



DEPARTMENT OF HEALTH AND SOCIAL AFFAIRS

FSM National Government

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Office of the Secretary

Up 2/21/23

February 20, 2023

**Request for Proposal – Supply, Installation, Training and Maintenance Contract for Analyzers for Matrix-Assisted Laser Desorption Ionization Time-of-Flight Mass Spectrometer (MALDI-TOF MS).**

Opening Date: February 22, 2023

Closing Date: March 24, 2023

**1. General**

The FSM Department of Health and Social Affairs is expanding the capacity of its National Reference Laboratory. FSM laboratories have limited ability to identify pathogens responsible for a myriad of infectious diseases. While FSM laboratories have expanded significantly expanded their capacity with the utilization of Cepheid GeneXpert PCR platforms and Biofire Multiplex array analyzers, this capacity would expand much further with the use of mass spectrometer technology.

**2. Specifications**

Mass Spectrometer/ matrix-assisted laser desorption ionization time-of-flight mass spectrometry (MALDI-TOF MS).

2.1 Fully automated with suitable software, work stations and full available database for full microbial identifications including bacterial (Gram Positive, Gram Negative, aerobic, anaerobic), Fungal (Yeast and molds), Mycobacterial (MTB complex and NTM) and filamentous bacteria.

**2.2 Instrumentation**

- The instrument should be fully automated working on the principle of matrix assisted laser desorption ionization – time of flight (MALDI-TOF) mass spectrometry technology.
- Should have linear time of flight (TOF) measurement.
- Should have oil free vacuum pumps for easy maintenance.
- Should be equipped with nitrogen laser preferably 337 nm with repetition rate upto 1-60 Hz.
- Should be FDA approved and have CE and IVD certifications.
- Should have Automated Monitoring of Contamination level of Optics and should have automated cleaning of Optics using IR laser to reduce the downtime

**2.3 Software**

- Should be windows based, easy to use and versatile.
- Result should be directly displayed as species of microbes.
- Should be capable of doing in-depth analysis with bioinformatics tools for sub typing and dendrogram.
- IVD approved software and kits for Direct ID from Blood culture without a need for subculture.
- IVD approved software and kits for Resistance patterning for Carbapenem and Cephalosporin group of antibiotics.
- Direct ID of MRSA & KPC strains without any additional sample processing

## 2.4 Analytical parameters

- Capable of identifying microbes up to species level.
- Sensitive enough to detect a low number of cells ~ 10<sup>5</sup> cells.
- Capable of denoting taxonomical classification
- Capable of denoting mixed population (at least 2 species) in a mixed culture
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## 2.5 Database

- Should be integrated with a ready to use reference library.
- The reference library provided should be up to date.
- The database should have automatic regular updates when available.
- Microbial Database should have IVD approved database of minimum 2500 microbial Species & 7500 microbial strains.
- Mycobacteria database should have at least 160 Mycobacteria Species & 800 Mycobacteria Strains or more.
- Available parasite database

## 2.6 Workstation

Windows operating system- Windows 10 Pro, 16GB RAM, 1TB hard disc space, 64 bit operating system. High resolution LED color monitor.

Color laser printer with wireless printing facility and one set extra black and all color cartridge must be provided.

Should provide any upgrade and update of system and software (if any) free of cost for next 5 years from the date of installation.

Should be interoperable with LIMS (HCLABS)

Must provide the accessories, consumables and miscellaneous items

- Essential reusable MALDI target plates.
- Matrix and standards for mass calibration and barcode scanner.
- All consumables required for installation and demonstration of system.
- All necessary consumables for processing of 200 aerobic bacteria, 50 anaerobic bacteria, 100 Mycobacteria, 50 yeasts, 50 fungi.

Should be easily connected with an automated AST system (such as Vitek -2), or should provide a fully automated antibiotic sensitivity system (FDA approved) with necessary consumables for 200 strains using that machine.

Full list of installations with models in regional laboratories with details of contact persons to be provided.

Two years of comprehensive warranty.

Comprehensive maintenance contract for subsequent 3 years.

To provide all the required electrical accessories (including compatible online UPS) for instrument running.

Voltage 220v/110v with US standard power plug

Provide onsite training for Pohnpei staff mandatorily.

### **3. Eligibility**

Vendor must be authorized distributor and able to provide biomedical support

### **4. Format for Bid Submission**

The proposal may be submitted in any generally accepted style and format as long as it provides the necessary information as follows:

- A. Name and Address of vendor
- B. Telephone number, contact email addresses
- C. Detailed cost including tax

### **5. Submission**

Submit proposals by hand, mail or email to the address below:

Marcus Samo  
Secretary  
Department of Health and Social Affairs  
FSM National Government  
PO Box PS-70, Palikir, Pohnpei FM 96941

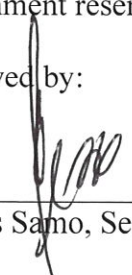
Phone: 320 8300/2619/2872

Email: health@fsmhealth.fm

### **6. Final Approval**

Government reserves the right to reject all or part(s) of any bid submitted

Approved by:

  
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Marcus Samo, Secretary

  
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Date