



Request for Proposal
for
Bioinformatics Services in Support of Next Generation/Whole Genome DNA Sequencing

Proposal Deadline (**REVISED**): ~~4:00pm PST, November 2, 2018~~
4:00pm PST, December 31, 2018

Public Health Foundation Enterprises, Inc. dba
Heluna Health, Inc (HELUNA HEALTH)
On behalf of
California Department of Public Health (CDPH)

HELUNA HEALTH
13300 Crossroads Parkway, North Suite 450
City of Industry, CA 91746
www.HelunaHealth.org

KEY DATES SCHEDULE

ISSUANCE OF RFP:.....Monday, October 1, 2018
ISSUANCE OF RFP(**REVISED**).....Saturday, November 10, 2018
DEADLINE FOR QUESTIONS:.....~~Friday, October 19, 2018 4 p.m. PST~~
DEADLINE FOR QUESTIONS (**REVISED**):.....Wednesday, December 26, 2018 4p.m. PST
BIOINFORMATICS PROPOSAL SUBMITTAL DEADLINE..... ~~Friday, November 2, 2018~~
~~4 p.m. PST~~
BIOINFORMATICS PROPOSAL SUBMITTAL DEADLINE (**REVISED**).....
Monday, December 31, 2018 4 p.m. PST

FINAL SELECTION BY:.....~~By Friday November 9, 2018~~
FINAL SELECTION BY (**REVISED**):.....By Friday, January 4, 2019

DELIVERY LOCATION of Bioinformatics Proposal: Heluna Health, Inc.
13300 Crossroads Parkway, North Suite 450
City of Industry, CA 91746
Attn: Rochelle McLaurin

Electronic Submission of Bioinformatics preferred: Send to Rmclaurin@helunahealth.org and Harit Agroia via email at Harit.Agroia@cdph.ca.gov

ANTICIPATED TERM OF SERVICE/BIOINFORMATICS PROJECT:
Upon execution of contract to July 31, 2019

NOTICE: ALL QUESTIONS RELATED TO THIS RFP ARE TO BE DIRECTED TO Harit Agroia via E-Mail at Harit.Agroia@cdph.ca.gov . NO PHONE CALLS PLEASE

Submit your completed application narrative, and budget to Rochelle McLaurin via email at Rmclaurin@helunahealth.org and Harit Agroia via email at Harit.Agroia@cdph.ca.gov

Once the Firm’s application has been reviewed and approved, HELUNA HEALTH will draft and send a contract encompassing required activities and approved funding. Additional documents may be required to establish the contractual agreement.

Introduction and Background:

Background:

In 2018, Public Health Foundation Enterprises, Inc. dba Heluna Health, Inc. (HELUNA HEALTH) on behalf of the California Department of Public Health (CDPH) was awarded funding from DHHS, Centers for Disease Control and Prevention under the Advanced Molecular Detection (AMD) Initiative to upgrade bioinformatics capabilities related to whole genome and next generation DNA sequencing. The funding also requires that Heluna Health/CDPH provide whole genome sequencing and bioinformatics training to local public health laboratories. The AMD goals include transforming public health microbiology with whole genome sequencing of bacterial pathogens.

This work will be done in collaboration with the Microbial Diseases Laboratory (MDL), California Department of Public Health.

<https://www.cdph.ca.gov/Bioinformaticsprograms/CID/DCDC/Pages/mdl.aspx>

MDL performs next generation DNA sequencing using Illumina and Pacific Biosciences platforms to characterize bacterial pathogens.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5527429/>

Purpose, Goals and Objectives:

Purpose:

The purpose of this solicitation is for Heluna Health, Inc (HELUNA HEALTH), on behalf of the California Department of Public Health (CDPH) Office of Public Affairs (OPA), to solicit proposals from qualified Bioinformatics firms or individuals in order to award a next generation of processes for the high throughput analysis of microbial genomic DNA.

