**University of Ljubljana research achievements, 5 December 2016**

**Prof. Dr. Damijan Miklavčič, guest speaker**

Dear guests,

Today is a day for celebration; today we start a week of celebrations – University Week.

Days, such as today, are important for the University and all the researchers/educators who are employed at the University, but who collectively somewhat remind me of a zoo. Namely, when you visit the zoo, you see unusual animals and therefore observe and admire them with interest and zeal. Unfortunately, soon after leaving the zoo, you forget about the animals and will generally remain indifferent to the conditions they normally live in.

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Upon the presentation of the Zois and Puh Awards, the recipient of the Zois Award for Lifetime Achievements Branko Stanovnik concluded his speech by saying: “A word of criticism on the funding and organisation of science in Slovenia will be due some other time; today is a day for celebration.” Unfortunately, I disagree. Pointedly, the public only rarely listens to us, and I believe any criticism, aspirations and expectations should be clearly expressed when its attention is drawn – that is, when the public is proud of our success. This is why I will use this opportunity to that end. Perhaps we will be heard.

Conditions for research work in Slovenia and at the University are not exactly rosy, but we have nevertheless been successful. Award winners and recipients prove this every year with their research achievements and high-profile publications, one may say, in spite of relatively low funding and mostly poor and outdated infrastructure and support. We have succeeded by persevering, cooperating and being resourceful. Unfortunately, the social climate is not supportive, with education and science being a part of the much hated public sector and, hence, primarily another cost for the society/State (without bringing any obvious benefits). Furthermore, the University “became famous” in the media on account of excessive author’s fees and allowances for on-call duty. Although we console ourselves that individuals are to blame, everyone working at the University and the University as an institution was discredited, and I believe that we did not react to the accusations in the best and most timely manner. In fact, we should have reacted to such deviant practices long ago, before they proliferated, and in a manner preventing them. It seems that we have looked the other way much too often rather than pinpointing the irregularities and errors. I am afraid that we will be paying the price for such attitude for a long time – a few months ago, I read a scornful remark in response to a statement that the University could rank much higher on global university ranking lists than it does if it received more funding for research and work at the University. Such a scornful remark in one of the most notable Slovenian newspapers clearly shows that our demands for increased funding are not considered as legitimate.

Although much has been said about the University and university rankings, one needs to be aware that a team is made of individuals. We love identifying with individuals who stand out with their extraordinary achievements, such as today’s award winners or, last weekend, skier Ilka Štuhec and before her Tina Maze and Peter Prevc. And yet, behind every one of these individuals is an entire team. Nowadays, this is usually an interdisciplinary team. Interdisciplinarity is probably the only true answer to the most pressing social, economic and research issues or, as I prefer to see it, challenges. I am confident that interdisciplinarity also contributed to most, if not all, top research achievements of the University of Ljubljana in 2016. However, interdisciplinarity encounters institutional obstacles everywhere in the world, hence also in Slovenia and at the University itself. Interdisciplinarity trips over obstacles at all levels, from a chair to the senate. Many obstacles are encountered every step of the way: habilitations, selection of courses at a non-parent faculty... not to mention the maintenance and funding for the gardens managed by the Slovenian Research Agency, all with the State providing practically unchanged financing ratios across sciences and scientific disciplines for decades.

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Throughout the world, university researchers have a major advantage over their colleagues working at institutes due to their direct contact with students and, hence, an inexhaustible source of young minds eager to learn and, importantly, not knowing what is and is not allowed. Only young people, upon the mentorship of top researchers/educators who are much integrated in international networks, will be capable of solving the most difficult research problems and the most pressing social issues that we face and will be facing in future. Slovenia has long insisted on a young researcher programme, and this is probably what distinguishes us from other transition countries. We must take pride in that programme, as young researchers have made a significant contribution to excellent research work at the University and, I am sure, also cooperated in most of the top research achievements highlighted today. Unfortunately, funds for science in Slovenia have fallen drastically since 2010 and will most probably not reach the level of funding before the crisis for quite some time – although the crisis passed a while ago according to all economic indicators. Hence, more and more young people are forced to go abroad after completing their studies. It is no doubt necessary and useful that they go abroad to get work experience while establishing contacts for further cooperation, but they need to come back – to the homeland. I would like to welcome the first attempts of the Ministry to draw young experts, PhDs, back to their homeland after spending time abroad – however, a 3-year project will hardly draw young people back home. We need to offer them at least 5-year projects and, most of all, a clear vision of what will happen after those 5 years or after such a project.

Research work is like long-distance running. Results unfortunately cannot be achieved overnight, and paths to the solutions of scientific problems are not always straightforward, while the results may not always be seen as useful. After researching electroporation over the past 25 years, I may say that almost 30 years passed since the first tests were performed up to their introduction and use at a clinic. Science and researchers, therefore, need long-term and stable financing – any interruption or decrease in financing may have a devastating effect on research work, and any relaunch and reestablishment of a research team is often impossible. Such a provider of finance, especially in this system, can only be the State, and the State will have to acknowledge its founder’s obligations to the University or find some other way of financing, while simultaneously granting the University the autonomy to allocate funds in a manner providing undisturbed research work at the University. It seems we forget that research work is a prerequisite for teaching and studying at the University. This is why we need to regulate the status and position of researchers – successive fixed-term employment contracts and project-based employment do not provide an encouraging environment for a young person who wishes to start a family, let alone for a person with a family and the obligation to provide them with economic and social security. Perhaps one of the possibilities is to reduce the teaching load of the most burdened professors and distribute pedagogical work more evenly. By relieving our top and most prominent researchers of their teaching load, they will be able to intensify their research work, achieve even better results and, consequently, place the University higher on global university ranking lists. Such practice has already been introduced within some University members, at least at the Faculty of Electrical Engineering – well, at least to a small extent and during the term of the current Dean.

Working with students along with their inclusion in research and development is the key to success, and I believe that not enough attention has been placed on it. Many students wish to work on specific problems. Problem solving greatly contributes to in-depth learning and achieving higher knowledge and goals, according to the Bloom and Marzano taxonomies, and which cannot be achieved without it. Naturally, such work with students requires much more engagement and more educators and researchers – we, therefore, need to improve the teacher-student relationship, for which we need more funding.

Our main product in a research-based teaching process is our graduates. The public is not well aware of that – and nor are we: Most high-level professionals were educated at our University. The public and economy expect us to provide instant solutions to their problems, and we often hear that the knowledge provided by the University is useless and that companies have no major benefits from it, but they forget that the high-level professionals they have employed to further their own development mostly graduated from the University of Ljubljana. It is true that it makes no sense to finance fundamental science and tertiary education programmes if society knows not how to use its results. It seems there is a hitch in that part – the transfer or, even better, flow of knowledge and human resources to the economy (and why not vice versa as well?). In recent years, the University has made some important steps forward – from regulating intellectual property management, establishing a University incubator, the Innovation and Development Institute, Career Centre and Development Fund to promoting direct integration with companies – but there are still plenty of possibilities, including additional funds, which require that we stay on this path. We need to build mutual trust, language and respect between companies and the University.

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The coming year is again an election year. I hope that the management continues and perseveres on the paths taken over the last couple of years. Unfortunately, we rely on the State and blame “external” factors, unfavourable conditions or bad timing far too much. It cannot be ignored that the instability of politics is probably the situation’s only constant. Our credibility for requesting more money, as I have already mentioned, is not at its prime and first needs to be raised considerably. Since our requests for increased funding arouse ridicule rather than understanding, we should remember an old saying: “Help yourself and God will help you,” and do what we can ourselves.

*Spoken word applies.*