



**Center for Bioequivalence Studies and  
Bioassay Research (CBSBR)**

**DR. PANJWANI CENTER FOR MOLECULAR  
MEDICINE AND DRUG RESEARCH**

INTERNATIONAL CENTER FOR CHEMICAL AND BIOLOGICAL SCIENCES  
UNIVERSITY OF KARACHI, KARACHI-75270

**RE-TENDER NOTICE NO. PCMD-BIOEQUIV-17.  
2011/12 (2<sup>nd</sup> Time)**

**Tender:**

1) ECG Machine with Trolley

Sealed tenders are invited only from the sales tax registered with Sindh Revenue Board and income tax registered suppliers for the Purchase/Import on C & F basis of Scientific Equipments required for the project entitled, "**Center for Bioequivalence Studies and Bioassay Research at Dr. Panjwani Center for Molecular Medicine and Drug Research**".

The detail and specifications of the item can be collected from the date of notification of the advertisement on the websites, from Purchase Office of PCMD, on any working day between 9.00 a.m. to 12.30 p.m., (except Friday), on payment of Rs. 300/- (non-refundable), in shape of a pay order (Demand Draft by the out of Karachi bidders), in favor of the Director ICCBS., or downloaded from the websites [www.iccs.edu](http://www.iccs.edu) and [www.pprasindh.gov.pk](http://www.pprasindh.gov.pk) The last date of issuing tender is 23-07-2012. The tenders may be submitted with 2% of the bid value as bid security, in shape of a pay order in favor of the Director ICCBS., latest by 02:30 p.m. on 24-07-2012. The tenders will be opened in Purchase Office PCMD of the Center at 03:00 p.m. on the same day in presence of the bidders or their representatives. The Procuring Agency may reject all or any bid subject to the relevant provision of SPP rules.

**CO-DIRECTOR  
PCMD**

**Quantity: 01set**

**1) ECG Machine with trolley**

**Specification:**

Input impedance	>10 ohm
Input dynamic range	+/- 2mV
Bandwidth	0.15 – 4.Hz
CMRR (Common Mode Rejection Ratio)	>95 db
A/D conversion	12 bits
Sampling frequency	-250 sample/s
Measurement time	~30 second
Display	240 x 128 LCD display panel
Input	Dry conduction electrodes and/ or external auxiliary electrodes
Output	USB interface
Size:	124*78*22mm
<b>Measurement Range:</b>	
Average heart rate	45 to 180 bpm
St value	3 to + 3 mm
QRS interval	< 0.2 sec

<b>Parameters</b>	<b>Reference Range</b>
Average Heart Rate	60 < HR < 100 bpm
ST Segment (ST)*	-2 < ST < +2 mm
QRS Interval (QRS)*	0.08 sec < QRS < 0.12 sec
PR Interval	0.12 ~ 0.20 sec
QT/QTc	0.32 ~ 0.44 sec/0.41 ~ 0.44 sec

**Note:**

- a) **IQ/OQ/PQ to be conducted by the vendors engineers at site with complete documentation.**
- b) **Alternate machines matching the above specification are acceptable.**

# SUMMARY SHEET

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*The tender will liable to be rejected if this form will not accompany the tender bid / quote*

SERIAL No.	BID VALUE	FOREIGN CURRENCY	CONVERSION RATE.	PRICE IN PKR.

<b>TOTAL BID VALUE IN PKR</b>		
<b>Earnest Money @ 2% in PKR</b>		
<b>Payorder / Bank Draft No:</b>		<b>Date:</b>
<b>Signature</b>	<b>Seal:</b>	