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

Project No. 316254
BASTION

"From Basic to Translational Research in Oncology"

Deliverable D3.1

Report on the recruitment of 9 experienced researchers and their research activities

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

1. Introduction

The BASTION project is envisioned to allow Medical University of Warsaw (MUW) to become a leading research and clinical oncology centre in Central Europe. One of the objectives realized in WP3 is to build human potential by attracting top-level scientists with international experience in basic and clinical oncology who can contribute to an increase in the quality of research. Deliverable D3.1 corresponds to the task T3.1 in WP3.

2. Recruitment process

We had no previous experience on recruiting such a huge group of professional personnel and felt that recruiting the right personnel would not be an easy task, so we decided to perform the recruitment in a few steps. Finally, recruitment process for total of nine research positions was carried out in three consecutive rounds. The first two rounds were planned to recruit seven experienced researchers funded from the project budget for a period of 30 months, while the third round was planned to recruit two researchers funded for a period of 24 months. Recruitment process was performed according to the procedures of the Medical University of Warsaw.

Advertisements were published on the online Nature Jobs website (www.nature.com/naturejobs/science/), EURAXESS website (http://ec.europa.eu/euraxess/index.cfm/jobs/index). Both Nature website and EURAXESS website have an extensive job-marketing section and wide European and international coverage. Moreover, advertisements were announced on the Medical University of Warsaw website (www.wum.edu.pl), distributed through email lists to international and domestic research centers (The International Institute of Molecular and Cell Biology IIMCB, Nencki Institute of Experimental Biology, University of Warsaw, Mossakowski Medical Research Centre, Polish Academy of Sciences, Institute of Haematology and Transfusion Medicine**,** Institute of Fundamental Technological Research Polish Academy of Sciences), research partners and collaborators (Dana-Farber Cancer Institute, University of Cambridge, Universite de la Mediterranee , University Hospital of Ulm, Karolinska Institutet) and published in the second highest selling newspaper in Poland (Gazeta Wyborcza) .

A. Announcements

First round – recruitment for teams of Dominika Nowis, Krystian Jazdzewski and Piotr Religa.

Announcements were published on 30th October, 2012 with deadline on 16th November, 2012. Every leader specified qualification requirements for postdocs matching his/her scientific profile (attachment 1).

Second round - recruitment for teams of Jakub Golab, Magdalena Winiarska, Tomasz Stoklosa, Pawel Wlodarski and Piotr Religa.

Announcements were published on 16th January, 2013 with deadline on 6th February, 2013. Every leader specified qualification requirements for postdocs matching his/her scientific profile (attachment 1).

Third round- recruitment for teams of Zbigniew Gaciong and Rafal Ploski.

Announcements were published on 25th June, 2013 with deadline on 12th July, 2013. Every leader specified qualification requirements for postdocs matching his/her scientific profile (attachment 1).

B. Applications

The response to the advertisement for research positions was very good, however numerous candidates were formally ineligible for the positions. The quality of the remaining applicants was outstanding and majority of the applicants hold at the time of application post-doctoral positions at polish or international research institutions. Every leader assessed candidates' suitability for positions and assessment processes was focused upon the formal criteria and work-related qualities needed for positions (attachment 2).

The following six selection criteria were used for all postdoc positions:

CRITERIA	WEIGHT (TOTAL OF 100)
Motivation letter	5
2 reference letters	5
Publications	50
Experience in the area	20
International experience	10
Additional qualifications	10

First round – recruitment for teams of Dominika Nowis, Krystian Jazdzewski and Piotr Religa.

(full lists have been rejected from the public report)
List of candidates for team of Dominika Nowis:
23 candidates

List of candidates for team of Krystian Jazdzewski:
4 candidates

List of candidates for team of Piotr Religa:
7 candidates

Second round- recruitment for teams of Jakub Golab, Magdalena Winiarska, Tomasz Stoklosa, Pawel Wlodarski and Piotr Religa

List of candidates for team of Jakub Golab:
8 candidates

List of candidates for team of Magdalena Winiarska:
5 candidates

List of candidates for team of Tomasz Stoklosa:
5 candidates

List of candidates for team of Pawel Wlodarski:
14 candidates

List of candidates for team of Piotr Religa:
6 candidates

Third round- recruitment for teams of Zbigniew Gaciong and Rafal Ploski

List of candidates for team of Zbigniew Gaciong:
8 candidates

List of candidates for team of Rafal Ploski:
7 candidates

C. Interviews and selection

During the interview all applicants were informed about the objectives of BASTION project and were evaluated against the selection criteria for the position and how far they could contribute towards the achievements of the BASTION goals. The selection process was made by a selection committee. The rating scale (1-40) was used when assessing candidates against the selection criteria.

Rating	Description	Points
Highly qualified	The candidate demonstrated experience/expertise above the advertised classification level.	36-40
Very qualified	The candidate demonstrated experience/expertise to a high degree as described for the advertised classification level.	30-35
Qualified	The candidate demonstrated experience/expertise as described for the advertised classification level.	25-29
Not qualified	The candidate demonstrated some aspects of experience/expertise for the advertised classification level.	20-24
Not qualified	The candidate failed to provide experience/expertise demonstrative of the requirements of this position.	1- 19

Selection criteria

	Skill/Quality	**Rating**
1	Depth and breadth of experience	1-5
2	Technical knowledge	1-5
3	Interpersonal skills, teamwork	1-5
4	Organization and planning	1-5
5	Creativity	1-5
6	Project planning, grant applications	1-5
7	Written and oral communication skills	1-5
8	Coping stress management	1-5
	TOTAL	**1-40**

First round – recruitment for teams of Dominika Nowis, Krystian Jazdzewski and Piotr Religa.
Short list was prepared by team leaders by 19th November,2012 and selected candidates were advised via e-mail by WP3 leader about the results and that they proceeded to the next stage of assessment (acceptance letter templates attached in attachment 3). Interview took place on 23rd November, 2012 in the Department of Immunology, MUW (interview rating results in attachment 4).

Members of the selection board:

1. Jakub Golab
2. Dominika Nowis
3. Piotr Religa (Skype)
4. Krystian Jazdzewski
5. Radoslaw Zagozdzon
6. Magdalena Winiarska
7. Iwona Drozdowska-Rusinowicz

List of invited candidates:
For team of Dominika Nowis
1. Monika L. (via Skype)
2. Michał K.
3. Malgorzata F.

For team of Krystian Jazdzewski
1. Anna D.
2. Anna W.

For team of Piotr Religa
1. Tsvetana H. (via Skype)
2. Marta W.
3. Anna D.

Results were announced on 28th November, 2012. All invited candidates were informed about the results (acceptance and rejection letter templates attached in attachment 3).

Selected candidates:

For team of Dominika Nowis: Malgorzata Firczuk
For team of Krystian Jazdzewski: Anna Wojcicka
For team of Piotr Religa: Tsvetana Hristozova - In the process of negotiating the position the offer was rejected by the applicant because she accepted the position at other research institute.

Second round- recruitment for teams of Jakub Golab, Magdalena Winiarska, Tomasz Stoklosa, Pawel Wlodarski and Piotr Religa.
Short list was prepared by team leaders by 9th February, 2013 and selected candidates were informed via e-mail by WP3 leader about the results. Interview took place on 14th February, 2013 in the Department of Immunology, MUW (interview rating results in attachment 5).

Members of the selection board:

1. Jakub Golab
2. Dominika Nowis
3. Piotr Religa (Skype)
4. Radoslaw Zagozdzon
5. Magdalena Winiarska
6. Tomasz Stoklosa
7. Pawel Wlodarski

List of invited candidates:

For team of Jakub Golab:
1. Katarzyna B.
2. Magdalena B-O
3. Malgorzata C.

For team of Magdalena Winiarska:
1. Magdalena J.
2. Beata P.
3. Maria S. – the applicant did not attend the interview due to personal reasons

For team of Tomasz Stoklosa:
1. Joanna D.
2. Abdessamad Z. (via Skype)

For team of Pawel Wlodarski:
1. Pawel G.
2. Magdalena B-O.
3. Monika C.
4. Klaudia S.

For team of Piotr Religa:
1. Oksana K.
2. Piotr Banski – the applicant did not attend the interview because he accepted the position at other research institute

Results were announced on 23rd February, 2013. All invited candidates were informed about the results.

Selected candidates:

For team of Jakub Golab: Małgorzata Czystowska-Kuzmicz
For team of Magdalena Winiarska: Beata Pyrzynska
For team of Tomasz Stoklosa: Joanna Drzewinska
For team of Pawel Wlodarski: Magdalena Banach-Orlowska
For team of Piotr Religa: Oksana Kovtonyuk

Third round- recruitment for teams of Zbigniew Gaciong and Rafal Ploski
Short list was prepared by team leaders by 18th July, 2013 and selected candidates were informed via e-mail by WP3 leader about the results. Interview took place on 24th July, 2013 in the Department of Immunology, MUW (interview rating results in attachment 6).

Members of the selection board:

1. Jakub Golab
2. Radoslaw Zagozdzon
3. Magdalena Winiarska
4. Zbigniew Gaciong
5. Rafal Ploski

For team of Zbigniew Gaciong:
1. Marzena L.
2. Daria R.

For team of Rafal Ploski:
1. Magdalena N.
2. Malgorzata R.
3. Lech T.

Results were announced on 31st July, 2013. All invited candidates were informed about the results.

Selected candidates:

For team of Zbigniew Gaciong: **Marzena Lazarczyk**
For team of Rafal Ploski: Lech Trzeciak

3. Presentation of selected candidates

I. Malgorzata Firczuk

DATE (YEARS)	DEGREE/ EXPERIENCE	PLACE	SUPERVISOR
2002	M.Sc.	Department of Molecular Biology, Intercollegiate Faculty of Biotechnology, University of Gdańsk, Poland	Prof. Jarosław Marszałek
2003	M.Sc.	Department of Microbiology, Faculty of Pharmacy, Medical University of Gdańsk, Poland	Prof. Władysław Werel
2007	PhD	Laboratory of Structural Biology, International Institute of Molecular and Cell Biology, Warsaw, Poland	Prof. Matthias Bochtler
2008-2009	Postdoc	Laboratory of Structural Biology, International Institute of Molecular and Cell Biology, Warsaw, Poland	Prof. Matthias Bochtler
2009-2012	Postdoc	Department of Immunology, Medical University of Warsaw, Poland	Prof. Jakub Gołąb
2013-now	Postdoc	Department of Immunology, Medical University of Warsaw, Poland	Dr hab. Dominika Nowis

Biosketch (provided by Malgorzata Firczuk)

I gained an extensive academic background in bio-medical sciences, studying biotechnology and pharmacy. In 2001-2002 I was working on my first research project, at the Laboratory of Molecular Biology, Intercollegiate Faculty of Biotechnology, University of Gdańsk, in the group of prof. Jarosław Marszałek. I had learned there basic methods of protein expression in yeasts, principles of protein purification, and earned a master degree. In 2003 I had also completed my studies at Medical University of Gdańsk, Faculty of Pharmacy. I worked on my master thesis project at the Laboratory of Microbiology under the supervision of prof. Władysław Werel. I was studying the interactions between bacterial RNA polymerase and its promoter. My work was awarded as the best master thesis of all Polish pharmacy faculties, presented on the competition organized by Polish Pharmaceutical Society in 2003.

Being more and more fascinated with how proteins work and how protein structure determines its function, for a PhD I moved to Warsaw to work under the supervision of prof. Matthias Bochtler, the head of the Laboratory of Structural Biology at the International Institute of Molecular and Cell Biology. My PhD work concentrated around structural biology and macromolecular crystallography. I have learned how to produce, purify, crystallize proteins, protein-DNA complexes, and solve their three - dimensional structures by X-ray crystallography. Moreover, I understood how proteins work at the atomic level, what are their mechanisms of interactions, and how the structure influences protein function. My main PhD theme involved peptidoglycan amidases, prokaryotic enzymes that contribute to bacterial pathogenicity. I have managed to obtain the crystal structures for two of them, LytM and MepA. Based on the structures, we designed mutated protein variants to conclude about the mechanisms of action, and studied small molecule interactions in the protein's active site.

Driven by the need to work on more medically-oriented research topics, I moved to the Department of Immunology at the Medical University of Warsaw, led by prof. Jakub Golab, working in the field of experimental oncology. I worked as a post-doctoral fellow in the TEAM project "Improvement of antitumor

effectiveness of photodynamic therapy“ financed by Foundation for Polish Science. I have learned molecular and cellular biology techniques, mammalian cell culture and *in vivo* mouse models. Importantly, I had an opportunity to supervise students, technicians, design whole projects and become more independent. I successfully applied for my own project funding. I am currently leading two research projects: “Improvement of photodynamic therapy by mobilization of dendritic cells”, financed by Polish National Science Centre, and “Search for target proteins for the new compounds with antitumor activity”, financed by Polish Ministry of Science and Higher Education within IUVENTUS program.

Selected publications

1. Garg AD, Krysko DV, Verfaillie T, Kaczmarek A, Ferreira GB, Marysael T, Rubio N, **Firczuk M**, Mathieu C, Roebroek AJ, Annaert W, Golab J, de Witte P, Vandenabeele P, Agostinis P. **2012**. A novel pathway combining calreticulin exposure and ATP secretion in immunogenic cancer cell death. *EMBO J*. Jan 17. 7;31(5):1062-79.
2. Kłossowski S, Muchowicz A, **Firczuk M**, Swiech M, Redzej A, Golab J, Ostaszewski RJ. **2012**. Studies towards novel peptidomimetic inhibitors of thioredoxin-thioredoxin reductase system. *J Med Chem*. Jan 12;55(1):55-67.
3. **Firczuk M**, Nowis D, Gołąb J. **2011**. PDT-induced inflammatory and host responses. *Photochem Photobiol Sci*. 2011 May;10(5):653-63. Review.
4. **Firczuk M**, Wojciechowski M, Czapinska H, Bochtler M. **2011.** DNA intercalation without flipping in the specific ThaI-DNA complex. *Nucleic Acid Research* 39(2):744-54.
5. **Firczuk M**, Bochtler M. **2007**. Folds and activities of peptidoglycan amidases. *FEMS Microbiol Rev*. 31(6):676-9. Review.
6. **Firczuk M**, Bochtler M. **2006**. Mutational analysis of peptidoglycan amidase MepA. *Biochemistry*, 9; 46(1):120-128.
7. **Firczuk M**, Mucha A, Bochtler M. **2005**. Crystal structures of active LytM. *J Mol Biol.* 354(3):578-90.

Awards/fellowships

- 1st degree scientific reward from the Rector of the Medical University of Warsaw, for the research articles of the year 2011 (2012)
- The best poster prize at the International Photodynamic Association 13th World Congress (2011)
- START scholarship extension, funded by Foundation for Polish Science (2008)
- START scholarship, funded by Foundation for Polish Science (2007)
- 1st prize for the presentation of research results on the annual session of the International Institute of Molecular and Cell Biology, Mierki, Poland (2005)
- 1st award for the best MSc thesis of all Polish pharmacy faculties presented on the competition organized by Polish Pharmaceutical Society, Wroclaw, Poland (2004)
- Prize for the best graduates of the Pharmacy Faculty of Medical University of Gdansk, founded by the biggest Polish pharmaceutical company POLPHARMA, Gdansk, Poland (2003)

Current research interests in BASTION project (provided by Malgorzata Firczuk)

Recently, I have been trying to apply my knowledge of protein structure and structure-to-function relationships to the field of experimental oncology. I am particularly interested in disease-related proteins, which are involved in protein folding, redox homeostasis, and support tumour cell proliferation.
I am focused on investigating mechanisms of action of small molecule compounds, drug target selection and validation. Recently, we had identified peroxiredoxins as molecular targets for an electrophilic peptidomimetic compound, SK053, initially designed as thioredoxin / thioredoxin reductase system inhibitor. Using biotin-avidin affinity approach, we found two-cysteine dimeric peroxiredoxins as covalently bound to the biotin-labelled compound. We are now investigating the detailed mechanism of SK053 binding to peroxiredoxin-1, both in cells and with purified recombinant proteins. In addition, we are validating peroxiredoxins as potential targets in B lymphocyte-derived malignancies.
The second line of my scientific interest is focused on the role of endoplasmic reticulum resident chaperone, glucose regulated protein 78 (Grp78), in tumour cell survival and response to anti-tumour therapies. Grp78 is

highly expressed in tumour cells and plays a cytoprotective role, supporting tumour growth. We had recently shown that Grp78 is up-regulated in response to photodynamic therapy, and contributes to the therapy resistance. Further, we demonstrated that Grp78 down-regulation by siRNA or a bacterial cytotoxin, which specifically cleaved and inactivated Grp78, sensitized cancer cells to photodynamic therapy. In prostate and lung cancer cell lines, the cytotoxin combined with photodynamic therapy triggered an unusual, non-apoptotic cell death, accompanied by massive cytoplasmic vacuolation.
The third research project I am working on aims to employ immune system to increase the effectiveness of photodynamic therapy *in vivo* in a mice model. Previous studies conducted at the Department of Immunology revealed crucial role of dendritic cells in the *in vivo* photodynamic therapy effect. We are studying the effects of chemokines involved in immature dendritic cell trafficking on the effectiveness of photodynamic therapy.

