

Greg Colello, PhD

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Professional Summary

Accomplished **Principal Investigator, Bioinformatics Program Leader, Software Engineer, and PhD Scientist** with an extensive track record that spans AI applications, bioprocess optimization, ecosystem modeling, and advanced systems engineering. Participated in **over \$810,000 in competitive NMSBA research grant funding** with Los Alamos National Laboratories (LANL). Expert at bridging biological phenotypes with computation, including local LLM server deployments, agentic tissue simulations, and distributed genomic databases at elite institutions like **Carnegie Institution, Stanford Medical Center, and NCGR**.

Technical Skills Inventory

AI & Agentic Modeling: Local LLM Infrastructure (Qwen 3.8 deployment), Predictive Multi-Scale Fungal World Models, Agentic Cell/Tissue Simulations, Genetic Programming (John Koza Lab), Prompt Engineering.

Computer Languages: Java (Swing, FX, 3D), Python, Perl, CGI, HTML, C, Objective-C, Fortran77, Visual Basic, Shell/CLI.

Systems & Networking: Linux (Debian, Red Hat, Ubuntu), Apache Web Server, Sun Solaris Multi-CPU, UNIX, Windows, macOS, NeXT, Network Architecture (CAT5/6 Intranets).

Applications & Scientific Data: Matlab, Mathematica, R, Bioinformatics Suites (GCG, BLAST), Distributed Repositories (DNA, Protein 3D, Earth Satellite), Data Formats (CSV, JSON, XML).

Ecosystem Simulations & Bench Science: CSUGCM Climate Change Models, Biosphere 2 & NASA EOS contributor, Cell-Receptor Assays, Sephadex Gel Filtration, Neurophysiology.

Core Professional Experience (most recent)

Onwardsnacks (Albuquerque, NM) | *Principal Investigator — Phenotype Architecture (Consultant)* | **2026 – Present**

- **Pioneered AI-assisted data strategies** to analyze, predict, and modify filamentous fungi phenotypes.
- **Formulated a \$250,000 DOE Genesis Mission SBIR/STTR pitch** for a Multi-Scale Fungal World Model.

Cetaly (Albuquerque, NM) | *Principal Investigator — Recombinant Proteins (Consultant)* | **2024 – 2026**

- **Spearheaded recombinant protein production pipelines** and cellular culture workflows; evaluated FGF2 potency.
- **Secured and executed a \$60,000 NMSBA grant** with LANL to conduct systemic cell-culture history reviews.

Daedalus Technology Group (DTG) (Albuquerque, NM) | *Principal Investigator (Consultant/Shareholder)* | **2021 – 2026**

- **Served as PI on consecutive NMSBA grants totaling \$500,000+** with LANL for stem cell medium development.
- **Deployed local open-source LLM architectures (Qwen 3.8)** on secure servers to parse historical data.

Capitol Computer and Network Solutions (Santa Fe, NM) | *Systems & Hardware Technician (Employee)* | **2019 – 2022**

- **Administered full hardware repair** and network administration lifecycles for Apple, Windows, and Linux.

Science Business Software (SCIBIZSW) (Santa Fe, NM) | *President (Owner)* | **2006 – Present**

- **Founded S-Corp developing custom simulation software** utilizing complex Java Swing, FX, and 3D graphics.
- **Leveraged Partner on 5 NMSBA grants** with LANL; provided local senior community IT consulting.

(5-year gap during cancer recovery, afterwards permanently semi-retired)...

National Center for Genome Resources (NCGR) (Santa Fe, NM) | *Bioinformatics Program Leader (Employee)* | **1999 – 2001**

- **Supervised an elite division** of 7 software engineers and 3 data consultants on high-performance genomic projects.
- **Spearheaded end-to-end design and code** of GeneX, a foundational open-source microarray data engine.

Stanford Medical Center (Dr. Peter Small TB Lab) (Palo Alto, CA) | *Bioinformatician (Consultant)* | **1999**

- **Designed custom automated molecular fingerprint analysis software** using Java and VB to parse raw RFLP inputs.

Mendel Biotechnology (Hayward, CA) | *Bioinformatician & Functional Genomics Dev (Employee)* | **1997 – 1998**

- **Built plant functional genomics database interfaces** using Perl, CGI, C, and Oracle for T-DNA records.

Civic Leadership & Education

- **Board Director / Voting Member:** Eldorado Community Improvement Association (Managed governance for 7k residents) | Santa Fe County US 285 South Planning Committee (Formulated land policies).
- **Data Analyst:** Santa Fe Sierra Club Alliance (Built custom Java models evaluating zip code solar capacities).
- **Education:** PhD in Biological Sciences / Computational Biology Focus (Details available on master CV).