CONFIDENTIAL

STOP SEARCHING
START BUILDING

Sana Biotechnology

POSITION DESCRIPTION
COMPUTATIONAL ENGINEER

ZRG

POSITION DESCRIPTION

CLIENT:	Sana Biotechnology
ROLE:	Computational Engineer
DEPARTMENT:	Technology Sciences
LOCATION:	South San Francisco, California
REPORTS TO:	George Hartzell, PhD Senior Director, Computational Engineering
WEBSITE:	www.sana.com

SITUATION OVERVIEW:

ZRG has been engaged by Sana Biotechnology to recruit a **Computational Engineer.** This is an exciting opportunity and time to be joining Sana's dynamic and growing team of innovative scientists in the Technology Sciences group.

ABOUT SANA BIOTECHNOLOGY:

Sana Biotechnology is focused on utilizing engineered cells as medicines for patients. The ability to modify genes and use cells as medicines will be one of the most important advances in healthcare over the next several decades. Founded by a team of experienced biotech executives, scientific pioneers in gene therapy and cell therapy, and investors, the company is building differentiated capabilities across the spectrum of cell and gene therapy. Sana has licensed technology from a number of leading academic institutions and has raised significant capital since its founding, with investments from a number of leading venture capital firms and institutional investors including Flagship Pioneering, ARCH Venture Partners & F-Prime Capital.

Following its launch in early 2019, Sana licensed technology from Harvard University that has the potential to boost the success of cell therapy treatments. In June 2020, Sana raised $700 million in initial financing that will be used to advance the company's discovery and development programs that create and deliver engineered cells as a treatment for different disease types. Growing from this foundation, Sana intends to push forward its platforms and product pipeline in 2020 and beyond. The company will use the funds to support IND-enabling and initial clinical studies for multiple therapeutic candidates, buildout of manufacturing capabilities, and expansion of the company's portfolio of enabling technologies. Sana also expects to bolster its team with additional hires. They currently have approximately two hundred fifty employees in South San Francisco, Seattle, and Cambridge.

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The company's core technologies of cell therapy, gene therapy, drug therapy, and unique translational models are the foundation of its research and development platform. Sana believes that revolutionary medicines result from bold research, performed to the highest standards, following the biology, putting patient needs first and performed by a collaborative, committed, and curious team.

Sana was founded with the long view – bringing together great people and the best technologies to deliver on the challenging promise of engineered cells as medicines. Scientists have made tremendous progress over the past decade in understanding how to modulate genes and use them now to make transformative medicines. The first wave of these transformative medicines has recently launched or is on pace to reach patients soon. However, the field is still in its infancy. Assembling the right technologies is key to opening up therapeutic opportunities ranging from rare diseases caused by a single genetic mutation to acquired diseases that affect millions.

Three aspirations drive Sana as they look to treat patients with poor outcomes or currently untreatable diseases:

1. Developing the ability to repair any cell in the body ("gene therapy")
2. Developing the ability to replace any cell in the body ("cell therapy")
3. Developing the technologies and processes to ensure access to their therapies

Sana's Mission
Sana has never lost sight of why their work matters – the potential to impact the lives of patients is important to everyone at Sana. As they push the bounds of scientific discovery, they recognize there will be obstacles and setbacks, but they remain resilient in pursuit of their mission. Their values are what ground us, keep their team connected, and make it possible for them to do their best work.

> "The most successful companies recognize that great people hire great people, great people acquire and develop great technologies, and finally, great people attract great capital. Sana's success is dependent upon attracting and retaining the best people."
>
> — Steve Harr, M.D., President and Chief Executive Officer

Lead from every seat.
Sana has a humble and unrelenting commitment to deliver for patients and their community – they seek to understand, act with honesty, and engage in the crucial conversations.

Thrive as a team.
They make each other better than they ever thought possible – they hire amazing people, are intensely curious, and cultivate personal connectivity.

Make it happen.
Sana makes great choices with urgency and integrity – they value vigorous debate, alignment around their decisions, and resilient execution.

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POSITION SUMMARY:

Sana Biotechnology is seeking a dynamic Computational Engineer to join its expanding team in the Computational Engineering department. This individual will work closely with computational biologists, the data infrastructure team, and the LIMS/ELN team to build, deploy, and maintain robust and efficient applications for collecting, analyzing, and distributing data to support its research and development efforts.

The ideal candidate will be excited about building applications and application environments that scale gracefully over time and teammates, and that can adapt to research needs. They should embrace the importance of building and evangelizing systems that are approachable and maintainable by using standard tooling and techniques; implementing test cases; using version control and continuous integration systems; and writing documentation for end-users and other developers.