Research activity in BASTION project (link http://bastion.wum.edu.pl/en/zespol-badawczy-dominiki-nowis/)

Publications	**Firczuk M**, Gabrysiak M, **Barankiewicz J, Domagala A**, **Nowis D**, Kujawa M, Jankowska-Steifer E, Wachowska M, Glodkowska-Mrowka E, Korsak B, Winiarska M, Golab J. GRP78-targeting subtilase cytotoxin sensitizes cancer cells to photodynamic therapy. Cell Death Dis. 2013 Jul 25;4:e741. doi: 10.1038/cddis.2013.265.
Speech/lectures/oral presentation at the conferences	**Firczuk M**, Gabrysiak M, Barankiewicz J, Domagala A, Nowis D, Kujawa M, Jankowska-Steifer E, Wachowska M, Głodkowska-Mrowka E, Korsak B, Winiarska M, Golab J. GRP78-targeting subtilase cytotoxin sensitizes cancer cells to photodynamic therapy, European Society for Photobiology 2013 Congress, Liege, Belgium, September 2-6, 2013.
Poster presentation at the conferences	1. **Firczuk M**, Gabrysiak M, Barankiewicz J, Domagala A, Nowis D, Kujawa M, Jankowska-Steifer E, Wachowska M, Głodkowska-Mrowka E, Korsak B, Winiarska M, Golab J. Photodynamic therapy combined with GRP78-targeting subtilase cytotoxin trigger atypical cell death in apoptosis-deficient prostate cancer cells, 21st ECDO Euroconference on Apoptosis on "Cell death: a Biomedical paradigm", 25-28.09. 2013, presenter: Firczuk M. 2. Chlebowska J, **Firczuk M,** Furs K, Muchowicz A, Sadowski R, Klossowski S, Ostaszewski R, Dabrowska-Iwanicka A, Golab J, Nowis D. SK053 an inhibitor of enzymes involved in allosteric disulfide bonds formation induces differentiation of human AML cells, 55th ASH Meeting and Exposition, New Orleans, 7-10.12.2013, presenter: Chlebowska J. 3. Barankiewicz J, **Firczuk M,** Gabrysiak M, Domagała A, Goląb J, EGF-SubA augments ER-stress induced by Photodynamic Therapy in prostate cancer cell line DU145. XL Jubilee Winter School of Faculty of Biochemistry, Biophysics and Biotechnology of the Jagiellonian Univeristy, Poland, Zakopane, February 2013, presenter: Barankiewicz J.
Participation in courses/trainings/workshops	1. Scientific writing training organized by Foundation for Polish Science within SKILLS project Warsaw, May 7-8, 2013. 2. Cancer genetics for medical community Workshop organized by the Medical University of Warsaw in the project BASTION, Warsaw, Poland, June 17, 2013. 3. Scientific team management workshop organized by Foundation for Polish Science within SKILLS project, Cracow, June 11-12, 2013.
Awards/fellowships	1st degree group award of the Rector of the Medical University of Warsaw for the cycle of publications – 2013
International training	Visiting Researcher at the Section of Clinical Neurology, Department of Neurological, Neuropsychological, Morphological, and Movement Sciences, University of Verona, Italy – 2 weeks
Supervising students	Supervising of the students of the Students' Scientific Group at the Department

	of Immunology, the Medical University of Warsaw: - Joanna Barankiewicz - Antoni Domagała - Anna Trzeciecka
Collaboration with other research teams	1. Prof. Matthias Bochtler, Laboratory of Structural Biology, International Institute of Molecular and Cell Biology, Warsaw, Poland. 2. Prof. Janusz Bujnicki, Laboratory of Bioinformatics and Protein Engineering, International Institute of Molecular and Cell Biology, Warsaw, Poland. 3. Prof. Michał Dadlez, Mass Spectrometry Laboratory, Institute of Biochemistry and Biophysics, Warsaw, Poland.

Participation in grants

Grant number	Title	Function	Duration	Funding	Funding Institution
IP1/2011/71	Search for target proteins for the new compounds with antitumor activity	Leader (PI)	2012-2015	384 000 PLN	Ministry of Science and Higher Education
N N401 037138	Improvement of the efficacy of photodynamic therapy by the mobilization of dendritic cells	Leader (PI)	2010-2014	380 000 PLN	Ministry of Science and Higher Education

Envisioned carrier paths in BASTION project (provided by Dominika Nowis)

In 2014 Dr. Malgorzata Firczuk will finalize her two research grants awarded by the National Science Center in Poland (Improvement of the efficacy of photodynamic therapy by the mobilization of dendritic cells) and the Ministry of Science and Higher Education (Search for target proteins for the new compounds with antitumor activity). The results obtained by Dr. Firczuk within these two research projects guarantee publication in the international cancer-related peer-reviewed journals. Considering that REGPOT Programme does not support research activities directly, in the following months Dr. Firczuk will focus on gathering the preliminary results to support her future grant application(s) to the National Science Center in Poland. The results of Dr. Firczuk's projects should allow development of her research carrier in the field of tumor biology and therapy and establishment of her own research team. We also expect that the results of the research will allow her to prepare a habilitation (Ds.C.) thesis of Dr. Malgorzata Firczuk in 2016.

II. Anna Wojcicka

DATE (YEARS)	DEGREE/EXPERIENCE	PLACE	SUPERVISOR
1999-2006	M.Sc.	University of Warsaw, Faculty of Biology	Agnieszka Dzikowska, PhD
2007-2012	PhD	Centre of Postgraduate Medical Education, Warsaw, Poland	Prof. Alicja Nauman. Ph.D.
2012-	Postdoc	Genomic Medicine, Department of General, Transplant and Liver Surgery, Medical University of Warsaw	Dr. Krystian Jazdzewski, M.D., Ph.D.

Biosketch (provided by Anna Wojcicka)

I graduated from the Faculty of Biology at the Warsaw University. My Master's thesis, concerning the arginine catabolism in fungus *Aspergillus nidulans* was performed in the Department of Genetics. After graduation I was employed at the Department of Genetics, Institute of Biochemistry and Biophysics, Polish Academy of Sciences, where I investigated mechanisms of sister chromatid cohesion in the fungal model of *Saccharomyces cerevisiae*. In October, 2007 I commenced PhD studies at the Medical Centre of Postgraduate Education in Warsaw, Laboratory of Molecular Biology, under supervision of Professor Alicja Nauman whose scientific interest has been focused on the elucidation of the role of thyroid hormones in carcinogenesis. The research I conducted within the topic of my PhD thesis consisted of the analysis of the thyroid hormone receptor beta (*THRB*) gene methylation and miRNA-dependent regulation in clear cell renal cell carcinoma, as well as of the evaluation of the effect of thyroid hormones on expression of genes coding for DNA methyltransferases.
I also gained additional experience working in international laboratories and cooperating with other laboratories in Poland. During my Master studies I spent six months at the Department of Clinical Genetics, Vrije Universiteit in Amsterdam, investigating mutations that could be potentially involved in pathogenesis of multiple sclerosis. Furthermore, since May until September 2011 I was an occasional student at Imperial College London, Laboratory of Molecular Endocrinology, where I performed part of my PhD thesis, analyzing expression of DNA methyltransfeases in tissues obtained from wild-type and mutant mice with disrupted T3 signalling. I also participated in other projects conducted in the Laboratory, analyzing in vivo phenotype of the developing and adult skeleton in murine and avian models. From October 2011 until February 2012 I worked at the Ohio State University Comprehensive Cancer Center. My research was focused on the analysis of the risk factors for thyroid cancer and included conduction of the genetic association study using the Sequenom technology and the analysis of microRNAs that are aberrantly expressed in thyroid cancer.

Selected publications

1. Boguslawska J, **Wojcicka A**, Piekielko-Witkowska A, Master A and Nauman A MiR-224 targets the 3'UTR of type 1 5'-iodothyronine deiodinase possibly contributing to tissue hypothyroidism in renal cancer. *PLoS One, 2011;6(9):e24541*
2. Piekielko-Witkowska A, Wiszomirska H, **Wojcicka A**, Poplawski P, Boguslawska J, Tanski Z and Nauman A

(2010) "Disturbed Expression of Splicing Factors in Renal Cancer Affects Alternative Splicing of Apoptosis Regulators, Oncogenes, And Tumor Suppressors." *PLoS ONE 5(10): e13690.*
3. Piekiełko-Witkowska A., Master A., **Wojcicka A.,** Boguslawska J, Brozda I, Popławski P, Tański Z, Nauman A. „Disturbed expression of type 1 iodothyronine deiodinase splice variants in human renal cancer" (2009) Thyroid 19(10): 1105-1113

Awards/fellowships

- Team Prize awarded by the Minister of Health for the article in PlosOne, 2011 "MiR-224 targets the 3'UTR of Type 1 5'-Iodothyronine Deiodinase Possibly Contributing to Tissue Hypothyroidism in Renal Cancer" (2012)
- European Thyroid Association Conference Travel Grant (2011)
- Team Prize awarded by the Minister of Health for the article in PlosOne, 2010 „Disturbed Expression of Splicing Factors in Renal Cancer Affects Alternative Splicing of Apoptosis Regulators, Oncogenes, And Tumor Suppressors" (2011)
- Society for Endocrinology Lab visit Grant (2011)
- UNESCO/FEBS Collaborative Experimental Scholarship for Central & Eastern Europe, December 2010
- Team Prize awarded by the Minister of Health for the article in Thyroid, 2009 „Disturbed expression of type 1 iodothyronine deiodinase splice variants in human renal cancer", 2010
- The Young Investigators' Prize (Basic) granted at the 34th Annual Meeting of the European Thyroid Association, September 2009
- Society for Endocrinology travel grant, March 2009

Current research interests in BASTION project (provided by Anna Wojcicka)

I am a molecular biologist working in the field of molecular endocrinology and oncology. For the past several years my research has been focused on the molecular basis of thyroid hormones action: their involvement in the processes of cell division and proliferation as well as on the role of aberrances in thyroid hormone signaling in development and progression of human cancers.
The projects I am currently involved in aim at elucidation of the role of microRNAs in the pathology of human diseases. MicroRNAs (miRs) are short, approximately 22-nt long non-coding RNAs that posttranscriptionally regulate expression of protein-coding genes. Binding of a miR to 3'UTR (UnTranslated Region) of mRNA results in inhibition of further steps of protein synthesis. Mature microRNAs are cleaved from a long precursor, and the studies of recent years have shown that a single pre-miR can produce a large number of mature miRs (isoforms), called isomiRs, but their biological significance is not yet understood. Increased expression of miRs, observed in cancers, leads to their enhanced binding with target mRNAs, causing severe downregulation of synthesis of proteins and resulting in deregulation of numerous cellular pathways. In our ongoing projects we employ next-generation sequencing to identify comprehensive miRNa profiles of human cancers, including papillary thyroid carcinoma and hepatocellular carcinoma. We seek to identify novel, previously unknown microRNAs and their isoforms, and to elucidate their impact on the cellular transcriptome together with a potential linkage with pathogenesis of cancer. We are also attempting to propose specific, microRNA-based diagnostic panels for non-invasive diagnostics of thyroid and liver malignancies.

Research activity in BASTION project (link http://bastion.wum.edu.pl/en/zespol-k-jazdzewskiego/)

Publications	1. **Wojcicka A**, de la Chapelle A, Jazdzewski K. MicroRNA-related sequence variations in human cancers Human Genetics, Anniversary Issue, in press DOI: 10.1007/s00439-013-1397-x 2. Swierniak M, **Wojcicka A,** Czetwertynska M, Stachlewska E, Maciag M, Wiechno W, Gornicka G, Bogdanska M, Koperski L, de la Chapelle A. Jazdzewski K. 2013 In-depth characterization of the microRNA transcriptome in normal thyroid and papillary thyroid carcinoma. J Clin Endocrinol Metab, 2013;98(8):1401-1409. doi: 10.1210/jc.2013-1214

	3. Liyanarachchi S, **Wojcicka A**, Li W, Czetwertynska M, Stachlewska E, Nagy R, Hoag K, Wen B, Ploski R, Ringel MD, Kozłowicz-Gudzinska I, Gierlikowski W, Jazdzewski K, He H, de la Chapelle A. 2013 Cumulative Risk Impact of Five Genetic Variants Associated With Papillary Thyroid Carcinoma Thyroid Aug 29, in press 4. **Wojcicka A**, Bassett JH; Williams GR 2013 Mechanisms of action of thyroid hormones in the skeleton. BBA - General Subjects, Special Issue: Thyroid hormone signalling. Biochim Biophys Acta Jul;1830(7):3979-86 5. Piekielko-Witkowska A, Kedzierska H, Poplawski P, **Wojcicka A**, Rybicka B, Maksymowicz M, Grajkowska W, Matyja E, Mandat T, Bonicki W, Nauman P. 2013 Alternative splicing of iodothyronine deiodinases in pituitary adenomas. Regulation by oncoprotein SF2/ASF Biochim Biophys Acta Jun;1832(6):763-72 6. He H, Li W, Wu D, Nagy R, Liyanarachchi S, Akagi K, Jendrzejewski J, Jiao H, Hoag K, Wen B, Srinivas M, Waidyaratne G, Wang R, **Wojcicka A**, Stachlewska E, Czetwertynska M, Dlugosinska J, Gierlikowski W, Ploski R, Krawczyk M, Jazdzewski K, Kere J, Symer DE, Jin V, Wang Q, de la Chapelle A. 2013 Ultra-rare mutation in long-range enhancer predisposes to thyroid carcinoma with high penetrance, PLoS One. 2013; 8(5): e61920 7. He H, Bronisz A, Liyanarachchi S, Nagy R, Li W, Huang Y, Akagi K, Saji M, Kula D, **Wojcicka A**, Nihil S, Wen B, Puch Z, Kalemba M, Stachlewska E, Czetwertynska M, Dlugosinska J, Dymecka K, Ploski R, Krawczyk M, Morrison PJ, Ringel MD, Kloos RT, Jazdzewski K, Symer DE, Vieland VJ, Ostrowski M, Jarząb B, de la Chapelle A. 2013 SRGAP1 is a candidate gene for papillary thyroid carcinoma susceptibility. J Clin Endocrinol Metab, 98(5):973-980
Patents	Filed patent applications: 1. Patent application filed in Polish Patent Bureau (Urzad Patentowy RP) on 15.10.2013. Title: Sposób diagnozowania raka wątrobowokomórkowego, zastosowanie markera mikroRNA do diagnozowania zmiany chorobowej w obrębie wątroby, oceny stopnia zaawansowania choroby oraz oceny podatności pacjenta i/lub choroby na zaproponowane leczenie oraz zawierający takie markery zestaw diagnostyczny *2.* Patent application filed in Polish Patent Bureau (Urzad Patentowy RP) on 14.11.2013. Title: Sposób diagnozowania raka brodawkowatego tarczycy, zastosowanie markera mikroRNA do diagnozowania nowotworu tarczycy, oceny stopnia zaawansowania choroby oraz oceny podatności pacjenta i/lub choroby na zaproponowane leczenie oraz zawierający takie markery zestaw diagnostyczny.
Organization of the conferences	Cancer Genetics for Medical Community, Warsaw
Awards/fellowships	1. Mentoring Program awarded by the Foundation for Polish Science (Mentor: Prof. Sissy Jhiang, The Ohio State University, Columbus, Ohio, USA) – 2013 2. Team Prize awarded by the Director of the Medical Centre of Postgraduate Education for a chapter in “Endokrynologia Kliniczna” textbook (2013) 3. Team Prize awarded by the Minister of Health for the article in PlosOne, 2011 “MiR-224 targets the 3’UTR of Type 1 5’-Iodothyronine Deiodinase Possibly Contributing to Tissue Hypothyroidism in Renal Cancer” (2012)

Collaboration with other research teams	1. Prof. Barbara Górnicka, M.D., Ph.D., Department of Pathology, Medical University of Warsaw 2. Prof. Rafal Płoski, M.D., Ph.D., Department of Medical Genetics, Medical University of Warsaw 3. Prof. Piotr Stępień, Ph.D., Institute of Genetics and Biotechnology, Univeristy of Warsaw International Co-operation: 1. Prof. Albert de la Chapelle, M.D.,Ph.D., Distinguished University Professor; Human Cancer Genetics Program, Comprehensive Cancer Center, The Ohio State University, USA 2. Prof. Sissy Jhiang, Ph.D., College of Medicine, The Ohio State University, USA

Participation in grants

Grant number	Title	Function	Duration	Funding	Funding Institution
2012/07/D/NZ3/04149	MicroRNA-dependent regulation of iodide transporters: NIS, AIT and Pendrin and aberrations of this process in papillary thyroid carcinoma	Leader (PI)	2013-2015	499 200 zł	National Science Centre

Envisioned career paths in BASTION project (provided by Krystian Jazdzewski)

Anna's scientific plans are focused on further studies on the pathology of thyroid cancer. Her long-term goals include elaboration of specific diagnostic panels allowing for non-invasive diagnostics of thyroid cancers. Moreover, she is currently initiating collaboration on the project aiming at elucidation of therapeutic tools for thyroid cancer, based on reestablishment of expression of genes coding for iodide transporters. Within the project, she will supervise the projects and theses of two PhD students.

