

Capacities/Research Potential FP7-REGPOT-2012-2013-1

Project No. 316254 **BASTION**

"From Basic to Translational Research in Oncology"

Deliverable D5.5

Report on transfer of know-how and networking including Science Business/KUL joint meeting and Pharma Open Days featuring leading MUW translational projects in oncology

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All reports are available on BASTION Webpage: www.bastion.wum.edu.pl



Introduction

There were two pharma open days planned within WP5. The events should have aimed to attract international biotech and pharmaceutical companies including representatives of big pharma to learn about research and innovation activities carried out at MUW and other Ochota Research Campus institutions. These were planned to be small, focused events, by invitation only, that would feature targeted presentations by various research groups from MUW and the CePT (Center of Preclinical Technologies) consortium related to cancer research. Each of these one-day events was expected to attract 30-50 researchers and industry representatives.

Deliverable 5.5 description

Deliverable D5.5 reported hereby corresponds to the task T5.2 in WP5. The aim of this task was the transfer of know-how and networking through a series of networking and workshop events. The task included one meeting in 2013 organized with Science Business and KU Leuven and two Pharma Days (in 2014 and 2015). The first meeting was described in D 5.2 report, the two Pharma Days are reported below.

Task performance

The concept of Pharma Day meetings was to make best practice in science - industry cooperation in order to facilitate innovation-driven translational research. These were organized on 25th April 2014 and on 24th April 2015. These were focused meetings, by invitation only, to ensure free exchange of ideas and fruitful discussions. Both gathered researchers with an outstanding scientific experience in experimental and clinical oncology and biopharmaceutical companies from all around the world to make one step forward towards real translational research. We managed to attract top level scientists in the field of molecular oncology presenting their results in light of potential new therapies or diagnostic tools. There were also Polish and international biopharmaceutical companies developing innovative anti-cancer therapies to share their needs and expectations concerning science-business cooperation. The key aspect of these events was to create stimulating ambience for networking and building good relations.



Pharma Day 2014





The following researchers presented their scientific accomplishments and laboratory capabilities:

- dr. Magdalena Winiarska (BASTION, Medical University of Warsaw)
- dr. Radoslaw Zagozdzon (BASTION, Medical University of Warsaw)
- prof. Rafal Ploski (BASTION, Medical University of Warsaw)
- prof. Przemyslaw Juszczynski (Institute of Hematology and Transfusion)
- prof. Jozef Dulak (Jagiellonian University)
- prof. Bozena Kaminska (Nencki Institute of Experimental Biology)

Good practice in science-industry cooperation was presented by:

- dr. Pawel Wlodarski (BASTION, Medical University of Warsaw) with prof. Tomasz Ciach (Board Member, NanoVelos)
- dr. Ahmad Jalili (Medical University of Vienna)
- dr. Marcin Szumowski (President & CEO, OncoArendi Therapeutics)

Industry representatives presented their R&D pipeline and expressed their expectations concerning academia-industry collaboration:

- Robert Verhagen (CEO, Helix Biopharma)
- dr. Krzysztof Brzozka (Executive Vice President & CSO, Selvita)
- dr. Jerzy Pieczykolan (Head of Research & Principal Investigator, Adamed Group)

A roundtable discussion, moderated by dr. Marcin Szumowski, gave the opportunity to share different perspectives of all parties on:

- How to facilitate translational research in academia?
- What are the key challenges for science-industry cooperation?
- How do different expectations and mentality prevent or disrupt collaboration?
- What are the main barriers of that cooperation in the Polish environment?
- What solutions could / should be implemented to improve the situation?

The summary of the discussion is attached to the report as Pharma Day 2014_press materials.



Pharma Day 2015

The second edition of Pharma Day got a lot of interest due to great appreciation of the first edition participants. We managed to attract representatives of Big Pharma, including keynote speaker dr. Bruce Conway who gave a presentation about drug discovery project he led at Johnson&Johnson that ended up with introducing new drug to the market. There were also representatives of Astra Zeneca, GlaxoSmithKline and Pfizer who actively participated in the discussions on the role of academic researchers, small to midsize biotech and big pharma in translational drug discovery process in oncology. The participants also debated on how to make industry - science collaboration in early stage drug discovery programs more productive.

The second edition of Pharma Day was composed by the following panels:

Keynote speech

Dr. Bruce Conway (Rockefeller University, NY) Moving a New Chemical Entity to a Drug: A case study for the development of a novel treatment for type II diabetes

Science for drug discovery

Prof. Jakub Golab (Medical University of Warsaw) Molecular targets in cancer immunotherapy

Prof. Leszek Krolicki (Medical University of Warsaw) *Magnetic resonance spectroscopy and nuclear medicine challenges for pharmaceutical industry*

Prof. Ewa Zalewska (Institute of Biocybernetics and Biomedical Engineering) Research capabilities of new Centre for Integrated Structural and Functional Studies of the central nervous system

Prof. Bruno Botta (Sapienza University of Rome) GlaB: The reward for perseverance

Prof. Andrzej Dziembowski (Institute of Biochemistry and Biophysics) *DIS3 PIN domain as a novel drug target for multiple myeloma.*

Dr. Marcin Nowotny (International Institute of Molecular and Cellular Biology) *Protein crystallography as a tool in drug development*

Ewa Rutkowska (Kieszkowska Rutkowska Kolasinski) *Law regulating the cooperation of academia and pharmaceutical industry – an incentive or an obstacle?*

Discussion Panel

How to make industry - science collaboration in early stage drug discovery programs more productive?

Panelists:

Dr. Magdalena Tagowska (Patpol)

Dr. Maciej Wierzbicki (BioTechMed cluster)

Dr. Andrzej Kusmierz (Idea2Business)



Dr. Izabela Rzepczynska (NCBR)

Moderator – Marcin Szumowski

Preclinical and early clinical drug discovery programs in Poland

Dr. Marcin Szumowski (OncoArendi Therapeutics) *Working with academia on drug discovery programs - opportunities, challenges, solutions?*

Dr. Wojciech Czardybon (Selvita) *Development of a dual PIM/FLT3 kinase inhibitor SEL24-B489 for the treatment of hematological malignancies*

Dr. Iwona Lugowska (Cancer Center and Institute of Oncology) *Academic clinical trials in rare cancers in Poland, EUROSARC project*

Big Pharma and Academia collaboration model

Dr. Duncan Holmes (GSK Discovery Partnerships with Academia) *Discovery Partnerships with Academia: building effective industry academic drug discovery collaborations*

Dr. Olga Krylova (External R&D Innovation, Pfizer) *Models of academia – industry cooperation. Pfizer perspective*

Dr. Piotr Kaminski (Kaminski & Partners Patent and Trademark Attorneys) *IP management – a key to success in R&D.*

Discussion panel

Role of academic researchers, small to midsize biotechs and big pharma in translational drug discovery process in oncology.

Panelists:

Prof. Janusz Bujnicki (International Institute of Molecular and Cellular Biology)

Dr. Duncan Holmes (GSK Discovery Partnerships with Academia Europe)

Dr. Agnieszka Byszek (Cancer Center and Institute of Oncology)

Dr. Marcin Makowski (Astra Zeneca R&D, Warsaw Clinical Operational Hub)

Moderator: Marcin Szumowski

The summary of the discussion is attached to the report as Pharma Day 2015_press materials.







Conclusions

Both Pharma Days were very successful – they gathered extraordinary people committed to develop excellence in science and to turn it into life application. The aim of such activity is to move forward to clinical practice and to help patients. Not only excellent speeches and great discussions, but what is most important – new contacts hopefully will evolve into new projects in drug discovery.





