**James Collins Powell, Ph.D.**

New York, NY 10024 |[powelljames01@gmail.com](mailto:powelljames01@gmail.com) |917-346-2665

**Research Scientist|Genomics**

Scientist experienced in translational research for clinical diagnostics and drug discovery with extensive scientific knowledge and practical application of Spatial Genomics and Next-generation sequencing based technologies. Accomplished in setting up and managing an Illumina CORE genetic testing laboratory.

**Professional Experience**

**Bristol-Myers Squibb,** Lawrenceville, NJ **2019-2020**

**Senior Research Investigator I**, Integrated Genomics and Technologies

Accountable for the development of spatially resolved method (Nanostring GeoMX DSP) for dissecting RNA expression and protein abundance in FFPE biopsies, resulting in an understanding of the immune cell activity in the tumor microenvironment.

* Planned and validated a new protein and RNA assays and applications for GeoMx digital spatial profiling platform.
* Accountable for oversight of 2-3 experienced associate scientists resulting in improved metrics.
* Collaborated with other team members, including scientists, biologists, and senior management.

**Mount Sinai School of Medicine (MSSM),** New York, NY **2013-2019**

**Manager**, Illumina Next-Generation Sequencing Operations, 2018 - 2019

Managed a team of 8 Bachelor of Science and Ph.D. level scientists and Bioinformatician’s to develop and perform Illumina sequencing applications and assays for R&D and clinical diagnostics.

* Validated CRISPR/CAS9 target enrichment strategy for Trinucleotide repeat expansion assay
* Optimized multiple NGS assays (DNA-seq, RNA, ScRNA-seq) to meet the needs of research community and commensurate with current NGS methods.
* Negotiated with multiple vendors on capital equipment and reagent purchase resulting in exceeding $8M for Laboratory CORE inception and build-out.
* Managed laboratory budget in accordance with forecasting large sequencing projects.
* Surveyed the competitive landscape for genetic data generation and analysis and collaborated with industry leaders to generate industrial technology development partnerships that included alpha and beta-test novel technologies.

**Project Manager|Senior Scientist,** Genetics and Genomics, 2013 - 2018

Scientific and technical innovation of disease-focused Next-generation sequencing (NGS) assays (10X Genomics, PacBIO, IonTorrent and Illumina platforms) including designing, optimizing, validating and implementing targeted sequencing panels to advance clinical biomarker assessment.

Project management|operational set-up of genetic testing start-up laboratory

* Developed and managed an active project plan including deliverables, timelines, budget, and risk management.
* Accountable for the physical plant design, workflow and infrastructure planning.
* Performed due diligence in department regulatory guidelines, ensuring clinical lab operations exceeded industry standards.
* Curated and managed capital equipment budget that exceeded several millions of dollars.

**Entrepreneurship Training**

**Mount Sinai Innovation Partners (MSIP),** New York, NY **10|2017**

**Intern,** Office of Technology and Business Development, Mount Sinai, NY

* Conducted market research, technology assessments, prior art searches, examination of commercial potential, and decision support research and documentation for technologies disclosed to Mount Sinai technical transfer office.

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**NYU Entrepreneurial Institute,** New York, NY **10|2017**

**Intern Venture Associate**

Explored licensing options and partnerships clarifying what key milestones and data would make NYU invention attractive to commercial partners.

* Conducted Market Research, due diligence, interaction with KOL to guide investment strategy.

**Rutgers Business School,** Princeton, NJ **09|2017**

**Mini MBA BioPharma Innovation,**

Determined strategies for the discovery, analysis and approval of new drugs aligned with Intellectual property laws and government policies driving drug development decisions.

* Regulatory strategy for Clinical process and timelines at the US FDA and its foreign counterparts.
* Completed Capstone Project “Market Forecast and Key Drivers in Type 2 Diabetes Therapeutics”

**Scientific Review Board**

**Kinetic Diagnostics, Inc.**, [http:||www.kineticdiagnostics.com](http://www.kineticdiagnostics.com) **2015-2016**

**Scientific Advisor**

Scientific advisor for California based sports genomics start-up company.

Conducted market analysis and due diligence for genomic analysis in sports medicine including reviewing gene panels associated with health and injury prevention.

* Reviewed next generation sequencing technologies to utilize and report generation guidelines

**Academic and Industrial Research**

**Icahn School of Medicine at Mount Sinai,** New York, NY **2010-2013**

**Neurology Post-Doctoral Fellow**, Laboratory of Dr Zhenyu Yue

Conducted independent research into the role LRRK2 kinase in Parkinson’s Disease including identifying and validating LRRK2 Kinase substrates using in vitro and in vivo assays.

