Yulia O. Trukhina

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WORK EXPERIENCE

Faculty part-time
University of Puerto Rico, Department of Biology - Arecibo, PR - August 2016 to Present

General Biology (lectures and the lab)

Plant Biology (lectures and the lab)

Molecular Biology (lab)

Essential biology (lectures)

Principles of General Biology (lab)

Faculty part-time Professor
Inter American University of Puerto Rico, Department of Science and Technology - Arecibo, PR - January 2016 to Present

Agricultural and Environmental Biotechnology (lectures and the lab)

Cell and Molecular Biology (lectures and the lab)

Biology Skill Lab II (lab)

Biotechnology Skill Lab II (lab)

Biological Science Technician
USDA-ARS TARS - Mayagüez, PR - January 2016 to January 2017, and other terms

Molecular marker analysis for disease resistance; microsatellite fingerprinting in fungi; DNA and RNA isolation, electrophoretic separation using agarose and polyacrylamide gels; polymerase chain reaction; microbiological techniques handling bacteria and fungi, tissue culture; plant sampling and evaluation in green house and in the field, etc.

Professional Server
University of Puerto Rico - Mayagüez, PR - May 2015 to July 2015 and March 14 to May 2014

Molecular marker assisted selection of common bean; laboratory trainings in molecular biology techniques for students and research associate

Visiting Scholar
MSU-DOE Plant Research Laboratory (Michigan State University) - East Lansing, MI - May 2005 to February 2006

Research: host-microbe interactions (*P.syringae, E.amylovora*)

EDUCATION

PhD. in Biology (US official equivalent)
Voronezh State University, Russia
July 1996 to July 2000

Master's in Biology (US official equivalent)
Voronezh State University, Russia
September 1993 to June 1995

SKILLS

Chromatography (5 years), Light Microscopy (10+ years), Confocal microscopy (2 years), Polymerase chain reaction (10+ years), Agarose and polyacrylamide gel electrophoresis (10+ years), Microbiological techniques (10+ years), Molecular biology techniques (10+ years), DNA Polymorphism (6 years), DNA Fingerprinting (5 years), Molecular Markers (10+ years), Quantitative Polymerase Chain Reaction (qPCR) (3 years), Microsoft Office (10+ years), MEGA, Tree View, DNA Baser, Sequencher, Gene Marker, Finch TV, DNA Strider, Clustal X (10+ years), Cloning (7 years), Bacteria and plant transformation (7 years), Cell culture (10+ years), Tissue culture (4 years), DNA, RNA and Protein purification (10+ years), Enzyme activity assays (10+ years), Northern, Southern and Western blots (7 years), Enzyme-linked immunosorbent assays (ELISA) (Less than 1 year), Spectrophotometry (10+ years), HPLC (2 years), GC-MS (2 years), Good communication skills (10+ years), Data keeping and protocol modification (10+ years), Safety, security and environment requirements (10+ years), Troubleshooting (10+ years), Operation and calibration of lab equipment (10+ years), Teaching at university level (3+ years), Agriculture (9 years), SOP's writing (Less than 1 year), GMPs (Less than 1 year), Root Cause Analysis (Less than 1 year), Equipment Qualification (Less than 1 year), Handling of Deviations and Investigation Reports (Less than 1 year), Risk Assessment (Less than 1 year), DNA Sequence Analysis (10+ years), Team work (10+ years), Lab management (10+ years), Good organizational skills (10+ years)

AWARDS

DAAD-fellow (German Academic Exchange Service)

August 1998

Fellowship for the research project on Plant Physiology at Osnabrück University, Osnabrück, Germany. August 1998 - July 1999 at Faculty: Biology/Chemistry, Department: Plant Physiology (Group Prof. R. Scheibe). Research project: "Biochemical and physiological characterization of wild type potato plants and potato plants with antisense repression of the NADP-dependent malate dehydrogenase under salt stress"

Diploma with high honors

June 1995

Diploma with high honors at Voronezh State University (June 1995), Voronezh, Russia.

CERTIFICATIONS/LICENSES

Genomic Technologies in Clinical Diagnostics: Molecular Techniques

February 2019

This online postgraduate level course explored how genomic technologies are used in healthcare to investigate genetic disorders. The course covered a wide range of molecular genetic and cytogenetic techniques with learning firmly embedded in the clinical setting.

Certificate obtained from St. George’s University of London, London, United Kingdom

The Genomics Era: the Future of Genetics in Medicine

December 2018

This course explored the growing role of genomics in healthcare for patient diagnoses and treatment.

