



Regional BioCamp 2015

Ljubljana, Slovenia | 2015

Values are leading us on our path toward reaching the goals

Knowledge and development are the driving forces of the pharmaceutical industry and patients are always in the focus. However, this is not enough for long-term success. In order to reach higher we need values that shape our culture and guide us.

Novartis has recently renewed its system of values in order to be better aligned with the changes and challenges from the environment in which we operate and live. Innovation, quality, performance, cooperation, courage and integrity are newly enhanced values that guide our work. The first three appear to be logically connected with pharmacy, the other three perhaps less. But when we think of the many challenges that have undermined the reputation of the pharmaceutical industry in recent years, it becomes clear why integrity has such high priority for us. Courage and cooperation stimulate people's potential to achieve the best for the patients.

I believe that after three days of getting together at the Regional Bio Camp, young talents have a better understanding of Novartis' mission which is to care and cure, and Sandoz' mission which is to provide long-term access to health care for people around the world with high quality and accessible medicines. These two sentences may sound so simple, but we have to walk a long way to reach this goal.

Vojmir Urlep,
President of the Board
of Management of Lek, a Sandoz company



Innovative cooperation generates new knowledge

Today, the economy is based on knowledge and its continuous circulation is the driving force of economic development.

Circulation of knowledge can be successful only if the circles are complete and interconnected. Knowledge travels between a number of related stages, from creation and acquiring to dissemination and use. Therefore it is necessary to gather knowledge and disseminate it to students and employees who then manage it in practice. And a circle is complete only when the use of knowledge in solving concrete issues in the economy creates new knowledge.

Knowledge circulates also between scientific-educational institutions and business companies. It is far from the truth that only scientific institutions generate new knowledge. New knowledge is also generated by companies. Therefore it is important that we all strive to spread knowledge and seek synergies in its creation and use.

The Regional BioCamp is an excellent contributor of knowledge circulation. It is an example of good practice where top experts give young talents an insight into cases, trends and challenges which the economy faces. In this way they teach them how the knowledge gained through studies is transferred into practice. This contributes to the personal and professional development of young talents. I am pleased that the University of Ljubljana and Lek, a Sandoz company, are connected and united in such an innovative manner. I am confident that in this way we will strengthen further cooperation and continue to build a society of knowledge in Slovenia.

Dr. Ivan Svetlik,
Dean of the University of Ljubljana



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a Sandoz company



Transfer of knowledge and ideas into new products and services is important

“The Regional BioCamp is a very interesting event. It uses innovation to encourage open cooperation in a business environment. BioCamp participants are my favourite audience when we talk about innovation and entrepreneurship. You are young, driven and skilled individuals working together with a common goal: to acquire knowledge and transfer it into new ideas, services, products and processes and thus contribute to social and economic progress.”

Using these words, Prof. Dr. Peter Olesen, Chairman of the European Institute of Innovation & Technology Governing Board (EIT) started his presentation at the Regional BioCamp 2015 and referred to the core message of his presentation. The mission of EIT is to encourage innovation in Europe and connect European countries into an innovative community. They wish to become the leading European initiative encouraging innovators and entrepreneurs to develop world-class solutions for social challenges,

contribute to the growth of the economy and provide quality jobs.

“Europe is slowly climbing up the ladder of innovation, but we are still behind the USA, Japan and some other countries. It is an enormous challenge to strengthen the willingness of European countries to commit to and encourage innovation. This is our mission at EIT,” said Prof. Dr. Peter Olesen.

EIT uses different projects and activities to increase competition in Europe and develop an encouraging environment for creative

thinking by linking education, innovation and entrepreneurship. The key to success is networking, cooperation, long-term stance, effective management and building an entrepreneurial culture.

“Europe has an excellent research core, creative talents and dynamic companies. By providing EIT programs, we wish to contribute to the transfer of as many ideas as possible into actual practice, new services and products and thus raise the level of innovation in Europe,” said Prof. Dr. Peter Olesen.



Innovation for the wellbeing of the whole society

35 best science students from the region gathered at the Regional BioCamp 2015. Together with lecturers they discussed new strategies for the treatment of autoimmune diseases, with a focus on rheumatoid arthritis. Below you will find some reflections of lecturers.

