# Steven Bates

**San Diego, CA**
steverbates@gmail.com
**610-513-7344**

## Summary

I'm a LIMS business analyst, product owner, and testing and validation specialist with a thirteen-year background as a bench scientist in academia. The theme across my industry career has been leveraging my domain knowledge into a deep understanding of the needs of cross-disciplinary scientific teams and implementing tools and solutions to help them manage their data. I seek a role in which I can continue to provide value for scientific teams while strengthening my experience in laboratory informatics, project and/or product management, and data governance and integrity.

## Skills

LIMS (LabVantage 8.4.6, CoreLIMS), writing user guides and SOPs, UATs, validation planning and testing, workflow mapping (Lucidchart, Visio), JIRA, molecular biology, collaboration, communication

## Certifications

- **LabVantage:** Administrator (2021)
- **Udemy:** Scrum Product Owner (2024)

## Experience

**20/15 Visioneers, Principal Visioneer** **2024-present**
- Scientific informatics consulting for clients in the biopharma space.
- Writing knowledge articles about scientific data management.
- Exploring AI tools to support laboratory research.

**ProPharma, Consultant (client: Avidity Biosciences)** **2023**
- Collaborated with on-site manager to draft computer systems validation SOP, as well as to complete final phase of LIMS vendor selection, initiating CMC group's digital transformation and establishment of FAIR and ALCOA+ data standards.
- Interviewed members of group (~10) to elicit user requirements, map workflows for receiving lot release and stability reports from CDMO partners, and gain their trust to begin to acclimate them to the benefits of a LIMS.
- Organized information inferred from paper reports of GMP test data (~200 tests with ~400 fields for 15 biologic drug products and intermediates, across 12 CDMOs) into a single framework to establish naming conventions and prepare for LIMS master data import.

**ClearNote Health (formerly Bluestar Genomics), Contractor/CLIA IT Systems Analyst** **2019-2023**
- Documented LIMS requirements and NGS laboratory workflows, and led vendor selection for a system compliant with both CLIA and 21 CFR Part 11, to commercialize liquid biopsy test for early detection of pancreatic cancer.
- Responsible for communications with the vendor's development team through their project manager and business analyst, to address bugs and other issues, request features, build SQL queries to retrieve QC metrics from LabVantage databases, draft and approve functional requirement specification documents, and any other areas of discussion necessary to the project.
- Generated user guides, user acceptance tests, validation plan and reports for LabVantage and, in collaboration with bioinformaticians, validation plan for ClearNote's custom machine learning models.
- Managed, organized, and prioritized backlog of JIRA tickets, periodically assigning them to development team, validating results in test environment, and documenting change requests for deployment to production.

**Laboratory Informatics and Business Analysis Consultant (clients: CoreLIMS and Ora, Inc.)** **2018-2019**
- Generated process design documentation, requirements, test plan, validation report, and user instructions for clinical CRO.
- Continued business analysis and implementation of applications for NGS, microarrays, qPCR, and protein analysis workflows to support LIMS developer client.

# Steven Bates

San Diego, CA
steverbates@gmail.com
610-513-7344

## Experience

**Accenture Scientific Informatics Services (formerly LabAnswer), Software Developer and Business Analyst** **2016-2018**

- Generated and documented user requirements for common applications to support LIMS developer client (CoreLIMS), including experimental workflows for biobanking, drug manufacturing, NGS, microarrays, qPCR, and proteomics.
- Wrote user acceptance test scripts cross-referenced to requirements.
- Supported launching of in-house teaching laboratory by aiding in the creation of lesson plan for demonstrating the polymerase chain reaction, and led a team designing a poster to summarize the history of PCR and its impact in biotechnology research and industry.
- Helped onboard and train new hires and otherwise contributed to the high reputation of client-facing project team throughout LabAnswer acquisition process, leading to contract renewal and expansion.