III. Malgorzata Czystowska-Kuzmicz

DATE (YEARS)	DEGREE/ EXPERIENCE	PLACE	SUPERVISOR
1998	M.Sc.	Heinrich-Heine University, Duesseldorf, Germany	Prof. Frank Wunderlich
2006	PhD	Heinrich-Heine University, Duesseldorf, Germany	Prof. Peter Dall
2006-2009	Postdoc	University of Pittsburgh Cancer Institute (UPMC), Pennsylvania, USA	Prof. Theresa Whiteside
2009-2013	Postdoc	Maternity leave	
since March 2013	Postdoc	BASTION	Prof. Jakub Golab

Biosketch (provided by Malgorzata Czystowska-Kuzmicz)

I earned my MSc degree at Heinrich-Heine University in Dusseldorf, Germany in 1998. During my Masters studies I also worked as an undergraduate research assistant at the Institute of Transplant-Diagnostic and Cell Therapeutics of the Heinrich-Heine University, participating in HLA-class I and II typification of patients and donors for bone-marrow and stem-cell transplantations. For graduate studies I joined Dr. Dieter Niederacher's Laboratory of Molecular Genetics, part of the Department of Obstetrics and Gynecology of Heinrich-Heine University. My Ph.D. thesis was a part of research projects of the German Cancer Aid Study and the German Human Genome Project. Basing on bioinformatic analysis of EST-databases and microarray data we tried to identify novel genetic markers in gynecological tumors. For this purpose I designed and developed a specific strategy to validate these candidate genes, which included expression analysis, high throughput pre-screening for mutations and promoter methylation (LOH-analysis, DHPLC) and functional cell-based assays. I identified the insulin-like growth factor binding protein 4 (IGFBP-4) as a putative tumor suppressor in ovarian cancer. I showed that IGFBP-4 downregulation in ovarian tumors was due to allelic loss and promoter-hypermethylation and was ER-status dependent. IGFBP-4 showed IGF-I-dependent anti-proliferative and partly IGF-I-independent pro-apoptotic effects in OvCa cell lines. After completing my Ph.D. in 2006, I moved to Prof. Theresa Whiteside's laboratory, at University of Pittsburgh Cancer Institute (UPMC), Pennsylvania, USA. Her laboratory had been doing pioneering work in characterizing tumor-mediated escape mechanisms and identifying surrogate immunologic markers of prognosis and response to therapy. During this time I was investigating mechanisms responsible for tumor-induced suppression of immune effector cells – primarily in head and neck cancer (HNC), but also in ovarian cancer and acute myelogenous leukemia. My special attention was devoted to the role of tumor-derived microvesicles as mediators of immune suppression and disease progression. In this context I also investigated the exosome-driven Treg (regulatory T cells)- mediated death of effector cells in HNC patients. My second focus was the chemokine receptor signalling that regulates host response to tumors. I found that patients with cancer have an increased frequency of circulating apoptosis-sensitive CD8+ cells, which do not express the chemokine receptor CCR7, and few CD8(+)CCR7(+) apoptosis-resistant T cells. Moreover, I showed that the CD8(+)CCR7(+) T-cell frequency in HNSCC patients' blood tested at diagnosis can discriminate them from normal controls and predicts disease recurrence. Finally, I was involved in the development of cytokine therapies for cancer patients in cooperation with an industry partner, investigating

the molecular mechanisms of T-cell protection of a new developed cytokine-based immunotherapeutic. I also participated in the evaluation of a randomized phase II p53 vaccine trial in ovarian cancer patients.

Selected publications

1. **Czystowska M**, Szczepanski MJ, Szajnik M, Quadrini K, Brandwein H, Hadden JW, Whiteside TL. Mechanisms of T-cell protection from death by IRX-2: a new immunotherapeutic. Cancer Immunol Immunother. 2011, 60(4):495-506
2. **Czystowska M**, Strauss L, Bergmann C, Szajnik M, Rabinowich H, Whiteside TL. Reciprocal granzyme/perforin-mediated death of human regulatory and responder T cells is regulated by interleukin-2 (IL-2). J Mol Med. 2010, 88(6):577-88
3**. Czystowska M**, Han J, Szczepanski MJ, Szajnik M, Quadrini K, Brandwein H, Hadden JW, Signorelli K, Whiteside TL. IRX-2, a novel immunotherapeutic, protects human T cells from tumor-induced cell death Cell Death Differ. 2009, 16(5):708-18
4. Rahma OE, Ashtar E, **Czystowska M**, Szajnik ME, Wieckowski E, Bernstein S, Herrin VE, Shams MA, Steinberg SM, Merino M, Gooding W, Visus C, Deleo AB, Wolf JK, Bell JG, Berzofsky JA, Whiteside TL, Khleif SN. A gynecologic oncology group phase II trial of two p53 peptide vaccine approaches: subcutaneous injection and intravenous pulsed dendritic cells in high recurrence risk ovarian cancer patients. Cancer Immunol Immunother. 2012 Mar;61(3):373-84
5. Szczepanski MJ, **Czystowska M**, Szajnik M, Harasymczuk M, Boyiadzis M, Kruk-Zagajewska A, Szyfter W, Żeromski J, Whiteside TL. Triggering of Toll-like receptor 4 expressed on human head and neck squamous cell carcinoma promotes tumor development and protects the tumor from immune attack. Cancer Res 2009, 69 (7):3105-13
6. Szajnik M, **Czystowska M**, Szczepanski MJ, Mandapathil M, Whiteside TL. Tumor-derived microvesicles induce, expand and up-regulate biological activities of human regulatory T cells (Treg). PLoS One. 2010, 22;5(7):e11469
7. Strauss L**, Czystowska M**, Szajnik M, Mandapathil M, Whiteside TL. Differential responses of human regulatory T cells (Treg) and effector T cells to rapamycin. PLoS One 2009, 4(6): e5994
8. Mandapathil M, Hilldorfer B, Szczepanski MJ, **Czystowska M**, Szajnik M, Ren J, Lang S, Jackson EK, Gorelik E, Whiteside TL. Generation and accumulation of immunosuppressive adenosine by human CD4+CD25highFOXP3+ regulatory T cells. J Biol Chem. 2010; 285(10):7176-86
9. Szajnik M, Szczepanski MJ, **Czystowska M**, Elishaev E, Mandapathil M, Nowak-Markwitz E, Spaczyǹski M, Whiteside TL. TLR4 signaling induced by lipopolysaccharide or paclitaxel regulates tumor survival and chemoresistance in ovarian cancer. Oncogene. 2009; 28(49):4353-63

Current research interests in BASTION project (provided by Malgorzata Czystowska-Kuzmicz)

My recent research activities focus on the understanding of the defensive strategies developed by tumors to protect against immune attack. This phenomenon is referred to as “tumor escape” and has been recently accepted as a major problem responsible for the tumor resistance to immune therapies and for the general lack of success in generation of clinical responses to vaccines in patients diagnosed with cancer. Tumors have the ability to escape the immune system by creating a highly suppressive environment, that involves secretion of immunosuppressive factors (TGF-β, IL-10), induction of immunoregulatory cells (Treg, MDSC), as well as targeted elimination of tumor-specific cytotoxic T-cells. Simultaneously, they frequently co-opt some of the signalling molecules participating in inflammation, such as adhesion molecules, cytokines and growth factors for migration, invasion, and metastasis. Remarkably, this tumor-induced immune suppression is not only confined to the tumor microenvironment, but is evident even in distant immune organs, such as draining lymph nodes or the bone marrow. We and others have identified tumor-derived exosomes (TDE) as carriers for the delivery of defined signals from tumor site to distant organs, enabling the tumor to develop a systemic immune suppression. We have found TDE not only in the tumor microenvironment, but also in peripheral blood and malignant effusions of patients in different cancer localization and showed that their presence and protein content was often associated with disease stage and tumor burden and could be useful as biomarkers of tumor progression and response to therapy. Recently, we identified on ovarian cancer exosomes two enzymes, i.e.

arginase-1 and -2, that are involved in degradation of non-essential amino-acids and play a critical role in chronic inflammation and evasion of anti-tumor immunity. Thus, we hypothesize that through the release of arginase-expressing exosomes which become systemically distributed through the bloodstream, tumor cells achieve a global L-Arg depletion leading to a systemic T-cell dysfunction. We plan to delineate the immunosuppressive role of these tumor-derived enzymes of the amino-acids metabolism. Taking also into account the recent development of inhibitors of amino acid metabolism, we also assume that the inhibition of the expression and enzymatic activity of the above-mentioned enzymes may tilt the balance from an immune-suppressive to an immune-active environment and should have a measurable impact on the disease outcome. Therefore, blocking arginase could be a target for novel anti-cancer strategies, especially in combination with existing molecularly targeted therapies, but also classical chemotherapy.

Research activity in BASTION project (link http://bastion.wum.edu.pl/en/zespol-j-golaba/)

Publications	The immune signature of CD8(+)CCR7(+) T cells in the peripheral circulation associates with disease recurrence in patients with HNSCC. **Czystowska M**, Gooding W, Szczepanski MJ, Lopez-Abaitero A, Ferris RL, Johnson JT, Whiteside TL. Clin Cancer Res. 2013;19(4):889-99
Supervising students	Supervising student Anna Czekalska
Collaboration with other research teams	Collaboration with Dr. Marta Szajnik-Szczepański from Poznan University of Medical Sciences, Department of Gynecologic Oncology

Participation in grants

Grant number	Title	Function	Duration	Funding	Funding Institution
	Elucidation of the role of tumor-derived and exosomal arginases in avoiding immune responses by ovarian cancer	Principal Investigator	2014-2017	Submitted, project pending	National Science Center

Envisioned career paths in BASTION project (provided by Jakub Golab)

Considering that REGPOT Programme does not support research activities directly, we have submitted a grant application to obtain funding of the research project of Dr. Malgorzata Czystowska. The project entitled: "Elucidation of the role of tumor-derived and exosomal arginases in avoiding immune responses by ovarian cancer" was submitted to the National Science Centre in Poland in December 2013. We expect the decision on funding in mid 2014. The project will continue until the end of 2017. We expect to support further research activities of Dr. Malgorzata Czystowska with this grant. The results of this project should allow development of research carrier of Dr. Malgorzata Czystowska in the field of tumor immunobiology. We also expect that the results of the research will allow to prepare a habilitation (Ds.C.) thesis of Dr. Malgorzata Czystowska in 2018.

IV. Beata Pyrzynska

DATE (YEARS)	DEGREE/ Experience	PLACE	SUPERVISOR
1989-1994	M.Sc.	Faculty of Biology, Warsaw University, Poland	Prof. A. K. Tarkowski
1995-1997	Assistant	Nencki Institute of Experimental Biology, Polish Academy of Science, Warsaw, Poland	Prof. A. Sobota
1998-2001	PhD	Nencki Institute of Experimental Biology, Polish Academy of Science, Warsaw, Poland	Prof. B. Kaminska-Kaczmarek
2002-2006	Postdoc	Emory University, Atlanta, GA, USA	Prof. E. G. van Meir
2007-2013	Postdoc	International Institute of Molecular and Cell Biology, Warsaw, Poland	Prof. M. Miaczynska

Biosketch (provided by Beata Pyrzynska)

I was first time involved in the laboratory work as a M.Sc. student at the Department of Embryology, Warsaw University, studying development of the block against polyspermy in different stages of oocyte maturation. Later, as an assistant at the Nencki Institute of Experimental Biology in Warsaw I studied involvement of the cytoskeletal and signaling proteins in phagocytosis. During that time I also gained my first international research experience as a TEMPUS fellow at the Institute of General Pathology, Perugia, Italy. My interest in cancer biology started when I joined the Laboratory of Transcriptional Regulation at the Nencki Institute of Experimental Biology, where I conducted research on the molecular mechanisms leading to glioma cell death upon treatment with immunosuppressive drug cyclosporine A. I used the short-term fellowship from EMBO as an opportunity to collaborate with the National Center of Biotechnology (CNB) in Madrid. My Ph.D. thesis dissertation (2001) was awarded at the Nencki Institute of Experimental Biology and I was also recognized as a young outstanding scientist by the Foundation for Polish Science (FNP, START program).
In 2002 I was recruited to the Winship Cancer Institute, Emory University, Atlanta, USA, to work as a postdoctoral fellow in the Laboratory of Molecular Neuro-Oncology. I used the microarray approach to study the influence of tumor suppressors (such as p53 or p14ARF) status on the development and progression of glioblastoma. My work was awarded by the research fellowships from NATO and from the American Brain Tumor Association. In 2006 I returned to Poland to work at the International Institute of Molecular and Cell Biology in Warsaw. I brought the experience in cancer biology to study the signal transduction pathways originated at the endocytic compartments and influencing different aspects of tumor growth. Over the years I have conducted the research in cancer biology and cancer therapeutics fields. I studied the regulation of cellular signaling leading to changes in gene expression and tumorigenesis. Beside the basic methods of molecular and cell biology I had the opportunity to gain some experience in bioinformatics, microarray technique and proteomics. Recently, I was recruited under the BASTION program to work as an experienced scientist at the Department of Immunology, Medical University of Warsaw.

Selected publications

1. **Pyrzynska B**., Banach-Orlowska M., Teperek-Tkacz M., Miekus K., Drabik G., Majka M., Miaczynska M. (2013). Multifunctional protein APPL2 contributes to survival of human glioma cells. *Mol. Oncol. 7, 67-84*.