Corresponding estimated*/budget

PERSONNEL, TRAVEL AND OTHER MAJOR DIRECT COST ITEMS FOR BENEFICIARY "1"				
FOR M19-M36				
W/P no	Item description	Amount	Evaluations	
WT 110.	item description	[EUR]	Explanations	
5	Personnel costs	19,818.07	Salary of the WP5 Leader (4,68 PM); fee	
			of the WP5 Co-leader (0,66 PM),	
	Travel	2,127.61	Travel & accommodation (invited	
			speakers – Pharma Day)	
			Project Experts fees (3 experts)	
	Subcontracting	31,435.07	Organisation of the two Pharm Days	
			(2014 &2015)	
	.		Materials for Pharma Days	
	Remaining direct costs	11,048.28	Membership to Science Business	
			Network	
TOTAL DIRECT WP5 COST (D5.5)		64,429.03		

/* - exact costs for M19-M36 will be presented in the 2nd Period Report and Form C (October 2015)

Dr. Karolina Dzwonek

Innovation Manager, WP5-Leader

Prof. Jakub Golab BASTION Project Coordinator WP5 Co-leader Warsaw, August 2015 BASTION From Basic to Translational Research in Oncology

SCIENCE BUSINESS Media partner

April 25th

Pharma Day program

- 10:00 10:15 prof. Jakub Golab welcome & BASTION project overview
- 10:15 11:00 Scientific presentations
 - dr. Magdalena Winiarska (BASTION, Medical University of Warsaw)

Optimizing combination regimens employing anti-CD20 monoclonal antibodies

dr. Radoslaw Zagozdzon (BASTION, Medical University of Warsaw)

Antibody-based biomarker studies in breast cancer

prof. Rafal Ploski (BASTION, Medical University of Warsaw)

Exome sequencing in clinical diagnostics

- 11:00 11:15 coffee break
- 11:15 12:00 Scientific presentations

prof. Przemyslaw Juszczynski (Institute of Hematology and Transfusion)

PIM kinases are rational therapeutic targets in lymphoid malignancies

prof. Jozef Dulak (Jagiellonian University)

Heme oxygenase-1 as a new target for anti-cancer therapies.

prof. Bozena Kaminska (Nencki Institute of Experimental Biology)

Integrin ligands as novel therapeutic targets in glioblastoma

- 12:00 12:15 coffee break
- 12:15 13:00 Good practice in science-industry cooperation

dr. Pawel Wlodarski (BASTION, Medical University of Warsaw)

& prof. Tomasz Ciach (NanoVelos)

Polysaccharide nanoparticles as a potential drug delivery system for cancer treatment

dr. Ahmad Jalili (Medical University of Vienna)

Institutional experience on a successful academia-industry collaboration with Novartis

dr. Marcin Szumowski (CEO, OncoArendi Therapeutics)

Industry - Academia collaboration from the perspective of an innovative drug discovery start-up



SCIENCE BUSINESS Media partner

14:00 – 14:45	Industry presentations
	Robert Verhagen (CEO, Helix Biopharma)
	Helix BioPharma: Corporate Presentation and discussion of Phase I/II clinical trial for
	NSCLC in Poland
	dr. Krzysztof Brzozka (CSO, Selvita)
	Selvita company presentation and R&D pipeline review
	dr. Jerzy Pieczykolan (Head of Research Department, Adamed)
	Introduction of Adamed Group Drug Discovery branch and R&D pipeline review
14:45 – 15:00	coffee break
14:45 - 15:00 15:00 - 16:00	coffee break Roundtable discussion
14:45 - 15:00 15:00 - 16:00 Moderator:	coffee break Roundtable discussion dr. Marcin Szumowski
14:45 - 15:00 15:00 - 16:00 Moderator: Topics:	coffee break Roundtable discussion dr. Marcin Szumowski How to facilitate translational research in academia? What are the key challenges for science-industry cooperation? How do different expectations and mentality prevent or disrupt collaboration? What are the main barriers of that cooperation in the Polish environment? What solutions could / should be implemented to improve the situation?

Venue: **sound Garden** Żwirki i Wigury 18 HOTEL Warsaw

Pharma Day speakers



Krzysztof Brzozka, PhD Executive Vice President Chief Scientific Officer at Selvita SA

Dr. Krzysztof Brzozka joined Selvita in 2007 as a specialist responsible for evaluation, due diligence and in-licensing of research projects. In 2009 he became a Project Manager of the first anticancer project initiated at Selvita and in subsequent years initiated further research projects, also in additional therapeutic indications. In January 2012 he was appointed to the position of Chief Scientific Officer and Member of the Management Board and is currently responsible for development of internal pipeline of novel, small molecule therapies across various indications. Dr. Brzozka holds a PhD degree from Ludwig Maximilian University in Munich (Germany) and an MSc degree in Biotechnology, specializing in Molecular Biology, from the Jagiellonian University in Krakow (Poland). He also completed a two-year Executive MBA at Stockholm University School of Business and the Cracow University of Economics Business School. In the years 2003 - 2007, Dr. Brzozka conducted research at the Ludwig Maximilian University in the field of intracellular signaling, pathogen defense mechanisms leading to the immune system inhibition and the innate immune response.



Tomasz Ciach, PhD, Prof. Head of Biotechnology and Bioprocessing Division Faculty of Chemical and Processing Engineering Warsaw University of Technology Co-founder & Board Member at Nanovelos

Professor at Faculty of Chemical and Processing Engineering, Warsaw University of Technology. Author of 12 granted patents and over 50 publications. During several years of residence in the Netherlands worked on drug delivery systems and biomedical engineering. After returning to Poland founded the Laboratory of Biomedical Engineering at Warsaw University of Technology, which addresses issues of biomedical engineering and advanced drug delivery systems, including nanotechnology. He is an author and and co-founder of NanoVelos. He has more than 20 years of experience in collaboration with companies including AstraZeneca, Procter and Gamble, Reckit, Adamed, Balton, Galmed. Co-author of two technologies that are already in production stage: biodegradable drug eluting coating for coronary stents and biocompatible, low friction and antiinfection coating for urological catheters. Currently working on the nanoparticles for targeted therapy of cancer and implants of stem cells.



Jozef Dulak, PhD, Prof.

Head of the Department of Medical Biotechnology Faculty of Biochemistry, Biophysics and Biotechnology at the Jagiellonian University in Krakow

Prof. Dulak, is a doctor honoris causa of the University of Orleans, France (2012), a corresponding member of the Polish Academy of Arts and Sciences (elected in 2011), and the president of the European Vascular Biology Organisation (EVBO). He is also a member of the Committee of Biochemistry and Biophysics and the Committee of Biotechnology of the Polish Academy of Sciences. Prof. Dulak is also a member of the Committee for Evaluation of Scientific Institutions (KEJN) at the Ministry of Science and Higher Education. Prof. Dulak was a member of the Scientific Committee of the Innovative Medicines Initiative in Brussels (for three terms, since 2008-2013), His research interest include stem cell biology, vascular biology and medicine, gene and cell therapy, cancer biology, microRNAs, inflammation and oxidative stress-driven mechanisms of diseases. He is the author of more than 140 papers, including those published in such journals as Circulation, Arteriosclerosis Thrombosis and Vascular Biology, Science, Journal of Experimental Medicine, Journal of Biological Chemistry, Antioxidants & Redox Signaling and others.



