



PLUS RATIO QUAM VIS MEDAL AWARDED TO PROFESSOR FRONCISZ



During the official inauguration ceremony of the 651. academic year, Prof. Wojciech Froncisz was honoured with the *Plus ratio quam vis* Medal. This commemorative medal is awarded to persons distinguished for eminent services to the Jagiellonian University.

Plus Ratio Quam Vis Medal was awarded to Professor Froncisz as a mark of recognition of his scientific achievements in the field of magnetic resonance spectroscopy and his contribution to the development of the University when he remained Vice-Rector for University Development and Dean of the Faculty of Biochemistry, Biophysics and Biotechnology. Professor Froncisz was honoured with this medal also as a recognition of his participation in establishing a multi-annual programme for construction of "The Campus of the 600th Anniversary of the JU Revival"(3rd Campus).

Prof. dr hab. Wojciech Froncisz studied biophysics at the Faculty of Physics, Lomonosov Moscow State University. He graduated in 1968. Professor Froncisz developed his entire academic career at the Jagiellonian University (more precisely, at the Institute of Molecular Biology).

In 1976 he obtained a doctor's degree, in 1981 habilitation and in 1989 – professorship.

The main areas of his interest are related to electron paramagnetic resonance spectroscopy in both theoretical and instrumental aspects, and applications of EPR methods in investigating living objects and biophysical processes. In particular, these are electron relaxation in magnetic field, multi-quantum transitions in EPR and multi-quantum transitions methods in EPR spectroscopy, pulsed EPR techniques, microwave techniques, resonant cavities for EPR spectroscopy, especially modern loop-gap resonators, EPR oximetry, studies of the structure and dynamics of proteins and peptides, NMR imaging of human body, biophysical effects of constant and alternating electric fields, as well as metabolic pathway modelling.

For many years, Prof. Wojciech Froncisz has been collaborating with leading research centres in the USA, as National Biomedical Center at the Medical College of Wisconsin, Jules Stein Eye Institute at the UCLA School of Medicine or Dartmouth College Medical School.

Scientific output of Professor Froncisz consists of almost 140 published works including 121 original journal articles, 10 original articles contained in conference proceedings published in books and 5 review book chapters published abroad.

He is an author or co-author of 15 patents out of which 11 were issued in the USA. His works were cited 2879 times (without self-citations) and his Hirsch index is 32. Professor Froncisz led many research grants funded by the State Committee for Scientific Research in Poland (KBN), the Foundation for Polish Scien-

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ce (FNP) and foreign organizations as NIH, Fogarty International Center and United States Department of Defence. Ten master's theses and ten doctoral dissertations have been produced under his supervision. In 1994, Professor Froncisz received silver medal from the International EPR Society (ESR) for his contribution to the development of EPR spectroscopy.

Apart from research and teaching, Professor Froncisz has been involved in organisational activities. From 1987, he was the Head of the Laboratory for Radiospectroscopic Analysis of Biomolecules, in 2011 transformed into the Department of Molecular Biophysics. In the years 1987–1993 he was the Director of the Institute of Molecular Biology and between 2008–2012 and 2012–2014 he served two terms as Dean of the Faculty of Biochemistry, Biophysics and Biotechnology.

In the years 1996–1999 Professor Froncisz was the Rector's Consultant for the 3rd Campus

and it was thanks to his efforts that the Biological Sciences Complex construction was started. As the Rector's Consultant, he continued seeking to obtain support from the national authorities for the construction of the 3rd Campus. His activities culminated in the adoption of the Act of 23 May 2011 on establishing a multi-annual programme for "Investment and Modernisation at the Campus of the 600th Anniversary of the JU Revival" by the Sejm of the Republic of Poland.

When Professor Froncisz served as the Dean, the Faculty of Biochemistry, Biophysics and Biotechnology scored a lot of spectacular successes: the highest scientific A+ category in the parametric evaluation of research institutions, 1st place for biotechnology in the Perspektywy Education Foundation ranking by subject and the status of the Leading National Research Centre (KNOW).