2. Hupalowska A., **Pyrzynska B**., Miaczynska M. (2012). APPL1 regulates basal NF-kB activity by stabilizing NIK. *J. Cell Sci. 125, 4090-102*.
3. Zerrouqi A., **Pyrzynska B**., Febbraio M., Brat D.J., Van Meir E.G. (2012). P14ARF inhibits tumor-induced angiogenesis by a p53-independent Mdm2/Sp1/Timp3 signaling axis. *J. Clin. Invest. 122, 1283-95.*
4. **Pyrzynska B**., Pilecka I., Miaczynska M. (2009). Endocytic proteins in the regulation of nuclear signaling, transcription and tumorigenesis. *Mol. Oncol. 3, 321-38*.
5. Khwaja F.W., Svoboda P., Reed M., Pohl J., **Pyrzynska B**., Van Meir EG. (2006). Proteomic identification of the wt-p53-regulated tumor cell secretome. *Oncogene* 25, 7650-61.
6. Tan C., de Noronha R.G. Roecker A.J., **Pyrzynska B**., Khwaja F., Zhang Z., Zhang H., Teng Q., Nicholson A.C., Giannakakou P., Zhou W., Olson J.J., Pereira M.M., Nicolaou K.C., Van Meir E.G. (2005). Identification of a novel small-molecule inhibitor of the hypoxia-inducible factor 1 pathway. *Cancer Res.* 15, 605-12.
7. Ciechomska I., **Pyrzynska B**., Kazmierczak P., Kaminska B. (2003). Inhibition of Akt kinase signaling and activation of Forkhead are indispensable for upregulation of FasL expression in apoptosis of glioma cells. *Oncogene* 22, 7617-27.
8. **Pyrzynska B.,** Serrano M., Martinez-A C., Kaminska B. (2002). Tumor suppressor p53 mediates apoptotic cell death triggered by cyclosporin A. *J. Biol. Chem. 277, 14102-8.*

Awards/felowships

- Two-years fellowship from the American Brain Tumor Association (ABTA), Winship Cancer Institute, Emory University, Atlanta, GA, USA (2002-2004)
- Fellowship from NATO (1 year), Winship Cancer Institute, Emory University, Atlanta, GA, USA (2002)
- Award for outstanding thesis dissertation, Nencki Institute of Experimental Biology, Polish Academy of Science, Warsaw, Poland (2001)
- Travel Award, 27th Meeting of FEBS, Lisbon, Portugal (2001)
- Fellowship from the Foundation of Exp. and Clinical Oncology for 1-month research in the National Center of Biotechnology, Madrid, Spain (2000)
- Award for Young Outstanding Scientists from the Foundation for Polish Science (1-year START fellowship) (2000)
- Travel Award, 26th Meeting of FEBS, Nice, France (1999)
- Fellowship from EMBO for 5-months research in the National Center of Biotechnology, Madrid, Spain (1999)
- Fellowship from the Foundation of Exp. and Clinical Oncology to attend the Conference on Apoptosis, Athens, Greece (1997)
- TEMPUS fellowship (3 months) in the Institute of General Pathology, Perugia, Italy (1995)

Current research interests in BASTION project (provided by Beata Pyrzynska)

My current research interest is focused on the molecular mechanisms that regulate expression of CD20 antigen in malignant B-cells. Clinical management of B-cell tumors (particularly non-Hodgkin's lymphoma and chronic lymphocytic leukemia) includes treatment with monoclonal antibodies (such as rituximab, ofatumumab or GA-101) directed against CD20 antigen. These antibodies eliminate B cells by triggering indirect effector mechanisms of the immune system, namely complement-dependent cytotoxicity (CDC), antibody-dependent cellular cytotoxicity (ADCC), or immunophagocytosis. Nevertheless, the resistance to this therapy is a frequent problem in the clinic. The resistance is often related to decreased levels of CD20 on the surface of malignant cells. Therefore, before investigating novel therapeutic combinations in cancer patients, the molecular mechanisms modulating the level of CD20 antigen, such as its transcriptional regulation, protein stability and its cellular localization should be taken into consideration. Looking for signaling pathways affecting these processes the research group of Dr. Winiarska has recently found that the BCR-SRC-AKT signaling is the key regulator of CD20 expression. These discoveries significantly contribute to understanding of the regulatory mechanisms that control CD20 levels in tumor cells and imply that the action of either clinically used SRC inhibitors (such as dasatinib) or AKT inhibitors (such as MK-2206) can result in reduced binding of therapeutic anti-CD20 monoclonal antibodies and increased resistance to such therapy.

I would like to extend the study mentioned above by elucidating the molecular mechanism acting downstream of AKT and leading to transcriptional repression of CD20 expression upon treatment with AKT inhibitors. I plan to perform the detailed characterization of the effect of clinically used AKT inhibitors on CD20 expression and on the efficacy of anti-CD20 treatment using different cell lines as well as primary samples of B-cell tumors. Importantly, I would like to employ modern molecular approaches to find the signaling molecules acting downstream of AKT and contributing to the regulation of CD20 expression. I expect that the proteomic approaches and database searches will lead to the identification of proteins that recognize and bind to the region of CD20 promoter that we have recently identified to be critical for regulation by AKT. I also plan to search for recognition/binding sites for identified downstream mediators of AKT in the promoters of genes encoding other clinically-targeted antigens in B-cells.

Research activity in BASTION project (link http://bastion.wum.edu.pl/en/zespol-badawczy-magdaleny-winiarskiej/)

Publications	1. "B-cell receptor pathway inhibitors affect CD20 levels and impair antitumor activity of anti-CD20 monoclonal antibodies." Bojarczuk K, Siernicka M, Dwojak M, Bobrowicz M, **Pyrzynska B**, Gaj P, Karp M, Giannopoulos K, Efremov DG, Golab J, Winiarska M Leukemia (in press) 2. "p14ARF suppresses tumor-induced thrombosis by regulating the tissue factor pathway" Zerrouqi A, **Pyrzynska B**, Brat DJ, Van Meir EG. Cancer Res. 2014 Jan 7. [Epub ahead of print]
Poster presentation at the conferences	"Inhibitors of SRC family and AKT regulate the activity of CD20 promoter" **Pyrzynska B**, Bojarczuk K, Winiarska M, Bil J, Miazek N, Zapala P, Bobrowicz M, Dwojak M, Siernicka M, Golab J. 55th ASH Annual Meeting and Exposition, XII.2013, New Orleans, USA
Participation in courses/trainings/workshops	1. Training in scientific project management "Scientists of Tomorrow" organized by pm2pm – Warsaw, Feb-June 2013; 2. Flow Cytometry Workshop "Apoptosis and Cell Signaling" organized by the Nencki Institute of Experimental Biology as part of BIO-IMAGINE project, Warsaw, April 22nd, 2013; 3. Workshop "Cancer genetics for medical community" organized by the Medical University of Warsaw as part of the BASTION project, Warsaw, June 17th, 2013; 4. Workshop "Commercialization of research results" organized by the Bio&Technology Innovations Platform of Biocentrum Ochota, Warsaw, June 27th, 2013;
Supervising students	Supervising of the students of the Students' Scientific Group at the Department of Immunology, the Medical University of Warsaw: Nina Miazek, Piotr Zapala
Collaboration with other research teams	1. Prof. Dimitar G Efremov, International Centre for Genetic Engineering and Biotechnology, Molecular Hematology Laboratory, Monterotondo, Italy 2. Prof. dr hab. Przemysław Juszczynski, Institute of Hematology and Transfussion Medicine, Warsaw, Poland 3. Prof. Daniel Olive, Institute of Tumor Immunology, Center for Cancer Research of Marseille, Mediterranean University, Marseille, France

Participation in grants

Grant number	Title	Function	Duration	Funding	Funding Institution
	Influence of AKT signaling pathway on CD20 expression and antitumor activity of therapeutic monoclonal antibodies	Principal Investigator	2014-2017	Submitted, project pending	National Science Center

Envisioned career paths in BASTION project (provided by Magdalena Winiarska)

Dr Beata Pyrzynska has already managed to conduct her own project, gather preliminary data and apply to the National Science Centre in Poland in December 2013 to obtain funding of the research project entitled "Influence of AKT signaling pathway on CD20 expression and antitumor activity of therapeutic monoclonal antibodies". We expect the decision on funding in early 2014. Moreover, we also expect that the results of Dr Pyrzynska project will allow her to obtain financial support, develop scientific career in the field of monoclonal antibodies and establish her independent research team. In coming years she is also planning to present her results at the international conferences, publish the results of her project in peer-review journals and participate in other projects of Dr Winiarska group.

V. Joanna Drzewinska

DATE (YEARS)	DEGREE/EXPERIENCE	PLACE	SUPERVISOR
2000-2005	M.Sc.	*Department* of Molecular Biophysics, University of Lodz	Prof. dr hab. G. Bartosz
2005-2010	Ph.D.	*Department* of Molecular Biophysics, University of Lodz	Prof. dr hab. M. Soszyński
2011	Research assistant	*Department* of Molecular Biophysics, University of Lodz	Prof. dr hab. G. Bartosz
2012	Postdoc	*Department* of General Biophysics, University of Lodz	Prof. dr hab. B. Klajnert
2013	Postdoc	BASTION, Department of Immunology, Warsaw Medical University	Dr T. Stoklosa

Biosketch (provided by Joanna Drzewinska)

I obtained Master of Science degree at University of Lodz, Department of Molecular Biology in 2005. During my Master's studies, I worked on molecular cloning, recombinant expression and transcriptional regulation of human proteins ABCC1, ABCC2, ABCC3 by MAP kinases signal transduction pathways. Upon completion of my M.Sc., I started my Ph.D. project focused on characterization of transcriptional regulation of *DHCR24* gene, which encodes seladin-1 protein. I investigated the transcriptional activity of *DHCR24* promoter in various mammalian cell types in response to oxidative stress, overexpression of wide array of transcriptional factors and transcriptional factors' inducers. As a result of these studies I demonstrated that mechanisms of DNA methylation and histone acetylation are responsible for tissue specific expression of *DHCR24* gene (Drzewinska et al., 2011). Moreover I identified glucocorticoids as inducers of *DHCR24* expression acting by glucocorticoid receptor-mediated mechanism in lung cancer cells. I completed my Ph.D. in biological sciences in 2010 from the Department of Molecular Biophysics, University of Lodz. In 2011 I worked in the project "Role of multidrug transporters in pharmacokinetics and toxicology – in vitro tests in pharmaceutical and clinical practice" conducted at University of Lodz in the frames of Innovative Economy National Cohesion Strategy. During this time, I worked on molecular cloning and recombinant expression of ABC proteins responsible for multidrug resistance in cancer cells. In the year 2012 I joined the lab of Prof. Barbara Klajnert to work as Postdoctoral Researcher in the project "Biological properties and biomedical applications of dendrimers" conducted within the framework of the TEAM programme, University of Lodz. In these studies we showed that dendrimers (synthesized branched cationic polymers) form stable complexes with anti-HIV antisense oligonucleotides and effectively protect them from nucleolytic degradation. Furthermore, we demonstrated that modification of dendrimer's surface with carbohydrates improves dendrimer's capability to protect the oligonucleotides from digestion by serum nucleases or nuclease S1 (Drzewinska et al., 2012). We also studied interactions between dendriplexes (complexes composed from dendrimers and oligonucleotides) and glucosaminoglycans (the main components of extracellular matrix) which may limit effectiveness of transfection. We were able to demonstrate that the effect of glucosaminoglycans on dendriplexes depends on the glucosaminoglycan type

and the oligosaccharide serving as the surface group of the dendrimer (Szewczyk et al., 2012). In 2013 I joined BASTION project as a Postdoctoral Researcher in the Department of Immunology, Medical University of Warsaw.

Selected publications

1. Zoladz J.A., Smigielski M., Majerczak J., Nowak L.R., Zapart-Bukowska J., Smoleński O., Kulpa J., Duda K., **Drzewinska J.**, Bartosz G. „ Hemodialysis Decreases Serum Brain-Derived Neurotrophic Factor Concentration in Humans" *Neurochemical Research 2012 Aug 19*

2**. Drzewinska J.,** Walczak-Drzewiecka A., Ratajewski M. "Identification and analysis of the promoter region of the human *DHCR24* gene - involvement of DNA methylation and histone acetylation" *Molecular Biology Reports 2011 Feb;38(2):1091-101*

3**. Drzewinska J.,** Pułaski Ł., Soszyński M., Bartosz G. "Seladin-1/DHCR24: a key protein of cell homeostasis and cholesterol biosynthesis", *Postępy Higieny i Medycyny Doświadczalnej, 2009 Jul 13;63:318-30*

Awards/fellowships

- Research scholarship funded by European Social Fund and Budget of State, 2006-2007
- Award of Polish Ministry of Public Education and Sport for outstanding achievements in studies, 2004-2005

Current research interests in BASTION project (provided by Joanna Drzewinska)

My research activities concentrate on studying mechanisms of drug resistance in tumors with the main focus on haematological malignancies such as chronic lymphocytic leukaemia (CLL) and chronic myeloid leukaemia (CML). Utilizing next-generation sequencing platform for exome sequencing we search for new genetic aberrations in CLL and CML.
Introduction of tyrosine kinase inhibitors (TKI) occurred to be a milestone in targeted therapy of chronic myelogenous leukaemia. However, drug resistance becomes an emerging problem with novel targeted therapies. Additional obstacle for oncogene-targeted therapy is low response rate in advanced disease (less than 20% for both first and second generation TKI in CML final stage).
Many reports demonstrated that epigenetic processes remarkably modulate CML expression profiles and phenotypic outcomes, but a lot of questions regarding epigenetic mechanisms of pathogenesis in CML remain unanswered. Hence, unravelling the mechanisms of epigenetic changes in leukaemia cells may contribute to inhibition of development of resistance to TKIs and malignant progression of the disease. Although aberrant DNA methylation is considered to be associated with CML progression, there are almost no useful epigenetic biomarkers which would allow stratifying CML patients into groups with different risk and to personalize or change their treatment before clinical resistance will develop. Thus, we are studying the epigenetic landscape in CML with special focus on leukaemia stem cells (LSCs) which are intrinsically resistant to targeted therapy with tyrosine kinase inhibitors. Employing the next-generation sequencing technology in a follow-back study, we intend to define patterns of epigenetic changes in early phase of CML which predispose patients to the progression of the disease. We expect that our studies will help to define patterns of DNA methylation which could serve as markers associated with CML resistance to tyrosine kinase inhibitors currently used in CML therapy.
Recently published data showed effectiveness of tyrosine kinase inhibitors in treatment of CLL, however detailed mechanisms of action and potential markers of sensitivity to these drugs are missing. Although chronic lymphocytic leukaemia is the most often diagnosed leukaemia in adults, there is no curative treatment for this disease. Therefore in our lab we investigate potential pathways and targets for TKIs in CLL cells, employing gene expression profiling (GEP) analysis in order to obtain molecular signature.

Research activity in BASTION project (link http://bastion.wum.edu.pl/en/zespol-badawczy-tomasza-stoklosy/)

Publications	1. Szewczyk M, **Drzewinska J**, Dzmitruk V, Shcharbin D, Klajnert B, Appelhans D, Bryszewska M. Stability of Dendriplexes Formed by Anti-HIV Genetic Material and Poly(propylene imine) Dendrimers in the Presence of Glucosaminoglycans. *The Journal of Physical Chemistry.* 2012 Dec 20; 116(50):14525-32 2. **Drzewinska J**, Appelhans D, Voit B, Bryszewska M, Klajnert B. Poly(propylene imine) dendrimers modified with maltose or maltotriose protect phosphorothioate oligodeoxynucleotides against nuclease activity. *Biochemical and Biophysical Research Communications.* 2012 Oct 12;427(1):197-201
Participation in courses/trainings/workshops	1. Cancer genetics for medical community Workshop organized by the Medical University of Warsaw in the project BASTION, Warsaw, Poland, June 17, 2013. 2. Next-generation sequencing workshop organized by Illumina and Open Exome. Warsaw, Poland, November 12-13 2013
Collaboration with other research teams	1. Prof. Lars Bullinger, Department of Internal Medicine: Hematology, Oncology, Rheumatology, and Infectious Diseases, University Hospital, University of Ulm, Ulm, Germany 2. Prof. Krzysztof Giannopoulos Experimental Hematooncology Department, Medical University of Lublin, 20-093 Lublin, Poland 3. Dr Maciej Wnuk, Head, Department of Genetics, Deputy Director, Institute of Applied Biotechnology and Basic Sciences, University of Rzeszow, Kolbuszowa, Poland 4. Dr hab. Przemysław Juszczyński, Dr Ilona Seferyńska, Dr Iwona Solarska, Institute of Hematology and Blood Transfusion in Warsaw, Poland

Participation in grants

Grant number	Title	Function	Duration	Funding	Funding Institution
	Role of epigenetic mechanisms in chronic myeloid leukemia progression and resistance to targeted therapy	Principal Investigator	2014-2017	Submitted, project pending	National Science Center
	Investigation of influence of tyrosine kinases inhibitors on epigenetic changes in chronic myeloid leukemia – a potential association with drug resistance.	Principal Investigator	2014-2015	submitted	Medical University of Warsaw

Envisioned career paths in BASTION project (provided by Tomasz Stoklosa)

During employment in the BASTION project, Dr Joanna Drzewinska has already applied for funding the grant entitled "Role of epigenetic mechanisms in chronic myeloid leukemia progression and resistance to targeted therapy" to The National Science Center. In her envisioned career path she plans to lead and realize the grant project which will involve getting experience in next-generation sequencing technic, publication of the project results in peer-review journals and presentation of the results at the international conferences. Dr Drzewińska will also participate in realization of projects directed by her team leader Dr Tomasz Stoklosa.