Jakub Golab, PhD, MD, Prof. Head of the Department of Immunology in the Center of Biostructure Research Medical University of Warsaw

Prof. Golab heads the Department of Immunology at the Medical University of Warsaw (MUW), where he manages a group of 40 researchers and thus far promoted 14 PhD students. His group is supported by several grants from national and international sources (FP7, Ministry of Science and Higher Education, Foundation for Polish Science, National Science Center, Polish-Swiss Research Program and the National Centre for Research and Development). He is a recipient of many prestigious awards, including the Prime Minister award for academic achievements. He is a member of the Committee on Cell Biology, Committee on Immunology and Infectious Diseases, Commission on Tumor Biology in the Committee on Human Genetics and Molecular Pathology in The Polish Academy of Sciences and the Scientific Advisory Board of the National Research Centre. He represents Poland in the COST Action TD0901 ",Hypoxia sensing, signaling and adaptation". His research is focused on experimental oncology, especially on improving anticancer activity of various therapeutic approaches, including proteasome inhibitors and statins. His publication record includes over 100 articles in top journals (citation index >4500 and a Hirsh index of 32). Jakub has also been active in privately funded drug development initiatives and was a member of Selvita SA Scientific Advisory Board. His invention on 'Novel antibody therapies' US 2011/0091473 A1 has been sold by MUW to Genmab B.V. Jakub graduated from the Medical University of Warsaw in 1998. He obtained his Ph.D. in 1999 from the Institute of Biostructure Research in Warsaw and had postdoctoral training in Harvard Institutes of Medicine (1999-2000) and University of Texas Southwestern Medical School (2003)



Ahmad Jalili, PhD

Consultant Dermatologist & Group Leader at the Division of Immunology, Allergy and Infectious Diseases (DIAID), Department of Dermatology Medical University of Vienna, Austria

Dr Ahmad obtained his medical training as well Ph.D. degree in immunology at the Medical University of Warsaw in Poland.

Dr Jalili's fellowships were at the International Institute of Molecular and Cell Biology, UNESCO/Polish Academy of Science in Warsaw, Poland as well as the DIAID, Department of Dermatology at the Medical University of Vienna. He completed his residency in dermatology at the Department of Dermatology of the Medical University of Vienna under the supervision of Prof. Georg Stingl.

Dr Jalili's clinical and research interests are inflammatory skin diseases, dermato-oncology and dermatology in Organ Transplant Recipient patients.

Dr Jalili has received several awards, among them: Cancer Research Prize of the Vienna City Council; Heinrich Auspitz prize, research grant, Kyrlie prize and poster prize of the Austrian Society for Dermatology and Venerology; poster prize and several travel grants



Przemyslaw Juszczynski, PhD Deputy Director for Science Institute of Hematology and Transfusion Medicine

Dr Juszczynski graduated from Medical University of Lodz in 2000 with an MD degree. He enrolled the PhD program in the Department of Hematology under the supervision of prof. Krzysztof Warzocha. In 2001 he trained at the Dept. of Hematology and Hematologic Malignancies Diagnostic Services, Leeds General Infirmary, Leeds, UK. In 2002 he defended his dissertation "Genetic polymorphisms in the tumor necrosis factor (TNF) locus influence non-Hodgkin's lymphoma outcome" and obtained PhD degree. His work was recognized and awarded by the START fellowship from Foundation for Polish Science. Right afterwards, he received ICRETT fellowship from International Union Against Cancer (Geneva, Switzerland) and KOLUMB fellowship from Foundation for Polish Science and in August 2003 began his postdoctoral training at the Dana Farber Cancer Institute, Harvard Medical School, Boston, MA in prof. Margaret Shipp's laboratory. He completed multiple bioinformatic courses at the Whitehead Institute for Biomedical Research, Massachusetts Institute of Technology, Cambridge, MA. In 2006 he joined Harvard Medical School junior faculty as an Instructor in Medicine. In 2010, he joined the Institute of Hematology and Transfusion Medicine, where he obtained DSc (habilitation) degree and was appointed as associate professor. Since 2011 he is Scientific Director of the Institute. In the same year, he received a TEAM grant "Tumor suppressor function of FOXO1 in diffuse large B-cell lymphomas: mechanisms of regulation and personalized rational targeting strategies" from the Foundation for Polish Science. He is a PI of two additional, ongoing National Science Center "Opus" grants. Dr Juszczynski cooperates with Selvita SA and is a member of its Scientific Advisory Board.



Bozena Kaminska, PhD, Professor

Head of the Laboratory of Molecular Neurobiology Neurobiology Center Nencki Institute of Experimental Biology Director of the Postgraduate School of Molecular Medicine at the Medical University of Warsaw

Prof. Kaminska graduated from the University of Warsaw and received Ph.D. in biochemistry (1991) at the Nencki Institute. She did postdoctoral training at McGill University, Montreal, Canada and was working as a visiting scientist Brain Research Institute, UCLA, USA (2001-2002). She received a professorship in 2003 and promoted 19 PhD students. She was a principal investigator on more than 44 national and international research grants, including 6th FP EU, NATO collaborative project, twice bilateral Polish-German grants in Neurology and bilateral Polish-French grants in cancer biology; holds National Science Center MAESTRO grant, provided a host laboratory for two FP7 Marie Curie Reintegration grants and was a coordinator of the International PhD Programme funded by FNP. She is currently a member of FP7 EU Initial Training network NeuroInflammation and two EU funded consortia *CMST COST Action TD0905* Epigenetics: Bench to Bedside and *CMST COST Action CM1106* Chemical Approaches to Targeting Drug Resistance in Cancer Stem Cells.

She received Prime Minister Award for the best habilitation, 1998; Foundation for Polish Science SCHOLAR GRANT 2004 and is elected member of 3 Committees of Polish Academy of Sciences: Committee of Neurobiology, Cell Biology, and Biochemistry and Biophysics. **R&D expertise:** Invited expert for Science Advisory Board of Novartis Oncology Team, Chicago, USA 2013; member of the scientific board of Selvita Com., Kraków; inventor of three USA patent applications.

She published 94 publications in international peer reviewed, PUBMED journals, cited over 2200 times, H-index = 28 (source ISI).



Jerzy Pieczykolan, PhD Head of Research & Principal investigator Adamed Group

Dr. Pieczykolan graduated from the John Paul II Catholic University of Lublin, Faculty of Biotechnology and Environment Sciences. From the beginning of his research career involved in the subject of tumorigenesis regulation. Holds the title of a Doctor of Philosophy in biological sciences with a specialization in molecular biology of cancer.

Since 2005 associated with the Polish pharmaceutical company Adamed Ltd. Author of the concept of new class fusion proteins with anticancer potential, subsequently developed by Adamed Ltd. within the '3CLA – biotechnological, antineoplastic targeted drug' project, implemented with the support of the Innovative Economy Operational Programme 2007-2013. Since 2011 holds the position of Head of Research in Adamed Ltd. A member of the American Association for Cancer Research since 2006. First author of nine patent applications and coauthor of one. Currently manages four innovative bio-oncological projects implemented by Adamed Ltd.

Lecturer in pharmaceutical biotechnology at the John Paul II Catholic University of Lublin. Currently responsible for the creation of portfolio of research projects on original drugs in Adamed.



Rafal Ploski, PhD, MD, Prof. Head of the Department of Medical Genetics Medical University of Warsaw

Professor Ploski, received his M.D. diploma from the Medical Academy in Warsaw in 1990 and Ph.D. diploma form the Uniwersity in Oslo, Norway in 1995. Throughout his carrier Prof. Ploski has been interested in human genetic variation in association with medical and anthropological problems as well as methods of forensic identification. His scientific record includes > 100 papers published in international journals which so far have been cited > 2000 times. At present Prof. Ploski is the Head of the Department of Medical Genetics of the Medical University in Warsaw. His activity focuses on implementation of state-of-the-art techniques of large scale DNA sequencing in medical diagnostics. An important part of this project involves application of said methods to a detection of cancer-causing mutations.



