

**BRIHANMUMBAI MUNICIPAL CORPORATION OF GREATER MUMBAI**

**TNMC & BYL Nair Ch. Hospital, Mumbai- 400008.**

**EXPRESSION OF INTEREST**

**Subject:** To invite Expression of Interest from vendors to **Supply, Installation, Testing and Commissioning of a Video Electroencephalography (EEG) machine** for the Department of Psychiatry, BYL Nair Hospital through CSR Fund received through PPF, BYL Nair Hospital from Mazgaon Dock Shipbuilders Limited (MDL)

BYL Nair Hospital is a tertiary care referral hospital with 1623 beds. The Department of Psychiatry routinely performs electroencephalograms for adult and pediatric patients referred not just from the Department of Psychiatry but also patients from various other departments. An EEG machine is highly beneficial for diagnosing, treatment & monitoring the prognosis of epilepsy and seizure disorders in both adults and children. Additionally, it plays a crucial role in diagnosing and monitoring other neurological disorders like encephalitis, brain tumors and various brain lesions. For this purpose, we urgently require a Video Electroencephalography (EEG)

For procurement of the Video Electroencephalography (EEG) machine for the Department of Psychiatry, it is proposed to invite "Expression of Interest (EOI)" from vendors to supply the same to BYL Nair hospital.

To supply the required Video Electroencephalography (EEG) machine, vendors should obtain **Application Form** from **Dean Office on 24/9/24 to 30/9/24** and submit all required documents on or before **30/9/24**, up to 1.00 pm in the drop box in Dean Office, G building, Ground floor, BYL Nair Hospital. This will be a 2 stage EOI comprising of 2 packets; Packet A - relevant documents related to the technical specifications along with the duly filled Application form AND Packet B - Commercial documents (quotation in the prescribed format). **Packet A will be opened on 1/10/24 & packet B will be opened on 7/10/24** in the Dean's Office.

**SPECIFICATIONS FOR VIDEO ELECTROENCEPHALOGRAPHY (EEG) MACHINE FOR THE DEPARTMENT OF PSYCHIATRY, BYL NAIR HOSPITAL, MUMBAI.**

**A) Amplifier Section should have**

1. 32 no. Of channels including minimum 3 polygraphic channels
2. Input impedance:- 100MΩ
3. CMRR :- Above 100db
4. Variable Sensitivity:- 1 μv to 1000 μv
5. Filters: - Low pass, High Pass & Notch.
6. Noise should be less than 1.5 μv.
7. Measure & store True AC impedance & give numeric Values
8. 16-bit data Acquisition at min two different Sampling rate.
9. Reusable electrodes

10. Electrode, paste / gel/adhesives.
11. The system should have an inbuilt impedance check facility. The impedance check should be able to perform both at the PC side and with the headbox.
12. Should be supplied with high quality audio device.
13. The system should work with wired/wireless (Wi-Fi) mode.
14. The amplifier should be equipped with built in rechargeable battery pack.  
The Battery should sustain about 6-8 hours of recording in wireless mode.

## **B) Software**

1. Display Resolution in @ 1 k matrix or more.
2. Different color for each trace
3. Display of waveforms sec by sec, half page by ,page by page, scrolling from L-R or R-L  
Continuous, on-off, Different positioning of traces.
4. Facility of sequential recording
5. Waveform freeze facility with simultaneous back ground recording of EEG.
6. Full Flexibility to change all the parameters with amplitude duration cursors.
7. Unlimited number of programmable montage.
8. EEG records management.
9. Facility of archive full/part of EEG record.
10. Facility of page back review.
11. Online and off-line event marker.
12. Brian mapping facility with amplitude, spectral and coherence mapping.
13. Facility of 2D and 3D spectrum analysis.
14. Summary graph for easy reviewing and reporting.
15. Simultaneously reviewing of spectral analysis, brain mapping, summary graph and EEG graph for accurate localisation of abnormalities.
16. Spike detection
17. Square or Sine wave calibration.
18. Time constant :1 ms to 10 sec.
19. The CD/DVD writer should be able to archive EEG data on a CD/DVD which should have the capacity to be read on any PC without any additional software. Similar archiving should be available with Pen drives or any other removable storage media.
20. Facility for acquisition and review mode by split screen.
21. Facility to enter patient data after starting the recording or later.
22. The system should have heart rate monitoring.

## **C) Photoc Stimulator with variable intensity.**

1. Programmable
2. Stimulus rate @ 1 to 60 Hz
3. Stimulus on & pause period @ 1 to 99 second
4. Stimulus mode Auto, Manual & Single
5. Pulse mode Normal, Random & Double.

## **D) Configuration:** - The PC Configuration should have following or better specification.

1. CPU:
  - A) Processor:- Latest intel Processor
  - B) RAM :- 4GB or more
  - C) HDD :-2 TB or more
  - D) CD/DVD R/W :- Latest CD/DVD R/W
2. Monitor: High resolution 24-inch Colored LED monitor.

3. Printer: High resolution LaserJet Printer of @1200 dpi,
4. Operating System: Latest Windows operating system with Licensed copy.
5. UPS.

**E) Video EEG Module:**

1. Complete synchronize Video with EEG Frame by frame
2. Programmable frame rate up to 30 frames / sec
3. Facility to Trim Video
4. Facility to view EEG with EEG with variable speed.
5. Facility to zoom and pan Tilt the images during Video recording & in review mode.
6. Digital High resolution HD video Camera, with Motorized Zoom lens.
7. Remote control to vary zoom lens & facility to move camera left, right, up And down.

**F) Consumables:** - Minimum 2 sets (25 each) of electrodes & paste / gel/ adhesives (24 jars) should be supplied.

**G) Cart with antistatic Wheels for the above system with power distribution board.** The system Should have a custom cart from the system manufacture to house all Components of the EEG with retractable keyboard rack, integrated power supply Isolation transformer Components of the EEG with retractable keyboard rack, integrated power supply & Isolation transformer.

**H) Two-year comprehensive warranty and should provide technical support and Required spares and consumables for 7 years after warranty period is over.**

**I) It should follow International standard & safety requirements. The system should Comply with CE, USFDA & IEC standards & quality marks.**

**J) User's list with the addresses and contact Nos. To be provided.**

**K) Demonstration of quoted model is compulsory.**

**L) All standard Accessories should be supplied.**

**M) Training to MEC Engineers.**

**N) operating and detailed service manual should be supplied.**

**O) Power supply: 230 V + 15 %, 50Hz + 3%. Voltage stabilizer if required should be supplied.**

**P) Tropicalization: Operating room temp: up to 40<sup>0</sup> C  
Storage room temp: up to 60<sup>0</sup> C  
Relative humidity: upto 90 % Non condensing.**

**The Installation Report & necessary documents will be submitted to the Donor, The Donor will deposit the payment in Nair Poor Patient fund (PPF) and payment will be made by Nair PPF after receiving the payment from the Donor**

If any doubt or any query about above mentioned work, you can contact at the Office -  
Telephone No.02223027205/02223027204

Sd/-

**Dr. Henal Shah**  
Addl Professor & Head(ACTG)  
Department of Clinical Pharmacology  
TN Medical College & BYL Nair Hospital, Mumbai

Sd/-

**Dr. Anjali Parande**  
Head of Department  
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