VI. Magdalena Banach-Orlowska

DATE (YEARS)	DEGREE/EXPERIENCE	PLACE	SUPERVISOR
1999	M.Sc. in molecular biology	Department of Genetics, University of Warsaw, Poland	Prof. Piotr Weglenski
2005	PhD in biochemistry	Institute of Biochemistry and Biophysics, PAS in Warsaw, Poland	Prof. Piotr Jonczyk
2006 - 2013	Postdoc	Laboratory of Cell Biology at International Institute of Molecular and Cell Biology, Warsaw, Poland	Prof. Marta Miaczynska
2013 – until present	Postdoc (research specialist)	Department of Histology and Embryology, Medical University of Warsaw	Dr hab. Pawel Wlodarski

Biosketch (provided by Magdalena Banach-Orlowska)

I graduated from the Department of Genetics, University of Warsaw in 1999. During my graduate studies in the laboratory of Prof. Weglenski I studied the regulation of Aspergillus nidulans agaA gene.
After completing my M.Sc., I successfully applied for the PhD-tract in the Laboratory of Mutagenesis and DNA Repair at the Institute of Biochemistry and Biophysics, PAS. The aim of my PhD project, being a part of systematic studies on a replication fidelity in Procaryota, was to determine the role of DNA polymerase II and DNA polymerase IV in replication. After publishing the results of my studies I received my doctoral degree (PhD) in biochemistry in 2005. In the years 2005–2006, I continued to work with the group of Prof. Fijalkowska and Prof. Jonczyk at the Institute of Biochemistry and Biophysics as a research fellow.
In the years 2006–2013, I was employed as a Postdoctoral Fellow at the International Institute of Molecular and Cell Biology. At that time I participated in studies concerning the role of endocytic proteins in signal transduction in mammalian cells. I have characterized the relationship between APPL1 endocytic protein and the nuclear repressor complex NuRD and its consequence for gene expression. We also demonstrated the role of APPL2 protein in survival of glioma cells. Since APPL adapter proteins interact with many partners involved in signal transduction we investigated their role in several signalling pathways. In 2010, I received grant from Foundation for Polish Science for investigation of the role of APPL1 protein in Wnt signaling. During my postdoctoral fellowship at Prof. Miaczynka Lab I was also involved in the project concerning the role of endocytic proteins in the NFkB pathway.
In 2013, I moved to dr hab. Pawel Wlodarski Lab at the Department of Histology and Embryology, Medical University of Warsaw. Since then I have been involved in three lines of work. The first one focuses on genetic basis of endometriosis. The second line of studies concerns the epigenetic regulation of gene expression. Employing NGS technology we plan to perform systematic analysis of methylation profile and in consequence find the changes in gene expression in response to female sex hormones (estradiol and progesterone).
The third line of work conducted in cooperation with Prof. Tomasz Ciach Lab from Warsaw University of Technology is devoted to investigation of the novel nanoparticles containing anticancer drug. Within this project we perform in vitro and in vivo studies of the new drug. I am particularly involved in investigating the intracellular trafficking of modified drug in breast and ovarian cancer cell lines.

Selected publications

1. Pyrzynska B., **Banach-Orlowska M**., Teperek-Tkacz M., Miekus K., Drabik G., Majka M., Miaczynska M. (2012) Multifunctional protein APPL2 contributes to survival of human glioma cells. *Mol Oncol.* (epub ahead of print)
2. Makiela-Dzbenska K., Jaszczur M., **Banach-Orlowska M**., Jonczyk P., Schaaper R.M., Fijalkowska I.J. (2009) Role of Escherichia coli DNA polymerase I in chromosomal DNA replication fidelity. *Mol Microbiol*. 74, 1114-1127
3. **Banach-Orlowska M**., Pilecka I., Torun A., Pyrzynska B. and Miaczynska M. (2009) Functional characterization of the interactions between endosomal adaptor protein APPL1 and the NuRD co-repressor complex. *Biochem. J.* 423, 389–400
4. Pilecka I., **Banach-Orlowska M.** and Miaczynska M. (2007) Nuclear functions of endocytic proteins. (Review) *Eur. J. Cell Biol.* 86, 533–547
5. Kuban W., **Banach-Orlowska M.,** Schaaper R.M., Jonczyk P., Fijalkowska I.J. (2006) Role of DNA Polymerase IV in the *E. coli* SOS mutator activity. *J Bacteriol*. 188, 7977-7980
6. **Banach-Orlowska M.,** Fijalkowska I.J., Schaaper R. M. and Jonczyk P. (2005) DNA polymerase II as a fidelity factor in chromosomal DNA synthesis in *Escherichia coli.*
Mol. Microbiol. 58, 61-70
7. Kuban W., **Banach-Orlowska M.,** Bialoskorska M., Lipowska A., Schaaper R. M., Jonczyk P., and Fijalkowska I. J. (2005) Mutator Phenotype Resulting from DNA Polymerase IV Overproduction in *Escherichia coli:* Preferential Mutagenesis on the Lagging Strand. *J Bacteriol.* 187, 6862-6866

Awards/fellowships

- START scholarships for young researchers from the Foundation for Polish Science (2008, 2009)
- The Prime Minister Award for PhD thesis (2006)
- The Institute of Biochemistry and Biophysics award for PhD thesis (2005)

Current research interests in BASTION project (provided by Magdalena Banach-Orlowska)

For several years my scientific interest concentrated on signal transduction and gene regulation. During my postdoctoral fellowship in Prof. Miaczynska laboratory I have studied relationship between endocytosis and signaling in mammalian cells, using cell line models. At present I finalize project concerning the role of APPL1 endocytic protein in Wnt signaling pathway. Studying the regulation of biological processes, I am particularly interested in, is much more exciting when leads to understanding disease mechanisms.
Since I have joined to BASTION program my scientific activity focuses on understanding the mechanism of endometriosis development – disease which in many cases leads to endometrioid or clear-cell ovarian cancer.
The aim of this project is to identify mutation predisposing to endometriosis development and establish the origin of ectopic lesions. Since in some of the affected individuals, endometriosis develops into endometrioid or clear-cell ovarian cancer the identification of novel mutations could be helpful in understanding the cancer development. We have been sequencing DNA isolated from the eutopic and ectopic endometrium of affected woman as well as eutopic endometrium of healthy individuals using powerful Next Generation Sequencing (NGS) technology. Implementation of this strategy allows us to identify mutations causing development of endometriosis as well as help to find the origin of endometrial structures implanted in the peritoneal cavity. At present, the most accepted hypothesis explains the presence of ectopic structures out of uterus by the retrograde menstruation carrying endometrial cells through fallopian tubes into the peritoneal cavity. However, no compelling evidence proving this theory has been presented yet. The proposal for this project (accepted for founding by National Science Center) has been prepared by Dr Wlodarski group with my contribution, and I am going to be the main executor of the NGS experiments.
Along with whole exome analysis we are interested in methylome profiling of woman suffering from endometriosis. There are examples of regions differently methylated in eutopic and ectopic endometrium, however no systematic analysis of methylation profiles of DNA isolated from tissue was performed. We plan to

employ the NGS technology to analyze the methylation patterns in affected woman (eutopic and ectopic endometrium) in comparison to healthy individuals (eutopic endometrium).
In parallel we have been analyzing whole genome methylation profile in response to female sex hormones using endometrial primary cell model. This study could be a starting point to follow changes in methylation profile and in consequence changes in gene expression in endometrium during a menstrual cycle.
Moreover, I am particularly interested in epigenetic regulation of gene expression by microRNA. Since different microRNAs are expressed in eutopic endometrium of healthy woman and ectopic endometrium of endometriosis affected ones, it seems that microRNA have potential to regulate processes responsible for disease development. Although expression profiles of microRNA were already studied there are no systematic studies searching for mutations within microRNAs' seed sequences – highly conserved regions responsible for recognition of target mRNA. Using NGS technology, we plan to sequence microRNA expressed in eutopic endometrium of healthy control and eutopic and ectopic endometrium of woman suffering from endometriosis. This project is at the initial stage of proposal preparation for the National Science Center.
Finally, in collaboration with Prof. Ciach Lab from Warsaw University of Technology we investigate the novel nanoparticles containing anticancer drug in in vitro and in vivo studies. Since structure of nanoparticles changes the way of drug uptake our initial in vitro studies focus on investigating its intracellular trafficking in breast and ovarian cancer cell lines. Moreover we test the influence of novel drug on proliferation and apoptosis in tumors isolated from treated animals, as well as in cell line models.

Research activity in BASTION project (link http://bastion.wum.edu.pl/en/zespol-badawczy-pawla-wlodarskiego/)

Participation in courses/trainings/workshops	1. Microdissection - MicroBeam IV (training performed by Advanced Imaging Microscopy Specialist - Zeiss) October, 2013 2. "Technology Day- miRNA solutions from profiling to validation" - Life Technologies 14.11.2013, Warsaw 3. Cancer genetics for medical community, July, 2013 Warsaw
Collaboration with other research teams	Prof. Tomasz Ciach, Biomedical Engineering Laboratory Faculty of Chemical and Process Engineering, Warsaw University of Technology.

Participation in grants

Grant number	Title	Function	Duration	Funding	Funding Institution
2013/09/B/NZ5 /00790	Exome-wide search for somatic mutations in pathogenesis of endometriosis	Co-investigator	2014-2016	992 405 PLN	National Science Center

Envisioned career paths in BASTION project (provided by Pawel Wlodarski)

The prospective professional development of Magdalena Banach-Orłowska lies chiefly in gaining expertise in performance of the next generation sequencing and in microdissection. Both techniques are fundamental in the projects that are currently executed in the lab, or are planned to be used in the near future. Besides that, Dr Banach-Orłowska will study novel mechanisms of epigenetic regulation in neoplastic diseased, which requires extensive literature search. It is our intention, to stimulate every member of the team to prepare a grant proposal. Initially, dr Banach-Orlowska will collaborate in preparation of the grant application for the on-going project. Eventually, she will prepare her own grant proposal in the related field.

VII. Oksana Kovtonyuk

DATE (YEARS)	DEGREE/EXPERIENCE	PLACE	SUPERVISOR
1995–2000	M.Sc.	Zhytomyr State University, Faculty of Biology and Chemistry.	Dr. Sergej V.Verevka Dr. Vladimir N. Listvan
2008	PhD	R.E. Kavetsky Institute of Experimental Pathology, Oncology and Radiobiology of the National Academy of Sciences of Ukraine, Department of Anticancer Therapy Mechanisms	Prof., MD. Vasyl F. Chekhun
2009-2010	Postdoc	Jagiellonian University Faculty of Biochemistry, Biophysics and Biotechnology, Laboratory of Molecular Genetics and Virology	Prof. Hanna Rokita
2011-2012	Postdoc	Taras Shevchenko National University of Kyiv, Ukraine. The Institute of Higher Technology, Molecular Biology, Biotechnology and Biophysics Dept.	Prof. Lidia S. Kholodna
2012	Postdoc	Laboratory of Mutagenesis and DNA Repair, Institute of Biochemistry and Biophysics, Polish Academy of Sciences	Prof. Iwona J. Fijalkowska

Biosketch (provided by Oksana Kovtonyuk)

In 2000, after graduating from the Faculty of Natural Sciences, Zhytomyr I. Franko State University (Ukraine), I joined the Department of Anticancer Therapy Mechanisms at R.E. Kavetsky Institute of Experimental Pathology, Oncology and Radiobiology of the National Academy of Sciences of Ukraine and started my PhD thesis. Starting from 2004, I was employed as a young scientist in the same department. I worked on the study of the proteinase-antiproteinase balance in the dynamics of the growth of Guerin carcinoma and Lewis lung carcinoma with induced cisplatin resistance. In these studies we were able to show that tumor resistance to cisplatin is accompanied by significant changes of the kinetics of tumour growth. The change of the growth kinetics has been found to associate with the elevation of total proteolytic activity as well as the level of α_1-proteinase inhibitor and decreased α_2-macroglobuline level in blood plasma. It has been shown that cisplatin resistance is accompanied by the imbalance between proteolytic and antiproteolytic activities shifted to the total proteolytic activity increase in blood plasma and tumour tissue. Furthermore, we were able to demonstrate that Lewis lung carcinoma cisplatin drug resistance development is accompanied by the increase of its metastasis together with the elevation of total proteolytic activity in blood plasma.
In 2008, I have received my doctoral degree in oncology. To increase my expertise in the field of cancer biology, I moved to the Laboratory of Molecular Genetics and Virology of Prof. H. Rokita (Faculty of Biochemistry, Biophysics and Biotechnology, Jagiellonian University, Krakow, Poland) as a Postdoctoral Fellow within Marie-Curie fellowship funded under the EU's Seventh Framework Programme. My research project focused on MCPIP

(Monocyte chemoattractant protein-induced protein) function in human neuroblastoma cell lines. During my 13-month stay at the lab, I worked on stable and transient transfection of neuroblastoma cells with mutant MCPIP forms and characterization of the clones at the level of MCPIP content, their proliferation and viability. In the years 2011-2012, I worked as a Staff Scientist at the Taras Shevchenko National University of Kyiv, Ukraine.
In 2012, I joined as a postdoctoral training fellow the laboratory of Prof. Iwona Fijalkowska at the Institute of Biochemistry and Biophysics, Polish Academy of Sciences. During my 6 month stay at the lab I was working on a research project entitled "New players involved in the maintenance of genomic stability". I studied the role of PSF1 (a subunit of the GINS complex, which plays a key role at DNA replication forks) mutants in ensuring genomic microsatellite stability using *Saccharomyces Cerevisiae* cell as a model organism.

Selected publications

1. Chekhun V. F., **Kovtonyuk O**. V., Todor I. N., Kulik G. I., Tryndiak V. P. Total proteolytic activity and content of the main proteinase inhibitors in blood plasma of rats bearing Doxorubicin-sensitive and Doxorubicin-resistant Guerin carcinoma. Exp Oncol. (ISSN 1812-9269) 2004; 26, P. 232-235. PMID: 15494693
2. Chekhun V. F., **Kovtonyuk O**. V., Todor I. N., Kulik G. I. Total proteolytic activity and levels of the main proteinase inhibitors in blood plasma of mice bearing Lewis lung carcinoma upon development of resistance to cisplatin. Exp Oncol. (ISSN 1812-9269) 2005; 27(4), P. 286-289. PMID: 16404348
3. Chekhun V. F., **Kovtonyuk O. V.,** Todor I. N., Kulik G. I. Innovation Patent of Ukraine. 76922, (51) МРК (2006) G01N 33/50 A61K31/282 (2006.01). The method of determination of the malignant tumor sensitivity to cisplatin Applied for 02.06.2005; Appeared in publication 15.09.2006. – Vol. №9. – 8 P.
4. G.P. Potebnya, I.M. Voeykova, G.S. Lisovenko, N.L. Cheremshenko, I.M. Todor, O.Yu. Yudina, **O.V. Kovtonyuk**, V.F. Chekhun. ANTITUMOR AND ANTIMETASTATIC ACTIVITIES OF VACCINE PREPARED FROM CISPLATIN-RESISTANT LEWIS LUNG CARCINOMA. Exp. Oncol. 2009; **31**, P. 226-230.
5. Yaiw KC, Mohammad AA, Taher C, Wilhelmi V, Davoudi B, Straat K, Assinger A, Ovchinnikova O, Shlyakhto E, Rahbar A, **Kovtonyuk O**, Religa P, Butler L, Khan Z, Streblow D, Pernow J, Söderberg-Nauclér C. Human cytomegalovirus induces upregulation of arginase II: possible implications for vasculopathies. *Basic Res Cardiol.* 2014 Mar;109(2):401. doi: 10.1007/s00395-014-0401-5. Epub 2014 Jan 19.

