

**THE ADDRESS OF THE DIRECTOR, PROF. DR. TAMARA LAH TURNŠEK,
ON THE OCCASION OF THE 50TH ANNIVERSARY OF THE NATIONAL INSTITUTE OF BIOLOGY
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“We are such stuff as dreams are made of”, said Shakespeare. I want to say “We are such stuff as knowledge is made of” ... Revelation is a thought caught on the fly, a butterfly caught in a net and realized in our scientific experiments. Then it gets established and becomes reality. We put knowledge into a context, like a stone into a mosaic, where it perhaps doesn't belong at all, and yet, sooner or later, it integrates where it really belongs.

Or it does not! Where will our thought belong tomorrow, when the fluid mosaic of our perception of everything that is around us and of what we do, will appear different – we do not know ...! Will we ever be given a chance to get to know a human being, the web of our neurons? Whether we will have this opportunity or not is very difficult to say, since one human life is too short for this. We are born and we die in a state of incomplete understanding. This is how I see my work. This is how we, scientists, see the living creatures and the surrounding nature – “biology”. Today's scientific film that we have created will show us more about this and in more depth, so enough for the moment!

Today requires even more from us, more than just philosophy or science – we have to spread this knowledge among people – it needs, in particular, to be **given to the young**, who are like fragile flowers seeking for the morning dew of knowledge – but they are also demanding, merciless, shameless and exhausting. The education of budding researchers, who we at NIB help to become equipped with new skills and knowledge, so that they will be prepared to deal with the challenges of society – human, environmental, economic, and so on – is an important mission of NIB. These new doctors of science, brought up in the context of our research, form the basis of a very much needed driving force of innovative development in Slovenia.

But today also demands that knowledge is turned into gold. Unfortunately, we are not alchemists, and there are many steps between knowledge and economic wellbeing that we cannot influence. There are many other elements and supporting systems which science and scientists themselves cannot do much about, but we can help build the steps up to a point where fusion between knowledge and technology can result in real success. But this cannot be achieved overnight.

When I look back into our **history** I realize that we used to be on the right path. We knew how to sacrifice and to seek higher goals. Science learnt how to walk and the growing industry of the 1970s – 1980s knew how to reach out for science. But those were other times; what happened then is too much for today's day of celebration.

Those were the times when NIB was born: the vision of **Prof. Miroslav Zei, a marine biologist** and the initiator of our Institute, has today become a reality. NIB was thus not born out of politics, unlike the majority of natural science and technical institutes founded prior to ours, and which are still getting stronger state support. NIB grew as a plant that grows on its own which has strengthened us for survival and for the days to come.

Today therefore, because of its strong scientific reputation and competent researchers, the new technological awareness is taking NIB as an important partner in development. Over the last decade in particular, we can recognise great improvements in the scientific work, with increasing and better publications, not to mention in the prestigious journal Nature, as well as in the development and application areas.

In the 1970s, the Marine Biology Station Piran (MBP) became part of the Institute, and their thinking has made a very considerable contribution to already existing research areas, such as plant physiology, entomology and, in particular, ecosystems research. Already, MBP has extended its exploratory research on marine biology into broader research on the coastal zone, development of its management, and exploitation of its resources. Today NIB is the most sought after partner of various ministerial sectors and agencies, in particular in the fields of environment, agriculture and health. We have become, and remain, an indispensable source of services and consultancy on the government's development planning policy, not to mention the much needed synchronisation with European policy and directives.

In the last decade we have succeeded, with the help of the Ministry of Higher Education, Science and Technology, in restructuring MBP, so that today, this is the most advanced infrastructure on and around the Adriatic Sea. We are expecting soon to achieve a new infrastructure in Ljubljana, based on the existing Biological Centre. It is only twenty years since we moved into the Centre, and yet it has already become too small, in particular due to the influx of young scientists joining NIB, including increasing numbers from other countries.

Here, I have to stress that biology is today one of the fastest growing disciplines and is involved in many of the new technologies, from classical biotechnology to nanotechnology and even space technology – although we are still insufficiently aware of this fact. We are trying to collaborate with the business sector, either by being partners in Centres of Excellence and the Centres of Competence, or by direct partnership with industries at home and abroad. We are trying...

In my opinion, however, it would be by far the best for us to establish our own spin-off companies. The first fruit of this strategy is the founding, on our 50th anniversary, the company Biosistemika. This company grew out of our own research on systems biology.

The subjects of our research are rather diversified – from bacteria to human beings and their environment. The bottom line is, however, the preservation of a healthy environment for a healthy humanity as the essential ground for the highest quality of life.

Let me stop here. I am inviting you to spend an enjoyable afternoon, in which you will feel biology and thus feel yourself as a living being that is only part of nature and nothing more – yet nothing less.

Tamara Lah Turnšek