ELECTION OF THE DEAN OF THE FACULTY OF BIOCHEMISTRY, BIOPHYSICS AND BIOTECHNOLOGY

Due to Prof. Wojciech Froncisz retirement, election of a new Dean of the Faculty was held in July 2014 in which Prof. Zbigniew Madeja, a former Vice-Dean for Science and International Affairs, was elected the winner.

Prof. Zbigniew Madeja graduated from the Jagiellonian University Faculty of Biology and Earth Sciences completing his molecular biology studies with a doctoral degree in natural sciences.

Since 2006 Professor Madeja has been the Head of the Department of Cell Biology, Institute of Molecular Biology, where he has been employed since 1991. He was awarded the title of Professor of Biological Sciences on

7 October, 2010.

Professor Madeja's research focuses on the migration mechanisms of normal and cancer cells with particular reference to the effect of homo- and heterotypic cell-to-cell contacts on the motile activity of cancer cells, reaction of cells to the substrata topography (contact guidance), mechanisms of electrotaxis (cell reaction induced by an electric field) and chemotaxis.

Professor Madeja is a member of the Presidium of the Committee on Cell Biology of the Polish Academy of Sciences and a winner of several Jagiellonian University Rector Awards for outstanding educational achievements.

INAUGURATION OF THE ACADEMIC YEAR 2014/2015



The official inauguration ceremony at the Faculty of Biochemistry, Biophysics and Biotechnology took place on 2 October, 2014. This event was enhanced by the presence of special guests, among them by Paweł Błachno, President of the Jagiellonian Center of Innovation and Prof. dr hab. Stefan Chłopicki, the Director of the Jagiellonian Centre for Experimental Therapeutics (JCET).

The ceremony was opened by the Dean of the Faculty of Biochemistry, Biophysics and Biotechnology, Prof. Zbigniew Madeja. In his lecture, Professor Madeja presented origins and development of the Faculty and described the learning opportunities provided for students. At the end of his speech, Professor Madeja wished the students fruitful years spent at the University.

New students who have just become members of the academic society, took the oath before Prof. Marta Dziedzicka-Wasylew-

ska, Vice-Dean for Student Affairs. Afterwards, the Dean introduced members of the College of Deans and Dean's Office staff to the audience. The next speakers were representatives of the Student Self-Government and Student Research Clubs "Mygen" and "Nobel" who briefly presented their activities and invited new students to join them.

At the end of the inauguration ceremony, Dr Krzysztof Guzik delivered a brilliant lecture entitled "Programmed cell death" which was a trip both into the past and into the future of science. He presented a hypothetical subject of a similar lecture that if given in twenty years of time from now, will maybe contain results of research made by the newly-matriculated students.

The ceremony was accompanied by the Faculty Choir who sang two beautiful hymns: "Gaude Mater Polonia" and "Gaudeamus Igitur".

RESEARCH GRANTS

Diamond Grants for Exceptionally Talented Students

As many as three students of the Faculty of Biochemistry, Biophysics and Biotechnology became winners of this year's edition of the Diamond Grant competition organised by the Ministry of Science and Higher Education.



Malwina Karwicka (MSc programme in biotechnology) in the coming twelve months,

in the Department of Biophysics, will implement a project entitled: "Mechanism of a new strategy of lung cancer photodynamic therapy". The purpose of the planned experiments is to establish the optimal regimen of photodynamic therapy to treat lung cancer in a model system. Photodynamic therapy is concerned a promising alternative to chemo- and radiotherapy.

Photodynamic therapy involves synchronous action of components that are individually nontoxic: light in an appropriate wavelength and dose and a compound that sensitizes tissue to the light. Their topical action induces very strong cellular immune response and stimulates the immune system to induce long-lasting antitumour response. Malwina Karwicka will focus on the changes in the structure and

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function of blood vessels within the irradiated tumours. These changes will be studied using various methods and in different time intervals after irradiation.