Marcin Szumowski, PhD, MBA President and CEO Oncoarendi Therapeutics

Marcin has over 15 years' experience in technology transfer, R&D project and life science investment management. He has been involved in preparation and management of more than 40 R&D and investment projects with a combined budget of over 200 million euro. He has founded and/or managed several life science start-ups, including Medicalgorithmics SA, where he was the CEO since its founding in 2005 until 2010. During that term he secured over 4 million PLN in private equity investment and over 4 million in matching public funds. He was also responsible for business development and oversaw the first products cleared for marketing in Europe (CE mark, 2008, 2009) and USA (FDA 510k approval, 2009). Medicalgorithmics currently is listed on the Warsaw Stock Exchange (GPW, ticker MDG) with market capitalization of over 1 billion PLN (330M USD) and high percentage of export sales. Marcin has been responsible for establishing a technology transfer platform within a bio-tech-med cluster (BTM Mazovia) formed around a 100 million euro Centre for Preclinical Research and Technology (CePT) investment project. The cluster brings together the three largest Warsaw universities, seven Polish Academy of Science institutes, several Polish biotech and biomed companies, VC and seed funds. Since 2012 Marcin has also assisted the European Commission on independent expert panels performing the impact assessment and interim evaluations of the Innovative Medicines Initiative (IMI) the world's largest public-private partnership (PPP) in pharmaceutical research.



Magdalena Winiarska, PhD assistant professor & BASTION Group Leader at the Department of Immunology, Medical University of Warsaw

Dr Winiarska graduated from the Faculty of Pharmacy, MUW in 2002. She received her doctoral degree (PhD) in 2008 from the Center of Biostructure, MUW. In 2008 she received the Prime Minister of the Republic of Poland award for her PhD thesis. She received START scholarship from the Foundation for Polish Science, PhD scholarship from the L'Oreal Poland for Women and Science, the Ministry of Science and Higher Education fellowship for outstanding young researchers as well as "Stay with us" scholarship from "Polityka" weekly journal Foundation. Most of the current research of dr Winiarska is aimed at elucidating the molecular mechanisms of antitumor effects of anti-CD20 monoclonal antibodies. The aim of this research is to identify new key modulators responsible for resistance to anti-CD20 monoclonal antibody-based therapeutic modalities.



Pawel Wlodarski, PhD, DDS, MD BASTION Group Leader at the Department of Histology and Embryology & Vice Dean for Doctoral Thesis at First Faculty of Medicine Medical University of Warsaw

Dr Wlodarski is a graduate of the Medical University of Warsaw (MD - class of 1992; DDS - class of 1995). He began to work in the Department of Histology and Embryology as a member of students research group, later as a technician. Shortly after graduation he was offered a post-doctoral fellowship in the laboratory of Bruno Calabretta at the Thomas Jefferson University in Philadelphia, PA to study molecular mechanisms of leukemia. His two next fellowships were at University of Texas (Dallas, TX) and University of Pennsylvania (Philadelphia, PA) where he worked on intracellular signaling and epigenetic regulation of lymphoma.

After dr Wodarski had returned from the USA, he organized his laboratory in the Department of Histology and Embryology and trained a number of students (now graduates of the MUW) many of whom are now members of his research team. His projects focused on the regulation of mTOR kinase in lymphoma, leukemia and glioma. Currently, his research group investigates epigenetic regulation of gene expression in cancer and in endometriosis seeking potential biomarkers or potential targets for novel therapeutic approaches. His group has also a strong ongoing collaboration with researchers from prof. Tomasz Ciach laboratory at Warsaw University of Technology developing novel anti-cancer drugs.

Dr Wlodarski defended his Ph.D. thesis in 2000. Thesis topic was The role of p53 in hematopoietic recovery after cytostatic treatment. Since 2008 he is an Associate Professor at the Department of Histology and Embryology. Since 2012 he is a Vice-Dean for the PhD thesis defenses in the First Faculty of Medicine at the Medical University of Warsaw.



Radoslaw Zagozdzon, PhD, MD BASTION Bioinformatics Group Leader at the Department of Immunology, Medical University of Warsaw

Dr Radoslaw Zagozdzon graduated from the First Faculty of Medicine, Medical University of Warsaw in 1996. He received his doctoral degree (PhD) in medical sciences in 1998 from the Center of Biostructure, MUW. In the years 1997–2000, he worked as an assistant professor in the Department of Immunotherapy, Transplantology and Internal Medicine, Transplantation Institute, MUW. In 1999, he received the first degree of specialization in internal medicine. In the years 1999–2000, he worked as an adjunct in the Department of Immunology, Center Biostructure MUW. In the years 2000–2005, he was employed as a Postdoctoral Fellow and, subsequently, (2005–2008) an Instructor in Medicine in Beth Israel Deaconess Medical Center, a teaching hospital of Harvard Medical School in Boston, USA. In the years 2008-2012, he worked as a Postdoctoral Fellow/Occasional Lecturer at University College Dublin in Ireland. Currently, he is the leader of the bioinformatics group at the Department of Immunology, Medical University of Warsaw under the BASTION program.

Dr Zagozdzon is the author or co-author of numerous scientific publications, both original and review papers, as well as book chapters. Research conducted by Dr Zagozdzon was supported by prestigious fellowships from the Foundation for Polish Science, the US Department of Defense or the Marie-Curie funding under the Seventh Framework Program from the European Union.



Robert A. Verhagen, BSc, MBA Chief Executive Officer of Helix Biopharma Corp.

Mr Verhagen has been Interim Chair of Helix Biopharma Corp since December 18, 2013 and its Non-Independent Director since March 16, 2012. Mr. Verhagen served as Vice President of Business Development at Spectral Diagnostics Inc. since April 1, 2006. He has over 15 years of business development experience in the pharmaceutical and diagnostics industries, including small cap biotechnology companies and large multi- national corporations. Mr. Verhagen has had particular success in the completion of product licensing agreements and strategic alliances.





April 25th Pharma Day

The day to make best practice in science - industry cooperation



Dear Dr....,

BASTION project is financed by European Commission under 7th Frame Programme. Its primary objective is to facilitate transition from scientific discovery to clinical application in oncology.

from bench to the bedside

The project brings together highly skilled and complementary assembly of European researchers **integrating and strengthening cancer research within the European Research Area.** The research program is envisaged to have a long-lasting and direct impact on survival and quality-of-life of cancer patients through the provision of more tailored and effective diagnostic and therapeutic strategies.

common interest

Pharma Day will be a focused meeting, by invitation only, to ensure free exchange of ideas and fruitful discussion. We will gather researchers with an outstanding scientific experience in experimental and clinical oncology and biopharmaceutical companies from all around the world to make one step forward towards real translational research. We will have **top level scientists in the field of molecular oncology** presenting their results in light of potential new therapies or diagnostic tools. We will have **Polish and international biopharmaceutical companies** developing innovative anti-cancer therapies to share their needs and expectations concerning science-business cooperation. Finally – we will create stimulating ambience for networking and building good relations.

it all depends on the people and their attitude

We want to make best practice in science - industry cooperation and to facilitate innovation driven translational research. To make a success, a coordinated, cross-European, multi-disciplinary effort is needed. We would be happy if you could join us on this special day.

