NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA

TEQIP –II CELL

No. NITR/TQ/CoE-OTER/NCB/2013/L/770 Date:05 /12/2013

Corrigendum

The Specification of **RT-PCR**, **Package No. 145,** has been revised as per our requirement (please refer to Tender No. NITR/TQ/CoE-OTER/NCB/2013/L/720 dated. 21.10.2013 & **BID REFERENCE NO: TEQIP-II/NITR/145, SECTION VI - TECHNICAL SPECIFICATIONS).**

The detailed specification is amended as follows.

Specification for Real Time PCR

1. The system should be able to perform Gene Expression, Plus/Minus assay, SNP, allelic discrimination and dissociation curve analysis etc.
2. Should have an open platform that supports all chemistries and plastic ware from different vendors.
3. The excitation by Tungsten Halogen source and detection by cooled CCD camera.
4. Reaction volume 10-30µL.
5. System should have the flexibility to adjust ramp rates to run standard protocol without change in hardware.
6. System should be capable for detection of 10 dyes SYBR GREEN I,FAM,VIC,JOE,NED,TAMARA ,TEXAS Red,Cy3,Cy5,and ROX .
7. Five position fluorescence excitation as well as emission filters for 5 colour multiplexing.
8. System should collect data for all 5 filters for all wells regardless of plate setup.
9. The data collection and instrument control software should provide multi componenting algorithm for deconvoltion of multiple dye signal with minimum cross talk.
10. Licensed full version software for primer and probe design must be included with user-friendly software
11. Instrument should have universal thermal cycling conditions.
12. Quotation should include following accessories separately:
    - A compact personal microcentrifuge for sample preparation, PCR Cooler for 96-well format for 0.2 ml & 0.5 ml reaction tubes, tube strips & PCR plates 96.
    - 1.5 ml tubes which is free of surface coating, free of DNase, RNase & PCR inhibitors & safe-lock lids with high degree of transparency.
    - Cap strips with inverted dome to avoid scratching of the optic surface, to reduce volume of the tubes and optimized for maximum light transmission.
    - Real-time PCR tube strips ,Reagent mix for quantification using SYBR Green
    - Online UPS system for running the system smoothly
    - At least 1 set of Taqman assay, inclusive of primer minor groove binder probe and Taqman master mix for gene expression must be quoted along with the offer.

Yours sincerely,

Nodal Officer (Procurement)

NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA

TEQIP –II CELL

No. NITR/TQ/CoE-OTER/NCB/2013/L/750 Date:05 /12/2013

Corrigendum

The Specification of **Force Plate 3D Motion Analysis**, **Package No. 146,** has been revised as per our requirement (please refer to Tender No. NITR/NCB/2013/L/720 dated. 21.10.2013 & **BID REFERENCE NO: TEQIP-II/NITR/146, SECTION VI - TECHNICAL SPECIFICATIONS).**

The detailed specification is amended as follows.

Component systems:-
1. Infrared Camera system to acquire 3D motion and analysis
1. No. of cameras 4 (four)
2. Should be expandable up to 16 digital cameras
3. Gigabit Ethernet communication
4. Type may be infrared cameras or CMOS cameras (with dual switch able marker and video modes for CMOS type)
5. Cameras should operate at 340Hz with full resolution
6. Camera resolution: Minimum 2048 x 11088 Pixel or higher (minimum 2.22 Mpixel or higher)
7. Maximum acquisition frequency upto 2000 Hz
8. Accuracy < 0.1 mm on a volume of 4x3x3 m
9. Marker detection system upgradable to Marker less ready system
10. Set of whole body markers, which should be upgradeable, and (reflective tapes for infrared system) as necessary.
11. System must be able to acquire complex movements in both indoor and outdoor conditions
12. System should be able to capture the ball trajectory
13. System should be supplied with markers to capture both upper limb and lower limb bilaterally and spare markers should be provided
14. System should be supplied with markers suitable for both paediatric as well as adult population
15. Should be integratable with other kinetic, kinematic and EMG data
16. Cables, accessories and stands should be included
17. Should be wall mountable and securable (to avoid in advertent calibration errors) or mountable on a light weight tripod. Six (6) tripods must be provided for portability needs.
18. Necessary calibration apparatus. Bar based calibration for a fast system set up even with obstacles in the field of view.
2. Force Platform (Optional)
The system should be compatible with AMTI/ Kistler make plateform.
3. Software and system specifications
1. To integrate, analyze, store, reproduce and report 3D motion analysis, video picture, kinematic, kinetic (forceplate and derived) and EMG data in the same control system. Simultaneous visualization of all the above data in graphs. Long duration motion capture facility.
2. Free software updates mandatory
3. Real time visualization of all integrated devices data
4. Immediate upload of data to workstation and storage
5. Easy drag and drop data processing software package for protocol creation, without any programming language knowledge.

6. Multimedia report in XLM/HTML format (it is not required any external viewer but a simple internet browser)
7. Must allow maintaining a data base of all sessions with archiving, retrieving and reporting facility.
8. Integrated Biomechanical analysis software package- MS windows 7 (or later version) based software
9. Following well proven biomechanical methodologies to provide 3D, 6 degrees of Freedom (6 DOF).
10. Able to do bilateral analysis of kinematic, force moments and EMG
11. May use Helen Hayes/ Newington or hybrid models of marker sets or clusters
12. Able to compute, report and graphical display of distance from origin, velocity, acceleration and distance travelled between two points, angular velocity, angular acceleration, joint angles stick figures, limb/body joint powers, moments, angles on sagittal and frontal planes, segment tilts.
13. Able to compute report and display graphically kinetics, centre of pressure, ground reaction forces on lateral, vertical, and frontal planes
14. To differentiate stance phase and swing phase kinematics, kinetics, EMG. Display of full perspective 3D representation of work space, markers and trajectories (mouse controllable).
15. Auto 3D reconstruction of marker trajectories, auto labelling of markers
16. Quick setup calibration, even with some obstacles partially obstructing camera view.
17. Auto elaboration of position of markers temporarily covered or out of field of vision.
4. Work Station
1. Suitable computer system with server, PC/laptop with high speed RAM and large (at least 4GB) memory system with dual LCD monitor, keyboard, DVD writer, Printer, UPS and or compatible inverter with battery system, electric line protection system, the work station, should be securable in glass/ acrylic cabinets.
2. Total system should be able to provide complete multimedia report of all graphs, measurements, rendered 3D skeleton graphics or other mannequin model, synchronized video etc. Both in digital (CD) and in printable form.
3. Plug in modules to accept data from, force plates, video cameras, EMG units
4. CE/FDA certification as per US/European standards.
5. System Necessities
1. Force Plate 3D Motion Analysis System should be supplied, installed on site with all necessary accessories, sufficient consumables.
2. AMC to be specified
3. Service backup, with response time of 24 hours
4. The supplier is responsible for the compatibility of all components in a single system
5. Letter of quality of performance to be furnished from reputed institutions using this system
6. Acceptance and compliance of the above specifications are required from the parent manufacturing company
7. The supplier should provide necessary training for 2 weeks.
8. The full System should be quoted as a full single package of one Manufacturer as designed for the present site.

Yours sincerely,

Nodal Officer (Procurement)