

TIFFANY R. KING PEOPLES, Ph.D.

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EXECUTIVE SUMMARY

Data-driven leader and educator with nearly 20 years of experience in mentorship, program development, stakeholder management, and biomedical research. Proven track record of leading teams and managing student success programs in startup environments, including developing internship programs from inception and educating 300+ students weekly. Expert in utilizing CRMs (Salesforce, Lever) to track engagement metrics and improve organizational outcomes. Passionate about applying instructional expertise and performance data to accelerate student growth and retention in innovative higher-education models.

EDUCATION AND TRAINING

UNIVERSITY OF PENNSYLVANIA – PERELMAN SCHOOL OF MEDICINE 2017 - 2022
Postdoctoral Fellowship, Cancer Immunotherapy (Center for Cellular Immunotherapies)
Research Mentors: Avery D. Posey, Jr., Ph.D. and Carl June, M.D.
Philadelphia, PA

RUTGERS UNIVERSITY – ROBERT WOOD JOHNSON MEDICAL SCHOOL 2009 - 2015
Doctor of Philosophy, Cell and Developmental Biology
Thesis Title: "The Identification of Genetically Distinct Pioneer Cells in Drosophila Dorsal Vessel Formation, and the Role of Enabled During Cardiac Fusion;" Thesis Advisor: Sunita G. Kramer, Ph.D.
New Brunswick, NJ

SPELMAN COLLEGE 2005 - 2009
Bachelor of Science, Biology
Atlanta, GA

PROFESSIONAL EXPERIENCE

SPELMAN COLLEGE
Faculty Lecturer (part-time) January 2026 – Present

- Instructional Leadership: Delivers Biological Chemistry instruction to upper-level STEM majors, applying student-centered practices to ensure academic persistence and engagement.
- Direct Mentorship: Serves as a dedicated mentor and instructor for 70+ students, providing one-on-one academic coaching and career guidance to foster the next generation of scientific leaders.
- Performance Tracking: Utilizes classroom data to identify students in need of intervention, implementing support strategies to improve learning outcomes.

MAXCYTE, INC.
Field Application Scientist July 2022 – January 2025

Training customers in the proper and effective use of the MaxCyte cGMP-compliant electroporation platform. Pre and post-sale customer support and relationship management (with clinicians, physician scientists, PhDs, and various stakeholders). Installation, troubleshooting and experimental design for customers in the translational academic and commercial space. Improving customer transfection efficiency and viability post electroporation of various cell types for a variety of applications - including cell and gene therapy (to treat many different cancers and other genetic disorders), and the production of protein and other biomolecules. Adhering to quality management system standards (ISO 9001:2015), with regards to customer interactions. **Experience with traveling 50-70%** for customer engagements and field support; travel logistics/planning. Representing the company at key conferences (**ASGCT, ASH, and Innate Killer Summit**).

UNIVERSITY OF PENNSYLVANIA – PERELMAN SCHOOL OF MEDICINE

Postdoctoral Researcher

October 2017 – July 2022

Developing novel immunotherapies for the treatment of solid tumors through CAR T cell targeting of cancer-specific epitopes. The therapies that I've created demonstrate potent cytolytic effects against both **prostate** and **breast cancer** models, which is beneficial to the field because translating the curative potential of these therapies from blood cancers to solid tumors has been one of the greatest unmet burdens. As a senior postdoctoral fellow, I mentored and trained both peers and junior trainees through laboratory onboarding, experiment planning/project management, and project execution. Presented research at the following conferences: **ISCT, ASGCT, SFG, and Immunotherapy 2018 in Havana, Cuba.**

Selected projects:

- IND-enabling preclinical studies to investigate the anti-tumor efficacy of Tn-MUC1 targeted CAR T cell therapy against aggressive metastatic prostate cancer models
- Aberrant glyco-epitope targeting
- Enhancing tumor killing by the endogenous and modified immune system through glyco-editing of tumor surface sialic acid
- Stromal targeting - Oncofetal fibronectin targeting

Leadership Roles:

Fall 2019 – Spring 2021

Diversity Committee Co-Chair, Biomedical Postdoctoral Council

- Maintaining, leading, organizing, and innovating the Mentoring Circles Program developed by former Diversity Committee members (the program consists of underrepresented faculty, postdocs, graduate students, and undergraduates at the University of Pennsylvania)
- Facilitate annual STEM social mixer to foster interaction and career discussion among the University of Pennsylvania's underrepresented community at all levels of the STEM pipeline
- Secure speakers from various STEM fields for "Spotlight Café," a monthly seminar series
- Attend monthly Biomedical Postdoctoral Council meetings