Goals and Objectives:

HELUNA HEALTH on behalf of CDPH seeks a bioinformatics firm or individual with capabilities including, but not limited to: validation of new tools, optimization and automation of tools, building local databases of antibiotic resistance and virulence genes, training staff, generating phylogenetic trees for microbial populations, installing software packages and third party tools, maintenance of computers (Mac, Linux, and Linux cluster), and participating in workshops and webinars. The successful applicant firm or individual will also be able to develop new methods of data analysis, and work well in a team environment. The bioinformatics analyst or analysts will interact with research scientists, public health microbiologists, and collaborators to ensure scientific relevance of data analysis and interpretation.

The bioinformatics individual or firm must have experience with next generation DNA sequencing technologies and sequence analysis tools.

The selected individual or firm will upgrade and enhance bioinformatics capabilities of the Microbial Diseases Laboratory (MDL), California Department of Public Health (CDPH), and will be a major contributor to a training event to occur in Spring 2019.

The individual or firm may partner with subcontractors, vendors, or consultants. This information must be stated in the proposed budget.

Scope of Work and Budget:

Service Overview:

The individual or firm agrees to provide to the CDPH MDL the services described herein.

This project will be conducted during the period, from ~~November 2018~~ January 2019 through July 31, 2019.

Services to be Performed:

The consultant firm or individual will:

- Play a key role in analyzing data for application demonstrations and development of the next generation of processes for the high throughput analysis of microbial genomic DNA.
- Analyze large data sets and help write reports on those analyses.
- Validate new tools,
- Optimize and automate tools,
- Build local databases of antibiotic resistance and virulence genes,
- Train staff,
- Generate phylogenetic trees for microbial populations,
- Install software packages and third party tools,
- Maintain computers (Mac, Linux and Linux cluster),
- Participate in workshops and webinars.
- Working with new methods of data analysis,
- Work well in a team environment.
- The bioinformatics analyst will interact with research scientists, public health microbiologists and collaborators to ensure scientific relevance of data analysis and interpretation.

Service Location:

The services are to be performed principally at the MDL, CDPH Richmond campus, 850 Marina Bay Parkway, Richmond CA. Permission to work off-site will require approval from the CDPH MDL Core Laboratory Technical Supervisor.

Service Hours:

The services shall be provided during the normal contractors working hours, 8:00 a.m. to 5:00 p.m., Monday through Friday unless by specific permission from the CDPH MDL Core Laboratory Technical Supervisor.

Budget:

Budget:

HELUNA HEALTH anticipates entering into an Firm Fixed Price Agreement with selected individual or firm. The individual or firm will be able to bill for services at a fixed rate of \$125 per hour. The budget amount for the period of the contract term is not to exceed an all inclusive amount of **\$60,000**.

Reporting:

Monthly Progress Reports:

Contractor must submit monthly progress reports and meet with the CDPH MDL Core Laboratory Technical Supervisor. The monthly reports shall include an itemized invoice detailing the work performed and the goals accomplished. The monthly report shall clearly identify completed tasks and provide information related to monthly activities. CDPH MDL’s Core Technical Supervisor may request that additional details be included in the report. The monthly itemized invoice must accompany the report to process for payment. Itemized invoices will not be processed until the report has been received and approved by the CDPH MDL Core Technical Supervisor.

- Timeline:

By ~~January 15, 2019~~ March 15, 2019:

- Development a next generation of processes for the high throughput analysis of microbial genomic DNA.
- Analyze large data sets and help write reports on those analyses.
- Validate new tools,
- Optimize and automate tools,
- Build local databases of antibiotic resistance and virulence genes,
- Train staff
- Generate phylogenetic trees for microbial populations,
- Install software packages and third party tools,
- Maintain computers (Mac, Linux and Linux cluster),

By ~~April 15, 2019~~ June 30, 2019:

- Develop instructional plans and Powerpoints for an online webinar, with a contribution of approximately three hours of instruction
- Develop instructional plans and Powerpoints for an in-person training event, with a contribution of 1.5 days (12hours) of instruction.