Alicja Karabasz (MSc programme in biochemistry) has been awarded funding for a research project entitled: "Analysis of toxicity and biodistribution of polyelectrolyte nanocapsules". The purpose of the study is a) to evaluate the *in vitro* and *in vivo* toxicity of nanocapsules, b) to trace their biodistribution and c) to estimate their clearance. The student will investigate these research topics at the Department of Cell Biochemistry for two years.

The analysed nanocapsules are formed with a unique technique of sequential adsorption of oppositely charged polyelectrolytes (layer-by-layer method). The nanocapsules consist of biodegradable and biocompatible substrata and will be tested using both cell lines and animal models to make the assessment comprehensive.

The innovation of this project lies in the examination of a new nanocarrier (so far untested *in vivo*) as a possible transporter of drugs in the modern anticancer therapies.

The project of **Sara Przetocka** (MSc programme in biotechnology) is focused on the "Structural characteristics of the TIR domain interactions". This project will be implemented in the Department of Microbiology.

The purpose of this study is to investigate the TIR domains (Toll/IL-1 receptor) which play a key role in signal transduction from the Toll-like receptors (TLR). TLRs are responsible for activation of the innate immune response after recognition of the molecular patterns of pathogenicity. TLR signal transduction pathway includes the MyD88 and Mal adaptor proteins that bind to the TLR receptor. MyD88 plays an important role in various immune processes, primarily in the immune response. MyD88 can also have a protective role in tumour development so it is very important to understand the molecular-based mechanism of action of this protein.

All TLRs and adaptor proteins contain TIR domains which are crucial for their interactions. Up to date, two possible models of interactions of the Mal and MyD88 proteins with TLR4 have been reported. The aim of the present project is to test these models and structurally characterize the interactions among TIR domains.

Sara Przetocka is going to construct recombinant TIR domains of the MyD88 and Mal proteins using molecular biology techniques and bacterial expression systems. Next she will determine the strength, stoichiometry and structure of their binding.

Faculty Grants for Young Researchers

In the competition intended for the Faculty PhD students and scientific staff members under 35 years of age, out of all the submitted applications, 45 research proposals were assessed. Finally, the Faculty Competition Board recommended 14 proposals to be financed.

The following proposals in the category "1st or 2nd year PhD students" were awarded funding:

- Elżbieta Boratyn – "Role of the expression changes of selected target microRNA Hsa-miR-3613-3p genes under overexpression of MCP1P1 in human neuroblastoma BE(2)-C cells",
- Katarzyna Jasińska – "DNA damage as a result of chromatin susceptibility to proton beam radiation",
- Milena Kosińska – "Interactions between TGF-β1 and Cx43 in the development of bronchial asthma",
- Martyna Śniegocka – "New strategy for cancer heterogeneity research – characteristics of the model",
- Aleksandra Twarda – "Interactions between the Link domain of stabilin-2 with hyaluronic acid",
- Krzysztof Żak – "How to cheat a cheater? In search of the structural basis for designing antagonists of PD1-PDL1 interactions".

In the category "3rd or 4th year PhD students", the following proposals were awarded funding:

- Filip Bartnicki – "Identification and analysis of the DNA aptamers that bind α and β amanitines, the main toxins of the death cap mushroom, Amanita phalloides",
- Michał Bukowski – "Significance of the saoABC operon for the virulence of *Staphylococcus aureus* strains",
- Szymon Czauderna – "Effect of the apolipoprotein E gene polymorphism on regenerative processes",
- Witold Nowak – "Assessment of the mesenchymal stem cell haem oxygenase-1 effect on the growth of squamous cell carcinoma SCC VII in an animal model",
- Natalia Wolak – "Expression of the Candida

albicans recombinant elongation factor-2 (Eft2p) and its role in pathogen-host interactions".

In the category "young scientists", the winning proposals were submitted by:

- Przemysław Grudnik – "Human ADP-dependent glucokinase – an initial biochemical and structural characterization",
- Justyna Karkowska-Kuleta – "Cross-linking method as a tool to investigate binding of human extracellular matrix proteins to the

cell wall of pathogenic yeasts of the genus *Candida*",

- Monika Rak – "Uptake pathways of lipoproteins based on cationic polypropenyl derivatives in eukaryotic cells".

