Samina N. Assanie-Shivji, Ph.D.

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PROFESSIONAL OVERVIEW:

Accomplished microbiologist with 30 years of successful experience in academia, research and medical laboratories. Experience in generating, troubleshooting and applying new protocols and technologies. Exceptional mentor and advisor with skills to motivate individual's performance. Experienced Scientific Grant Writer and Project Manager. Submitted several proposals to federal funding agencies and awarded grant funding. Wrote protocols and budgets for proposals, managed budgets and projects implementation, and performance monitoring of projects from beginning to completion. Performed scientific data analysis and submitted project performance reports to the funding agencies.

EXPERTISE:

Microbiology, Virology, Molecular Biology, Cancer Biology, Cell Biology, Immunology, MicroRNA (miRNA) expression in viral infected cell lines and evaluating therapeutic potentials of miRNAs for treating viral infections in mammalian cell lines.

SKILLS:

Polymerase Chain Reaction (PCR), Quantitative Real-Time PCR (qRT-PCR), Electrophoresis, SDS PAGE, Tissue Culture, DNA and RNA Extraction and Purification, DNA Sequencing, Restriction and Digestion Techniques, Immunological Techniques, Blotting Techniques, *In-Situ* Hybridization, T-cell receptor (TCR) clonality studies of early diagnosis of lympho-proliferative disease, Spectro Photometric Technique, Gene Expression Analysis (MicroRNA profiling), *In-vitro* Transfection, Laser Capture Microdissection, Bacteriology, Mycology, Virology and Animal Handling, Outstanding leadership, interpersonal, verbal and written communication skills. Proficiency in Windows 10, Office 365, Microsoft Words, Excel, PowerPoint, Adobe Photoshop. Database Handling, Statistical Data Analysis, Scientific Graphics and Word Press.

PROFESSIONAL EXPERIENCE (Listed Recent Ones):

Department of Biology, Claflin University, Orangeburg, SC

2014-Present: Associate Professor, Tenured
2008-2014: Assistant Professor, Tenure-Track

TEACHING

- **Undergraduate Courses:** General Biology I and General Biology II (Honors and non-Honors), Molecular Biology, Cell Biology, Introduction to Immunology, Undergraduate Biology Junior Seminar I, Undergraduate Honors Junior Thesis Seminar I, Undergraduate Biology Junior Seminar II, Undergraduate Honors Junior Thesis Seminar II, and Undergraduate Research.

- **Graduate Courses:** Immunology and Pathobiology, Biotechnology Seminar II, Biotechnology Seminar III, Biotechnology Seminar IV, Biotechnology Research I, Biotechnology Research II, Biotechnology Thesis Preparation, and Special Topics in Biotechnology.

RESEARCH

- Hepatitis C Virus (HCV), Human Papilloma Virus (HPV) and Influenza A strains: H1N1 and H3N2 and miRNA profiling in viral infected cell lines.

2006-2008: Research Assistant Professor (Molecular Virology Laboratory)

- Establishment and functioning of Molecular Virology Laboratory.
- Worked with on EXPORT project-NIH funded grant, completed the analysis of Human Immunodeficiency Virus Type-1 (HIV-1) viral load on HAART therapy individuals and studied its association with Human Herpes Virus Type-8 (HHV-8), found association of Human T-Lymphotrophic Virus Type-I and II (HTLV-I and HTLV-II) and GB Virus C (GBV-C) in plasma of HIV-1 sero-positive patients.
- Prevalence of Hepatitis C Virus (HCV) and Hepatitis B Virus (HBV) in serum samples of Pakistani population.

Department of Cancer Endocrinology, BC Cancer Agency–Research Centre, Vancouver, B.C., Canada

2003-2006: Post-Doctoral Fellow: Studied the expression of *gdf15* in the 12T-7s transgenic mouse prostate model, investigating its role in normal prostate development and early premalignant prostate lesions (PIN) formation.

PUBLICATIONS:

- 21 Refereed Articles.

RESEARCH SUPPORT:

ONGOING RESEARCH SUPPORT

1. National Institutes of Health-National Institute of General Medical Sciences
RISE at Claflin University through Collaborative Interdisciplinary Mentoring in Biomedical Sciences. Research Initiative Scientific Enhancement (RISE) (R25). 08/01/2015-07/31/2020 **$1,248,333**
PI: Dr. Gloria McCutcheon
Role: Co-Investigator

COMPLETED RESEARCH SUPPORT (Listed Recent Ones)

1. DoD/Air Force- 711 Human Performance Wing Defense Health Project 06/30/2015-05/31/2016 **$286,792**
Therapeutic Human miRNAs for Use as Anti-Viral Drugs for Influenza A Infection Prophylaxis.
Role: PI (Primary) Dr. James Baldwin (Secondary PI) on this project from DoD
Claflin University = $202,543.00

2. DoD/Air Force Office of Scientific Research (AFOSR): 03/15/2013-03/14/2014 **$167,580**
Instrumentation to Setup the Molecular Virology Laboratory-Effect of Host MicroRNAs on HCV Replication to Develop a Vaccine.
Role: PI

3. Seed Project/Curriculum Development Grant 12/01/2011-10/31/2012 **$7,750**
Claflin University
MicroRNA Induced Replication of HCV to Develop a Vaccine.
Role: PI

EDUCATION:

2004: Ph.D. in Microbiology: University of Karachi, Karachi, Pakistan.

- Thesis: *Prevalence and Characterization of T-cell Non-Hodgkin's Lymphomas and Association with Epstein-Barr Virus (EBV) and Human T-cell Lymphotropic Virus Type 1 (HTLV-1) in Pakistani Patients.*

1992: M. Phil. in Microbiology: University of Karachi, Karachi, Pakistan.

- Thesis: *Bioactivity and Immunopharmacology of Marine and Terrestrial Plants.*

1989: M.Sc. in Microbiology: University of Karachi, Karachi, Pakistan.
1986: B.Sc. in Biological Sciences: University of Karachi, Karachi, Pakistan.

CERTIFICATIONS:

2017: CITI: Human Subjects Research-Biomedical Basic Course (online).
2016: Mental Health First Aid USA: National Council for Behavioural Health.
2016: CRA: Clinical Research Associate Professional Development Program, The Clinical Research Training Institute Online Training (online).
2009: NIH: Clinical Research Training for Human Subject (online).
2007: Molecular Laboratory Diagnostics, Michigan State University, Medical Technology Program, Lansing, MI, USA.
2006: Workplace Hazardous Material Information System (WHMIS), BC Cancer Research Centre, Vancouver, B.C., Canada.
2005: **Injury Prevention, Employee Wellness & Safety,** BC Cancer Research Centre-PHSA, Vancouver, B.C., Canada.
Canadian Council on Animal Care, University of British Columbia, Vancouver, B.C., Canada.
2004: Chemical Laboratory Safety, University of British Columbia, Vancouver, B.C., Canada.
2003: Laboratory Biological Safety, University of British Columbia, Vancouver, B.C., Canada.
Radionuclide Safety and Methodology, University of British Columbia, Vancouver, B.C. Canada.

AWARDS AND SCHOLARSHIPS (Listed Recent Ones):

2013: The James E. Hunter Award for Excellence in Teaching and Career Development, Claflin University, Orangeburg, SC, USA.
2003-2006: Post-Doctoral work supported by grants from Genome British Columbia, and Health Canada, Canada.
2001: Leukemia Research Fund (UK)-Grant for Ph.D. research work.