WIESŁAW ABRAMOWICZ, M.S.

Oncological Molecular Biologist & Computational Scientist

using proteasomes inhibitor, nutritranscriptomics

🖥 RESEARCH EXPERIENCE

8/2017
|
10/2013

Transcriptomic profiling of a human kidney cancer cell line, Caki-2, after treatment of Ixazomib, Ursolic acid and jointly using microarray technology.

Advisor: Prof. Marzanna Cechowska-Pasko, Ph.D.
📍 Department of Pharmaceutical Biochemistry, Medical University of Białystok.

- Budget management (successful negotiations with vendors within budget);
- Project manager and executive (wet lab, in silico analyses);
- Performed **wet laboratory** experiments (Agilent's gene expression and miRNA microarrays of indirect *transcriptome* form total RNA (mRNA, lncRNA, lincRNA, sno/snRNA, ncRNA, miscRNA, miRNA), quality controls (pos/neg/spike-in), MTT drug testing (proteasome inhibitor, terpen), total RNA/DNA isolation, purification, quality, quantity (Bioanalyzer, NanoDrop), gene validation (qPCR, primer design, analysis))
- and **in silico** using open-source programming/biostatistical *R/RStudio* with packages from cran, bioconductor, github repos (pre-processing, numerical validation awarness, glm, Bayesian, multivariate, pathway enrichment analysis). On time delivering wet lab experiments (I take care of the details and I am very precise, successful troubleshooting), performing and precaution of misleading computational analysis. [manuscript in preparation]

12/2015
|
10/2014

DNA sequencing of clear cell renal cell carcinoma and healthy kidney area (clinical cases).

"Genome-wide methods in cancer genetics". BASTION. Advisor: Prof. Marzanna Cechowska-Pasko, Ph.D.
📍 Department of Pharmaceutical Biochemistry, Medical University of Białystok.

- project co-executive (wet lab, in silico analyses);
- **DNA sequencing (1000 genes)** of human cancer and normal kidney using **KAPA library**. [with co-operation of **Prof. Rafał Płoski, MD, PhD** (Medical University of Warsaw). [manuscript in preparation]

🖥 DRIVING LICENCE

Currently
|
30/08/2006

AM/B1/B

Smooth driving, dynamic driving, no collisions.

⬇ Download this resume or cover letter

Example of microarray analysis

CONTACT INFO

✉ immunol22@gmail.com
📞 +48 798 298 280
🐙 About Me
▢ WARZEM

SKILLS

🐧 Linux Ⓡ R

Ⓡ Studio

Git GitHub

M↓ Markdown, LaTeX

HPC (openMPI, Rmpi), HTML5, CSS, JS, YAML

EXPERIENCE

Biostatistics (glm + Bayes).

Immunology, Oncology.

NGS, Agilent's Microarray, qPCR [**wet lab**, **in silico**] {kidney oncology}.

Laboratory Diagnostics (urology inflammations).

LANGUAGES

Polish: Native

English: Proficient (C1)

⌨ IN SILICO

Biostatistic experience

Interests: **pre-processing** (raw signal, transformations), **manifolds/topology**, glm, gee, **mixed models**

- exploratory and confirmatory analyses;
- GLMs & Bayesian, mixed (limma, mmrm, lme4);
- R, RStudio;
- R packages (GO.db, pathview, RSubread, Gviz, biomaRt, plotly, ggplot, etc.);
- R programming (visualizations, office documentation, pdf, rtf);
- data mining, regular expression, rest api;
- pre-processing (log, lowess, loess, quantile) of transcriptomics data;
- Reproducible tools (git, github, gitlab) and reporting (rmarkdown, bookdown, etc.);
- Pathway Enrichment Analysis (GO, KEGG, Reactome, WikiPathways, HumanCyc, clusterProfiler, rSEA);
- Multivariate Analysis (PCA, tSNE, UMAP, SONG, NMF, Ricci flow);
- Comparative Analysis (Venn diagram);
- Isobolograms;
- use of data sets (ncbi, google patents, etc.);
- use of FDA resources (CDER, CDRH, NCTR – mitochondial toxicity, MAQC/SEQC);
- numerical validation awarness;
- Linux command line;
- basics of MySQL;
- basics of Python (PyScripter, PyMol, PyLasso, Autodock/Vina);
- basics of machine Learning (Random forest, CatBoost, LightGBM, XGBoost, H2O);
- basics of neural Networks (TensorFlow, Keras, etc.);
- Agilent's GeneSpring GX;
- CLC Main Workbench;
- more information in each description of course;

HPC experience

High-Performance and Parallel Computing

- I built cluster of two personal computers with **openMPI** and **Rmpi** (an interface for **R** & **RStudio**) on **Ubuntu** (**SSH** connected).

📄 WET LAB

Laboratory Experience

Research interests: **Oncology**, Immunology, **EpiOmics**, Transcriptomic, **Proteasomes**, Nutritranscriptomics, **Watson-Crick/Hoogsteen base paring**.