Each of the Faculty competition winners will receive 30 thousand zł. In order to obtain the approval of the research project, it is required to publish a conference communication, journal article or submit a grant application to an external funding institution that would cover the costs of further investigations.

AWARDS AND FELLOWSHIPS

SET Scholars

Once again a group of PhD students of the Faculty of Biochemistry, Biophysics and Biotechnology qualified for the University SET programme, i.e. interdisciplinary PhD studies "Society-Environment-Technology". The SET programme, financed from the Human Capital Operational Programme, is open to PhD students, young doctors and Jagiellonian University researchers. It is aimed both to improve the quality and to internationalize trainings of PhD students and young scientists, particularly in conducting interdisciplinary research and methodology of investigations. This year, the following scientists joined this programme: Natalia Gach (Department of General Biochemistry), Michał Gonciarz, Piotr Stępień and Martyna Śniegocka (Department of Biophysics), Agnieszka Hoang (Laboratory of Cell Biophysics), Monika Majchrzak-Górecka (Department of Immunology), Barbara Wyroba (Department of Cell Biochemistry) and Monika Ryś (Department of Analytical Biochemistry).



Lynn's Award for Maciej Cieśla

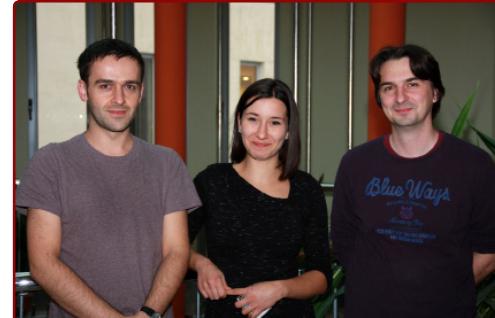
In July 2014, at a conference "Muscle Satellite and Stem Cells" organized by FASEB (Federation of American Societies for Experimental Biology) Maciej Cieśla, a PhD student from the Department of Medical Biotechnology received the Lynn's Award for the best poster presentation. His work was entitled "Role of haem oxygenase-1 in rhabdomyosarcoma development

and differentiation". The conference was held in Steamboat Springs, Colorado between 20-25 July 2014.

This work resulted from research supported by the VENTURES Programme ("New model for studying rhabdomyosarcoma development – role of haem oxygenase-1 in skeletal muscle tumour biology"). Maciej Cieśla was awarded this grant by the Foundation for Polish Science in 2013.

Scholarships for Outstanding Young Scientists

There were three representatives of our Faculty among outstanding young scientists who received scholarships from the Ministry of Science and Higher Education. These were: Arkadiusz Borek, MSc and Martin Sarewicz, PhD from the Department of Molecular Biophysics and Paulina



Rybak, MSc from the Laboratory of Cell Biophysics.

Scholarships for outstanding young scientists are awarded for three years. Scholarship decisions are based on overall assessment of each applicant scientific achievements, quality of research, as well as any prizes received or participation in international projects. Candidates are proposed by their employers.

In this year's, ninth edition of the competition, over 700 applications were submitted, 202 of which received positive recommendations. Among the winners, apart from the researchers from the Faculty of Biochemistry, Biophysics and Biotechnology, there are 14 people from other units of the Jagiellonian University.



Student Satisfaction Barometer

In September the University's Section for Education Quality Analyses published the results of the last survey campaign conducted among students in the end of April and in the beginning of May 2014 which concerned the conditions for studying at the University. A total of 3,525 people, students of the BSc, MSc, PhD and post-diploma programmes, took part in this survey. Sixty-eight participants were students of the Faculty of Biochemistry, Biophysics and Biotechnology.

