# **EFRAIN H. CEH PAVIA**

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### **TECHNICAL SKILLS**

- In vitro biochemical assays using ITC, BLI (Octet), and ELISA.
- **Protein expression** from heterologous expression systems (Bacterial, Mammalian, and Insect), both in micro scale (less than 10 mL) to medium scale (10 L).
- Protein purification using chromatography (IMAC, IEC and SEC) in AKTA systems (FPLC).
- Protein analysis such as MALLS, SDS-PAGE, Mass Spectrometry (LC/MS), UV-VIS spectrophotometry, Fluorescence, and Western Blot.

### **ORGANIZATIONAL** AND GENERAL **SKILLS**

- Ability to work collaboratively across different internal departments. both in large and startup environments.
- Accustomed to working towards team goals while keeping individual objectives.
- Experience managing projects individually or in collaboration.
- Presented findings in both academic and industrial settings.

### **PROFESIONAL EXPERIENCE**

#### **SCIENTIST**

# | TREADWELL THERAPEUTICS TORONTO, ON, CANADA November 2021 - Current

- Point of contact for the generation of antibody and antigens in the company.
- Routinely purified monoclonal antibodies for in vitro and in vivo studies.
- Selected humanized variants of a lead candidate by their expression. activity, and stability.

#### **SCIENTIST II**

# | GRIFOLS DIAGNOSTICS SOLUTIONS **EMERYVILLE, CALIFORNIA, US** April 2019 - Nov 2020

- Project Leader for the expression and purification of various proteins to be used in diagnostic assays.
- Formed part of a three-person team that led the development of Coronavirus proteins, coordinating multiple areas of the research department.
- Obtained sufficient expression of a viral protein that had stopped progress of the project for more than one year.

RESEARCHER

**POSTDOCTORAL** | UC SANTA CRUZ SANTA CRUZ, CALIFORNIA, US Dr. Carrie Partch, Sept 2017 - April 2019

- Identified new sites of post-translational modifications in circadian proteins using mass spectrometry (LC/MS).
- Evaluated the effects of protein acetylation on protein-protein interactions using fluorescence polarization and BLI (Octet).

|              | POSTDOCTORAL   UNIVERSITY OF MANCHESTER RESEARCHER MANCHESTER, UK Dr. Lydia Tabernero, Jan 2015 - Nov 2016  |
|--------------|---|
|              | <ul> <li>Developed a reliable protocol for the co-expression and purification of recombinant protein complexes (2-4 proteins) from bacteria.</li> <li>Determined the crystal structure of a two-protein complex from Candida albicans for use in antifungal drug design.</li> </ul> |
| EDUCATION    | PhD in BIOCHEMISTRY   UNIVERSITY OF MANCHESTER 2014   |
|              | B. Eng. CHEMICAL ENGINEERING   UADY, MEXICO 2009  |
|              | B. Eng. CHEMICAL ENGINEERING   ENSCCF, FRANCE 2007  |
| PUBLICATIONS | <ul> <li>Ceh-Pavia E and Partch CL. Regulating behavior with the flip of a<br/>translational switch. PNAS 2018 Dec 13. COMMENTARY</li> </ul>  |
|              | • Ceh-Pavia E, Ang SK, Spiller M, Lu H. The disease-associated mutation of the mitochondrial sulphydryl oxidase Erv1 impairs cofactor binding in the catalytic intermediates. Biochem J. 2014 Dec 15;464(3):449-59.   |
|              | <ul> <li>Ceh-Pavia E, Spiller M, Lu H. Folding and biogenesis of<br/>mitochondrial small Tim proteins. Int J Mol Sci. 2013 Aug<br/>13;14(8):16685-705. (Review)</li> </ul>  |
|              | • Spiller M, Ang SK, Ceh-Pavia E, Fisher K, Wang Q, Rigby S, Lu H.  |

Identification and characterization of Mitochondrial Mia40 as an iron-

Durigon R, Wang Q, **Ceh-Pavia E**, Grant C, Lu H. *Cytosolic thioredoxin system facilitates the import of mitochondrial small Tim* 

sulfur protein. Biochem J. 2013 Oct 1;455(1):27-35. (+podcast)

proteins. EMBO Rep. 2012 Oct;13(10):916-22.