In addition to having the ability to work with scientists, automation engineers, and computational biologists to understand their requirements, the successful candidate must be able to negotiate solutions that satisfy those requirements, and implement them in a timely fashion. They must have strong written and verbal communication skills paired with an ability to get things done quickly without amassing hidden technical debt. The ability to be flexible, and to work in a highly collaborative environment and an agile team first mind-set will be critical to success.

KEY RESPONSIBILITIES:

- Build, deploy, and maintain pipelines that are efficient, robust, and leverage Sana's distributed compute infrastructure while following software engineering good practices (e.g. version control, code review, testing, documentation, CI/CD);
- Collaborate with the Computational Biology group to help build core informatics infrastructure, tooling, and software development processes;
- Lead its code-review culture, establishing and extending good practices by building infrastructure that makes doing the right thing simple and straight-forward;
- Mentor and coach teammates: leading tutorials and training sessions, building documentation that encourages and supports good practices, and working 1:1 with co-workers;
- Work with the Data Infrastructure team to build and deploy resources using state of the art infrastructure-as-code approaches;
- Collaborate with the Computational Biology, Data Infrastructure, and LIMS/ELN teams to help build a dynamic, long-term, scalable data resource to support the company's work;
- Manage and execute multiple projects in parallel to meet short timelines while maintaining scientific quality and rigor;
- Influence scientists and engineers cross-functionally to design studies that are appropriately powered and properly controlled to meet experimental and business objectives;
- Communicate to a broad audience with a range of technical, analytical, and biological expertise and present results on a regular basis at various group meetings.

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QUALIFICATIONS:

Required

- Demonstrated proficiency building applications in Python, with experience in Python testing, packaging, documentation tools, and best practices;
- Demonstrated proficiency in building, packaging, and deploying applications in Unix-like environments; experience building and packaging applications for cloud and container platforms;
- Practical experience using Terraform, Ansible, or similar infrastructure-as-code tools to build and manage infrastructure;
- Solid, demonstrable understanding of how to use git, shared repository servers (BitBucket, GitLab), CI/CD systems, and related tools to manage and organize the evolution of software projects;
- Demonstrated strong problem-solving abilities and organizational skills as well as being detail-oriented and self-motivated with the ability to prioritize and manage several fast-paced projects concurrently;
- Strong verbal and written communication skills for technical and non-technical audiences;
- Able to work in cross-functional teams as a strong team player as well as independently;
- Experience establishing good engineering practices and mentoring teammates.

Preferred Experience

- Building tools to support research in a scientific discipline such as biology or chemistry;
- Building and deploying user-facing software applications using modern, web-based software stacks;
- R, BioConductor, and related bioinformatics tools;
- A variety of programming languages, including C++, Go, and/or Java;
- High performance computing (local or cloud);
- SQL database management systems;
- Non-SQL data management systems, including "noSQL" document databases and text search engines;
- Building packages for packages systems like Spack, Nix, or Homebrew;
- Contributions to public software projects using modern code-sharing platforms (e.g. open-source projects hosted on GitHub).

EDUCATION:

BA and/or MS plus 7+ years or equivalent combination of education and work experience; PhD in scientific/technical discipline with 2+ years academia or industry experience.

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LOCATION:
South San Francisco, CA.

SELECT LEADERSHIP:

George Hartzell, PhD
Senior Director, Computational Engineering

George Hartzell joined Sana in early 2020. He brings a wealth of real-world engineering and management experience in successful startups, dot-com ephemera, corporate behemoths and academia's ivory towers. He is a builder of teams and has a proven ability to blend computer science, applied engineering and molecular biology to produce effective solutions to real problems. George's prior biotech industry experience includes Audentes Therapeutics, Roche, and Genentech. At Roche, he was the Senior NGS Development Architect for close to two years. During his five years with Genentech, he ran a couple of groups within the Bioinformatics Department and was a Principal Computational Biologist there for two years. Earlier, he filled in for and helped HHMI's Janelia Farm recruit a Director of Scientific Computing.

George obtained a BA in Biology from Swarthmore College, an MS in Computer Science from the University of Colorado Boulder and a PhD in Computer Science from the University of California, Berkeley. His computational biology publications span over 20 years. While working on his MS degree on the side, he built and ran the computing facility for the Molecular, Cellular and Developmental Biology department at UC, Boulder. In addition, George was the Computational Group Leader in 1992 for the Stanford Yeast Genome Project, one of the first of the model organism genome sequencing sites (which were lead-ups to the human genome effort).

Christina Chaivorapol, PhD
Head of Analytical Genomics & Translational Bioinformatics

Christina is the Head of Analytical Genomics & Translational Bioinformatics. In this role, she oversees a majority of the Technology Sciences function including computational biology, computational engineering, data infrastructure, cell technologies, automation, and analytical genomics.

