

ENGIN YAPICI

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[PORTFOLIO](#) / [GITHUB](#) / [LINKEDIN](#) / [PERSONAL](#)

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SCIENTIST & DEVELOPER

SOLUTIONS-BASED SCIENTIST WITH A STRONG BACKGROUND IN BIOPHYSICAL & BIOANALYTICAL ASSAY DEVELOPMENT AND BIOMOLECULE CHARACTERIZATION, ABLE TO DELIVER BIOANALYTICAL & BIOPHYSICAL METHOD DEVELOPMENT AND VALIDATION. SOFTWARE DEVELOPER WITH BACKEND & FRONT-END EXPERTISE POISED TO WORK CROSS-FUNCTIONALLY TO DELIVER ENTREPRENEURIAL INSIGHT & EXCEPTIONAL PRODUCT-DEVELOPMENT EXPERTISE.

CORE COMPETENCIES

Scientist

- ✓ Time-gated epi-fluorescence microscopy
- ✓ Cell-based electrochemiluminescence assays with MSD reader
- ✓ Chromatographic separation techniques (HPLC; IEC, SE, RP, HIC, Affinity)
- ✓ SDS-PAGE and Western Blotting
- ✓ Fourier transform infrared spectroscopy (FTIR)
- ✓ Pull-down and immunohistochemistry assays
- ✓ Surface plasmon resonance (Biacore X100, T200)
- ✓ Circular dichroism spectroscopy (CD)
- ✓ Enzyme-linked immunosorbent assay (ELISA)
- ✓ Binding/inhibition assays with microplate reader (SpectraMax and PerkinElmer readers)
- ✓ DNA recombination and gene manipulation
- ✓ Statistical data analysis with Origin, JMP, and R programming

Developer

- ✓ Application development
- ✓ Database design
- ✓ UI/UX design & optimization
- ✓ Unit testing
- ✓ Data visualization
- ✓ Object-oriented design
- ✓ A/B testing
- ✓ Website analytics
- ✓ Web development
- ✓ End-user research & support
- ✓ Vector graphics design
- ✓ Web server configuration

RECENT RELEVANT EXPERIENCE

SR. SCIENTIST

PFIZER | LAKE FOREST, IL

2015 – Present

Working directly with Directors and Sr. Group Leaders to design novel biochemical and biophysical assays for biomolecule characterization.

Specific Accomplishments:

- Leading, guiding and training junior scientists on their laboratory techniques and experimental designs
- Overseeing development of 16 bioassay methods for a monoclonal antibody (mAb) and coordinating them between 2 sites (one of them overseas)
- Providing scientific and technical guidance to peers as needed and requested
- Directing 2 interns, assigning projects and leading them on their experiments
- Identifying inefficiencies, providing solutions and leading change to improve processes
- Designing, developing, troubleshooting, and qualifying time-resolved fluorescence energy transfer (TR-FRET; HTRF) mammalian cell-based bioassays
- Developing TR-FRET cell-free ligand binding assays
- Engineering mammalian cell lines for bioassays
- Expressing and purifying proteins (AKTA) from bacterial expression systems
- Supporting method development and validation with SPR (Biacore T200)
- Writing test methods, protocols, SOPs, and journal manuscripts
- Preparing and managing a web-based order management system with JavaScript, jQuery, AJAX, HTML5, CSS in front-end; PHP, MySQL in backend
- Developing custom single-page web applications with SharePoint backend. Providing support to end-users.
- Managing users and continuously improving the system with user feedback

LEAD FRONT-END DEVELOPER

BEX, LLC | CHICAGO, IL

2016 – 2017

Developing the front-end user interface and optimizing the user experience for financial analysis web applications

Specific Accomplishments:

- Preparing complex web applications from scratch, where end-users can manage and analyze financial assets and provide support to clients
- Using JavaScript, AngularJS, jQuery, AJAX, HTML5, SCSS, D3.js, Bootstrap for development
- Using Gulp for automation; Jasmine and Karma for unit testing
- Writing algorithms for customized plots using D3.js
- Supporting the backend development with Python and MongoDB

SCIENTIST III

THERAPEUTIC PROTEINS INTERNATIONAL, LLC | CHICAGO, IL

2015 – 2015

Worked directly with ARD Director, Senior Manager and Senior Scientist providing scientific guidance for ARD/QC department. Report directly to VP of Analytical Research and Development.

Specific Accomplishments:

- Help determine analytical similarity assessment criteria for TPI biosimilars
- Contribute in writing & reviewing for regulatory submission (IND)
- Independently developing and validating bioassays (cytotoxicity and cell proliferation assays) for biosimilar potency determination
- Independently developing HPLC methods for detergent, acid, impurity and identity determinations
- Characterizing proteins with UV spectroscopy and raw materials with ATR-FTIR
- Developing methods for similarity analyses with SPR (Biacore X100)
- Analyzing protein denaturation profiles with differential scanning calorimetry (DSC)
- Preparing and reviewing method validation, similarity, reference standard qualification, forced degradation reports
- Preparing and reviewing method validation, similarity, reference standard qualification, forced degradation reports
- Preparing and managing a web-based [inventory management system](#) with JavaScript, jQuery, AJAX, HTML5, CSS in front-end; PHP, MySQL in backend
- Writing triggers for the inventory management system for audit trail in MySQL
- Preparing and managing an RFID (NFC) based document tracking Android mobile application
- Preparing a web-based document and book tracking system with JavaScript, AJAX, HTML5, CSS, AngularJS in front-end; PHP, MySQL in backend

SCIENTIST II

THERAPEUTIC PROTEINS INTERNATIONAL, LLC | CHICAGO, IL

2014 – 2015

Developed and validated methods in accordance with GLP, GDP and GMP requirements as well as independently designing, developing and validating bioassays for biosimilar potency determination and HPLC methods for detergent, acid, impurity and identity determinations.

