology based a production. Suffice to say that for certain products within the field of biomedicine, the value of products exceeds US\$10 billion a year and at the same time, the annual rate of growth is higher than 12%. All the preparations that some countries have undertaken in the previous period have resulted in some changes today and in an increase in technological development. At this point in time, Japan and the USA are well ahead of Europe in general, because European countries have neglected applied research and a search for achievements in fundamental sciences, and have arrived at a situation in which their representatives at the Assembly of the European Federation for Biotechnology in Bruxelles in 1999 could state: "*The scientists in Europe know how to get a scientific result from a EURO, but they do not know how to get a EURO from a scientific result*". It must be mentioned here that the Croatian Society for Biotechnology has been a member of the European Federation for Biotechnology since 1990.

When we think of biotechnological production, we must take into consideration that in this area, throughout the world small and medium enterprises, supported by banks and governments, have contributed the most to the economies of their countries. Together with the development of new biotechnological products, an ancillary industry of consumables and packaging has developed. This increases the income from production and the number of vacancies for highly qualified professionals. Croatia is a country with significant human and material resources in this field. However, in the last decade it has turned into a trader of expensive biotechnological products and the question arises how the situation in the world market is reflected on Croatia.

It is clear that small countries can never become technologically independent or influence the world market. Therefore, it is necessary to find the advantages where the world will recognise Croatian results and create such preconditions that will make us worthy of its trust in assuming a share in the global market. Moreover, we must become aware that biotechnological research, and a part of production, rely on sea resources. It has already become mundane to talk about the Adriatic Sea and its advantages, but if we know that Switzerland has a programme of biotechnological research involving the sea, then it should motivate us to create adequate programmes on this very movement. There exists an active, long-term R&D programme in the field of biotechnology only in the pharmaceutical industry and biomedicine. There are many debates in Croatia on food production and the application of genetically modified organisms, and the Croatian Society for Biotechnology, in cooperation with Croatian Academy of Technical Sciences, have organised a forum entitled, *Biotechnology and Its Acceptance in Public*. Many experts and interested lay persons were present and in their lively discussion, they tackled many important issues, particularly possible problems which may arise of the implementation of biotechnology, which remains outside the legislative regulation and which, at the moment, has profit as its only goal.

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