

WIESŁAW ABRAMOWICZ, M.S.

Laboratory Diagnostician, Oncological Computational Scientist (personalised diagnostic, nutri-, epi-, transcriptomics, epi-, genomics, proteomics, metabolomics)

Achievements:

- * Improving the functionality of the clinical laboratory IT system;
- * Cost effective selecting personalized transcriptomics targets by microarray for on- and off-label treatment of tumors like in WINTHER clinical trial (NCT01856296);
- *The only person in Poland who performs the test properly on BD™ Bruker MALDI Biotyper;



EMPLOYMENT

Currently
|
05/2025

Implementation Specialist

MedLAN

📍 Białystok, PL

- IT technical support provided to contractors;
- implementation of IT applications;
- creating and testing database software for web applications;
- implementation of the needs of contractors from the area of pathology, laboratory clinical genetics in Poland;
- use for HL7, P1 protocols, medical laws, implementation of recommendations of scientific societies (e.g. PTPat, PTGC);
- support for implementation and development IT departments in the field of laboratory medicine.

12/2024
|
10/2024

Laboratory Diagnostician

Clinical genetic laboratory

📍 Łódź, PL

- improving the functionality of the laboratory;
- quality control of each stage of laboratory work in accordance with ISO15189;
- EMQN;
- GLP knowledge;
- capacity calculation of flow cells; supervision of the execution of the library and patient sample preparation;
- operation of five devices for NIPT (liquid biopsy – cfDNA), WES, WGS (DNBSEQ-G400 Sequencer, DNBSEQ-T7 Sequencer; SBS – Salus Nimbo, Pro, EVO)[up to 1.8 Gbp, 5.8 Gbp and 3 Gbp];
- cooperation with Professors;
- superb contact with the vendors (Salus, MGI, Altium Group– service and genetic representative);
- assistance in solving clients needs.

04/2024
|
11/2023

Laboratory Diagnostician – volunteering

Białystok Oncology Center – Laboratory Diagnostics Facility

📍 Białystok, PL

- InfoMedica;
- hematology (Sysmex XN-1000, XN-550, ACL350);
- biochemistry (Cobas 6000, e411, u411, u701, Integra 400 Plus, ABL90 flex);
- microbiology (Vitek 2 Compact, BD™ Bruker MALDI Biotyper - the only person in Poland who performs the test properly, according to the manufacturer's service);
- blood components distribution;
- improving the functionality of the clinical laboratory IT system.

CONTACT INFO

✉ immunol22@gmail.com

☎ +48 798 298 280

🗣 About Me

🏠 WARZEM Wood & Stone –

– UI/UX/ Graphic Designer,
Carpenter.

SKILLS

🐧 Linux, R Studio,

🔗 Git, GitHub

Markdown, *L^AT_EX*,

HPC (openMPI, Rmpi).
HTML5, CSS, JS, YAML,
Google Analytics,
Inkscape, GIMP, Blender.

GAMP5, GxP, CAPA, DoE,
Agile oriented.

EXPERIENCE

Biostatistics (glm + Bayes)

Immunology, Oncology
(4 years)

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

Laboratory Diagnostics
(Sysmex, Cobas 6000, e411,
Integra, LIS improvements)

LANGUAGES

English: Proficient (C1)

Polish: Native

12/2022
|
4/2021

Owner, Co-founder & CEO

WARZEM Wood & Stone, Solid Wood Artistic Carpentry Workshop 

📍 Dąbrowa Białostocka, PL

- fundraising;
- process optimization (Agile);
- management, accountancy;
- website design and build with HTML5, CSS, JS, YAML, Github, RStudio;
- Google Analytics;
- photography and video making;
- graphic design and creation (Inkscape – vector graphics);
- video design and creation (Blender);
- creating solid wood furnitures (using the golden ratio);
- carpentry tools design and create;
- using natural oils (no siccative, no PFAS) – toxicological issues;
- chopping down trees;

09/2009
|
09/2008

Pharmaceutical Assistant

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

Currently
|
01/2014

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

KIDL

📍 Warsaw



RESEARCH EXPERIENCE

8/2017
|
10/2013

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

📍 Department of Pharmaceutical Biochemistry, Medical University of Białystok.

- Budget management (successful negotiations with vendors within budget);
 - Design of Experiments (DoE);
 - Project manager and executive (wet lab, in silico analyses);
 - Performed **wet laboratory** experiments (Agilent's gene expression and miRNA microarrays of indirect *transcriptome* from total RNA (mRNA, lncRNA, lincRNA, sno/snrRNA, 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** analyses using open-source programming/biostatistical *R/RStudio* with packages from cran, bioconductor, github repos (pre-processing, numerical validation awareness, 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.

12/2015
|
10/2014

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

“Genome-wide methods in cancer genetics”. BASTION.

📍 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).

IN SILICO

● Biostatistic experience

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

- exploratory and confirmatory analyses;
- GLMs & Bayesian, mixed (lme4, mmrm, lme4);
- R, RStudio;
- R packages (GO.db, pathview, RSubread, Gviz, biomaRt, plotly, ggplot, D3.js, igvR, 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);
- Functional Annotation;
- GATK, STAR, DESeq2;
- 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 – mitochondrial toxicity, MAQC/SEQC);
- Gene Expression Omnibus;
- numerical validation awareness;
- 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 pairing**.

📍 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

Currently
|
01/2016

● 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 (REGEX), R programming Data Cleaning, Data Manipulation.

“R programming” (01/2016)

- Data Analysis, R programming, Debugging, RStudio.

“The Data Scientist’s Toolbox” (01/2016)

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

08/2017
|
10/2013

● Ph.D. Studies in Pharmaceutical Sciences

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).

09/2013
|
10/2007

● M.Sc. in Medical Analitics, PQF 7

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)

08/2007
|
09/2005

● Pharmaceutical Assistant, PQF 4

Vocational School No. 1 of Health Care

📍 Białystok, PL



DATA SCIENCE, LABORATORY COURSES

- 29/
|
31/03/2023
- **Duke Industry Statistics Symposium 2023**
"Empower Clinical Development by Harnessing Data from Diverse Sources" Duke University, USA
- 25/01/2023
- **"Good Things Come in Small Packages: Purifying miRNA from Plasma, Serum and Exosomes"**
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 Białystok, PL
- 08/
|
11/04/2014
- **"Using next generation sequencing to analyse human genome"**
Richard Dixon, Ph.D. – QIAGEN Medical University of Białystok, PL
- 07/04/2014
- **"Early diagnosis and treatment of neurodegenerative diseases"**
Department of Biochemical Diagnostics, Department of Neurology, Department of Neurodegeneration Diagnostics, Department of Pediatrics, Gastroenterology and Pediatric Allergology of Medical University of Białystok Białystok, PL

STUDENT MEMBERSHIP

- 2013
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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.
Advisor: dr hab. Małgorzata Borzym-Kluczyk, Ph.D.

📍 Medical University of Białystok, PL

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 Białystok, 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.



DRIVING LICENCE

Currently
|
30/08/2006

- **AM/B1/B**
Smooth driving, dynamic driving, no collisions.