**Marcel L. Ferreiro**

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**SUMMARY**

Researcher and analyst with strong STEM background, including laboratory and analysis experience, running computer models, data collection, preparing reports and presentations. Master’s degree in biochemistry with focus in molecular life sciences. Military experience, Secret security clearance. International experience including residence and advanced university study abroad, proficient in Spanish. Strong interest in the application of science and technology in national and international policy, and in military / security environments.

**WORK EXPERIENCE**

**• Worthen Industries (Richmond, VA), multinational chemical R&D and production**

**company**

Address: 4105 Castlewood Rd, Richmond, VA 23234

Supervisor: David Marshall

Phone number: (804) 275-9231

Work Period: May 2021-March 2022

Hours per week:40

Salary: $17.25 per hour

Objective: To serve as a Quality Assurance Laboratory Technician for the UPACO

Industrial Adhesives and Coating division.

Duties Included:

• Sample preparation and testing of chemical products

• Calculating adjustments for chemicals as needed

• Oversee compliance with OSHA requirements, and ensure proper record keeping

• Maintain safe and clean laboratory environment

Accomplishments: Ensured that chemical products were tested and approved in a timely and efficient

manner, and that the laboratory space was properly organized and maintained to regulatory standards.

**• C2 Education (Alexandria, VA), nationwide educational, training and test preparation**

**company**

Address: 14011 Noblewood Plaza, Woodbridge, VA 22193

Supervisor: Susan Kim

Phone Number: (703) 583-5550

Work period: July-Aug 2020/Aug 2018-Jan 2019

Hours worked per week: 26 hours

Objective: To assist high school, middle school, elementary school, and college with a

variety of subjects, including Mathematics, English, Science, and History. Furthermore, I

acted as Academic Coordinator for the C2 Woodbridge Center.

Duties included:

• Consulting parents on which topics they believe their children should focus on

• Contacting former C2 families and leads to see if they wish to our center

• Guiding students through homework questions and preparing them for exams

• Assisting students with writing projects

• Writing progress reports on each student I have worked with for the parents to view

Accomplishments: The students I worked with improved their grades in school and

on standardized tests, and were more engaged in class.

**• JK Moving (Reston, VA), nationwide transport and moving company**

Address: 44112 Mercure Cir, Sterling, VA 20166

Supervisor: Steven Long

Phone number: (703) 260-4282

Work period: Jun-Aug 2015

Hours worked per week: 44

Objective: To assist clients moving to and from locations.

Duties included:

• Loading and unloading moving trucks

• Building crates for shipping

• Storing customer items in containers

Accomplishments: Successfully assisted the company in moving clients’ business and

personal items.

**RESEARCH & LABORATORY EXPERIENCE:**

**• Internship for Wageningen University through Virginia Tech**

Supervisor: Dr. Anne Brown

Work Period: Oct 2020-Mar 2021

Objective: To determine if mutating the HIV protein Gp-41 affects its ability to interact with

small molecules.

Duties included:

• Running computer models and simulations of protein-molecule interactions

• Analyzing data from those interactions

• Writing a teaching protocol for arranging and running interaction simulations

Accomplishments: Determined that mutating Gp-41 did affect its interactions with small

molecules. Authored report on how to re-create the simulations performed during this

internship.

**• MSc Thesis at Wageningen University**

Supervisor: Dolf Weijers

Work Period: Feb-Jul 2020

Objective: To predict how the plant polarity protein SOSEKI may be regulated by cell

membrane electrostatics.

Duties included:

• Growing plant samples

• Prepared PCR methods for plant DNA

• Assessing PCR results on electrophoresis gel

• Preparing medium for yeast and bacteria

• Performing literature search and analysis

Accomplishments: Authored report that demonstrated how SOSEKI polarity could be

controlled by the electrostatic properties of the plant cell membrane, as well as complied

the known information on plant electrostatics.

**• Intern at Inova Genomics Lab, Fairfax Va.**

Supervisor: Thierry Vilboux

Work Period: Jun-Aug 2017

Objective: To determine if a genetic mutation of interest was seen in patient with

neurological disorder.

Duties included:

• Developing PCR method for patient and control DNA and conducing PCR

• Assessing PCR results on electrophoresis gel

• Preparing DNA to be sequenced

• Presenting and discussing results to non-scientific audience

Accomplishments: Discovered that the patient did have the mutation, showing a

possible link between the two.