Specific Accomplishments:

- Preparing method validation reports & transferring methods from research & development to quality control labs
- Analyzing protein-protein interactions with SPR (Biacore)
- Mapping protein denaturation profiles with Circular Dichroism
- Protein characterization with UV spectroscopy, FTIR, isoelectric focusing and ELISA
- Developed data analysis tools, macros and softwares with Origin C
- Developed web and mobile-based inventory management system with PHP, MySQL, HTML5, CSS, JavaScript, Java, JSON and XML
- Developed iOS and Android mobile applications for document and item tracking with RFID technology

RESEARCH ASSISTANT

UNIVERSITY OF ILLINOIS AT CHICAGO | CHICAGO, IL

2009 – 2014

Design and conduct biochemistry and chemical biology experiments for qualitative and quantitative analyses of protein-protein and protein-small molecule interactions.

Specific Accomplishments:

- Developed time-gated fluorescence resonance energy transfer based protein interaction and inhibition high-throughput screening assays with bacterial cell lysates and pure proteins
- Imaged protein-protein interactions (PPIs) in live mammalian cells with lanthanide complexes under fluorescence microscope with TR-FRET
- Developed HTS assays for protein interaction and inhibition detection in mammalian cells with TR-FRET.
- Performed ELISA, isothermal titration calorimetry, Fourier Transform Infrared Spectroscopy, circular dichroism assays for protein structure and function analyses
- Expressed proteins in bacteria and purifying them with affinity (GST, His tags), size exclusion and ion exchange chromatography
- Performing immunoassays and western blots for PPI analyses
- Crystallizing proteins for X-ray diffraction

ENTREPRENEUR | DEVELOPER

SELF-EMPLOYED

2011 – Present

CO-FOUNDER | WEB DEVELOPER

F8 STUDIOS | CHICAGO, IL

2013 – Present

Researching, developing and designing websites while managing a team of 3 people for marketing, talent acquisition and business planning

Sites:

- MetalForHire.com
- BountyGamers.com
- GamerProvingGrounds.com

OTHER PROJECTS:

Developed and marketed [NuPal](#), a social discovery platform that allows users to connect with and discover the world around them by introducing other people who share similar interests, and recommends the best, most interesting places to meet Nu-Pals

- Developing native iOS app with Objective-C
- Managing 2 developers, assigning tasks for app screen designs and coding
- Managing a team of 8 people for marketing, business and finance planning
- Designing the vector and raster graphics for the website and the mobile applications

Researched, developed and marketed [Everything – A To-Do Organizer](#) and Android app (native) that is a fast, simple and colorful list manager for to-dos, groceries and everything else

- [The app](#) currently has total 150k+ downloads, 3k active users and over 600 user ratings

Developed, designed and debugged the native (with Java) Android application for the [Ottopot.com](#), a Turkish website helping people find the best prices for their car services

- Developed the RESTful web service for the app with PHP, MySQL, HTML, HTTP and JSON.
- Prepared the vector graphics for the application with Adobe Illustrator

EDUCATION

PHD; CHEMISTRY (GPA 3.5/4.0)	UNIVERSITY OF ILLINOIS AT CHICAGO CHICAGO, IL	2014
MSc; CHEMISTRY (GPA 3.5/4.0)	UNIVERSITY OF ILLINOIS AT CHICAGO CHICAGO, IL	2012
BSc; BIOLOGY (GPA: 3.62/4.00)	MIDDLE EAST TECHNICAL UNIVERSITY ANKARA, TURKEY	2009

PUBLICATIONS

Rajendran, M., **Yapici, E.**, Miller, L. W., Lanthanide-based imaging of protein-protein interactions in live cells. *Inorganic Chemistry*, 53(4), 1839 – 1853, 2014.

Yapici E., Reddy D. R., Miller L. W., An adaptable luminescence resonance energy transfer assay for measuring and screening protein-protein interactions and their inhibition. *ChemBioChem*, 13(4), 553 – 558, 2012.

Garip S., **Yapici E.**, Ozek N. S., Severcan M., Severcan F., Evaluation and discrimination of simvastatin-induced structural alterations in proteins of different rat tissues by FTIR spectroscopy and neural network analysis. *Analyst*, 135(12), 3233 – 3241, 2010.

RELEVANT AWARDS

MAKE A DIFFERENCE AWARD	PFIZER, INC.	2017
CHANCELLOR'S STUDENT SERVICE & LEADERSHIP AWARD	UNIVERSITY OF ILLINOIS	2013, 2014
THE FINN WORLD TRAVEL AWARD	THE PROTEIN SOCIETY	2013
PROTEIN SOCIETY YOUNG INVESTIGATOR TRAVEL GRANT	THE PROTEIN SOCIETY	2013
GRADUATION WITH HIGH HONORS	MIDDLE EAST TECHNICAL UNIVERSITY	2009

ADDITIONAL EXPERIENCE

VICE PRESIDENT	UNIVERSITY OF ILLINOIS AT CHICAGO - GRADUATE STUDENT COUNCIL	2012 – 2014
	<ul style="list-style-type: none">○ Served as vice president of graduate student body with over 8000 members and 100+ representatives○ Chaired committees with 4-10 members to organize various events in the campus○ Worked directly with Chancellor, Provost, Vice Chancellors, Deans and Department Heads	
STUDENT SENATOR	UNIVERSITY OF ILLINOIS AT CHICAGO - FACULTY SENATE	2012 – 2014
PRESIDENT	UNIVERSITY OF ILLINOIS AT CHICAGO – CHEMISTRY GRADUATE STUDENT ASSOCIATION	2011 – 2012