

# KARAMARIE FECHO, PHD

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## EXECUTIVE PROFILE

Science and technology leader specializing in biomedical data and knowledge systems, community-driven open-science infrastructure, cross-sector collaboration, and biomedical and technical communications

- Served in leadership roles on large-scale, multi-institutional, open-science and AI infrastructure initiatives involving academia, industry, nonprofit organizations, and government partners
  - Helped secure millions of dollars in federally funded programs supporting open biomedical data infrastructure and scalable biomedical discovery platforms
  - Expertise in AI-relevant domains, including open science, data governance, data integration, FAIR principles, privacy and security, federated knowledge systems, and sustainable data ecosystems
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## EDUCATION

### PhD, Neurobiology

School of Medicine, University of North Carolina at Chapel Hill (UNC Chapel Hill)

### BA, Psychology & Mathematics (*summa cum laude*)

Rutgers College, Rutgers University

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## PROFESSIONAL EXPERIENCE

### Founder & CEO, Copperline Professional Solutions, LLC | 2010–present

Leading a biomedical data science and communications consulting firm focused on building open, community-driven, AI and data infrastructure to accelerate the translation of clinical and biomedical knowledge into scalable, interoperable, and mission-oriented solutions

- Advising academic, industry, nonprofit, and government collaborators on data integration, interoperability, governance, and sustainable, open, biomedical data ecosystems
  - Cultivating cross-sector scientific and technical communities spanning dozens of institutions and hundreds of contributors engaged in collaborative open-science initiatives
  - Developing community-oriented use cases, contributor engagement strategies, and outreach programs to expand adoption of open biomedical knowledge graph systems
  - Driving community engagement efforts through publications, workshops, presentations, collaborative communications, and interactive engagement models such as hackathons and outreach activities
  - Facilitating collaboration among researchers, developers, data scientists, and domain experts contributing to distributed open-source, biomedical data ecosystems
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### Research Affiliate, Renaissance Computing Institute (RENCI), UNC Chapel Hill | 2012–present

- Contributing to open-source, biomedical data platforms and knowledge graph ecosystems
  - Advancing standards-based data integration and AI-ready infrastructure
  - Developing proposals from concept to award, contributing to >\$22M in federal funding (NIH, NSF)
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### Assistant Professor, Anesthesiology, UNC Chapel Hill | 2004–2010

- Developed and directed data-driven patient safety initiatives using large-scale perioperative datasets
  - Developed and directed a medical student and resident physician research training program
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### Assistant Professor, Neurosensory Disorders, UNC Chapel Hill | 2002–2003

- Developed and directed research projects on pain and other neurosensory disorders
  - Supervised and trained students in study design, data management, and statistical analysis
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## Assistant Professor, Psychology & Neuroscience, UNC Chapel Hill | 1998–2002

- Developed and directed research projects on neural, endocrine, and immune interactions
  - Developed and taught undergraduate courses on drugs and human behavior, biopsychology, and biology
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## COMMUNITY-BUILDING LEADERSHIP

### NIH NCATS Biomedical Data Translator Program (2016–present)

Leadership roles across a major, open-source, federal data initiative:

- Lead, Translator Ambassadors & Champions Program
- Lead, Translator Relationships and Outreach for Visible Engagement and Resources (ROVER) Group
- Chair / Co-Chair, Publications Committee
- Lead Author, Translator Consortium portfolio of publications
- Contributor, Large Language Models Working Group

### Impact:

- Advanced national-scale open infrastructure for biomedical knowledge graphs and biomedical discovery
  - Helped shape approaches to data integration and interoperability, AI integration, and open data ecosystems
  - Led community engagement and cross-sector collaboration strategies
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## SELECT FUNDING SUPPORT (2020–present)

Key contributor and/or senior personnel on major, federally funded, open-source initiatives:

- DOGSLED: Data, Ontologies, and Graphs Supporting Learning and Enhanced Discovery (NIH, 2024–2029)
  - ROBOKOP: Reasoning Over Biomedical Objects linked in Knowledge Oriented Pathways (NIH, 2022–2027)
  - BioBricks-OKG: An Open Knowledge Graph for Cheminformatics and Chemical Safety (NSF, 2023–2026)
  - ICEES: Integrated Clinical and Environmental Exposures Service (NIH, 2020–2024)
  - Translator SRI: Standards and Reference Implementation, a Common Dialect (NIH, 2016–2024)
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## PUBLICATIONS & TECHNICAL CONTRIBUTIONS

- 170+ scientific publications and products, including peer-reviewed journal articles, peer-reviewed conference papers and proceedings, white papers, and technical reports (primarily first/senior author)
  - 100+ pharmaceutical and biotechnology publications and products (medical/technical writer)
  - 10+ open-source biomedical software systems (designer/contributor)
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## SELECT PROFESSIONAL ACTIVITIES (2020 – present)

- Editorial Board Member (2026), *Discover Artificial Intelligence*
  - Associate Editor (2026), *Frontiers in Systems Biology*, section on Data and Model Integration
  - Invited Speaker, ISMB/ECCB (2025) – “Building sustainable solutions for federally-funded open-source biomedical tools and technologies”
  - Invited Speaker, Environmental Health Language Collaborative (2022), “Biolink Model: an open-source standardized data model for semantic harmonization, integration, and interoperability across datasets”
  - Panelist, National Academy of Sciences Workshop (2021), “Leveraging Advances in Remote Geospatial Technologies to Inform Precision Environmental Health Decisions”
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## ADDITIONAL EXPERTISE

- AI & Data Policy: data governance, FAIR principles, open science
- Technologies: knowledge graphs, biomedical informatics, open-source software
- Domains: environmental health, clinical research, patient safety
- Leadership: large-scale collaboration, stakeholder engagement, program development
- Communications: collaborative publications, community engagement, interactive outreach activities

\*ChatGPT-5.3 was used to condense the original version of this document and restructure it as a first draft (04:12 PM ET, 04/07/2026), for subsequent review, editing, and formatting