📍 Medical University of Białystok, PL

- BIO-RAD CFX Connect Real-Time PCR (qPCR);
- Agilent's microarray (two-color gene expression, miRNA) + QC (positive, negative, spike-in controls);
- NanoDrop 2000 (spectrophotometry);
- MTT tests (using proteasome inhibitor {Ixazomib} – on-label FDA approved in multiple myeloma, terpen {Ursolic acid} – derivative, from e.g. apples, with anti-inflammation, anti-cancer properties);
- DNA, RNA extraction from cultured cells (Qiagen, Promega, A&A Biotechnology); RNase, DNase free environment;
- Agilent 2100 Bioanalyzer (DNA/RNA microcapillary electrophoresis, flow cytometry) – lab-on-chip;
- DNA, RNA gel electrophoresis;
- Western blot with SNAP i.d.;
- PMN, PBMC cells isolation, neutrophils isolation with anti-CD16 mAb MicroBeads and magnetic separator Midi MACS;
- cells counting chambers;
- setting up cell cultures;
- optical microscope;
- flow cytometry.

2017
|
2011

🎓 EDUCATION

Data Science Specialization

coursera.org – online
📍Johns Hopkins University, USA

"Exploratory Data Analysis" (11/2018)

- lattice.
- ggplot2.
- Clustering.
- Dimension Reduction.

"Getting and Cleaning Data" (02/2016)

- dplyr, httr, rhdf5, xml, RMySQL, foreign, rmongodb, RMongo, RPostresSQL;
- Regular Expressions.

"R programming" (01/2016)

- R, RStudio.

"The Data Scientist's Toolbox" (01/2016)

- Version Control (Git, GitHub).
- R Markdown.

Ph.D. Studies in Pharmaceutical Sciences (resign)

The Center for Innovative Research 2012-2017, Faculty of Medicine with the Division of Dentistry and Division of Medical Education in English, Faculty of Pharmacy and Division of Laboratory Medicine, Medical University of Białystok

📍PL

Research area: **Transcriptomic profiling of cancer cell line after drugs treatment using Agilent microarrays and biostatistic open-source tools.**

Advisor: Prof. dr hab. Marzanna Cechowska-Pasko, Ph.D.

All subjects passed (GPA 3,85):

- Principles of genetic analysis (6h);
- Learning techniques of molecular biology (10h);
- Introduction to genomics (6h);
- Epigenomics and transcriptomics (50h);
- Learning methods in structural and functional genomics (10h);
- **Basic Statistical refreshment** (30h; **prof. Tomasz Burzykowski**, UHasselt);
- **Statistical modeling** (30h; **prof. Tomasz Burzykowski**, UHasselt);
- **Design of experiments** (18h; **prof. Tomasz Burzykowski**, UHasselt);
- **Statistics for omics** (36h; **prof. Ziv Shkedy**, UHasselt);
- Metabolomics (16h);
- Facultative advanced courses in protein analysis/ proteomics/ metabolomics (50h);
- Protein analysis and proteomics (32h);
- Immunology (16h);
- Facultative advanced courses in immunology (15h);
- Teaching the presentation and evaluation of research at the academic level (30h);
- Professional practice (30h);
- OHS (4h).

M.Sc. in Medical Analitics, PQF 7

09/2013
|
10/2007

Faculty of Pharmacy and Division of Laboratory Medicine, Medical University of Białystok   📍 PL

Master's thesis: Expression of the APRIL particle in neutrophils of patients with potentially malignant lesions of the oral mucosa.

· GPA: 4,30 (transcript of master degree);
· isolation and work with human blood cells;
· Advisor: **Prof. dr hab. Ewa Jabłońska, Ph.D.**
· Co-Advisor: **dr Kamil Grubczak, Ph.D.**

· experience in **biochemistry** and **immunology** research (see Wet lab, Student membership & Publications sections in this resume);
· Dean's leave (10/2008 - 09/2009)

Pharmaceutical Assistant, PQF 4

08/2007
|
09/2005

Vocational School No. 1 of Health Care   📍 Białystok, PL

💼 EMPLOYMENT

Owner, Co-founder & CEO

12/2022
|
4/2021

WARZEM Wood & Stone, Solid Wood Artistic Carpentry Workshop 🌐.   📍 Dąbrowa Białostocka, PL

● management, accountancy; ● website design and build with html5, css, js, yaml, github;
● graphic design and creation (Inkscape – vector graphics); ● video design and creation (Blender); ● creating solid wood furniture (using the golden ratio); ● carpentry tools design and create; ● using natural oils (no siccative, no PFAS) – toxicological issues; ● chopping down trees;

Pharmaceutical Assistant

09/2009
|
09/2008

Pharmacy "Lobelia" Barbara Winsko.   📍 Białystok, PL

● advising for patients in OTC medication; ● issuing medicines prescribed by a physician; ● accepting and placing orders; ● delivering medicines to other points of sale.