Awards/fellowships

- Board National Academy of Sciences of Ukraine Fellowship (2003 –2004)
- Board National Academy of Sciences of Ukraine Fellowship for young scientists, project leader ("Comparative study of antitumor efficacy of vaccines of IEPOR series with different drug sensitivity: immunobiological characteristics") (2005 –2006)
- Marie Curie Postdoctoral Research Fellowship "Functional analysis of new acute phase proteins" (FR-6, MTKD-CT-2006-042586, ACUP project) (2009–2010)
- Postdoctoral Fellowship in Laboratory of Mutagenesis and DNA Repair, Institute of Biochemistry and Biophysics, Polish Academy of Sciences (2012)
- Twinning at Karolinska Institutet, Department of Medicine, Center for Molecular Medicine, (Stockholm, Sweden) (2013)

Current research interests in BASTION project (provided by Oksana Kovtonyuk)

Recent studies indicate that circulating tumor cells (CTC), released by primary tumours into blood, represent an independent prognostic factor for patient survival. These are biomarkers which are increasingly being used in clinical trials.
A critical concept that has emerged to be relevant to CTCs is the epithelial to mesenchymal transition (EMT), which enables epithelial cells to lose their apical–basal polarity, detach from neighboring cells, acquire a fibroblast-like morphology and invade through the surrounding stroma. During this process, tumor cells loose expression of specific epithelial markers including E-cadherin and cytokeratin, gain expression of mesenchymal cytoskeletal and adhesion proteins such as vimentin, CD44 and N-cadherin, and upregulate kinases and growth factors including c-MET, TGF-β, Wnt. Our preliminary results show that the number and the structure of the vessels in a tumor mass is a better predictor of tumor dissemination and CTC number than tumor size. The

project aims to identify the role of vascular factors in interrelationships between CTC with metastasis. Moreover, I work on modulation of angiogenesis and inhibition of tumor growth in colon cancer model through α5β1-integrin/c-Met/FAK/Src-dependent signaling pathway to identify possible molecular players that are involved in this process.
Moreover, the important part of my research work is the study of anti-viral treatment of cytomegalovirus (CMV) -infected tumors (colon cancer, brain tumors) aimed to better understand the CMV role in cancer.

Research activity in BASTION project (link http://bastion.wum.edu.pl/en/zespol-badawczy-piotra-religi/)

Particiaption in the conferences	COST working group meeting (19.09.2013-20.09.2013)
Poster presentation at the conferences	''The role of CMV infection in tumor progression''. *Joanna Soin, Oksana Kovtonyuk, Krzysztof Bojakowski, Piotr Religa*
International training	Twinning at Karolinska Institute (03.11.2013 –22.12.2013)
Supervising PhD students	Varsha Prakash
Collaboration with other research teams	Collaboration with dr Alice Assinger group, Institute for Physiology, Center for Pharmacology and Physiology, Medical University Vienna, Schwarzspanierstraße 17, 1090 Vienna

Participation in grants

Grant number	Title	Function	Duration	Funding	Funding Institution
2011/01/B/NZ4 /06635	Effect of tumor biology of circulating tumor cells	Co-investigator			National Science Center

Envisioned career paths in BASTION project (provided by Piotr Religa)

Dr Kovtonyuk will reach knowledge in vascular and tumor biology. She will also participate in journal clubs, seminars and conferences. Moreover, Dr Kovtonyuk will actively participate in realization of projects directed by her team leader Dr Piotr Religa.

VIII. Marzena Lazarczyk

DATE (YEARS)	DEGREE/EXPERIENCE	PLACE	SUPERVISOR
2005	MSc.	University of Warsaw, Faculty of Biology, Warsaw, Poland	Prof. Mieczysław Kuras
2009	PhD	Mossakowski Medical Research Centre; Polish Academy of Sciences (PAS), Warsaw, Poland	Prof. Ewa Matyja

Biosketch (provided by Marzena Lazarczyk)

My research was previously focused on plant compounds and their potential role in anticancer therapy. Since 2009 I still continued my cancer research within PhD. I studied potential anti-proliferative properties of tachykinin and opioid peptides analoques (substance P/NK1 receptor antagonists, opioids agonists and hybrid peptides consisted of tachykinin-like and opioid sequences), as well as platinum (II) peptide complexes on human and rat glioma cell lines. The achievements of mentioned research activities were partially included in the Final Activity Report for Normolife project Specific targeted research or innovation project (Development of new therapeutic substances and strategies for treatment of pain in patients with advanced stages of cancer within Sixth Framework Programme Life Sciences, Genomics And Biotechnology For Health Liefescihealth-6).
In the meantime (2010-2013) I gained comprehensive knowledge and practical experience in clinical trials field cooperating with clinical research organizations. As a project coordinator and medical writer I had an excellent opportunity to further develop my scientific background in pre-clinical research getting familiar with clinical studies. I dealt with clinical data management, prepared numerous and completed clinical trial documentation for registration, including clinical study protocols submitted to European Medicines Agency and clinical study reports submitted to U.S. Food and Drug Administration.

Selected publications

1. Matyja E, Grajkowska W, **Łazarczyk M,** Marchel A, Czernicki T. Chordoid meningiomas of a different histopathological pattern: a report of two cases. Folia Neuropathol. 2006; 44(1):34-41.
2. **Łazarczyk M,** Matyja E, Lipkowski AW. Substance P and its receptors – a potential target for novel medicines in malignant brain tumour therapies (mini-review). Folia Neuropathol 2007;45 (3): 99-107.
3. Szeliga M, Obara-Michlewska M, Matyja E, **Łazarczyk M,** Lobo C, Hilgier W, Alonso FJ, Márquez J, Albrecht J. Transfection with liver-type glutaminase (LGA) cDNA alters gene expression and reduces survival, migration and proliferation of T98G glioma cells. Glia (2009) 57:1014-1023.
4. **Łazarczyk M**, Matyja E, Lipkowski AW. A comparative study of morphine stimulation and biphalin inhibition of human glioblastoma T98G cell proliferation in vitro. Peptides (2010) 8:1606-1612.

Awards/Fellowships

- The Scientific Award from the *Wisniewski Neuroscience Foundation* for young Polish scientists (for doctoral thesis) handed by Professor Thomas Wisniewski from the New York University Medical Centre (2011)
- The Scientific Award of the Director of Mossakowski Medical Research Centre PAS for the co-authorship of the paper (Glia (2009) 57:1014-1023) (2010)
- Scientific Award for Young Investigators for the most interesting poster presentation at Joint Meeting of the German Society of Neuropathology and Neuroanatomy and the Polish Association of Neuropathologists, September 5-8, 2007; Germany (Greifswald) (2007)

Current research interests in BASTION project (provided by Marzena Lazarczyk) (link http://bastion.wum.edu.pl/en/zespol-badawczy-zbigniewa-gacionga/)

Since 2013 I continue my cancer research trying to combine my experience in pharmaceutical industry /clinical trial companies and business area with scientific activity to commercialize the research results. We are investigating the role of distinct factors affecting tumour progression i.e. cytomegalovirus (CMV) and chemokines- mediated mechanisms of cancer metastasis. It is known that CMV contributes to increased motility of tumour cells and facilitate their migration. CMV virus presence has been detected in numerous cases of distinct human cancer types, including breast cancer, colon cancer, sarcomas, glioblastoma, medulloblastoma and neuroblastoma. We are intending to test selected compounds against CMV virus in animal model of human malignances to develop therapeutic strategies towards metastatic diseases.
Second line of research I am involved in relies on attempts to find explanation of the role of chemokines and their receptors in cancer invasiveness and migration. It has been demonstrated that chemokines can control organ predilection of metastasis. We assume that detailed insight into chemokines signaling may provide additional information on mechanisms of cancer metastasis. My upcoming studies will focus on CXCL9-related paracrine and autocrine mechanisms by which tumors retain their own ability to spread.

Envisioned career paths in BASTION project (provided by Piotr Religa)

Dr Lazarczyk will participate participate in realization of projects directed by her team leader Dr Piotr Religa. She will present the results of her experiments at the international conferences and publish her results in peer-review journals.

IX. Lech Trzeciak

DATE (YEARS)	DEGREE/EXPERIENCE	PLACE	SUPERVISOR
1984-1990	M.Sc.	Medical University of Warsaw, First Faculty of Medicine	- (none)
1991-1994	Assistantship	Medical Centre for Postgraduate Education, Warsaw	prof. J. Ostrowski
1994-1995	Fellowship	University of Washington, Seattle	Prof. K. Bomsztyk
1995-1999	PhD	Medical Centre for Postgraduate Education, Warsaw	prof. J. Ostrowski
2000-2001	Postdoc	M. Nencki Institute of Experimental Biology, Warsaw	prof. M. Żylicz
2001-2004	Postdoc	International Institute of Molecular and Cell Biology, Warsaw, Poland	prof. M. Żylicz

Biosketch (provided by Lech Trzeciak)

I began my scientific career in 1987 as a medical student, joining the research team of prof. Ostrowski at the Department of Gastroenterology, Medical Centre for Postgraduate Education in Warsaw. I started from biochemical research (such as HPLC analysis of various components or measuring activity of enzymes, looking for biomarkers of certain diseases, including neoplasms). Soon I made a transition to molecular biology, meanwhile graduating from Medical Faculty in 1990. My primary interest was cancer biology (molecular causes of transformation and metastasis) with particular emphasis on protein phosphorylation (culminated in 1.5 year fellowship in the molecular lab of prof. Bomsztyk in University of Washington, Seattle, USA, for studying phosphorylation of RNA-binding proteins, 1994-1995).
Initially I was involved in studies on the action of growth factors (via kinase receptors) on cancer cells, but it was then already clear that the reason for increased activity of certain receptors in neoplasms was DNA mutation. In 1994 I have successfully applied for a grant for investigating p53 mutations and expression in colorectal cancer, and in 1999 completed my PhD thesis based on the results from this project that involved sequencing on first generation semi-automated DNA sequencers from ABI. In course of these studies we also looked for the contribution of DNA methylation to cancer development. I was hoping to extend these studies to cover more genes, reasoning that cancer development relies on interplay of at least several altered pathways,

but we soon realized that semi-automated sequencing, although being a great improvement over radiolabeled manual method, wasn't really powered enough for a large scale cancer DNA study, considering the size and exon-intron composition of several just-cloned cancer-related genes.
In 2000 I got another grant, for cloning and studying a then-novel human protein kinase (discovered by myself through a PCR-based screen of a cancer cell transcriptome) and moved with this project to the International Institute for Molecular and Cellular Biology in Warsaw under supervision of prof. Maciej Żylicz. The study got an unexpected aid from HUGO project: an accelerated publication of a draft of human genome essentially produced a complete sequence of the gene we were attempting to clone. We followed with the studies on protein function, finding a plausible activation mechanism for the kinase and looking for its interacting partners. However, the kinase appeared to be unlikely involved in carcinogenesis. Meanwhile, we were again reminded that to study molecular biology of cancer one needs sufficient resources to cover multiple interaction networks at once.
Since then I had spent several years working in science/education, first for Polish edition of Scientific American and then for two medical book publishers, closely following the advances in the field. The development of next generation sequencing turned former impossibility into nearly a routine. Therefore I took this opportunity, quit my recent job and successfully applied for a position within BASTION project.

Selected publications

1. Grzelkowska, K., Motyl, T., Ostrowski, J., **Trzeciak, L.**: *The effect of OA on proliferation and polyamine metabolism of K 562 leukemic cells and their responsiveness to natural killer cell activity*. Int J Hematol 1995; 61: 147-56
2. Grzelkowska, K., Motyl, T., Malicka, E., Ostrowski, J., **Trzeciak, L.,** Filipecki, M.: *Effect of orotic acid on TGF-beta 1-induced growth inhibition of L1210 leukemic cells*. Int J Hematol 1995; 61: 23-33
3. Motyl, T., Grzelkowska, K., Zimowska, W., Skierski, J., Wareski, P., Ploszaj, T., **Trzeciak, L.:** *Expression of bcl-2 and bax in TGF-beta1-induced apoptosis of L1210 leukemic cells.* Eur J Cell Biol 1998; 75: 367-74
4. Ostrowski, J., **Trzeciak, L.**, Kolodziejski, J., Bomsztyk, K.: *Increased constitutive activity of mitogen-activated protein kinase and renaturable 85 kDa kinase in human colorectal cancer*. Br J Cancer 1998; 78: 1301-6
5. Łazowska, I., **Trzeciak, L.,** Godlewska, R., Hennig, E., Jagusztyn-Krynicka, K., Popowski, J., Reguła, J., Ostrowski, J.: *In search of immunogenic Helicobacter pylori proteins by screening of expression library*. Digestion 2000; 61: 14-21
6. Ostrowski, J., Woszczyñski, M., Kowalczyk, P., Wocial, T., Hennig, E., **Trzeciak, L.,** Janik, P., Bomsztyk, K.: *Increased activity of MAP, p70S6, and p90rs kinases is associated with AP-1 activation in spontaneous liver tumors, but not in adjacent tissue in mice*. Br J Cancer 2000; 82: 1041-1050
7. **Trzeciak, L**., Przybyszewska, M., Nasierowska-Guttmejer, A., Kolodziejski, J., Nowacki, M. P., Janik, P., Ostrowski, J.: *Mutacje genów K-RAS i p53 oraz akumulacja białka p53 w rakach jelita grubego*. Nowotwory 2000; 50(1): 10-16
8. **Trzeciak, L.,** Hennig, E., Kolodziejski, J., Nowacki, M., Ostrowski, J.: *Mutations, methylation and expression of CDKN2a/p16 gene in colorectal cancer and normal colonic mucosa*. Cancer Lett 2001; 163(1): 17-23
9. Bucko-Justyna, M., Lipinski, L., Burgering, B.M., **Trzeciak, L.**: *Characterization of testis-specific serine-threonine kinase 3 and its activation by phosphoinositide-dependent kinase-1-dependent signalling*. FEBS J 2005 Dec; 272(24): 6310-23.
10. Iacopetta B, Russo A, Bazan V, Dardanoni G, Gebbia N, Soussi T, Kerr D, Elsaleh H, Soong R, Kandioler D, Janschek E, Kappel S, Lung M, Leung CS, Ko JM, Yuen S, Ho J, Leung SY, Crapez E, Duffour J, Ychou M, Leahy DT, O'Donoghue DP, Agnese V, Cascio S, Di Fede G, Chieco-Bianchi L, Bertorelle R, Belluco C, Giaretti W, Castagnola P, Ricevuto E, Ficorella C, Bosari S, Arizzi CD, Miyaki M, Onda M, Kampman E, Diergaarde B, Royds J, Lothe RA, Diep CB, Meling GI, Ostrowski J, **Trzeciak L**, Guzinska-Ustymowicz K, Zalewski B, Capella GM, Moreno V, Peinado MA, Lonnroth C, Lundholm K, Sun XF, Jansson A, Bouzourene H, Hsieh LL, Tang R, Smith DR, Allen-Mersh TG, Khan ZA, Shorthouse AJ, Silverman ML, Kato S, Ishioka C: *TP53-CRC Collaborative Group: Functional categories of TP53 mutation in colorectal cancer: results of an International Collaborative Study*. Ann Oncol 2006 May; 17(5): 842-7.

Awards/fellowships

- Team award of Polish Ministry of Health (1995, 1999, 2000)
- Polish Gastroenterology Foundation Fellowship (1991; Department of Gastroenterology, St Bartholomew's Hospital, London, UK)
- Fulbright Fellowship (1994-1995; Molecular Biology Laboratory of Department of Nephrology, University of Washington, Seattle, USA)
- Fellowship (1995; Molecular Biology Laboratory of Department of Nephrology, University of Washington, Seattle, USA)

Current research interests in BASTION project (provided by Lech Trzeciak)

My research interests revolve around the role of genes in the development and outcome of cancer (incl. cancer therapy). The advent of Next Generation Sequencing allows now for a comprehensive (and relatively inexpensive) study of individual cancer exomes/genomes, methylomes and transcriptomes and compare these to the corresponding normal tissue of the same individual or its relatives, if appropriate. This approach may be used in several ways.