The questionnaire contained several dozen questions on the following topics:

- safety level;
- social and living conditions (including student dormitories and financial support);
- Jagiellonian University computer systems (including webpages, University electronic mail, USOS (University Support System of Studies), remote learning platform);
- opinion on the questionnaire evaluation of courses;
- facing difficulties caused by administrative procedures;
- activities of people and institutions supporting the process of studying;
- learning environment in a given University unit;
- the implemented curriculum;
- offer of professional trainings and foreign scholarships;
- University libraries.

Finally, the respondents were asked to rate their overall satisfaction with studying at the Jagiellonian University. This part of questionnaire included questions about:

- satisfaction with studying at the University;
- satisfaction with the chosen field of study;
- access to employment opportunities consistent with the field of study;
- willingness to recommend studying at the Jagiellonian University to a friend.

As in the previous year, we are rightly pride to be in the group of top rated departments at the University (in the following characteristics the results of the University-wide units are not taken into account). The Faculty of Biochemistry, Biophysics and Biotechnology occupies the first place in the ranking for its teaching staff, administrative staff, classroom equipment,

safety level and the webpage. We took the second place in the following categories: good learning environment, assessment of educational services, offer of scholarships under the Erasmus programme and overall satisfaction with studying at the Jagiellonian University.

The report of the present edition of the Student Satisfaction Barometer, together with the reports of previous editions, are available at: www.jakosc.uj.edu.pl/raporty.

Admission Results for Different Programmes at the Faculty of Biochemistry, Biophysics and Biotechnology

In the academic year 2014/2015, a total of 318 people started their programmes (BSc, MSc or combined BSc and MSc) at the Faculty of Biochemistry, Biophysics and Biotechnology:

- biochemistry (BSc programme) – 68,
- biotechnology (BSc programme) – 135,
- biophysics (combined BSc and MSc programme) – 30,
- biochemistry (MSc programme) – 33,
- biotechnology (MSc programme) – 50,
- biotechnology in English (MSc programme) – 2.

Moreover, 27 people were admitted for the PhD programme. The postgraduate courses: "Post-diploma Studies in Molecular Biology" and "Business in Biotechnology" were chosen by 39 and 25 students, respectively.

It should be noticed that, in comparison with the previous year, there was a nearly two-fold increase in the number of students admitted to the BSc programme, both in biotechnology and biochemistry. The number of students admitted to the MSc or combined BSc and MSc programmes in biophysics was almost unchanged.

'High Noon' Meetings with Biochemistry, Biophysics and Biotechnology



It is already the ninth edition of Saturday lectures for secondary school students that will start on 18 October. The programme of this year's "High noon" meetings with biochemistry, biophysics and biotechnology" lectures will include some new topics

that has not been discussed so far: genetic expert opinions, ciliated cells, biofuels and carbonic acid. Full programme of the 'High noon' meetings can be found at the following internet address: <http://www.wbbib.uj.edu.pl/oferta-dla-szkol/spotkania-w-samo-poludnie>. We invite everyone to attend the lectures!

Malopolska Researchers' Night Fired the Imagination of Visitors

The last edition of Malopolska Researchers' Night at the Faculty of Biochemistry, Biophysics and Biotechnology proved to be a really successful project. Despite the bad weather, people crowded the main hall at 4 pm, impatiently waiting for the opening lecture. Demonstrations and workshops aroused much excitement, as well as the odd-looking laboratory equipment. Together these triggered an avalanche of questions but there was nothing strange or even surprising about this as it was a once-a-year chance to see scientists at work. Such a unique opportunity is worth even a long journey.

This year we had guests coming from Racibórz, Myślenice, Limanowa and even Biel-

sko-Biała, students of primary and secondary schools. Our faculty attracted over 1000 people! This demonstrates that both the Faculty of Biochemistry, Biophysics and Biotechnology and popularization of scientific achievements arise great interest.

Malopolska Researchers' Night at the Faculty of Biochemistry, Biophysics and Biotechnology has not gone unnoticed either by the mass media including radio stations. Maybe this will bring even more visitors so it would be worth considering to make really exceptional arrangements for next year.

