Arturo Orlacchio, PhD

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EXECUTIVE SUMMARY

Principal Scientist and Certified Six Sigma Black Belt with 10+ years of experience solving the key process and quality challenges in preclinical-to-clinical transitions. Integrates deep expertise in translational oncology (biomarkers, genomics, in vivo models) with a rigorous process-optimization framework. Expert in designing and validating robust, scalable, and GxP-ready bioanalytical assays. A proven cross-functional leader who builds "quality first" systems into R&D, eliminating data variance and accelerating the path to successful INDs.

CORE COMPETENCIES

- Molecular biology
- Gene Editing
- Tumor Immunology
- Histology
- Mouse Models

- Epigenetic
- Trial Readiness & Assay Integration
- Assay Development & Validation
- Drug Discovery
- Biomarkers

CERTIFICATIONS

- ASQ Certified Six Sigma Black Belt (CSSBB), 2025
  Credential ID: 165966704 | [Verify](#)

WORK EXPERIENCE

Episteme Prognostics, Brooklyn, NY	01/2024-present

Senior Scientist - Principal Scientist

- Spearheaded the end-to-end development and validation of a novel chromatin accessibility platform to identify predictive biomarkers for pancreatic cancer, delivering a proof-of-concept that underpins the company's lead diagnostic program.

- Managed and mentored a high-performing team of 2 scientists, aligning individual performance goals with program milestones to drive the successful execution of key diagnostic projects.

- Drove the complete translational lifecycle of novel molecular assays, leading cross-functional teams (R&D, Clinical, Ops) to successfully advance diagnostics from R&D to full clinical trial readiness.

- Architected the end-to-end diagnostic workflow, integrating all CLIA/CLEP requirements and authoring the foundational documentation package (SOPs, validation protocols) to support LDT development.

- Served as the scientific lead for clinical collaborations, integrating biomarker discovery efforts with patient cohort selection to ensure 100% alignment with trial timelines.

- Implemented a rigorous QC and eligibility review process for longitudinal samples, preserving the integrity of 3 high-value patient cohorts and guaranteeing trial compatibility.

NYU Grossman School of Medicine, New York, NY 06/2021-01/2024

Research Scientist – Senior Research Scientist

- Spearheaded a translational drug discovery project that successfully identified a novel target to overcome immunotherapy resistance in PDAC though epigenetic modulation, advancing a new therapeutic strategy from concept to preclinical validation.
- Trained and mentored research technicians and junior scientists in complex *in vivo* protocols and data analysis, improving team productivity and ensuring high-quality, reproducible data generation.
- Engineered and optimized complex *in vitro* immune co-culture systems to accurately model the tumor microenvironment, creating a reliable platform for assessing drug efficacy and mechanism of action.
- Executed over 100 complex mouse survival surgeries to build and test orthotopic PDAC models, generating the critical *in vivo* efficacy data required to validate novel therapeutic targets.
- Drove the optimization and standardization of key immune profiling assays, establishing a robust, repeatable protocol that directly supported clinical trial-relevant biomarker discovery.

THE Ohio State University, Columbus, OH 08/2017-06/2021

Post-Doctoral Researcher

- Led a target discovery program that identified and validated 2 novel therapeutic targets in NSCLC, leveraging a multi-platform approach (CRISPR, conditional GEMMs) to build the preclinical case for a new drug development effort.
- Architected and implemented a scalable *in vivo* drug-testing pipeline, significantly increasing the throughput and efficiency of preclinical efficacy and tolerability screening.
- Drove key translational insights for multi-institutional projects by managing all PDX model studies and conducting analyses on retrospective clinical samples to correlate *in vivo* data with patient outcomes.
- Generated and compiled comprehensive data packages, including annotated tumor data and detailed experimental reports, to support IRB-regulated studies and secure grant funding.

Albert Einstein College of Medicine, Bronx, NY 09/2013-08/2017

Research Fellow

- Directed a target discovery program in anaplastic thyroid cancer that successfully identified and validated selected AGC kinases as critical oncogenic drivers, establishing them as a novel therapeutic target class for the disease.
- Initiated and managed a key pharmaceutical partnership to advance therapeutic candidates toward clinical translation, leading the preclinical evaluation of novel kinase inhibitors.
- Engineered and optimized a primary thyrocyte cell culture system, creating a critical platform that enabled the successful execution of functional assays.

SELECTED TECHNICAL SKILLS

Clinical/Diagnostic Applications:
- Handling and processing of clinical tumor tissues and blood samples
- cfDNA extraction, library preparation (for liquid biopsy applications).
- ATAC-seq & target enrichment protocols

Molecular & Cellular:
- Western Blot, ELISA, IP, qRT-PCR
- Flow cytometry
- RNA interference (siRNA, shRNA), CRISPR knockout/knockin, lentiviral transduction
- Primary immune cell isolation and culture (human/mouse T cells, macrophages)
- Cytokine secretion assays, in vitro polarization, cell viability/apoptosis assays

In Vivo:
- Survival surgeries (pancreatic orthotopic, subcutaneous, tail vein injection)
- Drug dosing (IP, IV, PO)
- Preclinical efficacy models (GEMMs, PDXs, CDXs, humanized mice, syngeneic systems)
Software:
Benchling, GraphPad Prism, FlowJo, ImageJ, UCSC Genome Browser, IPA, GSEA

SELECTED PUBLICATIONS

- "Continuous regression of metastatic pancreatic adenocarcinoma after suspending chemotherapy: a case report."
  Bayat L, **Orlacchio A**, Parrott D, Wu J. Case Rep Oncol (2025) https://doi.org/10.1159/000549360

- "RANBP9 and RANBP10 cooperate in regulating non-small cell lung cancer proliferation."
  Orlacchio, A. and Kajimura, Y., Rizzotto, L. *et al.* *J Exp Clin Cancer Res* **44**, 259 (2025).
  https://doi.org/10.1186/s13046-025-03491-8

- "*SGK1 is a critical component of an AKT-independent pathway essential for PI3K-mediated tumor development and maintenance.*"
  Orlacchio A, Ranieri M, Brave M, Arciuch VA, Forde T, De Martino D, Anderson KE, Hawkins P, Di Cristofano A. *Cancer Research*. 2017; 77(24):6914-6926. doi: 10.1158/0008-5472.CAN-17-2105

Full publication list

Professional website

EDUCATION

PhD – Life Sciences   University of Sannio, Benevento, BN, Italy

MS – Medical Biotechnologies   University of Sannio, Benevento, BN, Italy