💼 PROFESSIONAL MEMBERSHIP

The Right to Practice the Profession in Laboratory Diagnostic. No 13786

12/2018
|
01/2014

KIDL   📍 Warsaw

💻 DATA SCIENCE, LABORATORY COURSES

Duke Industry Statistics Symposium 2023

29/
|
31/03/2023

"Empower Clinical Development by Harnessing Data from Diverse Sources"   📍 Duke University, USA

"Good Things Come in Small Packages: Purifying miRNA from Plasma, Serum and Exosomes"

25/01/2023

Michelle Mandrekar – **Promega**   📍 Online, PL

· Maxwell RSC miRNA

22/ | 25/09/2014

Courses:
A&A Biotechnology

📍 Gdańsk, PL

· "Real-Time PCR"   · "Real-Time PCR - quantitative markings"

10/2014

Prof. Tomasz Motyl Laboratory Experience:
Department of Physiological Sciences, WULS (SGGW)

📍 Warsaw, PL

· Agilent's expression microarray experiments (wet lab only).

06/2016

"NGS in Regulatory Gene Research"
ideas4biology

📍 Poznań, PL

Coordinator: dr Michał Szcześniak, Ph.D.

Techniques: ChIP-chip, ChIP-Seq, ChIP-exo, CLIP-Seq, DNase-Seq, FAIRE-Seq, GRO-Seq, HiC, MeDIP-Seq, MBD-Seq, MNase-Seq, oxBS-Seq, RIP-Seq, RRBS-Seq, TAB-Seq, TSS-Seq, WGBS-Seq.

Linux. WinSCP, PuTTY.

Softwares: POLYPHEMUS, ChromHMM, Segway, MACE, DANPOS2, MeDUSA, diffReps, BSMAP, methylKit, Trimmomatic, Subread, BamTools.

Databases: OMICtools, AllSeq, ChIPBase, hmChIP, mirPath, miRTarBase.

16/ | 18/06/2014

"Using next-generation sequencing to analyse human transcriptome"
Richard Dixon, Ph.D. – QIAGEN

📍 Medical University of Bialystok, PL

08/ | 11/04/2014

"Using next generation sequencing to analyse human genome"
Richard Dixon, Ph.D. – QIAGEN

📍 Medical University of Bialystok, PL

07/04/2014

"Early diagnosis and treatment of neurodegenerative diseases"
Department of Biochemical Diagnostics, Department of Neurology, Department od Neurodegeneration Diagnostics, Department of Pediatrics, Gastroenterology and Pediatric Allergology of Medical University of Bialystok

📍 Bialystok, PL

STUDENT MEMBERSHIP

2013 | 2012

Member of the board of the Students' Scientific Society
Co-organizer of the **8th** & **7th** Białystok International Medical Congress for Young Scientists. Coordinator of Belarusian participants.

📍 Medical University of Białystok, PL

06/2013 | 10/2009

Department of Immunology
Active participant of Student's Scientific Society.

📍 Medical University of Białystok, PL

Advisor: Prof. Ewa Jabłońska, Ph.D.

2011 | 2010

Department of Pharmaceutical Biochemistry

Active participant of Student's Scientific Society.

📍 Medical University of Białystok, PL

Advisor: dr hab. Małgorzata Borzym-Kluczyk, Ph.D.

PUBLICATIONS AND POSTERS

2013

Tylirozyd, a flavonoid with cytotoxic properties. Poster presentation.

Nationwide Scientific Symposium "Supplements a deity under the microscope of a pharmacist".

📍 Medical University of Bialystok, PL

Abramowicz W.

2012

APRIL molecule in patients with potentially malignant lesions of the oral mucosa (lichen planus).

7th International Medical Congress for Young Scientists, Białystok, p.185

Abramowicz W., Wawrusiewicz-Kurylonek N., Garley M.

2010

Alpha-mannosidase and beta-galactosidase activity in the serum of patients with colorectal adenocarcinoma.

5th International Scientific Conference of Medical Students and Young Doctors, Białystok, p.132-133

Luto M., Choromańska B., Chwiła A., Wasiluk A., Abramowicz W.

2010

Assessment of the activity of N-acetyl-beta-D-hexosaminidase, it's B enzyme and betaglucuronidase in the urine of patients with Lyme disease.

5th International Scientific Conference of Medical Students and Young Doctors, Białystok, p.127

Choromańska B., Luto M., Abramowicz W., Chwiła A., Wasiluk A.

2010

The activity of N-acetyl-beta-hexosaminidase, it's N-isoenzyme and beta-glucuronidase in the blood serum of patients suffering from Lyme disease.

5th International Scientific Conference of Medical Students and Young Doctors, Białystok, p.128

Chwiła A., Luto M., Choromańska B., Wasiluk A., Abramowicz W.

2010

Alanine and aspartic aminotransferase activity in blood serum of men after acute and chronic ethyl alcohol poisoning.

5th International Scientific Conference of Medical Students and Young Doctors, Białystok, p.137-138

Wasiluk A., Abramowicz W., Luto M., Choromańska B., Chwiła A.

HOBBY

Free time | 11/1986;)

Books (QCD, manifolds, new technologies, marine art), cycling in the mountains, pencil drawing, swimming, ski, interior design, DIY (wood & stone), photography.

📍 Everywhere it is possible

Last updated on 2023-07-02.