First, genetic predispositions towards cancer may be elucidated. A substantial percentage of cancer cases arise due to strong genetic predispositions (increasing the risk at least twofold). However, the exact nature of such predispositions is known in roughly half of these cases – the ones that are caused by relatively frequent predisposing mutations in few most important genes (overall, over 100 such genes have been identified, although some erroneously). The remaining susceptibility cases are most likely due to a multitude of very infrequent mutations in many other genes. Pinpointing all of them would require a huge collective effort. Search for such abnormalities is warranted in cases of familial aggregation of cancer (such cases are referred to us by consulting physicians/oncologists on a case-by case basis) after exclusion of main known causative mutations, and in cases of early neoplasm development (that we can select from population cohorts). Eventual findings would not only increase our genetic knowledge (or even identify mutations specifically important for Polish population), but are likely to reveal novel mechanisms of neoplastic transformation/susceptibility. For example, we have recently identified a novel mutation in a gene predisposing to skin HPV infections and resulting cancer. The department also works on establishing the methodology for methylation–sensitive NGS and mtDNA NGS to broaden the scope of investigations.

Another possible way of using NGS data is to correlate an individual tumor mutation profile to the clinical parameters, most importantly to the susceptibility to treatment with conventional chemotherapeutics as well as modern targeted therapies (such as low-molecular weight kinase inhibitors etc). Seminal studies in this area referred to single-agent resistance (such as correlating response to imatinib or gefitinib with the specific mutation spectrum of the gene coding for the targeted kinase). However, there were also many failed attempts to correlate single gene mutations with metastasis, survival or effectiveness of a therapy. Such single-agent/single-gene approach will likely be soon replaced with a more complex one, taking into account the whole functional state of a given tumor based on its mutational profile. For example, the activity spectrum of various small molecule kinase inhibitors was thoroughly tested and this knowledge could be applied in conjunction with molecular profiling and structural predictions of a cancer kinome. While for the timebeing it remains only a far-sighted possibility (albeit verified experimentally at least once), we are moving into this direction, seeking clinical partners; our first grant application in this field has recently been submitted.

I am also interested in another use of NGS information, namely correlating mutational profile to immunologic parameters of a neoplasm, but we do not have any immediate research plans in this area.

Research activity in BASTION project (link http://bastion.wum.edu.pl/en/zespol-badawczy-rafala-ploskiego/)

Particiaption in the conferences	„Sekwencjonowanie Następnej Generacji (NGS): SureSelect i Haloplex, SureDesign, SureCall" - dr Andreas Polten, Agilent Technologies (2013.10.29 Warszawa)

Envisioned career paths in BASTION project (provided by Rafal Ploski)

Dr Lech Trzeciak is a qualified physician and molecular biologist with experience in cancer research. During his employment at BASTION dr Trzeciak will study the involvement of EVER2/TMC8 gene mutation in skin cancer development. During these studies he will gain expertise in Next Generation Sequencing techniques (setting up biochemical reactions and operating the equipment). He will also master the methods of NGS data analysis, initially relying on the pipeline already established at our laboratory and possibly contributing to its enrichment in collaboration with our bioinformaticians to expand the scope of available techniques towards network/system-oriented. Developing such skills, combined with his medical background, would open for him a number of attractive career pathways such as datamining of cancer genomes, drug targeting/repurposing and (ultimately) personalizing the therapy of individual patients.

4. Summary of recruiting activity

BASTION project has fully used its opportunity to recruit nine top-level qualified researchers with high ability to increase research potential in basic and translational oncology at Medical University of Warsaw. The technological expertise and scientific background of all nine recruits fits BASTION effort to strengthen the existing areas of excellence in oncology research. Moreover, each individual will bring in know-how and experience in translational oncology work and will help to bridge the gaps and create links among research groups working at MUW. All leaders have succeeded in recruiting extremely diligent and hardworking postdocs showing a great enthusiasm for their work in the field of experimental oncology. We are completely sure that newly employed researchers will contribute to the success of BASTION project.

Working space:
All recruited researchers are provided with research and office space by leaders of research groups already existing at MUW. Since four research groups in BASTION project are located at the Department of Immunology the option to increase the research and office space was necessary and inevitable. One room has already been redesigned to provide new researchers with sufficient working space and will soon be renovated. One group (Pawel Wlodarski's team) will soon be moving to a new laboratory located in a newly built CePT (Centre for Preclinical Research and Technology) building.

Research funding:
BASTION project does not directly provide research support for newly employed post docs. However, all nine researchers are eligible for applying for national funding from National Science Centre (NCN), The National Centre for Research and Development (NCBiR), The Foundation for Polish Science (FNP) and Ministry of Science and Higher Education. Moreover, team leaders support newly employed researchers with their grant funding.

Status of recruited researchers:
Three postdocs (Malgorzata Firczuk, Anna Wojcicka and Malgorzata Czystowska-Kuzmicz) are employed for 30 months, four postdocs (Oksana Kovtonyuk, Magdalena Banach-Orlowska, Joanna Drzewinska and Beata Pyrzynska) are employed for 29 months. One postdoc (Lech Trzeciak) is employed for 24 months and one postdoc (Marzena Lazarczyk) is employed for 23 months.
Number of faculty positions at Medical University of Warsaw is regulated by a quota of teaching hours (pensum). Thus, according to the recruitment policy of Medical University of Warsaw recruited researchers are employed at the university as the experienced research specialists. They are entitled to all benefits of governmental employees. Majority of them has already applied for funding which we expect will support their further research activities and help them to develop their research carriers.

Changes to work-plan, delays

Although the timeline for recruitment of postdocs was relatively short we managed to employ four postdocs for a specified time period (30 or 24 months). Five other postdocs were employed with a one-month delay. In some cases postdocs were not immediately available for starting a position at Medical University of Warsaw. Moreover, some formal recruitment requirements delayed the start date of employment.
The group of Slawomir Majewski had no need and space to recruit a new postdoc. Although Rafal Ploski was not planning to recruit a new researcher, he finally decided to open the position for a postdoc in his group.

Corresponding estimated/* budget

PERSONNEL, TRAVEL, OTHER MAJOR DIRECT COST ITEMS FOR BENEFICIARY "1" FOR 18M			
WP No	Item description	Amount [EUR]	Explanations
WP3 Task 3 & 3.1	Personnel costs	362 708,20	Salaries of the WP3 leader, Co-leader, recruitment committee members (7,82 PM); 9 (nine) Postdocs - experienced researchers (93,08 PM)
	Travel	0,00	
	Remaining direct costs	4 175,36	press announcements
TOTAL DIRECT WP3 COST		366 883,56	

/ - exact costs for M1-M18 will be presented in the Ist Period Report and Form C (April 2014)*

Dr Magdalena Winiarska
WP3 Leader
Prof. Slawomir Majewski
WP3 Co-leader

Prof. Jakub Golab
BASTION Project Coordinator
Warsaw, February 2014

Attachment 1

Announcement for postdoc position in the team of Dominika Nowis

Medical University of Warsaw, Poland
REGPOT-2012-2013-1 Program EU FP7

Project BASTION (From Basic to Translational Research in Oncology)

is looking for a

POSTDOCTORAL FELLOW
Nr ref. APK2/1210-25/2012

Qualification requirements:

- PhD degree (or equivalent) in molecular biology, biochemistry, biology, chemistry, physics or medical sciences,
- extensive experience in the field of recombinant protein expression, purification and characterization, (candidates who would defend their Ph.D. thesis shortly after the application deadline, and before a start of employment contract, are eligible to apply),
- outstanding publication record,
- profound knowledge of molecular biology techniques,
- be highly motivated (demonstrated via joint publications, references of the candidate's thesis tutor, previous post doctoral positions different from the PhD awarding institutions,
- be proficient in English.

Required documents and declarations:

- CV,
- letter-of-intent,
- 2 letters of reference,
- copy of PhD diploma (or equivalent),
- contact information, including e-mail address and phone number,
- the candidates may include additional information or copies of documents/certificates in support of the application,
- declaration about authorization for personal data processing: „I hereby authorize you to process my personal data included in my job application for the needs of the recruitment process (in accordance with the Personal Data Protection Act, Journal of Laws of 2002, no 101, item 926 as amended).

Selection criteria:

- list of publications: 0-50 points,
- professional experience: 0-30 points,
- previous international experience: 0-10 points,
- adequacy of prepared letter-of-intent with the target projects: 0-15 points,
- Reference(s): 0-20 points
- Certificates of extra qualifications that may be of some value for the execution of the project: 0-15 points.

Applications should be submitted by 3p.m. (*Warsaw time*) on 16th November 2012, *to* magdalena.winiarska@wum.edu.pl with a note in the e-mail subject: "*Competition for the position of Postdoctoral fellows ref. no. APK2/1210/25/2012 in "BASTION" project*

For more information on the project including expectations from a new group leader and admission procedures please visit our website at http://bastion.wum.edu.pl/en/start

Please be advised that only selected candidates will be contacted, and sent documents will not be returned.

Announcement for postdoc position in the team of Krystian Jazdzewski

Medical University of Warsaw, Poland
REGPOT-2012-2013-1 Program EU FP7

Project BASTION (From Basic to Translational Research in Oncology)

is looking for a

POSTDOCTORAL FELLOW
Nr ref. APK2/1210-23/2012

Qualification requirements:

- to hold a PhD degree (or equivalent) in molecular biology, biochemistry, biology or medical sciences,
- an extensive experience in the field of molecular thyroidology (candidates who would defend their Ph.D. thesis shortly after the application deadline, and before a start of employment contract, are eligible to apply),
- to have an outstanding publication record,
- to be highly motivated (demonstrated via joint publications, references of the candidate's thesis tutor, previous post-doctoral positions different from the PhD awarding institutions),
- to be experienced in microRNA analysis,
- to be proficient in English.

Required documents and declarations:

- CV,
- letter-of-intent,
- 2 letters of reference,
- copy of PhD diploma (or equivalent),
- contact information, including e-mail address and phone number,
- the candidates may include additional information or copies of documents/certificates in support of the application,
- declaration about authorization for personal data processing: „I hereby authorize you to process my personal data included in my job application for the needs of the recruitment process (in accordance with the Personal Data Protection Act, Journal of Laws of 2002, no 101, item 926 as amended).

Selection criteria:

- list of publications: 0-30 points,
- professional experience: 0-30 points,
- previous international experience: 0-30 points,
- adequacy of prepared letter-of-intent with the target projects: 0-15 points,
- reference(s): 0-20 points
- certificates of extra qualifications that may be of some value for the execution of the project: 0-15 points.

Applications should be submitted by 3p.m. (*Warsaw time*) on 16th November 2012, *to* magdalena.winiarska@wum.edu.pl with a note in the e-mail subject: "*Competition for the position of Postdoctoral fellows ref. no. APK2/1210/23/2012 in "BASTION" project*

For more information on the project including expectations from a new group leader and admission procedures please visit our website at http://bastion.wum.edu.pl/en/start

Please be advised that only selected candidates will be contacted, and sent documents will not be returned.

Announcement for postdoc position in the team of Piotr Religa

Medical University of Warsaw, Poland

and Karolinska Institutet, Sweden

REGPOT-2012-2013-1 Program EU FP7

Project BASTION (From Basic to Translational Research in Oncology)

is looking for a

POSTDOCTORAL FELLOW

Nr ref. APK2/1210-24/2012

Qualification requirements:

- PhD degree (or equivalent) in cell biology, vascular and tumor biology and or molecular biology,
- extensive experience in the field of cell biology, vascular and tumor biology and or molecular biology (candidates who would defend their Ph.D. thesis shortly after the application deadline, and before a start of employment contract, are eligible to apply),
- outstanding publication record
- experience in in cell cultures, animals, morphological analysis of cells and tissues and gene expression
- be highly motivated (demonstrated via joint publications, references of the candidate's thesis tutor, previous post doctoral positions different from the PhD awarding institutions)
- be proficient in English.

Required documents and declarations:

- CV,
- letter-of-intent,
- 2 letters of reference,
- copy of PhD diploma (or equivalent),
- contact information, including e-mail address and phone number,
- the candidates may include additional information or copies of documents/certificates in support of the application,
- declaration about authorization for personal data processing: „I hereby authorize you to process my personal data included in my job application for the needs of the recruitment process (in accordance with the Personal Data Protection Act, Journal of Laws of 2002, no 101, item 926 as amended).

Selection criteria:

- list of publications: 0-30 points,
- professional experience: 0-30 points,
- previous international experience: 0-30 points,
- adequacy of prepared letter-of-intent with the target projects: 0-15 points,
- reference(s): 0-20 points
- certificates of extra qualifications that may be of some value for the execution of the project: 0-15 points.

Applications should be submitted by 3p.m. (*Warsaw time*) on 16th November 20122012, *to* magdalena.winiarska@wum.edu.pl with a note in the e-mail subject: "*Competition for the position of Postdoctoral fellows ref. no. APK2/1210/24/2012 in "BASTION" project*

For more information on the project including expectations from a new group leader and admission procedures please visit our website at http://bastion.wum.edu.pl/en/start

Please be advised that only selected candidates will be contacted, and sent documents will not be returned.

Announcement for postdoc position in the team of Jakub Golab

Medical University of Warsaw, Poland
REGPOT-2012-2013-1 Program EU FP7

Project BASTION (From Basic to Translational Research in Oncology)
is looking for a

POSTDOCTORAL FELLOW

in the project on the role of immune response and endoplasmic reticulum stress in the therapeutic outcomes of antitumor photodynamic therapy – beginning in the first quarter of 2013

Ref. no: APK2/1210-03/2013

Requirements:

- PhD degree (or equivalent) in immunology, molecular biology, biochemistry, biology, or medical sciences,
- extensive experience in the field of molecular biology, immunology and experimental oncology (minimum two-year post-doctoral employment),
- outstanding publication record,
- experience in flow cytometry, assays to monitor the activity of lymphocytes, macrophages and neutrophils,
- high motivation demonstrated via joint publications, references of the candidate's thesis tutor, previous post-doctoral positions different from the PhD awarding institutions,
- proficiency in English.

Admission
The application should contain the following documents/information:

- CV
- Letter-of-intent
- 2 letters of reference
- Copy of PhD diploma
- Copy of certificate/s of employment
- Contact information, including e-mail address and phone number
- Declaration about authorization for personal data processing: „I hereby authorize you to process my personal data included in my job application for the needs of the recruitment process (in accordance with the Personal Data Protection Act, Journal of Laws of 2002, no 101, item 926 as amended)
- The candidates may include additional information or copies of documents/certificates in support of the application.

Selection criteria
A detailed analysis of the received applications will be based on the following evaluation criteria:

- List of publications: 0-50 points
- Professional experience: 0-25 points
- Previous international experience: 0-10 points
- Adequacy of the prepared letter-of-intent with the target-project: 0-5 points
- Reference(s): 0-5 points
- Certificates of extra qualifications that may be of some value for the execution of the project: 0-5 points

Position is offered for 30 months with the possibility of extension.

Applications should be submitted by 3p.m. (*Warsaw time*) on 6th February 2013 to magdalena.winiarska@wum.edu.pl with a note in the e-mail subject:
"Competition for the position of Postdoctoral fellow ref. no* APK2/1210-03/2013 *in "BASTION" project

The admission procedure will be carried out in two steps. First, the applicants are requested to submit application documents. Short listing will be carried out within 3 days after the closing date. Applications will be assessed against person specification criteria and 3-4 applicants will be invited for interview. During the interview candidates will be scored with regard to communication skills, teamwork and project competency. Successful candidates will be offered a position within 2 days after the interview date.

For more information on the project visit our website at http://bastion.wum.edu.pl/
Please be advised that only selected candidates will be contacted, and sent documents will not be returned.

Announcement for postdoc position in the team of Magdalena Winiarska

Medical University of Warsaw, Poland
REGPOT-2012-2013-1 Program EU FP7

Project BASTION (From Basic to Translational Research in Oncology)
is looking for a

POSTDOCTORAL FELLOW

in the project aimed at elucidating the mechanisms of the antitumor activity of monoclonal antibodies beginning in the first quarter of 2013:

Ref. no: APK2/1210-04/2013

Requirements:

- PhD degree (or equivalent) in immunology, molecular biology, biochemistry, biology, or medical sciences,
- Extensive experience in the field of molecular biology, immunology and experimental oncology (minimum two-year post-doctoral employment),
- Outstanding publication record,
- Experience in flow cytometry, immunocytochemistry, proteomic techniques
- Proficiency in English

Required documents and declarations:

- CV
- Letter-of-intent
- Reference letter(s)
- Copy of degree diploma(s),
- Copy of certificate(s) of employment,
- Contact information, including e-mail address and phone number
- Declaration about authorization for personal data processing: „I hereby authorize you to process my personal data included in my job application for the needs of the recruitment process (in accordance with the Personal Data Protection Act, Journal of Laws of 2002, no 101, item 926 as amended)
- The candidates may include additional information or copies of documents/certificates in support of the application.