THE WHARTON SCHOOL – MACK INSTITUTE FOR INNOVATION MANAGEMENT

May 2019

Mack Technology Fellow – Commercialization Workshop

Designed for faculty, scientists, clinicians, and post-docs who want to commercialize their research, participants from the University of Pennsylvania and Children's Hospital of Philadelphia gain access the most successful teaching offerings on innovation and entrepreneurship around campus. ([Learn More](#))

BIOBUS, INC. ([Learn More](#))

February 2015 – September 2017

Staff Scientist

- Educated over 300 K-12 students per week on using various laboratory techniques, particularly microscopy (scanning electron, compound light, stereo, and fluorescence), to make scientific discoveries.
- Developed hands-on science curriculum for K-12 students, which incorporated Next Generation Teaching Standards to foster excitement and interest in scientific research.
- Developed a paid internship program for college and high school students from inception
- Served as Director of summer camp programs and developed new and exciting curriculum
- Taught professional development courses to classroom teachers and non-profit leaders who service the New York City public school system.
- Managed aspects of recruitment and onboarding of interns and new hires utilizing application platforms including Lever and Zenefits for HR responsibilities.
- Managed and directly mentored college and high school interns in the development and execution of independent research projects, using the organisms *Daphnia magna*, *Drosophila melanogaster*, *Hydra vulgaris*, and mosquitoes
- Recruiter/educator for community lab afterschool and summer programs
- Gained experience using the CRM software Salesforce to manage relationships with partner schools and organizations.

RESEARCH EXPERIENCE

RUTGERS UNIVERSITY – ROBERT WOOD JOHNSON MEDICAL SCHOOL September 2009 – December 2014

Graduate Student – Research Fellow

Investigated embryonic cardiac tube development using the *Drosophila melanogaster* dorsal vessel (DV) as a model.

Selected projects:

- Through genetic analysis of the cardiac tube, key cytoskeletal proteins involved in early heart formation were identified using the following techniques: embryo fixation, antibody staining, fluorescence microscopy, live embryo imaging, confocal microscopy, epi-fluorescence microscopy, and classical *Drosophila* genetics.
- Characterized loss of function mutations, and discovered that the cytoskeletal regulator protein Enabled (Ena) modulates the actin cytoskeleton in order to facilitate final sealing of the heart tube during cardiac fusion.
- Demonstrated that when Ena protein is depleted gaps are observed between opposing cardiac cells, which should be sealed. Provided evidence of a significant decrease in filopodia length and number on the leading edges of migrating cardiac cells in *ena* mutant embryos.
- Contributed evidence to the field that genetically distinct pioneer cardiac cells initiate cell migration and fusion during heart tube formation.

NAVAL RESEARCH LABORATORY

May 2009 – August 2009

Summer Research Intern

Investigated the effects of physicochemical anomalies of soda-lime silicate slides on biochemical immobilization.

Selected projects:

- Glass slides are common substrates for the manufacturing of microarrays because they are susceptible to chemical surface modifications. The surface of glass slides was chemically treated with a silanization method in order to coat the slides with hydroxyl groups that aided in immobilizing biomolecules.
- Assays were done to immobilize fluorescent biomolecules onto an array of glass slides from different vendors, to test the efficiency of immobilization. Proteins were purified using size-exclusion chromatography.

PRINCETON UNIVERSITY

June 2008 – August 2008

Summer Research Intern

Investigated the role of Oskar (*osk*) protein and other associated molecules during germ cell development in *Drosophila melanogaster*, using embryo fixation, immunofluorescence, and Western blotting.

Selected projects:

- Performed TAP-Tag protein purification with *osk*-TAP fusion transgene, which allowed for the isolation of *osk* and associated proteins and protein identification using mass spectrometry.

UNIVERSITY OF CHICAGO

May 2007 – July 2007

Summer Research Intern

Studied the effects of lamin mutations in heart development.

Selected projects:

- Performed fluorescence *in situ* hybridization (FISH) to identify the chromosome positioning within lamin-normal and lamin-mutant human cardiomyocyte and fibroblast nuclei. I also harvested RNA from patient fibroblast samples for microarray analysis. These findings were presented at the 2007 ABRCMS, where I earned a poster presentation award.

SPELMAN COLLEGE

January 2007 – May 2009

Research Technician

Studied the effects of LIM silencing on IL-16 related responses in T cells, specifically CD25 expression, lymphoproliferation, and apoptosis.