By ~~June 30, 2019~~ July 31, 2019:

- Participate, present three hours of instruction in a webinar, to be performed from the CDPH Richmond campus
- Participate, present 12 hours of instruction on two different days at an in-person workshop on the CDPH Richmond campus

Proposal Requirements-Instructions:

All proposals must provide the following as part of their bioinformatics proposal:

- (1) **Title Page/Cover Letter:** Include your or your company's name, address, web site, telephone number, and primary contact person with e-mail, direct line and mobile phone numbers. The title page will be considered a cover letter, and should be signed by an agent, owner or authorized officer of your company. **Maximum of 1 page in length.**
- (2) **Executive Summary:** Respondents should provide a summary of their organization, their qualifications and their proposed approach for working with HELUNA HEALTH on behalf of CDPH. This summary should be a **maximum of 2 pages in length.**
- (3) **Statement of Firm Qualifications:** All responses must include a statement of qualifications, experience and description of the Respondent individual or firm and your/its history.
The response should specifically indicate your or your firm's current and historical expertise in providing services identified in this RFP. The minimum required qualifications for Respondent include (**Maximum of 3 pages in length**):

EDUCATION/EXPERIENCE/SKILLS:

- B.S. or higher degree in Bioinformatics or a related field, including biological sciences, statistics, computer science, or mathematics.
- 2+ years working experience in Bioinformatics and NGS analysis

REQUIRED KNOWLEDGE/SKILLS/ABILITIES:

- Understanding and hand-on experience in bioinformatics algorithms.
- Proficiency in R, Python
- Experience with Linux environment and Unix/Linux utilities
- Experience with PCR and NGS technologies and sequence analysis tools.
- Experience with installing and using NGS analysis tools such as BWA, Samtools, VCFTools GATK, MUMMer, Mauve, PhyML, Figtree etc.
- Experience in the field of microbiology, molecular biology, and microbial population genetics

- Highly self-motivated and enjoy working as part of a multi-disciplinary team.
- Strong analytical and problem-solving skills.
- Proven track record of independent thinking & innovative approaches to problem solving.
- Strong oral and written communication skills.
- Strong organizational and documentation skills, thorough and detail-orientated.

PREFERRED QUALIFICATION/SKILLS/ABILITIES

- Familiar with public genomic databases and resources (NCBI, Ensembl etc.)
- Maintenance of Linux Cluster
- Experience with C++ and Java
- Proficiency in SQL as well as NoSQL database technologies

- (4) **Staff Qualifications:** All responses must include experience and qualifications of each individual who will be providing their expertise to the task as outlined in this RFP. All Respondents must identify the individual(s) who will have primary responsibility for contact and communications with HELUNA HEALTH and CDPH and the person who is authorized to negotiate and contractually-bind Respondent. HELUNA HEALTH reserves the right to investigate and review the background of any or all personnel proposed. Any changes to personnel require formal written approval by HELUNA HEALTH, and HELUNA HEALTH reserves the right to terminate any finalized Agreement if changes are not resolved. **Maximum of 3 pages in length.**
- (5) **Technical Solution:** The Respondent shall demonstrate and describe the individual's or firm's ability to accomplish the project, based on the requirements in the Statement of Work. Our ability to interpret and evaluate your ability to perform the project will factor into our decisions. **Maximum of 3 pages in length.**
- (6) **Past Performance/References:** All responses must include references from at least 3 clients of the firm, and preferably clients who have utilized the firm within the last three years. **Maximum of 5 pages in length**
- (7) **Billing Rates and Structure:** HELUNA HEALTH anticipates entering into an Firm Fixed Price Agreement with selected individual or firm to not exceed an all inclusive amount of \$60,000. **Maximum of 3 pages in length**