Jabbar Campbell

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SENIOR SCIENTIST

Molecular Biologist with experience developing and optimizing assays for early discovery efforts in neurodegenerative disease. Fluency in R studio and Python with experience designing pipelines to automate data analysis and visualization. These skills include:

- Design of RNA sequence analysis pipelines using Bioconductor
- Experience with Cloud based solutions such as AWS and Github repositories
- Molecular Biology experience in DNA cloning
- Multivariate analysis and visualization using R and Python
- Automated Liquid Handling Experience
- Assay development on High Thruput instrumentation
- Quantitative Analysis using Bioqant, Image-j, R and Python

PROFESSIONAL RESEARCH EXPERIENCE

CARAWAY THERAPEUTICS, Cambridge, MA 2020 – 2023

Senior Scientist

Advanced projects in Lysosomal storage as they pertain to Neurodegeneration thru assay development across multiple modalities, high content imaging, and cell-based assays. Contributed to a small molecule campaign to triage potent and selective Ion channel activators.

- Treated Niemann pick cell models with in house chemical matter followed by downstream Lipidomic analysis to detect phenotypic rescue.
- Used PCA to visualize and cluster compounds according to performance across assays.
- Designed a pipeline for Analysis and Visualization of RNA-seq data followed by GSEA to elucidate important pathways.
- Quantitated Protein levels following treatment to observe rescue of lysosomal function.
- Increased turnaround time for High Content Imaging Data with customized scripts in R by 6-fold.
- Established plate-based QC metrics to facilitate data integrity.

AMGEN, Cambridge, MA 2015 – 2020

Associate Scientist – Neuroscience

Advanced projects in Analgesia and Neurodegeneration through assay development across multiple modalities, including electrophysiology, high content imaging, biochemical and cell-based assays. Spearheaded a small molecule campaign using both biochemical and cell-based systems and identified potent and specific enzyme inhibitors.

- Optimized conditions for imaging Fluorogen activated peptides to improve signal to background signal window for High content imaging.
- Characterized a protopathic aggregation model for ALS in SH-SY5Y cells using High Content Imaging.
- Screened natural and designed compound libraries to drive Structure Activity relationships (SAR) for ligand and Ion gated Channels.
- Confirmed and prioritized IC50 data across platforms to validate next generation instrumentation.
- Confirmed and prioritized hits across technology platforms to validate next generation instrumentation.
- Performed MEA from spinal cord slices to elucidate mechanism of action for a novel pain target.
- Measured enzymatic activity and calculated kinetic constants such as Km and Kd to advance project to “Early Optimization Phase” in under 6 months.
- Established a Nanobret Luciferase assay to provide target engagement data.
- Drove technology transfer to an external CRO’s and increase throughput to reduce cost using R.
- Quantitated protein from lysate in a 384 plate-based sandwich ELISA system via MSD.
- Performed MSD pulldown of proteins associated with RISC loading of RNA to establish PKPD relationships.
- Built a SHINY web application for the Visualization of Pharmacological relationships.
- Achieved departmental and companywide visibility thru hosting guest speakers and poster Presentation.
- Strengthened community relationships through Community Outreach.
- Mentored Junior Associates in the lab and through weekly “Neuroinformatics” meetings.

NATHAN KLINE RESEARCH FOUNDATION, Orangeburg, NY 2001 – 2015
Department of Dementia Research
Constructed and characterized models for studying the dynamics of axonal transport in neurons leading to publication of multiple peer reviewed articles in High Impact journals.

- Created transgenic models via cell type specific promoters.
- Used Western blot analysis and histology for studying Neurofilament colocalization.
- Examined protein-protein interaction between Myosin Va and Neurofilament light chain.
- Conducted behavioral experiments to highlight variation in locomotion for KO mice.
- Implemented and maintained a tissue sample database.

EDUCATION

Master of Science in Biology, New York University · New York, NY
Bachelor of Science in Biology, Tufts University, Medford, MA