Prior to joining Sana in September 2019, Christina served as Senior Director, Bioinformatics & NGS Assay Development at Audentes Therapeutics. She is a proven scientific and technical leader with over 12 years of industry experience in drug development (gene therapy, cell therapy and biologics), biomarker discovery, genetics and genomics, and diagnostic and bioanalytical assay development. She has led and contributed to organizational and scientific strategy for multiple therapeutic programs from research through clinical trials including IND filings. In addition, Christina has built and managed teams with diverse scientific and technical backgrounds, implemented informatics infrastructure, and developed and executed organizational practices to increase efficiency and reproducibility in biotech startups and pharmaceutical companies. She began her career at Genentech in 2008, starting as Computational Biologist in the Immunology

Biomarker Discovery Group and held roles of increasing responsibility there and later at Roche as Research Group Leader in Bioinformatics.

Christina earned her BS in Microbiology and Molecular Genetics with a specialization in Computer Programming from the University of California, Los Angeles and her PhD in Bioinformatics from the University of California, San Francisco. She was a National Science Foundation Fellow and her PhD research was in identifying the gene regulatory networks in human and mouse embryonic stem cells. In 2013, Christina was recognized by Genentech as a Key Researcher.

Steve Harr, MD
President and Chief Executive Officer

Steve Harr, MD, is President and Chief Executive Officer of Sana Biotechnology. Prior to co-founding Sana, Steve served as Chief Financial Officer and Head of Corporate Development for Juno Therapeutics until its acquisition by Celgene in early 2018. He was a member of the Board of Directors of Loxo Oncology prior to its acquisition by Eli Lilly in early 2019. Steve also was a co-founder and member of the Board of Directors of JW Therapeutics, a cell therapy company in China. Prior to joining Juno, Steve was at Morgan Stanley, most recently as Managing Director and Head of Biotechnology Investment Banking and previously as a biotech research analyst and co-head of global healthcare research.

Steve obtained a BA in Economics from College of the Holy Cross and an MD from Johns Hopkins University School of Medicine. He was an Internal Medicine resident at the University of California, San Francisco and performed research at Harvard Medical School and Massachusetts General Hospital.

Ed Rebar, PhD
Chief Technology Officer

Ed is Senior Vice President and Chief Technology Officer at Sana. Prior to joining Sana Ed worked at Sangamo Therapeutics to develop the company's zinc finger protein platform for therapeutic applications in genome editing, gene regulation and cell engineering. Over a 21-year career he held roles of increasing responsibility including most recently Chief Technology Officer. Ed has authored over 60 publications relating to the development of customized DNA binding proteins and editing technologies. Prior to joining Sangamo, he was a post-doctoral fellow at the University of California, Berkeley.

Ed earned his BS in biochemistry from Rutgers and his PhD in biophysics and structural biology from MIT.

COMPENSATION:
A market-competitive full compensation package will be developed for the successful candidate.

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ABOUT ZRG PARTNERS

For more than 20 years, ZRG's data-driven approach to executive and professional search has been changing the way clients think about how to find top talent. Today, ZRG is a top 10 global executive search firm and is one of the fastest-growing firms in the search industry. We provide a full suite of executive, middle management, project, and interim search solutions globally through its offices in North America, Europe, South America, and Asia. It's time to stop searching and start building with ZRG.

LAUREN LEE WHITE, JD
Managing Director
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Lauren Lee White joined ZRG Partners in 2018 as a Managing Director in the Global Life Sciences practice. With 20+ years of executive search experience, Lauren brings an extensive track record of success in recruiting senior-level talent at both premier global executive search firms and Fortune 500 companies. She has experience recruiting for a wide range of functional areas, including C-Suite, R&D, HR, legal and other strategic leadership positions.

- Merck Global Head Executive Talent Acquisition for Merck Research Laboratories; Korn Ferry: Partner, Global Healthcare/Life Sciences Practice; DHR International;
- An attorney, admitted to practice law in the Commonwealth of Massachusetts (inactive);
- Languages: Fluent in Korean and English;
- Education: BA, Brandeis University; JD, Suffolk University Law School; Master of Laws in Transnational Business Practice, McGeorge School of Law, University of the Pacific.

SANA BIOTECHNOLOGY IN THE NEWS:

October 30, 2020
Sana Biotechnology Announces Acquisition of Oscine

September 03, 2020
Sana Biotechnology Strengthens Senior Research Leadership Team with Ed Rebar, Ph.D. and Terry Fry, M.D.

June 23, 2020
Sana Biotechnology Announces Completion of Initial Financing

March 21, 2019
Stacey Ma, Ph.D., Joins Sana Biotechnology as Executive Vice President, Technical Operations

January 04, 2019
Sana Biotechnology Launches Focusing on Engineering Cells to Create a New Class of Medicines