**Orphidia, Inc., Operations Planning Manager** **2015**

- Developed models for target markets for blood diagnostic products as part of initial business team strategy sessions.
- Cultivated relationships with prototyping, manufacturing, funding, and supply partners.
- Searched for, selected, and contacted *in vitro* medical device regulatory consultants and conducted initial screening interviews.
- Researched, wrote, and submitted reports concerning healthcare markets, funding opportunities, and regulatory requirements.

**Cambrian Genomics, Staff Scientist** **2014**

- Set up and initiated testing of instrument pipeline for emulsion PCR and bead enrichment
- Wrote responses to program director and panel for NSF SBIR Grant Renewal.

**MIT Synthetic Neurobiology Group, Postdoctoral Associate** **2011-2014**

- Experimentally validated a strategy for collecting single-cell cytoplasmic samples from mouse brains to measure gene expression.
- Initiated and managed a collaboration to develop a molecular tool for barcoding mRNA strands to effect single-cell-resolution expression analysis in bulk tissue.

**Stanford Bioengineering Department, Stephen Quake Group, Graduate Student** **2005-2010**

- Conducted a screen of protein interactions with *E. coli* RNA polymerase using microfluidic mechanical trapping.
- Designed and developed high-throughput devices for quantifying protein-protein and protein-nucleic acid interactions.

**Stanford Bioengineering 201A: Molecular and Cellular Engineering Lab, Teaching Assistant** **2006**

- Guided a group of first-year graduate students through a microarray analysis of *E. coli* gene expression.

**University of Pennsylvania Department of Chemistry, Ponzy Lu Group, Research Associate** **2000-2004**

- Led a collaboration with the Penn Microarray Core Facility inventing a new strategy for microarray probe design.
- Carried out large-scale expression and purification of Klenow exo- fragment D424A, yielding a quantity of enzyme that would have cost $80,000 to purchase off the shelf.

# Steven Bates

**San Diego, CA**
**steverbates@gmail.com**
**610-513-7344**

## Selected Independent Data Projects

- **https://alumni.media.mit.edu/~sbates/**

**Python**

- Comparison of unsupervised learning methods for classification of fly neurons by clustering of single-cell gene expression data points
- Custom interface for training, evaluating, and managing various supervised learning classification algorithms
- Custom function to simplify the creation of heatmap plots

**R Shiny**

- Non-parametric, computational hypothesis test for small data sets using random sampling
- Interactive model of the solar system with projected positions of planets and moons over a twenty-four-year period
- Calculator for strand melting temperature of nucleic acid sequences

## Education

**Stanford University** ● Stephen Quake Group ● Ph.D., Applied Physics **2004-2010**
**University of Pennsylvania** ● BA, *summa cum laude* ● Roy & Diana Vagelos Program in the Molecular Life Sciences **2000-2004**

- Quadruple major: Physics, Biochemistry, Biophysics, and Biological Basis of Behavior

## Presentations and Publications

Bates, S.R.; Quake, S.R.; Gerber, D. "A Microfluidic Device for Generating Binding Curves of Biomolecular Interactions." Poster presented at the Biophysical Society 54th Annual Meeting, San Francisco, CA (2010).

**Peer reviewed:**

Bates, S.R.; Quake, S.R. "Mapping of Protein-Protein Interactions of *E. coli* RNA Polymerase with Microfluidic Mechanical Trapping." *PLOS ONE,* **9**(3): e91542 (2014).

Bates, S.R.; Quake, S.R. "Highly Parallel Measurements of Interaction Kinetic Constants with a Microfabricated Optomechanical Device." *Applied Physics Letters* **95**, 073705 (2009).

Bates, S.R.; Baldwin, D.A.; Channing, A; Gifford, L.K.; Hsu, A; Lu, P. "Cooperativity of Paired Oligonucleotide Probes for Microarray Hybridization Assays." *Analytical Biochemistry* **342**, 59-68 (2005).