Prof. Jakub Gołąb BASTION Project Coordinator

Dr Karolina Dzwonek BASTION Project Innovation Manager





From Basic to Translational Research in Oncology

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Pharma Day participants

Andrzej Bialkowski-Miler levi alleter. Krzysztof Brzozka, PhD Tomasz Ciach, PhD, Prof. Marcin Ciuk Magda Chlebus Wojciech Czardybon, PhD Jozef Dulak, PhD, Prof. Karolina Dzwonek, PhD Zbigniew Gaciong, PhD, Prof. Pawel Gaj, PhD uc! Jakub Golab, PhD, Prof. Leszek Grabarczyk w 20stapsture: Henryk Gruza, PhD Agnieszka Gugula 1pul Q Ahmad Jalili, PhD Alicja Jozkowicz, PhD, Prof. Przemyslaw Juszczynski, PhD, Prof. Bozena Kaminska, PhD, Prof. Tomasz Korkosz Piotr Kuna, PhD. Prof. Andrzej Kusmierz, PhD Monika Lamparska-Przybysz, PhD Bogdan Lang, PhD Slawomir Majewski, PhD, Prof. Patryk Mikucki

Pawel Nowicki 0 Dominika Nowis, PhD Jolanta Pawlowska, PhD Jerzy Pieczykolan, PhD Stanislaw Pikul, PhD Rafal Ploski, PhD, Prof. Tomasz Poninski m Alina Pszczolkowska Jaroslaw Regula PhD, Prof. Piotr Rutkowski, PhD, Prof. Ali Janusz Siedlecki, PhD, Prof. e! Dariusz Smolen, PhD Krzysztof Stachnik e Tomasz Stoklosa moliente Elwira Strokowska Marcin Szczecinski Acre n. Pawel Sztwiertnia Marcin Szumowski, PhD Cezary Scibiorski, PhD **Robert Verhagen** Anna Walkowska Magdalena Winiarska, PhD Mumashe Pawel Wisniewski, PhD Wisn. 28 Pawel Wlodarski, PhD Krzysztof Wojciechowski ind Lucjan Wyrwicz, PhD, Prof. Radoslaw Zagozdzon, PhD

ScienceBusiness 15 May top Story Florin Pharma day: 25 April 2014 – Warsaw, Poland

Poland looks to spur translation of its medical research

While it has a high reputation for the quality of its basic medical research, Poland lacks the means to translate this into the clinic. International collaboration is needed to help build this infrastructure

By Florin Zubascu

Poland's medical researchers have plenty of good ideas and the intellectual capacity to pursue them, but they are having a hard time translating research outputs into the clinic.

The reasons behind this are varied, but delegates at last month's Pharma Day in Warsaw agree: what the country needs right now is to come up with strategies for spurring more international collaboration.

The meeting, organised by the Medical University of Warsaw and BASTION, a project set up to reduce the time from scientific discovery to clinical application, brought together top Polish medical scientists and biotech companies to discuss how to stimulate translational research in oncology and enhance cooperation between science and industry.

Funding the "wrong projects"

In addition to EU funding, Poland has several national funding mechanisms designed to stimulate translational research, noted Izabela Rzepczyńska, deputy head of unit at the Polish National Centre for Research and Development (NCBiR). Ultimately, it is up to medical researchers to brave the step of applying for funds through these mechanisms, she said.

The national strategy programme, Strategmed, which is just about to launch its second call this year, offers the opportunity of getting access to the big money and for building consortia between academia and industry representatives. Another important programme, Innomed, is offering funding opportunities for science and industry collaborations. 35 per cent of its total budget of €72 million comes from industry, and its first call was launched last year.

However, researchers and academics complain about the quality of evaluation in these programmes. Zbigniew Gaciong, head of Internal Medicine, Hypertension and Vascular Diseases, at the Medical University of Warsaw argued that "many projects do not have innovative potential and won't have any patents as an output. Many papers in high-impact journals yes, but not much innovation will come out of them. There will be no translation and no commercial benefits", Gaciong said.

Magda Chlebus, Director of Science Policy at the European Federation of Pharmaceutical Industries and Associations, argued that basic science is relevant as well. "Not all science must be innovative or with commercial potential. Basic science is not about innovation but it plays an enabling role", Chlebus said.

A more active role for the government

Piotr Rutkowski, Director Representative for Clinical Trials at Maria Sklodwoska-Curie Memorial Cancer Center and Institute of Oncology, highlighted the mismatch between the number of clinical trials run by

academia and the number of trials sponsored by the industry. "Unfortunately in Poland we have only commercially-sponsored trials," he said.

In 2013 there was only one academic clinical trial in the field of oncology registered in Poland, while in the EU as a whole, 40 percent of clinical trials are academic.

"We should promote and facilitate more clinical trials coming from academia, because the best ideas come from there," Rutkowski said.

The Polish Ministry for Health should allocate funds and offer legal support for academic clinical trials, which are easier and cheaper to perform than industry-sponsored trials, Rutkowski suggested.

International collaboration – Poland's weak point

Jakub Golab, BASTION project coordinator and head of the Department of Immunology at MUW, said "Poland should put greater focus on developing infrastructures to facilitate collaborations with more advanced research institutes in Europe and to bring more experienced researchers into the country". While BASTION has an impressive track record, with two patent applications for new diagnostic tools in oncology, and 74 peer-reviewed articles published since 2012, that is not enough to get the industry more interested in investing.

Patryk Mikucki, Hub Director for Study Management and Operations at AstraZeneca, said research in Poland is impressive, but from the perspective of a big pharmaceutical company, Poland is not the favourite place in which to invest in research. "In order to be successful internationally, Poland has to choose a niche where it can be the best and the research community needs to build a common voice and to be perceived as one group", Mikucki said.

Money is not the biggest problem. Before even thinking about funding, Poland has to create functional interfaces between academia and the industry, Mikucki told the meeting. "Local biotech companies can in some ways act as an interface between academia and big pharma, but people need to forget for a while about personal conflicts and come together as one group", he said.

Precarious IP management

Collaboration certainly does not happen overnight, and there are obstacles that make it hard for biotech companies to get involved in partnerships, said Wojciech Czardybon, head of Discovery Chemistry at Selvita. "The biggest obstacle in the way of industry-academia collaborations is the lack of basic knowledge about IP protection", he said.

Universities should take further steps in training students and researchers in the basics of IP protection and protect potentially valuable results. Companies automatically lose interest in investing in a project with an unclear IP position.

It is vital to teach students about IP and to develop mechanisms for improving IP protection, Czardybon said.

Marcin Szumowski, CEO and President of OncoArendi Therapeutics, echoed this. "Even though more and more researchers understand IP protection issues and some of them are doing a good job of protecting their IP, there are a lot of cases where these functions are run by assistant lawyers or by the legal departments of universities and this is not very effective", Szumowski said.

Poland has the building blocks, but it will take time to put them together

In a short period of time Poland has made a giant leap forward, thanks to NCBiR, the National Science Council and units within universities which are committed to transferring IP to the market and commercialising it. "Both science and industry are becoming more and more successful, but they can do more", said Gaciong. Overall, there are reasons to be optimistic about the future of science-industry collaboration but perhaps there is a need to move faster, because certainly the west is not going to wait for Poland to catch up.

In order to become an international success, Poland has to speak a common voice and keep the ideas flowing, otherwise it will be hard to attract big international money.

You can find more details about the BASTION project by clicking <u>here</u> or by sending an <u>email</u> to <u>Karolina</u> <u>Dzwonek</u>, Innovation Manager at BASTION.

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Pharma Day 2nd edition program

9:00 Welcome & introductio

9:10 Keynote speech

Dr. Bruce Conway (Rockefeller University, NY) Moving a New Chemical Entity to a Drug: A case study for the development of a novel treatment for type II diabetes

Science for drug discovery

9:45 Prof. Jakub Golab (Medical University of Warsaw) Molecular targets in cancer immunotherapy

> Prof. Leszek Krolicki (Medical University of Warsaw) Magnetic resonance spectroscopy and nuclear medicine challenges for pharmaceutical industry

Prof. Ewa Zalewska (Institute of Biocybernetics and Biomedical Engineering) Research capabilities of new Centre for Integrated Structural and Functional Studies of the central nervous system

Prof. Bruno Botta (Sapienza University of Rome) GlaB: The reward for perseverance

- 10:45 Coffee break
- 11:15 Prof. Andrzej Dziembowski (Institute of Biochemistry and Biophysics) DIS3 PIN domain as a novel drug target for multiple myeloma.

