ASSOCIATE SCIENTIST III - UPSTREAM PD - MAMMALIAN

Profile

Upstream Process Development Scientist possessing a Master's Degree and managerial experience with the ability to prioritize, identify goals, and resolve key issues efficiently and effectively. Experienced at assay development and implementation in BSL2/3/4 laboratories. Demonstrated ability to work either independently, as part of a team, and as a project leader.

Core Qualifications

- Assay Development and Problem Solving
- Data Analysis
- Tech Transfer
- Risk Assessments
- SOP Development
- Equipment Validation
- Client Interface
- Virus Growth and Characterization
- Pathogen Isolation
- Method Development and Validations
- GMP, GLP, and ISO trained (UCC certified)
- Project Leader
- Cell Culture

Skills

Software: Microsoft Office Suite, Partek, Ingenuity Pathway Analysis (IPA), ANOVA, Principal Component Analysis (PCA), and Filemaker Pro.

Assays: Plaque Assays, PRNT's, FRNT, TCID50, Proximity Ligation Assay, Serological and antigenic detection assays including ELISA, Micorarrays, DNA and RNA Extraction, qPCR, Surface Plasmon Resonance (SPR)

Equipment: ViroCyt Virus Counter 2100, Octet QKe, Magpix, Tecan, Biospot (CTL) Analyzer, Nanodrop, Agilent, perfusion bioreactors

Professional Experience

Associate Scientist III - Upstream PD - Mammalian

December 2017 to Current Smartstyle Hair Salons ï¼ Kimball , TN Implement knowledge/expertise to successfully execute specific aspects of a project:

- Scientific lead on 2 projects
- Perform hands-on experiments to generate material for production of the recombinant proteins, VLPs, inclusion bodies, etc. in stirred tank and packed bed bioreactors
- Aids in design and execution of the experiments to develop and improve scalable protein production processes utilizing different expression systems
- Interacts with appropriate analytical and downstream functional areas to determine appropriate method for protein recovery
- Collects, analyzes and interprets the experimental data for reports and presentations
- Write standard operation procedures, protocols, process flow diagrams and batch records
- Participation in decision-making processes within the project team by actively engaging in scientific and technical discussions.

Scientific Redactor

November 2017 to May 2018 Social Solutions ï¼ City , STATE Anonymize scientific grant proposals for NIH project to study selection bias. Redact identifying data from grants focused on Cardiovascular and Respiratory Sciences, Social Sciences, and Biomedical Research.

Advanced Biologist

May 2016 to December 2017 Southern Research Institute ï¼ City , STATE

- Lead technician on multiple projects, viral and bacterial.
- Oversee project operations from start to finish as well as organizing data and animal titers.
- Perform method qualifications and validations for client projects in a GLP setting following FDA standards.
- Perform, develop, and optimize plaque and focal reduction neutralization tests.
- Participate in multiple viral and bacterial research contracts.
- Identify and resolve computing and technical issues.
- Provide recommendations to improve experimental methods and procedures.
- Develop and optimize new methods, processes and assays under minimal supervision in accordance with GLP standards.
- Provide data interpretation and summaries to Project Management and Study Directors.
- Maintain experimental records and raw data.
- PBMC isolation and cryopreservation.
- Primary Cell isolation
- Cell Culture including Primary Cell Culture
- Develop and optimize cell culture media and reagents.
- Developing, qualifying, and validating FRNT for hCMV tech transfer.
- Operator on ZKV FRNT validation project.
- Developed draft protocol for ZKV mouse study.

- Work with various infectious diseases including ZKV, DENV, YF, CMV, and VACV.
- Trained other on multiple projects.
- Wrote 2017 bacterial Biological Project Review (BPR) ensuring that bacterial work currently performed is conducted in a manner that is compliant with CDC and BMBL.