* Developed research collaboration with Industrial companies, CRO’s and academic institutions.
* Supervised laboratory projects and team leader of graduate and PhD student projects.

**GlaxoSmithKline,** Harlow, UK  **2009-2010**

**Molecular Biologist**, Biological Reagent Assay Development (BRAD)

Accountable for the development of recombinant cell-based assays for neuroscience drug discovery projects.

Designed and generated biological reagents for assay transfer within scientific lead teams and accountable for screening of drug discovery targets using in vitro kinase assays.

**Education**

**PhD, Biochemistry in Signal Transduction -** University College Cork, Cork, Ireland

Laboratory of Dr Justin McCarthy-Investigated mechanism of growth factor and cytokine signaling in Alzheimer’s disease which resulted in several publications in peer-review journals.

**Bachelor of Science (BSc), Biochemistry -** University College Cork, Cork, Ireland

**Publications**

**Powell JC**, Strahl M, Ellis M,ShahH, Wang Ying-Ching, Sachs D, Tsai Yu-Chih,GreenbergD, Clarke T, Smith M, Schadt E and SebraB. CRISPR-Cas9-Targeted SMRT Sequencing of Medically Relevant CGG DNA Repeat Expansions in the FMR1 gene. 2019 (Manuscript in submission phase)

Uzilov Andrew, Ding V.Wei , Fink Marc Y, Antipin Yevgeniy, Brohl, Andrew S, Shah Hardik, Kasai Yumi, **Powell JC** et al. (2016). Development and clinical application of an integrative genomic approach to personalized cancer therapy. Genome Medicine 8:62

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**Publications, Cont.**

Chhibber-Goel Jyoti, Coleman-Vaughan Caroline, Agrawal Vishal, Sawhney Neha, Hickey Emer, **Powell JC** and McCarthy J.V. (2016). γ-secretase activity is required for regulated intramembrane proteolysis of tumor necrosis factor (TNF) receptor 1 and TNF-mediated pro-apoptotic signaling. J. Bio. Chem. Vol .291,N0.11, 5971–5985

Krebs CE, Karkheiran S, **Powell JC**, Cao M, Makarov V, Darvish H, Di Paolo G, Walker RH, Shahidi GA, Buxbaum JD, De Camilli P, Yue Z, Paisán-Ruiz C. (2013).The Sac1 domain of SYNJ1 identified mutated in a family with early-onset progressive Parkinsonism with generalized seizures. Human Mutation Sep;34(9):1200-7

**Powell JC,** Twomey C and McCarthy JV. (2009). Association between Presenilin-1 and TRAF6 modulates regulated intramembrane proteolysis of the p75NTR Neurotrophin receptor. J. Neurochemistry.108: 216-30

Elzinga BE,Twomey C., **Powell, J.C**.,Harte F.and McCarthy JV. (2009). The interleukin-1 receptor type-1 is a substrate for gamma-secretase dependent regulated intramembrane proteolysis. J. Bio. Chem. Nov. 16284: 1394-409

[Clifford N](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=Search&Term=%22Clifford%20N%22%5BAuthor%5D&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_DiscoveryPanel.Pubmed_RVAbstractPlus), [Smith LM](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=Search&Term=%22Smith%20LM%22%5BAuthor%5D&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_DiscoveryPanel.Pubmed_RVAbstractPlus), [**Powell J**](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=Search&Term=%22Powell%20J%22%5BAuthor%5D&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_DiscoveryPanel.Pubmed_RVAbstractPlus), [Gattenlöhner S](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=Search&Term=%22Gattenl%C3%B6hner%20S%22%5BAuthor%5D&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_DiscoveryPanel.Pubmed_RVAbstractPlus), [Marx A](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=Search&Term=%22Marx%20A%22%5BAuthor%5D&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_DiscoveryPanel.Pubmed_RVAbstractPlus), [O'Connor R](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=Search&Term=%22O'Connor%20R%22%5BAuthor%5D&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_DiscoveryPanel.Pubmed_RVAbstractPlus). (2008). The EphA3 receptor is expressed in a subset of rhabdomyosarcoma cell lines and suppresses cell adhesion and migration. J Cell Biochem. 105(5):1250-9

McElroy B, **Powell JC**, McCarthy JV. (2007). The insulin-like growth factor 1 (IGF-1) receptor is a substrate for gamma-secretase-mediated intramembrane proteolysis**.** Biochem Biophys Res Commun. 358(4): 1136-41