We are very grateful to everyone who have been involved in this extraordinary event, both staff members and students, including members of the Student Research Clubs: "Mygen", "Nobel" and "N.Zyme", altogether over 60 people. We express special thanks to the staff and students from the Departments of: Cell Biochemistry, Medical Biotechnology, Plant Physiology and Biochemistry, Microbiology and Cell Biology for the organization of workshops and to the lecturers: Dr hab. Ewa Zuba-Surma, Dr Martyna Krzykawska-Serda, Ariel Kamiński, MSc and Marcin Zawrotniak, MSc.



1 July 2014

Prof. dr hab. med. Marek Radomski (School of Pharmacy and Pharmaceutical Sciences Trinity College Dublin, Ireland). "Living through research or how to launch a successful career in science". Guest of the Department of Medical Biotechnology.

28 July 2014

Prof. Ralf Oelmüller (Institute of Plant Physiology, Friedrich-Schiller-University, Jena, Germany). "Beneficial and pathogenic fungi in the rhizosphere: How do roots distinguish?". Guest of the Department of Plant Biotechnology.

VISITING LECTURERS

KNOW



Krajowy Naukowy
Ośrodek Wiodący

Establishment of the KNOW Board

On 13 October, the Board of the Jagiellonian Scientific and Business Consortium for Biomolecular and Cellular Research (Cell-Mol-Tech) was established. The Board consists of Prof. dr hab. Zbigniew Madeja, Prof. dr hab. Wojciech Froncisz and Prof. dr

hab. Marta Dziedzicka-Wasylewska (Faculty of Biochemistry, Biophysics and Biotechnology) and Paweł Błachno, Justyna Morawska-Płoskonka and Marek Bartosz from the Jagiellonian Centre of Innovation. Professor Froncisz was unanimously elected the President of Cell-Mol-Tech Board.

In May 2014, the Cell-Mol-Tech Consortium received the status of the Leading National Research Centre (KNOW) granted by the Minister of Science and Higher Education (we wrote about it in Triplet No. 26). Funds raised by the Faculty of Biochemistry, Biophysics and Biotechnology and the Jagiellonian Centre of Innovation will be used for different purposes, such as interdisciplinary research in biochemistry, biophysics, molecular and cell biology; implementation of research results in industry and medicine; education and employment of new scientific staff; scholarships, internships and trainings for students of the BSc, MSc, and PhD. programmes. The programme covers the period 2014-2018 and the annual co-funding amount may be as high as PLN 7 million.

"MYGEN"

Summer holidays were not only a chance to blissfully relax, but also to make the final amendments to the texts included in the sixth edition of Acta Mygenica, a bulletin of biotechnology students. Since August our journal has been waiting for students who wished to read about scientific achievements of their colleagues.

In the first few days of the academic year, the Student Research Club "Mygen" gained many new members from among students who kept coming to the

club room in search of useful knowledge as well as a cup of coffee, which would help them survive the morning lectures. The junior and senior students became acquainted with each other during a tour to Kasinka Mała which took place between 17-19 October and replaced the traditional trip to Mszana.

For a few weeks, some Mygen members have been working hard on their presentation at the XVI National Academic Seminar of Biotechnology Students (OASSB) to be held in Łódź, 21-23 November, 2014. It will be an excellent opportunity to present the results of their own research and share interests with students from all over Poland.

"N-ZYME"

Beginning of the new academic year was the perfect time to summarise the activities of the biochemistry Student Research Club "N.Zyme" in the last semester. As usual, we were involved in promoting biochemistry, both as a field of study and as a field of science: we participated in the Jagiellonian University Open Day (March), Festival of Science (May) and Małopolska Researchers' Night in September.

N.zymists also developed their own interests and spread knowledge of the recent discoveries in biochemistry during the cycle of seminars "Science Corner" in which visiting scientists participated.

Moreover, the Club members had the opportunity to improve their skills in the project "Synthesis of lysine- and glutamic acid-coated functional magnetic nanoparticles and determination of their characteristics and applications." The results were presented by the former N.zyme President Przemysław Dutka at the 8th National Conference of Biotechnology Students held in Kazimierz Dolny, 17-19 October, 2014.

