

# Chiomah (Queenette) Hephzibah Ezeomah

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<https://chi-sunshine.github.io>

## EDUCATION

**Cornell University – Weill Cornell Graduate School of Medical Sciences** | New York, NY

**Master of Science** | August 2020

- Major: Biostatistics and Data Science (Magna Cum Laude)
- Portfolio Project: Nocturnal non-dipping is associated with HIV-infection and kidney disease in Tanzania

**University at Buffalo, The State University of New York** | Buffalo, NY

**Bachelor of Arts & Bachelor of Science** | February 2017

- Major: Mathematics-Economics with Honors and Distinction (Magna Cum Laude) – B.A
- Major: Biological Sciences with Honors (Magna Cum Laude) – B.S.
- Undergraduate Research Thesis: Phylogenetic analysis of 68 strains of Lassa virus (LASV) samples collected from 1969-2012 from Nigeria using the JTT model

## EXPERIENCE

**Biosafety Management Company** | Nigeria

**Founder** | March 2020 – till date

- Wrote a Biosafety Level 2 (BSL2) course manual, and developed it into an online course.
- Won distributorship of Fisher Scientific products in Nigeria
- Provided consultancy services to the Taraba State Government for Coronavirus-19 disease
- Designed, remodeled and setup molecular laboratories in the Taraba State Specialist Hospital, Taraba State
- Collaborated with UNHCR to setup remodeled molecular laboratory wing of the General Hospital, Takum in Taraba State
- Worked collaboratively with a team of architects to design virology laboratory for the Federal Medical Center, Jalingo, Taraba State
- Provided biological safety training to laboratory personnel

**Cornell University – Weill Cornell Medicine, Department of General Internal Medicine** | New York, NY

**Research Assistant (COVID-19)** | August 2020 – till date

- Contributed to manuscript preparation for a study investigating the association between intubation strategies used for COVID-19 patients and morbidity & mortality

**Cornell University – Weill Cornell Medicine, Department of General Internal Medicine** | New York, NY

**Research Assistant (COVID-19)** | May 2020 – July 2020

- Analyzed and summarized COVID-19 data from the Weill Cornell COVID-19 registry for patients admitted to the New York Presbyterian hospital network and managed by Cornell University using the R programming language
- Conducted summary analysis of COVID-19 data for operations and clinical management of COVID-19 patients treated in the ICU with opioids and benzodiazepines to improve New York Presbyterian patient management using R programming language
- Performed statistical analysis using R programming language of data from the Weill Cornell COVID-19 registry in a study to investigate calcium channel blockers and mortality in COVID-19 patients and investigate the association between COVID-19 viral load and mortality in hospitalized patients
- Performed statistical analysis using R programming language of data from the Weill Cornell COVID-19 registry in a study to investigate the association between intubation strategies used for COVID-19 patients and morbidity & mortality

**Cornell University – Weill Cornell Medicine, Center for Global Health** | New York, NY

**Research Assistant** | December 2019 – May 2020

- Generated statistical analysis and exploratory data analysis with R programming language for a study investigating the association between HIV and blood pressure phenotypes in a population of HIV patients in Tanzania
- Contributed to manuscript creation in preparation for publication

**Nigerian Center for Disease Control** | Abuja, Nigeria

**Technical Support (COVID-19)** | April 2020 – May 2020

- Effectuated biosafety changes at the Aminu Kano Teaching Hospital laboratory that was shut down due to infection of laboratory personnel, by performing risk assessment and establishing safety protocols in the laboratory which led to reopening of the laboratory for COVID-19 testing in Kano state, Nigeria
- Consulted on biosafety management programs at the National Reference Laboratory that included drafting and implementing biosafety protocols and SOPs to optimize safety practices for COVID-19 testing