Selection criteria

A detailed analysis of the received applications will be based on the following evaluation criteria:

- List of publications: 0-50 points
- Professional experience: 0-25 points
- Previous international experience: 0-10 points
- Adequacy of the prepared letter-of-intent with the target-project: 0-5 points
- Reference(s): 0-5 points
- Certificates of extra qualifications that may be of some value for the execution of the project: 0-5 points

Position is offered for 30 months with the possibility of extension.

Applications should be submitted by 3p.m. (*Warsaw time*) on 6th February 2013 to magdalena.winiarska@wum.edu.pl with a note in the e-mail subject:
"Competition for the position of Postdoctoral fellow ref. no* APK2/1210-04/2013 *in "BASTION" project

The admission procedure will be carried out in two steps. First, the applicants are requested to submit application documents. Short listing will be carried out within 3 days after the closing date. Applications will be assessed against person specification criteria and 3-4 applicants will be invited for interview. During the interview candidates will be scored with regard to communication skills, teamwork and project competency. Successful candidates will be offered a position within 2 days after the interview date.

For more information on the project visit our website at http://bastion.wum.edu.pl/
Please be advised that only selected candidates will be contacted, and sent documents will not be returned.

Announcement for postdoc position in the team of Tomasz Stoklosa

Medical University of Warsaw, Poland
REGPOT-2012-2013-1 Program EU FP7

Project BASTION (From Basic to Translational Research in Oncology)
is looking for a

POSTDOCTORAL FELLOW

in the project aimed at looking for therapeutic targets and mechanisms of drug resistance in hematological and solid tumors - beginning in the first quarter of 2013:

Ref. no: APK2/1210-09/2013

Requirements:

- PhD degree (or equivalent) in medical sciences, genetics, biotechnology or molecular biology,
- Extensive experience in the field of molecular biology, genetics, experimental oncology (minimum two-year post-doctoral employment, preferably previous post doctoral positions different from the PhD awarding institutions),
- Outstanding publication record,
- Strong background in tumor biology and gene-expression analysis;
- Experience in cell culture and cytotoxicity assays;
- Experience in working with biological or medical databases and bioinformatics tools;
- Ability to travel for short term assignments and work with international partners;
- Experience in dealing with clinical data will be an additional asset
- Proficiency in English

Required documents and declarations:

- CV
- Letter-of-intent
- Reference letter(s)
- Copy of degree diploma(s),
- Copy of certificate(s) of employment,
- Contact information, including e-mail address and phone number
- Declaration about authorization for personal data processing: „I hereby authorize you to process my personal data included in my job application for the needs of the recruitment process (in accordance with the Personal Data Protection Act, Journal of Laws of 2002, no 101, item 926 as amended)
- The candidates may include additional information or copies of documents/certificates in support of the application.

Selection criteria
A detailed analysis of the received applications will be based on the following evaluation criteria:

- List of publications: 0-50 points
- Professional experience: 0-25 points
- Previous international experience: 0-10 points
- Adequacy of the prepared letter-of-intent with the target-project: 0-5 points
- Reference(s): 0-5 points
- Certificates of extra qualifications that may be of some value for the execution of the project: 0-5 points

Position is offered for 30 months with the possibility of extension.
Applications should be submitted by 3p.m. (*Warsaw time*) on 6th February 2013 to magdalena.winiarska@wum.edu.pl with a note in the e-mail subject:
"Competition for the position of Postdoctoral fellow ref. no APK2/1210-09/2013 in "BASTION" project

The admission procedure will be carried out in two steps. First, the applicants are requested to submit application documents. Short listing will be carried out within 3 days after the closing date. Applications will be assessed against person specification criteria and 3-4 applicants will be invited for interview. During the interview candidates will be scored with regard to communication skills, teamwork and project competency. Successful candidates will be offered a position within 2 days after the interview date.

For more information on the project visit our website at http://bastion.wum.edu.pl/
Please be advised that only selected candidates will be contacted, and sent documents will not be returned.

Announcement for postdoc position in the team of Pawel Wlodarski

Medical University of Warsaw, Poland
REGPOT-2012-2013-1 Program EU FP7

Project BASTION (From Basic to Translational Research in Oncology)
is looking for a

POSTDOCTORAL FELLOW

in the project on the epigenetic regulation of genes involved in extracellular matrix remodeling. The successful candidate will investigate the role of miRNA in progression of cancer. The project begins in the first quarter of 2013.

Ref. no: APK2/1210-10/2013

Requirements:

- PhD degree (or equivalent) in molecular biology, biochemistry, biology, chemistry, physics or medical sciences, and extensive experience in the field (minimum two-year post-doctoral employment, preferably previous post-doctoral positions different from the PhD awarding institutions),
- outstanding publication record,
- experience in cell culture and transfection/transduction of mammalian cells
- be highly motivated (demonstrated via joint publications, references of the candidate's thesis tutor, previous post-doctoral positions different from the PhD awarding institutions),
- be proficient in English.

Required documents and declarations:

- CV
- Letter-of-intent
- Reference letter(s)
- Copy of degree diploma(s),
- Copy of certificate(s) of employment,
- Contact information, including e-mail address and phone number
- Declaration about authorization for personal data processing: „I hereby authorize you to process my personal data included in my job application for the needs of the recruitment process (in accordance with the Personal Data Protection Act, Journal of Laws of 2002, no 101, item 926 as amended)
- The candidates may include additional information or copies of documents/certificates in support of the application.

Selection criteria
A detailed analysis of the received applications will be based on the following evaluation criteria:

- List of publications: 0-50 points
- Professional experience: 0-25 points
- Previous international experience: 0-10 points
- Adequacy of the prepared letter-of-intent with the target-project: 0-5 points
- Reference(s): 0-5 points
- Certificates of extra qualifications that may be of some value for the execution of the project: 0-5 points

Position is offered for 30 months with the possibility of extension.
Applications should be submitted by 3p.m. (*Warsaw time*) on 6th February 2013 to magdalena.winiarska@wum.edu.pl with a note in the e-mail subject:
"Competition for the position of Postdoctoral fellow ref. no* APK2/1210-10./2013 *in "BASTION" project

The admission procedure will be carried out in two steps. First, the applicants are requested to submit application documents. Short listing will be carried out within 3 days after the closing date. Applications will be assessed against person specification criteria and 3-4 applicants will be invited for interview. During the interview candidates will be scored with regard to communication skills, teamwork and project competency. Successful candidates will be offered a position within 2 days after the interview date.

For more information on the project visit our website at http://bastion.wum.edu.pl/
Please be advised that only selected candidates will be contacted, and sent documents will not be returned.

Announcement for postdoc position in the team of Piotr Religa

Medical University of Warsaw, Poland
REGPOT-2012-2013-1 Program EU FP7

Project BASTION (From Basic to Translational Research in Oncology)

is looking for a

POSTDOCTORAL FELLOW
in the project to aimed study the mechanism of tumor metastasis

Ref. no: APK2/1210-13/2013

Qualification requirements:

- PhD degree (or equivalent) in cell biology, vascular and tumor biology and/or molecular biology,
- extensive experience in the field of cell biology, vascular and tumor biology and or molecular biology (minimum two-year post-doctoral employment, preferably previous post-doctoral positions different from the PhD awarding institutions),
- outstanding publication record,
- experience in in cell cultures, animals, morphological analysis of cells and tissues and gene expression
- be highly motivated (demonstrated via joint publications, references of the candidate's thesis tutor, previous post doctoral positions different from the PhD awarding institutions)
- ability to travel for two 6-month assignments in Karolinska Institutet and to work with international partners
- be proficient in English

Required documents and declarations:

- CV,
- motivation letter,
- 2 letters of reference,
- copy of PhD diploma (or equivalent),
- copy of certificate(s) of employment,
- contact information, including e-mail address and phone number,
- the candidates may include additional information or copies of documents/certificates in support of the application,
- declaration about authorization for personal data processing: *„I hereby authorize you to process my personal data included in my job application for the needs of the recruitment process (in accordance with the Personal Data Protection Act, Journal of Laws of 2002, no 101, item 926 as amended)"*.

Selection criteria:

- list of publications: 0-30 points,
- professional experience: 0-30 points,
- previous international experience: 0-30 points,
- adequacy of prepared letter-of-intent with the target projects: 0-15 points,
- reference(s): 0-20 points,
- certificates of extra qualifications that may be of some value for the execution of the project: 0-15 points.

Position is offered up to 31st August 2015 with the possibility of extension.

Applications should be submitted by 3p.m. (*Warsaw time*) on 8th February 2013, to:
magdalena.winiarska@wum.edu.pl **with a note in the e-mail subject:**
"Competition for the position of Postdoctoral fellows ref. no* APK2/1210-13/2013 *in "BASTION" project
For more information on the project including expectations from a new group leader and admission procedures please visit our website at http://bastion.wum.edu.pl/en/start

The admission procedure will be carried out in two steps. First, the applicants are requested to submit application documents. Short listing will be carried out within 3 days after the closing date. Applications will be assessed against person specification criteria and 3-4 applicants will be invited for interview. During the interview candidates will be scored with regard to communication skills, teamwork and project competency. Successful candidates will be offered a position within 2 days after the interview date.

For more information on the project visit our website at http://bastion.wum.edu.pl/
Please be advised that only selected candidates will be contacted, and sent documents will not be returned.

Announcement for postdoc position in the team of Zbigniew Gaciong

Medical University of Warsaw, Poland
REGPOT-2012-2013-1 Program EU FP7

Project BASTION (From Basic to Translational Research in Oncology)

is looking for a

POSTDOCTORAL FELLOW

in the project aimed to study circulating tumor cells to identify novel molecular mechanisms of tumour initiation, growth and progression
Ref. no: APK2/1210 - 28/2013

Qualification requirements:

- PhD degree (or equivalent) in cell biology, vascular and tumor biology and/or molecular biology,
- extensive experience in the field of cell biology, vascular and tumor biology and or molecular biology,
- outstanding publication record,
- experience in in cell cultures, animals, morphological analysis of cells and tissues and gene expression
- be highly motivated (demonstrated via joint publications, references of the candidate's thesis tutor, previous post doctoral positions different from the PhD awarding institutions)
- ability to travel for two 2-month assignments in Karolinska Institutet and to work with international partners
- be proficient in English

Required documents and declarations:

- CV,
- motivation letter,
- 2 letters of reference,
- copy of PhD diploma (or equivalent),
- copy of certificate(s) of employment,
- contact information, including e-mail address and phone number,
- the candidates may include additional information or copies of documents/certificates in support of the application,
- declaration about authorization for personal data processing: *„I hereby authorize you to process my personal data included in my job application for the needs of the recruitment process (in accordance with the Personal Data Protection Act, Journal of Laws of 2002, no 101, item 926 as amended)"*.

Selection criteria:

- list of publications: 0-30 points,
- professional experience: 0-30 points,
- previous international experience: 0-30 points,
- adequacy of prepared letter-of-intent with the target projects: 0-15 points,
- reference(s): 0-20 points,
- certificates of extra qualifications that may be of some value for the execution of the project: 0-15 points.

Position is offered for 24 months with the possibility of extension.

Applications should be submitted by 3p.m. (*Warsaw time*) on 12th July 2013 to:
magdalena.winiarska@wum.edu.pl with a note in the e-mail subject:
"Competition for the position of Postdoctoral fellows ref. no* APK2/1210-28/2013 *in "BASTION" project
For more information on the project including expectations from a new postdoc and admission procedures please visit our website at http://bastion.wum.edu.pl/eng/start

The admission procedure will be carried out in two steps. First, the applicants are requested to submit application documents. Applications will be assessed against person specification criteria and 3-4 applicants will be invited for interview. During the interview candidates will be scored with regard to communication skills, teamwork and project competency. Successful candidates will be offered a position within 2 days after the interview date.

For more information on the project visit our website at http://bastion.wum.edu.pl/

Please be advised that only selected candidates will be contacted, and sent documents will not be returned.

Announcement for postdoc position in the team of Rafal Ploski

Medical University of Warsaw, Poland
REGPOT-2012-2013-1 Program EU FP7

Project BASTION (From Basic to Translational Research in Oncology)
is looking for a

POSTDOCTORAL FELLOW

in the project aimed at implementation of Next Generation DNA Sequencing in basic and clinical oncology

Ref. no: APK2/1210-29/2013

Requirements:

- PhD degree (or equivalent) in immunology, molecular biology, biochemistry, biology, or medical sciences. MD degree will be an additional asset.
- Extensive experience in the field of genetics (esp. DNA analysis in relation to cancer biology/ diagnosis/treatment), molecular biology, and experimental oncology (minimum two-year post-doctoral employment),
- Outstanding publication record related to the abovementioned fields,
- Proficiency in English

Required documents and declarations:

- CV
- Letter-of-intent
- Reference letter(s)
- Copy of degree diploma(s),
- Copy of certificate(s) of employment,
- Contact information, including e-mail address and phone number
- Declaration about authorization for personal data processing: „I hereby authorize you to process my personal data included in my job application for the needs of the recruitment process (in accordance with the Personal Data Protection Act, Journal of Laws of 2002, no 101, item 926 as amended)
- The candidates may include additional information or copies of documents/certificates in support of the application.

Selection criteria

A detailed analysis of the received applications will be based on the following evaluation criteria:

- List of publications: 0-50 points
- Professional experience: 0-25 points
- Previous international experience: 0-10 points
- Adequacy of the prepared letter-of-intent with the target-project: 0-5 points
- Reference(s): 0-5 points
- Certificates of extra qualifications that may be of some value for the execution of the project: 0-5 points

Position is offered for 24 months with the possibility of extension.

Applications should be submitted by 3p.m. (*Warsaw time*) on 12th July 2013 to:
magdalena.winiarska@wum.edu.pl **with a note in the e-mail subject:**
"Competition for the position of Postdoctoral fellows ref. no* APK2/1210- 29/2013 *in "BASTION" project
For more information on the project including expectations from a new postdoc and admission procedures please visit our website at http://bastion.wum.edu.pl/en/start

The admission procedure will be carried out in two steps. First, the applicants are requested to submit application documents. Applications will be assessed against person specification criteria and 3-4 applicants will be invited for interview. During the interview candidates will be scored with regard to communication skills, teamwork and project competency. Successful candidates will be offered a position within 2 days after the interview date.

For more information on the project visit our website at http://bastion.wum.edu.pl/
Please be advised that only selected candidates will be contacted, and sent documents will not be returned.

Attachment 2

Rejected from the public report

Attachment 3

Warsaw, date

Dear Dr X (candidate),

I am happy to inform you that after the first step of recruitment for the position of the Postdoctoral Fellow in BASTION project you have been shortlisted and invited for an interview. I will be keeping you informed about the details.

Best regards

Magdalena Winiarska (coordinator)

Department of Immunology
Centre for Biostructure Research
Medical University of Warsaw

Warsaw, date

Dear Dr X (candidate),

It is my pleasure to invite you for an interview which will take place at the Department of Immunology (Centre for Biostructure Research, Medical University of Warsaw, 1a Banacha St., building F) on day X at X time (Warsaw time).

Best regards

Magdalena Winiarska (coordinator)

Department of Immunology
Centre for Biostructure Research
Medical University of Warsaw

Warsaw, date

Dear Dr X (candidate),

I am pleased to inform you that after careful consideration you have been selected for the postdoctoral fellow position in BASTION project.

Best regards

Magdalena Winiarska (coordinator)

Department of Immunology
Centre for Biostructure Research
Medical University of Warsaw

Warsaw, date

Dear Dr X (candidate),

After careful consideration, we regret to inform you that you have not been selected for the postdoctoral fellow position in BASTION project. We appreciate your interest in this position and wish you success in achieving your career goals.

Best regards

Magdalena Winiarska (coordinator)

Department of Immunology
Centre for Biostructure Research
Medical University of Warsaw

Attachment 4

Rejected from the public report