Dr. Marcin Nowotny (International Institute of Molecular and Cellular Biology) Protein crystallography as a tool in drug development

Ewa Rutkowska (Kieszkowska Rutkowska Kolasinski) Law regulating the cooperation of academia and pharmaceutical industry – an incentive or an obstacle?

12:00 Discussion Panel

How to make industry - science collaboration in early stage drug discovery programs more productive?

Panelists:

Dr. Magdalena Tagowska (Patpol) Dr. Maciej Wierzbicki (BioTechMed cluster) Dr. Andrzej Kusmierz (Idea2Business) Aleksandra Moscicka-Studzinska (NCBR)

Moderator – Marcin Szumowski

13:00 Lunch

Preclinical and early clinical drug discovery programs in Poland

14:00 Dr. Marcin Szumowski (OncoArendi Therapeutics) Working with academia on drug discovery programs - opportunities, challenges, solutions?

Dr. Wojciech Czardybon (Selvita) Development of a dual PIM/FLT3 kinase inhibitor SEL24-B489 for the treatment of hematological malignancies

Dr. Iwona Lugowska (Cancer Center and Institute of Oncology) Academic clinical trials in rare cancers in Poland, EUROSARC project

14:45 coffee break

Big Pharma and Academia collaboration model

15:00 Dr. Duncan Holmes (GSK Discovery Partnerships with Academia) Discovery Partnerships with Academia: building effective industry academic drug discovery collaborations

Dr. Olga Krylova (External R&D Innovation, Pfizer) Models of academia – industry cooperation. Pfizer perspective

Dr. Piotr Kaminski (Kaminski & Partners Patent and Trademark Attorneys) IP management – a key to success in R&D.

15:45 Discussion panel:

Role of academic researchers, small to midsize biotechs and big pharma in translational drug discovery process in oncology.

Panelists:

Prof. Janusz Bujnicki (International Institute of Molecular and Cellular Biology) Dr. Duncan Holmes (GSK Discovery Partnerships with Academia Europe) Dr. Agnieszka Byszek (Cancer Center and Institute of Oncology)

Dr. Marcin Makowski (Astra Zeneca R&D, Warsaw Clinical Operational Hub)

Moderator: Marcin Szumowski

16:30 Concluding remarks

Venue: **Sound Garden** Żwirki i Wigury 18 Warsaw



Media Partner



Prof. Jakub Golab Medical University of Warsaw

Prof. Golab heads the Department of Immunology at the Medical University of Warsaw (MUW), where he manages a group of 40 researchers. His research is focused on experimental oncology,

especially on improving anticancer activity of various therapeutic approaches, including proteasome inhibitors and statins. His publication record includes over 100 articles in top journals (citation index >4500 and a Hirsh index of 32). He received many prestigious awards, including the Prime Minister award for academic achievements. He is a member of the Committee on Cell Biology, Committee on Immunology and Infectious Diseases, Commission on Tumor Biology in the Committee on Human Genetics and Molecular Pathology in The Polish Academy of Sciences and the Scientific Advisory Board of the National Research Centre.

Jakub obtained his Ph.D. in 1999 from the Institute of Biostructure Research in Warsaw and had postdoctoral training in Harvard Institutes of Medicine (1999-2000) and University of Texas Southwestern Medical School (2003)



Dr. Duncan Holmes GSK Discovery Partnerships with Academia

European Head of Discovery Partnerships with Academia (DPAc), a global GlaxoSmithKline initiative that establishes integrated partnerships with academic groups to undertake early drug discovery

and translate innovative research into medicines that benefit patients. Duncan established DPAc in 2010, developing the first collaborations in the UK, before the initiative was expanded globally. Multiple projects are now up and running with academics at European institutions.

He is an active drug discovery scientist and medicinal chemist with over 20 years experience at GlaxoSmithKline. Duncan previously has led both chemistry and multidisciplinary departments undertaking drug discovery across a range of therapeutic areas, including in recent years respiratory diseases and inflammation, delivering many quality candidates that have progressed to Phase II clinical trials and beyond.



Dr. Olga Krylova External R&D Innovation, Pfizer

Olga Krylova graduated from Moscow State University with a degree in biochemistry, and subsequently received her PhD in neurobiology. After completing her PhD thesis Olga moved to the UK to conduct scientific research in University

College London (UCL) and later in Imperial College London.

Olga gained her first experience in the pharmaceutical industry working for GlaxoSmithKline in the UK, where during four years she led several drug discovery programs in Psychiatry. Later Olga worked for the European Office of Japanese Trade and investment company Mitsui&Co as senior technology analyst, dealing with research and development of the company's pharmaceutical and medical business examination opportunities for investment, partnerships and licensing.

Since 2011 Olga works at Pfizer Russia as Senior Director for external R&D.



Ewa Rutkowska Kieszkowska Rutkowska Kolasinski

Attorney and partner at the law firm Kieszkowska Rutkowska Kolasinski, she is an expert in pharmaceutical law, healthcare law and product liability. She has many years of experience in legal advice to Polish and international companies from the pharmaceutical

industry, the medical devices sector and the FMCG sector in their daily activities in Poland, particularly in the scope of clinical trials, advertising and distribution of medicinal products. She advises industry organisations which she has repeatedly represented as the public party in the legislative process as well as supporting them in work on industry codes of best practices.

For years, she has been recommended by Polish (Rzeczpospolita) and international (Chambers Europe, PLC Which Lawyer) legal rankings as a leading lawyer in pharmaceutical law in Poland, and by the Expert Guides -Women in Business Law 2014 ranking in the area of product liability. Ewa works pro bono for non-profit organisations, including the Foundation "Warsaw Hospice for Children".

She worked for Baker & McKenzie for almost four years. Before joining Baker & McKenzie as a partner, with her team of four, Ewa worked for many years at the Hogan Lovells (formerly Lovells) law firm, creating and then managing the pharmaceutical law and product liability practice.



Dr. Iwona Lugowska Cancer Center and Institute of Oncology

Iwona Lugowska, MD, PhD is medical oncologist at the Department of Soft Tissue/Bone Sarcoma and Melanoma, Maria Sklodowska-Curie Memorial Cancer Centre-Institute of Oncology

(COI), and researcher at the Deptartment of Epidemiology, Institute of Mother and Child, Warsaw, Poland.

Dr Lugowska is a member of the Publishing Group of the European Society of Medical Oncology (ESMO), a member of the Sarcoma Subcommittee of the European Organization for Research and Treatment of Cancer (EORTC) and a member of the Bioethics Committee of COI.

Dr Lugowska has received awards from the American Society of Clinical Oncology (ASCO IDEA Program in 2010), ESMO-ECCO 2010, NIHES, and the GLOW "Talent in Oncology Programme". Her main fields of interest are sarcomas, melanoma, and clinical trials methodology.



Dr. Piotr Kaminski Kaminski & Partners Patent and Trademark Attorneys

Polish Patent Attorney and European

Patent Attorney, an engineer and biotechnologist, Dr Kaminski holds a Masters degree in biochemistry from University of Technology of Lodz and a PhD degree in biotechnology from the University of Westminster (UK). He studied Intellectual Property Law at School of Laws at the University of Birmingham (UK) and Law on Industrial Property at the Cracow Jagiellonian University. Before postgraduate studies in IP law Dr Kaminski gathered extensive experience in the field of Research & Development both in academic and pharmaceutical industry sectors. Registered in Polish Chamber of Patent Attorneys, Dr Kaminski is also registered to practice before the European Patent Office and before Office on Harmonization of Internal Market. Focuses on litigation and prosecution work in patents in biosciences, but also deals with utility models and industrial designs. National trainer certified by EPI (European Patent Institute).