Scientific Support Staff: Immunodiagnostics and Biologics
September 2011 to May 2016 Untied States Army Medical Research Institute Of Infectious Disease ï¼ City , STATE

- Participated in ongoing research to develop, test, and optimize assays used for the detection and identification of biological warfare agents as a participant in BPRP, CDC registered to work with select agents.
- Prepared and characterized stocks of virus requiring BSL-3/4 bio-containment.
- Performed quality control (QC) testing of biologic products, including sterility, endotoxin, and mycoplasma testing.
- Developed diagnostic assays, tested and evaluated diagnostic platforms and equipment.
- Surface Plasmon Resonance (SPR) assay development.
- Started the development of viral stability SPR assay using Octet QKe biosensor system.
- Maintained BPRP status and CDC SRA.
- Performed and wrote risk assessments.
- Developed, revised, and reviewed SOPs.
- Performed peer review of assay batch and lab records. Provided data interpretation and summaries to Project Management.
- Maintained experimental records and raw data.
- Participated in the development of assays on multiple instruments including Octet QKE, ViroCyt, and Magpix.
- For the last 3.5 years science team leader of Pathogen Discovery project, developing and executing protocols for isolating pathogen from patient samples.
- Isolated and amplified Filovirus (Bundibugyo strain) from patient samples during recent Ebola outbreak.
- Isolated and amplified Filovirus from patient semen samples months after recovery showing survival of virus in isolated organs.
- Received 'Office of the Commander Ebola outbreak support recognition' award.

Research Technician 4: Virology
August 2007 to July 2009 Untied States Army Medical Research Institute Of Infectious Disease ï¼ City , STATE

Effect of Filovirus on dendritic cells following infection.

- Primary associate researching transcriptional changes in human dendritic cells following exposure to filoviruses from inception to finish.
- Isolating monocytes from human blood and developed optimal media and methods for differentiation into dendritic cells.
- Analyzed data received from experiments using programs such as ANOVA and Partek.
- Analyzed microarray data using Partek analysis suite software, Ingenuity Pathway Analysis (IPA), ANOVA, and Principal Component Analysis (PCA).
- Performed culturing of dendritic cells, RNA nucleic acid extraction and purification, and microarrays.
- Maintained BPRP status and CDC SRA.
- Developed and adjusted protocol for project from inception to finish.Â
- Optimized procedures for isolating and culturing dendritic cells.Â As a direct result of my optimization studies we were able to more than triple the survival rates of dendritic cells cultured and, using methods such as flow cytometry, we were able to determine the purity of dendritic cells cultured averaged 95%.
- Trained others on assays after optimization.
- Optimized and performed RNA extraction methods for microarray analysis.
- Introduced using the Partek Genomic Suite and Ingenuity Pathway Analysis software as a way to analyze microarray data to division group.
- Participated in ongoing research in the Viral Pathogenesis and Immunology Branch BSL3/BSL4 laboratories.
- Organized scientific data to be published in a peer reviewed scientific journal.
- Quality control of data.

Senior Laboratory Research Technician
June 2005 to July 2007 Johns Hopkins Medical Institution ï¼ City , STATE

- Worked with multiple national labs on the development of a new molecular tests for cervical cancer.
- Engaged in ongoing research in a BSL-2 pathology lab which focused mainly on the study of cervical cancer as a result of HPV infections.
- Independently created and maintained a comprehensive database for tracking and annotating hundreds of cervical cytology samples in a bio-repository.
- Orchestrated specimen accrual and organization for project.
- Tested cytology samples to determine performance characteristics of a new immunocytochemical test for proteins expressed in cervical cancer.
- Analyzed and integrated data into reports for presentation to coordinating labs.
- Prepared data and statistics for publication.
- Read and interpreted medical writing into standardized form for clinical study.
- Optimized laboratory protocols.
- Trained others in laboratory techniques.
- Participated in clinical trial study for molecular characterization of colon cancer.

- Created a database for tracking patient enrollment and specimen handling.
- Participated in orchestration of patient samples from multiple institutions.
- Dissected tumor samples from slides and performed the DNA extractions for PCR based mutation detection.
- Coordinated with and provided support for multiple research projects.

Assistant Manager
June 2001 to December 2002 Factory Card Outlet ï¼ City , STATE

- Managed and maintained the front end of a retail store. Â
- Managed over 5 employees per shift.
- Resolved customer conflicts.
- Performed employee evaluations and training.
- Independently performed store opening/closing procedures, payroll procedures, and employee scheduling.
- Interacted with existing and new store vendors.
- Managed front end re-organizations.Â Set up displays to promote sales of small end items.