Selected projects:

- Transfected IL-16 stimulated T cells with siRNA specific for LIM protein, and performed FACS analysis to quantify CD25 expression compared to non-transfected cells. Transfectants exhibited decreased CD25 expression. IL-16/2 activated T cells transfected with LIM siRNA exhibited a decrease in T cell proliferation.
- Apoptosis was induced in LIM-knockdown T cells with camptothecin and active-caspase activity was measured through fluorescence microscopy.

SCIENTIFIC SKILLS

- Assay development for in vitro characterization of CAR T cell function after antigen exposure - investigating anti-tumor function through cytokine release (ELISA, Luminex), cytotoxicity (xCELLigence RTCA, eSight, Incucyte, luciferase and flow-based; primarily against prostate and breast cancers), and proliferation assays
- Mammalian cell culture - including techniques to produce and maintain new cell lines
- Fluorescence microscopy
- Multi-color flow cytometry
- Molecular biology techniques – antibody staining, IHC, western blotting, DNA/RNA isolation, purification, and quantification, PCR, qPCR, cloning, gel electrophoresis, etc.
- Lentiviral vector design/synthesis for the stable transfer of engineered chimeric antigen receptor (CAR) constructs, and lentivirus production
- Genetic engineering of human T cells by lentiviral transduction and ex-vivo expansion
- CRISPR gene editing of both primary T cells and tumor cell lines; nucleofection and electroporation
- Animal modeling to investigate safety and in vivo efficacy of CAR T cells against solid tumors; prostate
- Software/Platform proficiency: Aperio ImageScope, BD FACSDiva, FlowJo, ImageJ, GraphPad Prism, Living Image, Sequencher, Benchling

PATENT APPLICATIONS

“Fibronectin Targeting Chimeric Antigen Receptors (CARs),” PCT International Application No. PCT/US2020/58352 ([WO2021087356A1](#)), filed 10/30/2020.

“Engineered Expression of Cell Surface and Secreted Sialidase by CAR T Cells for Increased Efficacy in Solid Tumors,” U.S. Patent Application No. 16/879,636 ([US20240368546A1](#)), filed 5/20/2020.

PUBLICATIONS

King-Peoples, T.R., Keane, J.T., Lewis, H.S., Liu, F., Dagher, O., Paravathaneni, K., Gardner, B., Ahmed, A., Furth, E., Lal, P., Posey, A.D. (Under Review) CAR T Cells Targeting O-Glycosylated Fibronectin Exhibit Potent Cytolytic Activity to Synergize with Tumoral Toll-Like Receptor Agonism to Overcome Tumor Resistance. *Cancer Immunology Research*

Liu, F., Kean, J.T., Lewis, H.S., **King-Peoples, T.R.**, June, C.H., Posey, A.D. (2026) CD2 costimulation bridges potent CAR-induced cytotoxicity and durable persistence. *J Immunother Cancer*. 14(1): e013208. doi: 10.1136/jitc-2025-013208. PMID: 41571300; PMCID: PMC12829372.

Sumen, C., **King Peoples, T.** (2023) Embracing Diversity to Advance Science and Clinical Care. *Technology Networks Cell Science*. <https://www.technologynetworks.com/cell-science/articles/embracing-diversity-to-advance-science-and-clinical-care-370760>.

King-Peoples, T.R. and Posey, A. D., Jr. (2021) Splitting signals drives CARs further. *Nat Cancer*. 2, 873–875. doi:10.1038/s43018-021-00257-x