For more detail please visit the N.zyme webpage. We invite you to cooperate!

Dominik Nahotko



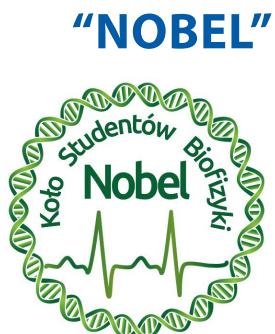


During the summer holidays, the Nobel members travelled a lot, both in Poland and abroad. These were not only work placement or training visits, but also trips for leisure purposes. In October we returned to Kraków to start the new academic year.

As every year, our first project was a get-together of biophysicists held in the mountains in the vicinity of Kraków, primarily aimed at the first-year students. This year, for the fifth time,

it was organised in Jaworki near Szczawnica. Apart from the mountain walks and presentations on the studies and student activities, this year we organised a biophysics pun competition which proved to be a great fun for all participants.

Soon after we returned to Kraków, general meeting of the Student Research Club "Nobel" was convened and the new Board and Audit Committee were established. The Board consists of three people: Katarzyna Radoń (2nd year) – President, Oskar Szelest – Vice-President and Małgorzata Wolska – Treasurer. For more detail please visit our webpage: <http://www.nobel.wbbib.uj.edu.pl>.



Anna Sawicka

IT'S PAST BELIEF!

"In those days research was financed by big capital. Also governments were dependent upon big capital (...). Funds were not high since the industrial plants (...) supported only these research directions that provided short-term benefits. Nobody understood or did not want to understand this vital truth that these were scientists who should have led the way for the industry [and not vice versa]."

H. Bojarska-Dahlig "Stanisław Kostanecki 1860-1910"¹

History of the Kostanecki family coming from Wielkopolska and using Wieruszowa Coat of Arms as well as their related Polish and German families are so interesting that they were even the subject of doctoral theses. It would be difficult to find people more noble and worth following in the history of our homeland or the history of world science. I would like to focus on two Kostanecki family members: Stanisław and his nephew Wojciech, but I cannot ignore the latter's father, Antoni who was an economist at the University of Warsaw, and another Stanisław's brother, Kazimierz, a medical doctor at the Jagiellonian University. Both Antoni and Kazimierz held the most respectable positions at their universities. In the years 1917-1919 Antoni was the University of Warsaw Rector whereas Kazimierz, also Deputy Mayor of Kraków and the President of Polish Academy of Learning (PAU), served as the Rector of the Jagiellonian University between 1913 and 1916. Kazimierz Kostanecki died as a result of the "Sonderaktion Krakau".

Now I will focus on the third of the Kostanecki brothers, Stanisław who will bring us closer to the enigmatic title of this essay. At the end of his life he received the position of Head of the Chair of Organic Chemistry at the Jagiellonian University but did not take up his duties due to bureaucratic obstacles imposed by the Austrian government. While Stanisław Kostanecki was waiting for the approval of his nomination, he received an offer of an equivalent position at the University of Bern, Switzerland. This fact had a salutary effect upon the development of science. In her memoirs², Prof. Stefania Jabłońska reveals unpublished information from the Swiss friends of Kostanecki from times when he was the Dean of the Faculty of Philosophy. According to them, it was Kostanecki who persuaded the Faculty Council to take a more positive stance towards the docto-

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► IT'S PAST BELIEF! cont. from p. 9

ral dissertation submitted by someone named Albert Einstein. At that time nobody understood his work containing fundamentals of modern cosmology and basics for understanding the physical reality of the Universe³.