Dr. Marcin Nowotny International Institute of Molecular and Cellular Biology

Marcin Nowotny heads the Laboratory of Protein Structure at the International Institute of Molecular and Cell Biology in Warsaw. He graduated from the Chemistry Department of Warsaw

University in 1997. In 2002 he received a doctoral degree in biochemistry from the Nencki Institute of Experimental Biology and went he was a postdoctoral fellowship to the National Institutes of Health in Bethesda, Maryland.

In his research Marcin uses macromolecular crystallography and protein biochemistry to study the mechanism of enzymes involved in processing of nucleic acids. The main achievements of his group include the elucidation of a unique catalytic mechanism of RNase H2, the discovery of the DNA damage detection mechanism of bacterial protein UvrA, the determination of the first substrate complex structure of a cellular Holliday junction resolvase, the determination of the first structure of a retrotransposon reverse transcriptase.

The group of Dr. Nowotny is involved in several collaborations with pharmaceutical companies. They use protein crystallography to provide structural information for the interactions between proteins and their inhibitors which is used in rational drug design.



Prof. Andrzej Dziembowski Institute of Biochemistry and Biophysics

Andrzej Dziembowski is the professor of biological sciences and grup leader at the Institute of Biochemistry and Biophysics, PAS, Warsaw and also associate professor at Faculty of Biology, University of Warsaw. His research interest is

focused on molecular mechanisms of RNA decay and processing. He has published ~50 research articles in primary scientific journals, including: Nature, Nature Structural and Molecular Biology, Genes and Development, 3 in Molecular Cell, 4 in EMBO journal, 3 in EMBO reports and 8 in Nucleic Acids Research. These papers were cited about 1800 times with a Hirsch index of H = 21.

Winner of many prestigious awards, including most recently National Science Centre award for outstanding scientific achievements, Knight's Cross Order of Polonia Restituta for scientific achievements and Foundation for Polish Science Mistrz Award.



Dr. Bruce R. Conway Rockefeller University, NY

Dr. Conway is an experienced scientific leader with demonstrated success within industrial and university settings. He worked for 10 years at Johnson & Johnson Pharmaceutical Research and Development where he served as the

lead biologist for multiple drug discovery projects. He championed the progression of three compounds into the clinic, one of which resulted in the approval of Invokana/Canagliflozin as a first-in-class treatment for type 2 diabetes. After leaving Johnson & Johnson, Dr. Conway became the Senior Director of Biology and Pharmacology at the Institutes for Pharmaceutical Discovery where he oversaw the scientific operations of the Biology, Pharmacology and DMPK Teams.

Bruce currently serves as the Director of the Robertson Therapeutic Development Fund at Rockefeller University and works closely with the Faculty to translate basic research discoveries into breakthrough medications. He has an Adjunct Faculty position in the Center for Clinical and Translational Science and serves as an Advisor to OncoArendi Therapeutics, the Tri-Institutional Therapeutics Discovery Institute, and the Pfizer Center for Therapeutic Innovation.



Prof. Bruno Botta Sapienza University of Rome

Bruno Botta is full professor and he has been nominated Deputy Rector for the Internationalization in November 2014. He is Head of the Dipartimento di Chimica e Tecnologie del Farmaco at Sapienza University of Rome since

2011. His interest during the years has been focused on the structural elucidation and synthesis of biologically active compounds derived from living plants. Since 20 years, he has been working on the field of plant tissue cultures in combination with chemistry directed toward the understanding of biosynthetic pathways of the compounds under investigation. During the last years, Prof. Botta focused his attention also on both the synthesis and host-guest studies of artificial receptors of the resorcarenes family.

During the last 7 years he focused his attention on the Hedgehog (Hh) signalling pathway which plays a pivotal role in the initiation, proliferation, invasion and metastasis of various cancers (inter alia medulloblastoma).

He is author of 135 publications, including 6 patents (3 national and 3 international – USA and Europe), and he is author and coauthor of 10 books. For the Italian publishing house Edi-Ermes he edited 2 text books of Organic Chemistry.



Dr. Wojciech Czardybon Selvita

Dr. Wojciech Czardybon is Head of Discovery Chemistry Department & Project Manager at Selvita. He joined the company in 2008 with a task of setting up chemistry labs. In 2009 he became chemistry team leader in the first anticancer

program initiated in Selvita. In 2012 he became a Project Manager of the same program leading it successfully to recently initiated IND-enabling studies. Dr Czardybon is also a Project Manager of the Project on Cancer Quiescence being developed in Selvita in collaboration with Felicitex Therapeutics (Boston, USA).

Dr. Czardybon holds PhD in Organic Chemistry from Silesian Technical University. He conducted research in the area of organic and physical organic chemistry at McMaster University in Canada.



Prof. Ewa Zalewska Institute of Biocybernetics and Biomedical Engineering

Ewa Zalewska PhD, DSc is the specialist in medical engineering. Current position is Associate Professor in the Nalecz Institute of Biocybernetics and Biomedical Engineering, Polish Academy of Sciences, head of the

Department of Engineering of Neuromuscular System. Her research studies focus on the analysis of neurophysiological signals, EEG and EMG, and neuroimaging.

Prof. Zalewska is the President of the Polish Society for Biomedical Engineering, Consultant in medical engineering for the Kujawsko-Pomorskie Voivodeship, Board member of the Clinical Engineering Division (CED) of the International Federation for Medical and Biological Engineering (IFMBE) and member of editorial boards of scientific journals.



Prof. Leszek Krolicki Medical University of Warsaw

Professor (Warsaw University of Medicine, since 1997) with medical speciality in neurosurgery (1983) and nuclear medicine (1985). Chief of Nuclear Medicine and Magnetic Resonance Department at Medical

University of Warsaw, II Faculty (County Hospital of Warsaw), Chief of Nuclear Medicine and Positron Emission Tomography Department Medical University of Warsaw, I Faculty (Clinical Hospital of Warsaw), President of Polish Society of Nuclear Medicine, National Consultant (nuclear medicine), Member of Polish Academy of Science.

His main domain of research are clinical applications of MRI and nuclear medicine in brain examinations and in oncology.



Dr. Marcin Szumowski OncoArendi Therapeutics

Marcin is president and CEO at OncoArendi. He has over 15 years' experience in technology transfer, R&D project and life science investment management. He has been involved in

preparation and management of more than 40 R&D and investment projects with a combined budget of over 200 million euro. He has founded and/or managed several life science startups, including Medicalgorithmics SA, where he was the CEO since its founding in 2005 until 2010. Marcin has been responsible for establishing a technology transfer platform within a bio-tech-med cluster (BTM Mazovia) formed around a 100 million euro Centre for Preclinical Research and Technology (CePT) investment project. Since 2012 Marcin has also assisted the European Commission on independent expert panels performing the impact assessment and interim evaluations of the Innovative Medicines Initiative (IMI) the world's largest publicprivate partnership (PPP) in pharmaceutical research.

OncoArendi Therapeutics is an innovative biopharmaceutical company dedicated to developing and commercializing novel therapeutics for neoplastic and inflammatory diseases. Founded in March 2012 the company has thus far secured nearly 16 million PLN (about 4.5 million USD) in private financing.





Pharma Day Second edition



The day to make best practice in science - industry cooperation

Warsaw. April 24th, 2015











April 24th Pharma Day Second Edition

The day to make best practice in science - industry cooperation



Dear Dr ...,

BASTION project is one of a kind - it gathered extraordinary people committed to develop excellence in science. The second edition of Pharma Day will be the last such event within our project. That is why it should be the moment to show how we see the future. the future of research that turns into life application, the future that puts emphasis on people, great science and clinical benefit.