**University of Texas Medical Branch, Galveston National Laboratory** | Galveston, TX

**Research Project Coordinator, Research Associate** | April 2018 – September 2019, July 2017 – April 2018

- Coordinated the human studies arm of an NIH funded study: Sequelae of Lassa Fever
- Designed assays, performed mutagenesis and cloned genes to attenuate the Lassa virus, increase its immunogenicity and developed vaccine candidates for Lassa Fever
- Created a novel assay for detecting Lassa virus in human plasma/serum/cerebrospinal fluid
- Collaborated on a study to test adenovirus-based flu vaccine in both mouse and ferret models of flu infection
- Performed molecular assays to test the hypothesis that substances of abuse, such as cocaine and fentanyl, affect immune responses in small animal models and the human brain
- Managed Dr. Irma Cisneros' lab from April 2019 to September 2019

**The Know Place Nigeria** | Abuja, Lagos, Port Harcourt, Nigeria

**Founder/ Managing Director** | February 2009 – December 2016

- Led a multidisciplinary and multicultural team of 20 part-time and full-time employees
- Negotiated for and won consultancy for four large secondary school accounts in multiple states in Nigeria
- Won exclusive licensing rights of the Princeton Review SAT, GRE, GMAT courses for Nigeria
- Wrote business plan that won \$60,000 in funding from the Nigerian Federal Ministry of Finance (FMF) in 2010

**PointCare Technologies Inc.** | Nigeria

**Country Director** | June 2008 – September 2009

- Established and maintained working contact and exerted positive influence with government and multinational leaders in the healthcare sector
- Oversaw accounts for clients such as Shell Petroleum Development Corporation's Corporate Community Health, Bayelsa State Government of Nigeria, Catholic Relief Services
- Negotiated contracts and renewals with state government health parastatals and corporate entities
- Implemented end-user training in new PointCare NOW CD4 testing sites
- Developed and implemented territory business plan with detailed business activity plans for distributors & key accounts
- Solved problems arising from the marketing and sales of PointCare products within the territory and communicated strategic plans and metrics with relevant stakeholders

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## PROGRAMMING LANGUAGES, CERTIFICATIONS & TECHNICAL SKILLS

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- **Programming languages:** R, SAS, Python and Biopython
- **SAS Certified Specialist:** Base Programming Using SAS 9.4
- Biosafety Level (BSL) 2, BSL 3, Animal Biosafety Level (ABSL) 2, ABSL 3 trained, BSL 4 training commenced
- **Viral agents experience:** SARS-CoV-2, Influenza virus, Lassa virus, Zika virus, Yellow fever virus, vaccine strain of Venezuelan equine encephalitis virus (VEEV) – TC83, HIV and Junin virus
- **In-vitro laboratory techniques:** virus titration; plaque assays; plaque reduction neutralization test (PRNT); cell culture maintenance; neutralization assay; virus stock preparation; molecular cloning; site directed mutagenesis; DNA, RNA and protein extraction; real-time qPCR; conventional PCR; conventional western blotting and western blotting using the Simple Wes; immunohistochemistry; hematoxylin and Eosin staining; conventional microscopy; transmission electron microscopy; sample preparation and photography using Philips C100 transmission electron microscope; rat brain section using Leica CM3050S cryostat; and Enzyme Linked Immunosorbent Assay (ELISA)
- **Animal experience:** mouse, guinea pig, ferret and rat
- **Animal techniques:** subcutaneous, intraperitoneal, intramuscular and intranasal injections; retroorbital, cardiac puncture and vena cava bleeds; inhalational and injectable anesthesia administration; euthanasia and necropsy with tissue collection

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## PUBLICATIONS

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**Chiomah Ezeomah**, Adeyi Adoga, Chikwe Ihekweazu, Slobodan Paessler, Irma Cisneros, Oyewale Tomori, and David Walker. Sequelae of Lassa Fever – Post viral cerebellar ataxia. *OFID* (2019)

John Manning, Nadya Yun, Alexey Seregin, Takaaki Koma, Rachel Sattler, **Chiomah Ezeomah**, Cheng Huang, Juan de la Torre, and Slobodan Paessler. The glycoprotein of the live-attenuated Junin virus vaccine strain induces ER stress and forms aggregates prior to degradation in the lysosome. *Journal of Virology* (2020)

**Chiomah Ezeomah**, Kathryn Cunningham, Sonja Stutz, Robert Fox, Natalya Bukreyeva, Kelly Dineley, Slobodan Paessler, and Irma Cisneros. Fentanyl self-administration impacts brain immune responses in male Sprague-Dawley rats. *Brain, Behavior and Immunity* (2020)