Biosimilars increase access to the most up-to-date therapies

In modern medicine, biologics are extremely important as they offer key therapeutic options for treating complex diseases such as cancer, rheumatoid arthritis, psoriasis, renal and other diseases.

Rheumatoid arthritis is a severe and frequent disease as it affects around 1 per cent of the entire population. It is a chronic inflammatory disease, which can cause irreparable damage and even early death if left untreated. Biological products are very effective in treating RA. They affect the

function of cells causing the inflammatory process and prevent the communication between them or even destroy them.

The challenge we are facing in biological products is their accessibility. Due to the exceptionally long and costly development and production, biologics are often inaccessible to a wider group of patients. Most patients with a severe form of rheumatoid arthritis should be treated with biological products, because they are very effective in this disease. However, data show that even in developed countries, such as Europe, the US and Japan, only 50% of

patients receive biological treatment.

Biosimilars are the answer to this issue because they match their respective originator products regarding quality, safety and effectiveness— but at a more affordable price.

Biosimilars are already making savings in the European Union. Research of the IGES institute in Berlin estimates that healthcare systems in eight EU countries will have saved by 2020 up to EUR 33 billion by biosimilars. Almost ten years of Sandoz experience in this field and more than 200 million patient days with biosimilars in the EU prove that **biosimilars are safe and effective.**

Lek is a part of Sandoz, a global leader in the sale of biosimilars and the number of these products in a late development phase.

We collected some of the lecturer's impressions of the Regional BioCamp 2015.



Prof. dr. Borut Božič, Dean at Faculty of Pharmacy, University of Ljubljana

"The Regional BioCamp poses a good opportunity for young people to link their academic knowledge with the business know-how. The academic sphere and the economy are not two separate poles, although it seems that way sometimes. Both are striving to create new knowledge and transfer it into practice for the wellbeing of society.

Rheumatoid arthritis is an important condition, which can cause disability and early death if left untreated. Treatment can significantly improve the quality of life of patients so they can work and live a full life. However,

there remains substantial scope for further improvements, development of new therapies, more efficient patient treatment and earlier recognition of this disease, which is crucial for treatment success.

My message to the young scientists is that there will always be more questions than answers and therefore we conduct research. However, we need to be aware that we cannot do everything by ourselves. The exchange of knowledge and experience between various groups and peers is of great importance if we want to improve lives. And this is what the Regional BioCamp is all about."



Dr. Karin Klokkers, Chief Scientific Officer at Sandoz

"The Regional BioCamp is a very important event for Sandoz. We need young talents in various fields to maintain our position among the leading companies in our business in the future. The event gives them insight into the industry. We show them how we work and how important young, educated, innovative, and motivated people are for the development of our scientifically demanding new products and in order to reach the next level of operational excellence.

The knowledge about rheumatoid arthritis and the painful inflammations of joints grew tremendously in the few last years, and highly efficacious therapies could be developed with innovative biological drug products. However, as addressed in the symposium, only around half of the patients also in developed countries have access to such treatments. Sandoz is continuously striving to increase the accessibility of these valuable medications; therefore the topic of rheumatoid arthritis is certainly of high relevance."



Dr. Wolfgang Hueber, Director, Discovery and Profiling, Novartis Institutes for Biomedical Research

"The Regional BioCamp is an excellent opportunity for students to establish contacts with pharmaceutical companies, such as Sandoz and Novartis, and learn about innovative approaches to bring new treatments to patients. On the other hand, as a lecturer, I am keen to learn about their ideas and projects, and if or how they might envision to pursue these in collaboration with an innovative pharmaceutical company.

The topic of this BioCamp was Rheumatoid Arthritis. As highlighted in several lectures, Rheumatoid arthritis is a chronic inflammatory disease with many challenges and opportunities for the future development of better, innovative treatments.

I hope the bright young participants of the Regional BioCamp will embrace the new knowledge gained here. Maybe they will also consider developing a closer relationship with Novartis, and leverage their diverse skill sets for bringing new medicines to patients in need.