Certificate obtained from St. George’s University of London, London, United Kingdom

Validation Industry Certification Training Program for FDA Regulated Industries

February 2017 to present

An introduction to Validation Regulations and FDA Current Trends (FDA regulatory requirements, Validation Documentation System, What, Why and When of the Validation Process); Equipment Qualification (Documentation Development: User Requirements, Functional Specification,

Impact Assessment, Risk Assessment, Traceability Matrix, Validation Plan, IQ, OQ, PQ Protocol Development, Development of Critical Validation Tests, Development and Handling of Deviations and Investigation Reports, Final Report, Protocol Package Generation)

The certificate obtained after the completion of the course at Job Center PR, San Juan, PR

An Introduction to Good Laboratory Practices, for Non-clinical Laboratory Studies

December 2016 to present

The certificate obtained after the completion of the course at Job Center PR, San Juan, PR

How to Write Effectively Standard Operating Procedures (SOP's) for FDA Regulated Industries

November 2016 to present

The certificate obtained after the completion of the course at Job Center PR, San Juan, PR

Quality Inspector Certification Program for FDA Regulated Industries

October 2016 to present

Good Manufacturing Practices CFR 21, Part 210/211 Pharmaceutical Regulation; Good Documentation Practices for FDA Compliance; An Introduction to Pharmaceutical Manufacturing Solid Dosage; An Introduction Packaging Process Operation; AQL Sampling: Sampling Procedures for Inspection by Attributes-ANSI Standards; Deviations and Investigation: Development, Handling, and Root Cause Analysis.

The certificate obtained after the completion of the course at Job Center PR, San Juan, PR

English-Russian Referent Translator

May 1998 to present

Written and oral translation between Russian and English languages

The certificate obtained after successful completion of 2-year course at Voronezh State University, Voronezh, Russia.

German language Basics 1 "Intensive 8" course

September 1998 to present

The certificate obtained after completion of 2-month course "Intensive 8", Goethe Institute, Bremen, Germany

GROUPS

American Society of Plant Biologists (ASPB)

February 2003 to Present

Member of the professional society for plant biologists

PUBLICATIONS

Registration of AO-1012-29-3-3A red kidney bean germplasm line with bean weevil, BCMV and BCMNV resistance. – Journal of Plant Registrations. Germplasm. – March 25, 2016.

https://www.researchgate.net/publication/299434272_Registration_of_AO-1012-29-3-3A_red_kidney_bean_germplasm_line_with_bean_weevil_BCMV_and_BCMNV_resistance/citations?latestCitations=PB%3A324691745

Development of bean lines that combine resistance to BCMV, BCMNV, and bean weevils.

Development of tools for *Macrophomina phaseolina* evaluation and for genetic improvement of common bean. – 2014. – Annual Report of the Bean Improvement Cooperative.– 57: 189-190.

http://arsftfbean.uprm.edu/bic/wp-content/uploads/2018/05/BIC_2014_Volume_57.pdf

ITS and other genomic regions as well as microsatellite markers are used to investigate the genetic diversity of Macrophomina phaseolina.

Mutants of putative sugar transporters show altered carbohydrate

levels in *Arabidopsis thaliana*. – Plant Biology & Botany 2007. The annual Meeting of Four Professional Scientific Societies: July 7-11, 2007. – Chicago, Illinois, USA. – Poster Abstract Book. – Poster P13014. – P.66.
http://www.2007.botanyconference.org/engine/search/index.php?func=detail&aid=2006

EST-analysis of the thermo-acidophilic red microalga *Galdieria sulphuraria* reveals potential for lipid A biosynthesis and unveils the pathway of carbon export from rhodoplasts. – 2004. - Plant Molecular Biology. 55: 17-32.
https://www.ncbi.nlm.nih.gov/pubmed/15604662

To begin to explore the unique biology of G. sulphuraria , 5270 expressed sequence tags from two different cDNA libraries have been sequenced and annotated. Particular emphasis has been placed on the reconstruction of metabolic pathways present in this organism.

ADDITIONAL INFORMATION

Languages: Russian (native), English (fluent), Spanish (fluent), German (good)

REFERENCES:

1) Dr. T. Porch, USDA-ARS TARS Mayaguez, PR, USA timothy.porch@ars.usda.gov

2) Dr. M. L. Acevedo Santiago, University of Puerto Rico, Arecibo, PR, USA mari.acevedo@upr.edu

3) Dr. L. Romero Perez, Inter American University, Arecibo, PR, USA lromero@arecibo.inter.edu

4) Dr. J. Beaver Ciag, Dept. of Crops and Agroenvironmental Sciences, UPR Mayaguez, PR, USA james.beaver@upr.edu

5) Dr. D. Jenkins, South Carolina Forestry Commission, USDA-ARS, Rock Hill, SC, USA djenkins@scfc.gov

6) Dr. J.G. Arbelo Garcia, University of Puerto Rico, Arecibo, PR, USA jose.arbelo@upr.edu

7) Dr. A. Minoda, University of Tsukuba, Japan minoda.ayumi.gb@u.tsukuba.ac.jp

8) Dr. F. Brandizzi, MSU-DOE Plant Research Laboratory, Michigan State University, East Lansing, Michigan, USA fb@msu.edu

9) Dr. S.Y. He, MSU-DOE Plant Research Laboratory, Michigan State University, East Lansing, Michigan, USA hes@msu.edu

10) Dr. R.Scheibe, Faculty of Biology and Chemistry, University of Osnabrueck, Osnabrueck, Germany scheibe@biologie.uni-osnabrueck.de