Cody Nolan, Karl Reis, Salama Fadhil, Anthony Etyang, **Chiomah Ezeomah**, Justin R. Kingery, Bernard Desderius, Myung-Hee Lee, Saidi Kapiga, and Robert N. Peck. Nocturnal dipping of blood pressure and heart rate in people with HIV in Tanzania. (Manuscript submission – December 7, 2020)

**Chiomah Ezeomah**, Benjamin Babson, Tyler Manning, Emmanuel Jonathan, Sophie Osawe, Yakubu Mangai, Petronila Nwadike, Mohammad Muazu, Chris Akude, Edwin Esegbe, Atiene Sagay, Godwin Imade, Oche Agbaji, Chikwe Ihekweazu, Alash'le Abimiku, Slobodan Paessler, Irma Cisneros, Oyewale Tomori, Adeyi Adoga, and David Walker. Case Control Study of the association between Lassa virus infection and hearing loss. (In Progress)

**Chiomah Ezeomah**, Amanda Persons, Celeste Napier, Irma Cisneros. Cocaine alters immune responses in the frontal cortex of HIV-1 transgenic rats. (In Progress)

Jamuna Krishnan, **Chiomah Ezeomah**, Mangala Rajan, Ben Baer, Mark Alshak, Katherine Hoffman, Fernando Martinez, Edward Schenck, Monika Safford. Morbidity & mortality associated with COVID-19 intubation strategy. (Abstract submission – December 16, 2020)

## VOLUNTEER EXPERIENCE

- **Volunteer** | University of Texas Medical Branch, Pediatrics Urgent Care and ER | August 2017 – November 2017
- **Volunteer** | Jos University Teaching Hospital, University of Jos, Nigeria | February 2017 – April 2017
- **Educational Advising Intern** | Educational Advising Center, U.S. Embassy, Nigeria | March 2004 – December 2004

## LEADERSHIP & ADDITIONAL EXPERIENCE

- **Team Lead** | Yale Healthcare Services Innovation Case Competition 2019
- **Undergraduate Research Assistant** | University at Buffalo 2016 – 2017, 2005, 2003
- **Secretary** | Creekside-Flickinger Council 2015 – 2016
- **Academic Tutor** | University at Buffalo, Office of Athlete Academic Services 2005
- **Fundraising & Volunteer Coordinator** | Alpha Epsilon Delta Pre-Health 2005
- **Undergraduate Teaching Assistant (PSY 101)** | University at Buffalo 2003
- **Resident Advisor** | University at Buffalo Residence Halls and Apartments 2003
- **Vice President of Activities** | Advisory Councils 2003
- **Common Area Damage Representative**, Clement Hall Council 2002 – 2003

## AWARDS & HONORS

Weill Cornell Medicine Merit Scholarship;	<i>for the Biological Sciences</i>	Honor Society; <i>Listed on</i>	Education Sector (Nigeria)
<i>WCM Population Health</i>	<i>Department Convocation;</i>	<i>Who's Who among</i>	by the Tip Executives
<i>Sciences Spotlight Student;</i>	University at Buffalo -	<i>Students in American</i>	Publications & Ranking
University at Buffalo -	Department of Mathematics	<i>Universities and Colleges;</i>	(2015); <i>Diamond Bank</i>
Advanced honors	Harry Merrill Gehman	Alpha Epsilon Delta Pre-	<i>Scholarship for 2013</i>
scholar;	Scholarship; <i>University at</i>	Health Honors Society;	<i>Certificate in</i>
<i>University at Buffalo -</i>	<i>Buffalo- Reichbach</i>	<i>National Dean's List; Phi</i>	<i>Entrepreneurship</i>
<i>Named 2017 Graduating</i>	<i>Memorial Scholarship;</i>	Eta Sigma; <i>National Honor</i>	<i>Management (CEM) Course</i>
<i>Department Representative</i>	University at Buffalo -	<i>Society; Ranked amongst</i>	
	Dean's List; Golden Key	top 3% of Executives in the	