- King, T. R.**, Kramer, J., Cheng, Y. S., Swope, D., & Kramer, S. G. (2021). Enabled/VASP is required to mediate proper sealing of opposing cardioblasts during *Drosophila* dorsal vessel formation. *Dev Dyn*, 250:1173–1190. doi:10.1002/dvdy.317
- Dagher, O.*, **King, T. R.***, Wellhausen, N., & Posey, A. D., Jr. (2020). Combination Therapy for Solid Tumors: Taking a Classic CAR on New Adventures. *Cancer Cell*, 38(5), 621-623. doi:10.1016/j.ccell.2020.10.003
- Schwab, R. D., Bedoya, D. M., **King, T. R.**, Levine, B. L., & Posey, A. D., Jr. (2020). Approaches of T Cell Activation and Differentiation for CAR-T Cell Therapies. *Methods Mol Biol*, 2086, 203-211. doi:10.1007/978-1-0716-0146-4_15 Book Chapter.
- King, T.** and Posey A. D. (2019) Co-expression of an engineered cell-surface sialidase by CART cells Improves anti-cancer activity of NK cells in solid tumors. *Cytotherapy* 21(5): S27. doi:10.1016/j.jcyt.2019.03.338 Abstract.
- Martinez Bedoya, D., **King, T.**, Posey, A.D. (2019) Generation of CART cells targeting oncogenic TROP2 for the elimination of epithelial malignancies. *Cytotherapy* 21(5): S11-S12. doi:10.1016/j.jcyt.2019.03.570 Abstract.
- Stentoft, C., Migliorini, D., **King, T. R.**, Mandel, U., June, C. H., & Posey, A. D., Jr. (2018). Glycan-directed CAR-T cells. *Glycobiology*, 28(9), 656-669. doi:10.1093/glycob/cwy008 Review.
- Swope, D., Kramer, J., **King, T. R.**, Cheng, Y. S., & Kramer, S. G. (2014). Cdc42 is required in a genetically distinct subset of cardiac cells during *Drosophila* dorsal vessel closure. *Dev Biol*, 392(2), 221-232. doi:10.1016/j.ydbio.2014.05.024
- North, S. H., Lock, E. H., **King, T. R.**, Franek, J. B., Walton, S. G., & Taitt, C. R. (2010). Effect of physicochemical anomalies of soda-lime silicate slides on biomolecule immobilization. *Anal Chem*, 82(1), 406-412. doi:10.1021/ac902324r

SELECTED PRESENTATIONS

- Extracellular Matrix-Targeting CAR T Cells for the Treatment of Prostate Cancer*. Center for Cellular Immunotherapies Research in Progress Seminar, Virtual. March 2021. Oral.
- CAR-T Cell Therapies to Target and Overcome the Tumor Microenvironment in Prostate Cancer*. Spelman College – Invited Speaker – RISE Program, Atlanta, GA. October 2019. Oral.
- Co-Expression of an engineered cell-surface sialidase by CART cells improves anti-cancer activity of NK cells in solid tumors*. International Society Cell & Gene Therapy Annual Conference, Melbourne, AU. May 2019. Poster.
- A Glycan-Directed Approach to CAR T Cell Therapy for Metastatic Prostate Cancer*. Immunotherapy 2018: Designing the Next Generation of Cancer Immunotherapies, Havana, Cuba. November 2018. Poster.

SELECTED VOLUNTEER EXPERIENCE

- COMBATTING RACIAL INEQUITIES COMMITTEE – UNIVERSITY OF PENNSYLVANIA 2020 – 2022
Committee Member
- Charged with evaluating the current racial climate within the graduate groups and the postdoctoral program at the University of Pennsylvania, in order to make recommendations for improvement ([Learn More](#))

BIOMEDICAL POSTDOCTORAL COUNCIL – UNIVERSITY OF PENNSYLVANIA 2019 – 2021
Diversity Committee Co-Chair

- See description under “Professional Experience”

SEEDING LABS, INC. – RUTGERS UNIVERSITY CHAPTER 2013 – 2014
Founding Member, Fundraising Co-Chair

- Organized both fundraising events and social gatherings to bring awareness to the Seeding Labs cause while obtaining resources to fulfill our mission
- Participated in and publicized equipment drives in order to obtain lab equipment for donation

CITIZEN SCHOOLS 2012
Volunteer Genetics Teacher

- Taught the fundamentals of genetics and cell structure using microscopy to students in grades 6-8 during an extended day program; provided a research-grade microscope for lessons
- Designed and led hands-on experimental mini-lab components to each lesson; prepared and coached students to deliver final presentation at the program’s culminating showcase

SELECTED HONORS AND AWARDS

Ernest E. Just Postgraduate Associate Fellow	2020
NIH/NCI Research Supplement Grant to Promote Diversity in Health-Related Research – Parent Grant: 3P01CA214278-02S1	2018-2022
Poster Prize – Immunotherapy 2018 International Meeting (Havana Cuba): Designing the Next Generation of Cancer Immunotherapies	2018
Panelist – Black Girls Code Women of Color in STEM Career Panel	2017
New York Stock Exchange Opening Bell Ringer – Honoring community engagement through BioBus, Inc.	2016
Keynote Address Speaker – Research Initiative for Scientific Enhancement (RISE) Summer Research Symposium, Spelman College	2014
FASEB MARC Poster/Presentation Travel Award	2014
Scientist Mentoring and Diversity Program (SMDP) Scholar for Biotechnology	2013-2014
Spelman College NIH/NIGMS RISE Program Alumna Rising Star Award	2012-2014