Why the Polish Chemical Society awards annually the Stanisław Kostanecki Medal for outstanding achievements in organic chemistry and why does he deserve commemoration in "Triplet"? This question could be answered with a question: has anyone from our Faculty ever heard of curcumin? Flavonoids? Quinones or catechols? Paradoxically, Kostanecki was fascinated by their colour, most often yellow. He developed methods of isolation and synthesis of these compounds, investigated their structure and relations and gave names to some of them (flavonoids). It is said that he carried out 1610 syntheses and analyses¹... and it is really difficult to list all his activities. Kostanecki tried to understand why some organic compounds are colourful. He was looking for generalizations and causal relationships and was not interested in doing research solely for the practical applications in industry so, although it is difficult to believe, he had difficulties in finding sponsors in Switzerland. Kostanecki died early, in 1910 (being as old as the author of the present essay), believing that the compound which could have healed him from a post-operative staphylococcal infection had been already discovered and in the time of his deadly illness was waiting to be applied as a drug. He was right; sulfonamides had already been known to chemists. Maybe it could be said that Kostanecki was lucky to die before the noun "chemistry" began to be associated only negatively in media...

It still remains to be explained what has Prof. Stefania Jabłońska, dermatologist, one of the most highly cited Polish scientists, to do with the Kostanecki family. Over the years she has been a boss of another Kostanecki, a nephew of Stanisław and a son of Antoni and Anna, born Geyer. Doc. dr. hab. Wojciech Kostanecki (1923-1994) was a dermatologist and trichologist, a grandson of a January insurgent and himself a participant in the Warsaw Uprising (cadet corporal, pseudonym "Wierusz", regiment "Jelen"). Geyers were Poles of German origin well known as meritorious industrialists of Łódź. Although formally Imperial Germans (Reichsdeutsche), during the Nazi occupation Geyers rejected the Nazi ideology and remained Poles. "Wierusz" fought with the Home Army (Armia Krajowa, AK) and studied medicine at the underground university in Warsaw. However, this did not prevent him from combining the later academic career with love to Germany, in fact his second homeland, where he spent much time and made close friends. Wojciech Kostanecki stayed also in Libya where he led a department of dermatology². I have written elsewhere about his scientific achievements⁴, here I would like to emphasise something else. The Kostanecki family members, particularly Wojciech, are examples of outstanding patriotism in the best sense of the word. Their patriotism was subjected to severe trials but they always emerged victorious. The fate of the Kostaneckis shows how great is the strength and value of science that allows for breaking down stereotypes and prejudices, ideological, national and racial barriers and even crossing partition borders of Poland (with the full support of the invaders) and occupation zones. As rightly pointed out by Prof. Halina Bojarska-Dahlig¹, for the sake of future generations, mankind with all its industrial, innovative and exploratory activities together with feeble attempts to "improve" the society, should yield to science. And not vice versa!

Przemysław M. Plonka

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2. Jabłońska S. "Doc. dr hab. Wojciech Kostanecki". Official webpage of Prof. Stefania Jabłońska –<http://www.stefanjablonska.keed.pl/kostanecki.html> (accessed on 4 November 2014).
3. What intrigued me, was that it is known from elsewhere that Einstein actually received his doctorate in Zurich in 1905 (promotion in 1906). However, his doctoral thesis on statistical physics was published in Bern, where he was employed in a patent office. In order to continue in a scientific career, Einstein had to become so called "Privatdozent". To obtain this position, habilitation was required. In 1907 University of Bern rejected his candidacy (based on 15 works in theoretical physics probably including works that have been the world's most significant scientific breakthroughs) and only in 1908, a new dissertation and probably a support given by Kostanecki enabled Einstein's career to progress quickly. The information was gained, among others, from the following sources: Prof. Josef Jadassohn, in the years 1896-1917 the Head of the Department of Dermatology, University of Bern, and his son, prof. Werner Jadassohn – after prof. S. Jabłońska, op cit and a website by Hans-Josef Küpper: <http://www.einstein-website.de/indexhtml.html> (accessed on 4 November 2014). Moreover, Dr Tilman Sauer from Bern discussed thoroughly the problems of Einstein's doctorate and habilitation: http://philoscience.unibe.ch/documents/MaterialFS11/V-Einstein11/AE_Vorl06.pdf (accessed on 4 November 2014), although nowhere does he mention Kostanecki...
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