Education
Master of Science : Homeland Security , 2015 Towson University ï¼ City , State , USA

MS in Integrated Homeland Security from Towson University.

POST-BACCALAUREATE : Security Assessment and Management , 2015 Towson University ï¼ City , State , USA
Master of Science : Biology , 2007 Towson University ï¼ City , State , USA

MS degree in Biology. Degree includes courses in virology and gene expression, infectious diseases, molecular medicine, and physiology.

Bachelor of Science : Biology , 2004 Loyola College ï¼ City , State , USA

A BS in biology with a strong base in Microbiology, Cell and Molecular Biology, and Genetics. Also an introduction into Immunology and Neurology.

Associate of Science : Sociology , 2001 Community College of Baltimore County ï¼ City , State , USA
Publications

Corning HYPER *Flask* (R) for Viral Amplification and Production of Diagnostic Reagents

Brian J. Kearney, Matthew A. Voorhees, Priscilla L. Williams, Scott P. Olschner, Cynthia A. Rossi, and Randal J. Schoepp

Diagnostic Systems Division, US Army Medical Research Institute of Infectious Diseases, Fort Detrick, MD 21702, USA

Ke'aki Technologies, LLS, 1425 Porter Street, Fort Detrick, MD, 21702

Evaluation of ViroCyt Virus Counter for Rapid Filovirus Quantitation

Cynthia A. Rossi, Brian J. Kearney, Scott P. Olschner, Priscilla L. Williams, Camenzind G. Robinson, Megan L. Heinrich, Ashley M. Zovanyi, Michael F. Ingram, David A. Norwood, and Randal J. Schoepp

Diagnostic Systems Division, US Army Medical Research Institute of Infectious Diseases, Fort Detrick, MD 21702, USA

Abstract presented at 2015 Chemical & Biological Defense Science and Technology Conference:

Use of FilmArray BT-E Assay for Presumptive Detection of Ebola Zaire Virus

Cynthia Phillips, Matthew Scullion, Gary Uzzell, Rob Crisp, Kevin Bourzac, Jeremy J. Gilbreath and Kristen Kanack, David Norwood, David Kulesh, Brian Kearney, Matt Voorhees, Scott Olschner, and Priscilla Williams

Biofire Defense, Biofire Diagnostics, Salt Lake City, UT 84107-08

US Army Medical Research Institute of Infectious Diseases, Fort Detrick, MD 21702, USA

Ebola Virus Infection Induces Irregular Dendritic Cell Gene Expression

Kalina, Warren, V.R. Melanson, and P. Williams

USAMRIID in house technical report 2014:

Production and *in-vitro* characterization of Kikwit variant of *Zaire ebolavirus* , stock R4415

Cynthia A. Rossi, Brian J. Kearney, Scott P. Olschner, Priscilla L. Williams, Michael D. McNaney, Ashley McCormack, Jeffrey R. Kugelman, Gustavo F. Palacios, Camenzind G. Robinson, Randal J. Schoepp, Mark J. Wolcott, and David A. Norwood

Diagnostic Systems Division, Genomics Division, Pathology Division, US Army Medical Research Institute of Infectious Diseases, Fort Detrick, MD 21702, USA

USAMRIID in house technical report 2013:

Production and *in-vitro* characterization of Angola isolate of *Marburg Marburgvirus* , stock R4410

Cynthia A. Rossi, Brian J. Kearney, Scott P. Olschner, Priscilla L. Williams, Michael D. McNaney, Ashley McCormack, Jeffrey R. Kugelman, Gustavo F. Palacios, Camenzind G. Robinson, Randal J. Schoepp, Mark J. Wolcott, and David A. Norwood

Diagnostic Systems Division, Genomics Division, Pathology Division, US Army Medical Research Institute of Infectious Diseases, Fort Detrick, MD 21702, USA

Poster presented at American Society of Virologist July 2009:

Aberrant Transcriptional Changes in Human Dendritic Cells Following Exposure to Filoviruses

V. R. Melanson, P. Williams, and W. D. Pratt

United States Army Medical Research Institute of Infectious Diseases, Virology Division, 1425 Porter St., Ft. Detrick, MD 21702