**• Volunteer Position at the Engel Hall, Virginia Tech University**

Supervisor: David Ruggio

Work Period: Jan-May 2017

Objective: Make observations on the procedures for developing fatty acid solutions for

experiments.

Duties included:

• Studying the various calculations needed to determine the concentrations of

chemicals

• Studying the methods to operate lab equipment

• Assisting Research Associates when needed (i.e. organizing lab equipment)

Accomplishments: Identified how to calculate amounts of samples and product from

experiments.

**• Internship at Latham Hall, Virginia Tech University**

Supervisor: Dr. Sarah Cox

Work Period: Aug-Dec 2016

Objective: To determine the necessity of zygosity in potato fertility.

Duties included:

• Designing PCR sequence primers by examining the genome

• Isolating and preparing DNA from potato leaves for PCR sequencing and analysis on SDS gel

• Assessing the gel results to determine if there is a link between zygosity and fertility

Accomplishments: Discovered a possible link between heterozygosity

and fertility.

**• Internship at Aspiring Scientist Summer Program (ASSIP), George Mason University**

Supervisor: Dr. Fatah Kashanchi

Work Period: June-Aug 2016

Objective: To determine the effect of exosomes from virally infected cells on protein levels

in uninfected cells.

Duties included:

• Preparing gels to isolate proteins from infected cells

• Loading proteins onto membrane and read membrane results from UV imager

• Interpret results

• Prepare a poster based on data that I would present at a scientific conference

Accomplishments: Discovered that exosomes from infected cells influence expression

of genes in non-infected cells.

**• Internship at Engel Hall, Virginia Tech University**

Supervisor: Dr. Biswarup Mukhopadhyay Work

Period: Jan-April 2016

Objective: To study the function of certain genes for the consumption of hydrogen in the

archaeal organism *M.jannaschii*.

Duties included:

• Preparing of growth media for both my experiment and my colleagues’

• Monitoring progress of cell culture growth (i.e., developing a growth curve to examine the

relation between cell count and nutrient level)

• Developing methods to remove specific genes to see if the archaea can consume hydrogen

without them

Accomplishments: Learned how to feed anaerobic cells, conduct growth curves, and

develop media for anaerobic bacteria.

**• Internship at Fralin Life Center, Virginia Tech University**

Supervisor: Ms. Valerie Cash

Work Period: Jan – Dec. 2015

Objective: To study the use of IscS and IscU genes in the formation of iron sulfur clusters

(which are used in the electron transport chain) in bacteria

Duties included:

• Preparing growth media for cells for both my experiments and for my colleagues’

• Assembling new DNA plasmid strands for experiments

• Purifying DNA and proteins from cells and analyzing results

Accomplishments: Learned how to induce mutations into bacteria through vectors.

**MILITARY EXPERIENCE**

**• US Navy Officer Candidate School, Newport, Rhode Island**

Training Period: March – June 2022

Develop skills in leadership, profession of arms and knowledge of the naval profession

Entry-Level Separation

**EDUCATION**

**• Wageningen University and Research. (WUR)**

MML in Biochemistry

• Thesis

• Toolbox Molecular Biology

• Academic Consultancy Training

• Internship

Graduated: April 30, 2021

GPA: 3.10

**• Virginia Polytechnic Institute and State University. (Virginia Tech)**

BSc in Biochemistry

• Biochemistry

• Analytical Chemistry

• Organic Chemistry

• Genetics

Graduated: May 12, 2018

GPA: 3.07

**• University of Kent (Semester Abroad)**

Duration: September-December 2017

• Cell Biology

• Cell Signaling

• Bioinformatics and Genomics

• Metabolism and Metabolic Diseases

**HONORS/ACTIVITIES:**

• WUR: MSV Alchimica; Member of External Contacts Commission (ECC). 2019-2021

• WUR: Schermutselaers Fencing Club. 2019-2021

• Virginia Tech: Co-President, Engineers for a Sustainable World (ESW): 2015-2016

• Virginia Tech: Chi Alpha Service Group: 2015

• George Mason University: Inventor’s club. 2016-2017

**SECURITY CLEARANCE**

Level: Secret

Date Given: May 2021

Authorizing Agency: Department of Defense Consolidated Adjudications Facility

**CERTIFICATIONS:**

• IBM Data Science Professional Certificate: In process

**INTERNATIONAL EXPERIENCE**

• Residence: Britain, Netherlands

• Travel: México, Belize, Costa Rica, Perú, Colombia, Iceland, France, Spain, Italy,

Switzerland

**LANGUAGES**

• Spanish, intermediate level read/write/speak