We would like to show that nowadays, in the heart of Poland, there is a group of people that will make the difference. The pact between Medical University of Warsaw, where the BASTION project is carried out, and a brand new OncoArendi Therapeutics company comprises a special case of joining knowledge and experience, good will and resources, to come up with an international scale, top level drug discovery programs aiming high, and aiming right. It is what we want to show and what we want you to join on the 24th of April.

During the Pharma Day 2015 we will talk about immunotherapies in cancer – the nearest future in cancer treatment. We will show case studies of excellence in science and the way how to implement it into clinical practice. We will show you how..

.. how to introduce the culture of innovation into a daily routine

..how to break barriers

.. how to tighten collaboration

..how to help treating patients

..come and join us to find out!

For us the people are the most important, just like you are.

Prof. Jakub Gołąb BASTION Project Coordinator

Dr. Karolina Dzwonek BASTION Project Innovation Manager

FP7-REGPOT- 316254



Pharma Day 2nd edition

List of Participants

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Poland making moves to lift barriers to investing in drug discovery

Shortcomings in the framework for clinical trials, little knowledge of intellectual property law and a dysfunctional relationship between scientists and technology transfer offices are holding back science-industry collaboration, but work is in hand to change things

Florin Zubascu

Medical researchers in Poland have plenty of good ideas and the intellectual capacity to pursue them, but they are having a hard time building effective drug discovery partnerships with industry.

In Poland, scientists show "huge resistance" when it comes to working with industry, said Duncan Holmes, head of Discovery Partnerships with Academia (DPAc) at GlaxoSmithKline. "But I come here open minded," he told delegates at a meeting held to highlight the barriers to effective collaboration between research and industry, in Warsaw last month.

The meeting of medical scientists, IP specialists and representatives of big pharma was organised by BASTION, an EU funded project that aims to reduce the time from scientific discovery to clinical application.

Poland has got great scientific heritage and Holmes said that is one of the reasons why big pharma is still looking for investment opportunities there. However, Polish scientists have got to be open to this interest. "Big pharma will not keep coming unless you are willing to stand up and talk about the research you are doing," he said.

Overcoming this reticence would allow scientists to capitalise on the economic potential of their research and meet the industry halfway.

In recent years big pharma companies have put significant effort into setting up dedicated units with a brief to improve interactions with academics, Examples include the Johnson & Johnson innovation centres, Pfizer's Centres for Therapeutic Innovation (CTI) and GSK's DPAc programme.

GSK's DPAc programme is looking around the globe for 10 to 15 partnerships with researchers that "undertake the best science" and "are focused on drug discovery," said Holmes. These partnerships can be set up across any geography and in any therapeutic area, with the researchers sharing both the investment and the rewards with the pharma company.

Another example is Pfizer's CTI. These centres are separate research units with a focus on entrepreneurship which, "serve as accelerators for projects in academic research," said Olga Krylova, Senior Director for External R&D Innovation at Pfizer. Researchers can tap into Pfizer's know-how in regulation and commercialisation. Since 2010, Pfizer's CTIs have, "evaluated over 1,000 proposals of which two have already reached the clinical development phase," Krylova noted.

For the moment, there are obstacles on the road to fruitful collaboration between science and industry in Poland, including an incomplete legal framework for clinical trials, little awareness of intellectual property law, and the dysfunctional relationship between scientists and technology transfer offices.

Incomplete legal frameworks

"The Polish law on non-commercial clinical trials is very poor," said Ewa Rutkowska, an expert in pharmaceutical law, healthcare law and product liability. "But there are sparkles of hope," she said.

The Polish government is in the thick of preparing an amendment to the pharmaceutical law that open the door to non-commercial clinical trials.

Researchers complain about not being able to use equipment paid for by the EU in clinical trials sponsored by industry. This is prohibited by the rules of the funding. "These kind of situations block science-industry cooperation and the progress of science," said Rutkowska.

Some of these obstacles could be avoided if Poland was more engaged in EU funding mechanisms and programmes such as Horizon 2020 and the Innovative Medicines Initiative, argued Janusz Bujnicki, head of Laboratory of Bioinformatics and Protein Engineering at the International Institute of Molecular and Cellular Biology. Poland, "Is not involved in designing EU funding mechanisms," he said.

Another hole in the Polish legal framework is a lack of special provisions to ensure the transparency of science-industry collaborations. In healthcare, "cooperation is inevitable, but let's do it in a fair and transparent way," said Rutkowska. To achieve this, stakeholders should be more proactive and "encourage decision makers to implement laws that offer incentives and not obstacles," Rutkowska recommended.

Last but not least, the Polish tax law lacks key provisions relating to the fiscal status of research grants coming from industry.

No IP, no commercialisation

Until last year the Polish IP law was not clear about who actually owns a patented invention, causing much confusion between scientists and research institutions. A new law, "is a good direction, but it's still not perfect" said Rutkowska. There should be more flexibility, enabling scientists to earn money from their inventions.

In addition, a low level of IP awareness can be a barrier in the drug development process, said Magdalena Tagowska, patent attorney at PATPOL. Scientists in Poland overlook many important details. They "do not look into the patent database and many get heartbroken when they find out their 'invention' has already been registered," said Tagowska.

At the same time scientists are drowning in paperwork and do not have enough energy to do their research and take care of the legal stuff as well, Tagowska said, suggesting this is a burden which could be relieved by technology transfer offices.

Piotr Kaminski, managing partner at Kaminski & Partners, warned scientists about the dangers of publishing research results before legally protecting the IP. Once the results are published scientists will not be able to find partners or investors from the industry. "Publish and be damned," he said.

Kaminski echoed Tagowska's view on the low IP awareness of scientists in Poland, arguing scientists must educate themselves about the importance of IP if they ever wish to commercialise their research results.

Technology transfer offices are waiting for scientists to catch up

Tech transfer offices have a crucial role in oiling the wheels of science-industry collaborations. They know about the expectations and the needs of the industry and have the ability to advise scientists on commercialisation opportunities.

However, as things stand "Most drug development projects are at an early stage and are not mature enough to show to investors," said Maciej Wierzbicki, head of technology transfer at the BioTechMed cluster.

While early stage drug discovery projects in Poland have attracted interest from big pharma there are no successful spin out companies. "I hope that in a few years there will be this very famous Polish biotech company," said Andrzej Kusmierz, founder & CEO, Idea2Business. Then, "We will be able to say this is the place to come for early stage drug discovery projects."

A survey of scientists, experts, tech transfer officers and investors conducted by Idea2Business, suggested that to speed things up, Warsaw needs an independent biotech incubator. "Leaders of the best research teams said they have many ideas and would like to have a place where they can go freely without being defined collaborators of existing institutes," said Kusmierz

How Poland can play to its strengths

"Poland should play to its strengths and find its competitive advantage" said Marcin Makowski, associate director for Centralised monitoring at AstraZeneca. "[Poland] has the capability to recruit a lot of patients in early phase clinical trials," said Makowski. "Our biggest asset is the quality of human resources."

To tackle the shortcomings in science-industry collaboration in drug development projects, Bujnicki suggested there should be more interchange with Polish scientists and business representatives from abroad.

This view was echoed by Duncan Holmes. "More dialogue between the different groups involved is really valuable," he said. Big pharma companies will not invest in universities where there is no, "form of engagement to drug discovery," said Holmes.

You can find more details about the BASTION project by clicking <u>here</u> or by sending an <u>email</u> to <u>Karolina Dzwonek</u>, Innovation Manager at BASTION.

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