The Regional BioCamp gives an insight into the operation of the pharmaceutical industry and demonstrates how the knowledge is transferred into practice. The event encourages students to think creatively, to be innovative and to search for solutions to social challenges. Patients are the focus of the modern pharmaceutical industry – this was also the main idea for choosing this year's topic of the Regional BioCamp: rheumatoid arthritis. The concept of the partnership between physicians, patients and the pharmaceutical industry is to find the best therapies.



A modern approach to the treatment of rheumatoid arthritis

Prof Dr. Matija Tomšič, Head of the Clinical Department of Rheumatology at the University Medical Center Ljubljana: *Rheumatoid arthritis used to be a disease with severe consequences and had a major impact on patients' lives which is also evidenced by many shocking photographs of patients with severely deformed joints.*«

In the past, the approach to treatment of rheumatoid arthritis was very cautious due to lack of knowledge about the use of medicines available at the time and the awareness of the importance of early management and intensive therapy. In recent years, we have adopted a different approach to treatment. The key is a combination of early diagnosis, fast introduction of immunomodulation therapy, regular monitoring of disease activity and tracking treatment progress towards the

goal – remission or low disease activity.

»By adopting a modern approach to treatment of patients with rheumatoid arthritis, the disease is now generally very manageable and no longer constitutes a major obstacle in patients' lives. This approach brings good results also in Slovenia. Therefore I am convinced that in 20 to 30 years' time we will no longer see photographs with such severely deformed joints in patients with rheumatoid arthritis,« said

Prof. Dr. Matija Tomšič.

»Rheumatoid arthritis continues to be an incurable disease, but it can be much better controlled. It is very good that we can discuss this and present the disease and its challenges to young researchers who will be able to continue our work. It is important to link the knowledge from all areas that could contribute to the welfare of patients.«

»I can live life to the full with the right therapy«

Aladar Belec, a patient with rheumatoid arthritis:

» I am grateful for every morning when I can get up without help and have only minimal pain and I am glad that I can contribute more to my family life, at work and in the Rheumatic Association of Slovenia.«



Patients are at the heart of the modern pharmaceutical industry. Therefore, Aladar Belec, who developed rheumatoid arthritis at the age of two-and-a half years, presented his story to the participants of the Regional BioCamp 2015.

»I have been living with juvenile rheumatoid arthritis that significantly marked my life, since very early childhood. Throughout the years it occurred unexpectedly and after the joint effort of doctors, physiotherapists, the family and I, the disease subsided more or less to the extent

where it was possible to live a more or less normal life. After many hospitalisations throughout these years, after surgeries, replacement of both hips and various therapies, after weeks and months when I could not move and lived in pain, when no essential therapy worked any more, the doctors finally found a therapy with a biological medicine that suits me and almost completely subdues the disease and therefore helps me to live my life to the full now,« said **Aladar Belec** relating his remarkable story.

»I was very pleased to be invited to this event.

It is of great importance that young researchers, who will create the future, meet and see the patients, and listen to their stories. Once a professional has met a person with a certain problem, their efforts to help are much more intense. It is no longer just a job, it is something you put your heart and soul into it. The Slovene Rheumatoid Arthritis Society aims at creating a partnership between patients and physicians to fight this disease. The pharmaceutical industry is certainly a part of this partnership.»



Impressions of the participants at the 5th regional BioCamp

Kamila Kulbat, Faculty of Biotechnology and Food Science at the University of Technology Lodz, Poland:

»The event was very well organized and I am glad that as a biotechnology student I was given a chance to meet fellow students. I enjoy meeting new people, working in a team and gaining knowledge on how such big companies as Sandoz and Novartis operate.«

Jan Breznikar, Faculty of Pharmacy at the University of Ljubljana, Slovenia:

»I am greatly interested in the theme of the Regional BioCamp so I was really looking forward to attending the event. The colleagues are great,

we get on very well as we all came here with the same goal. Together we will certainly gain useful knowledge and above all get an insight into the pharmaceutical industry which will help us when making a decision about our future job. As we were selected among a large number of candidates we will do our best, especially when working in teams.«

Mihajlo Novaković, Faculty of Physical Chemistry at the University of Belgrade, Serbia:

»I am so pleased that I was chosen to participate at the BioCamp. I like it because I have wanted to know more about the field

of pharmacy for a long time. I also like the 30-minute presentations as they summarize contents in an interesting way. An important part of this event is also meeting new people which enables us to forge ties and broaden our horizons – this is the essence of life.«

Žiga Perko, St. John's College, Oxford University, United Kingdom:

»The Regional BioCamp is a brilliant idea and I am glad that Lek as part of Sandoz and Novartis decided to organize such an event for students. This is a great opportunity to get to know the industry, leading experts and trends in pharmacy. I learnt a lot, and I was





Lek, a Sandoz company, organised a top scientific event Regional BioCamp for the fifth time in a row. In Slovenia, it hosted altogether 175 most promising students from the region. The Regional BioCamp 2015 hosted 35 students from 13 countries: Slovenia, Austria, Bosnia and Herzegovina, Denmark, Croatia, Ireland, Italy, Macedonia, Germany, Poland, Russia, Serbia and Great Britain.

especially impressed by working in teams which represented a unique challenge. I forged good ties with other colleagues which will be very useful in the future.«

Laura Pezzè, Center for Integrative Biology at the University in Trento, Italy:

»A brilliant event! I met many new people from different areas, which gives us many opportunities for discussion and exchange of knowledge. Working in a pharmaceutical company is one of my desires and this event gives me a good insight into the nature of this work and what my employment opportunities would be.«

Olga Mulina, Institute for Organic Chemistry, Russia:

»I am glad that I came to Slovenia, saw beautiful Ljubljana and participated in this event. The lectures were very informative and all participants connected really well. Back home I will definitely recommend all my colleagues to apply for this event next year. Shortly I am planning to start up my own company and the knowledge gained through the BioCamp will certainly be of benefit to me.«

Karolina Kalbarczyk, Pharmaceutical Design and Engineering at the Technical University of Denmark, Denmark:

»I am enjoying myself as all the topics are closely related to my field of studies and addressed from both aspects – business and scientific. I am very much looking forward to working in teams and the challenge that we will have to tackle. I'm sure we will learn a lot and

make new acquaintances. I think that the essence of BioCamp is to meet people from different fields, with different knowledge and interests and to share the experience that can help us in deciding on our career path in the future.«

Mario Mazić, Faculty of Pharmacy at the University of Tuzla, Bosnia and Herzegovina:

» Given the fact that people from all over Europe are participating this event, I was most looking forward to meeting people from different fields and cultures. Never before have I faced the preparation of a business plan for a pharmaceutical company, so I learned a lot here. In my career I want to focus on work mainly in research therefore this part of the BioCamp was particularly interesting for me.«

Julian Kellner, Max Planck Institute for Medical Research, Heidelberg, Germany:

»The event was very well organized. Ljubljana is so beautiful and I am glad that the organisers showed us around the city center. The lectures were very interesting and not too long to keep us focused on the contents. The teamwork was a big challenge as we all come from different backgrounds, but I believe that we all learnt a lot. The knowledge that I gained here will be undoubtedly used in my future as it is my big wish to work for Sandoz and I hope that this event opened a new door for me.«

Marin Sorić, Department of Biotechnology at the University of Rijeka, Croatia:

»The Regional BioCamp is a great opportunity for gaining new, valuable knowledge and meeting new people. I note that all the

participants that I met are exceptional in their respective fields; they can ask the right questions and actively participate in discussions. That is why the teamwork was very stimulating and informative.«

Daniela Milosheška, Faculty of Pharmacy at the University of Ljubljana, Slovenia:

»I learnt that one should never underestimate the power of a team and this was also an important part of the BioCamp – working in a team, which will be an extremely important part of our future business path. In the teamwork we faced some issues as we came from different backgrounds, but we managed to jointly find the right decisions and agree with the final result. I am glad that I have met many people and we will certainly stay in touch even after the event.«

Danielle Joseph, International Management Center at the University of Applied Sciences, Krems, Austria:

»The event was very well structured, we had interesting lectures, all the time we learnt new things. I liked in particular the presentation of HR topics where we got some interesting guidelines with regard to what the pharmaceutical companies look for and how to present yourself at a job interview. Working in teams was a unique challenge. We didn't know each other well but we quickly found out who would take which role and at the end we were able to present a good result. It was exhausting but productive.«





Linking science and business

An important part of the Regional BioCamp is the case study where the participants show their way of thinking, innovation and their ability to demonstrate constructive cooperation in a team. This time, the students were generating ideas on topics of rheumatoid arthritis.

» The Regional BioCamp once again brought together young talents and top experts and offered them an insight into the pharmaceutical industry and related entrepreneurship. They were impressed by the work in our development units and we were impressed as well when observing them during the preparation and presentation of a case study where they demonstrated a truly exceptional degree of innovation,« said **Dr. Darja Ferčej Temeljotov**, Head of continuous improvements at Sandoz Development Center Slovenia and the president of the organising committee of the Regional BioCamp 2015.

Among the 35 most promising science students from the region, **Žiga Perko** and **Julian Kellner** showed the best individual performance in preparing a case study and transferring the acquired knowledge into practical work. Both winners will participate in the Novartis global BioCamp 2015 in Basel in Switzerland.

Žiga Perko from Oxford University, United Kingdom, commented on his win: »I did not expect to win the award as I was not quite

sure what the panel members were looking for. I think the winning combination was my style of leading which is not aimed at limiting ideas but guiding in the right direction. Working in teams was a great experience because each of us comes from a different background and has different knowledge which additionally contributed to our success. The whole event was very successful, I enjoyed it and I was pleased to get an insight into the operation of a pharmaceutical company. It is difficult to gain such knowledge at the university therefore I appreciate even more that I was selected to be among the participants of this event and even win in the end.«

Julian Kellner from Max Planck Institute for Medical Research, Germany, said:

» I am very pleased that I won. The teamwork was very intense, we worked hard to achieve a good result, as we come from different backgrounds and we had different opinions. However, in the end we succeeded. I believe a good presentation of our business plan contributed to my success, although we did not know exactly what the expectations of the panel were. The whole event was exceptional and very inspiring, but also very

strenuous. However, we all enjoyed ourselves and obtained useful knowledge at the same time,«

With teamwork to success

Laura Avogaro, Andonela Janeva, Zlatko Joncev, Julian Kellner, Daniela Milosheska, Janja Mirtič and Omar Naneh proved themselves as the best performing team.

Daniela Milosheska revealed what the key to their success was: » I learnt that one should never underestimate the power of teamwork. Our task was in fact that we connect and collaborate. At the beginning we were not sure about the success, we saw many obstacles. But later we connected, joined the various skill of team members and developed good solutions. Significant was also the selection of the right person to present our case and I think that we made a good choice and presented our idea in a confident manner.«



Dr. Darja Ferčej Temeljotov



Winning team



Winners Žiga Perko and Julian Kellner



Matej Rajk, Mesi d.o.o.:

» Companies are providing young talents with the most valuable experience by including them in the work at different levels. Every student, every young researcher wants to apply their knowledge into practice. I wish to see many linking events like the Regional BioCamp.

Courage going hand in hand with innovation and integrity drives our world and promotes progress. It is up to each individual whether they will be innovative and make the most of it. Events like the Regional BioCamp are a step towards a systematic way of encouraging innovation at a high level, which benefits all of society.

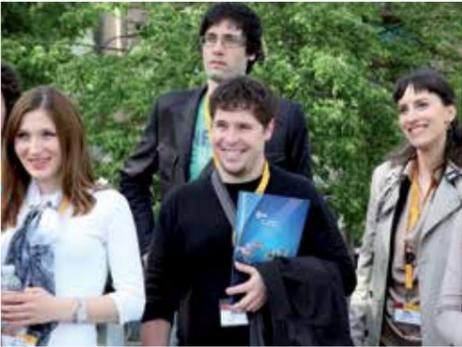
Regional BioCamp through the years



2011



2012



2013



2014



2015

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Published by: Lek Pharmaceuticals d.d., Corporate Communications,
Verovškova 57, SI-1526 Ljubljana, Slovenia
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Editor in chief: Katarina Klemenc
Design: Intesa RD d.o.o.
Photography: Lek d.d. archive



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