December 10, 2013

## NIQ for Software for analysis of fingerprinting gels

Sealed quotations are invited for supply of software for analysis of fingerprinting gels in the Department of Biochemical Engineering and Biotechnology. The essential technical specifications for the software are given below.

## **Essential Specifications:**

Software for analysis of fingerprinting gels
The software for analysis of fingerprinting gels (especially DGGE profiles) should work on
Windows.
Possibility of input of any bitmap image, densitogram, and chromatogram without any
restriction on file size.
Option of:
• Automatic lane finding for gels.
• Automated and manual alignment by pattern recognition using both external and
internal reference patterns and/or bands.
On-screen normalization of bitmap images
• Adjustable background subtraction.
• Spot removal and curve smoothing.
• Display of any combination of normalized bitmap strips and densitograms.
• Possibility to identify and mark uncertain bands/peaks.
• Comparative quantification of bands/peaks between groups of patterns.
• Binary and quantitative band matching tables of multiple combined fingerprints.
• Comparisons of >5000 database entries, various similarity/distance coefficients for
different data types, such as Pearson correlation, Dice, Jaccard. Similarity-based
clustering: Unweighted pair-grouping (UPGMA), complete linkage (furthest
neighbor), single linkage (nearest neighbor), Neighbor Joining clustering.
Generalized Parsimony. Population modeling.
• Bootstrap analysis for single or composite datasets.
• Comparison between data sets to generate consensus clustering.
• Generation of 2-D and 3-D bar graphs, contingency tables, 2-D and 3-D scatterplots
from database fields and characters.
• Principal Component Analysis. Multi-Dimensioning Scaling.
• Parametric and non-parametric statistical tests such as Chi-square test. T-test.
ANOVA, Pearson correlation test.
Import data from other molecular fingerprint techniques (such as MALDI) with error values
Dongle for use on difference computers
Optional: Database sharing tools

## **General instructions:**

- 1. Letter from the manufacturer specifically to quote for this tender is to be attached for authenticity of dealership / agency and the dealer should be authorized service provider.
- 2. Free one year warranty, please provide AMC rate after one year warranty period.
- 3. The lowest quotation, however, does not depend upon the warranty period.
- 4. Validity of the quotation should be at least three months. Vendors will do the installation and demonstration of the equipment at IIT Delhi premises without additional charges.
- 5. Taxes, terms and conditions should be clearly mentioned.
- 6. In the case the items are proprietary products of the company, a proprietary item certificate stating the same may be provided.
- 7. Specifications form should be similar to the given specifications sheet.
- 8. A compliance statement for required specifications should be attached.
- 9. Discount to Educational Institute should be given.
- 10. Payment terms and conditions should be clearly mentioned. No advance payment is encouraged by IIT Delhi.
- 11. Firm MUST provide a compliance statement vis-à-vis specifications in a "tabular form" clearly stating the compliance and giving justification, if any supported by technical literature with clear reference of page number, paragraph or lines. This statement must be signed, with the company seal, by the tendered for its authenticity and acceptance that any incorrect or ambiguous information found submitted will result in disqualification of the tender. The quotation should be complete in all respects (as per IIT-Delhi rules).

## The Institute/ purchase committee has the right to accept or reject any bid or all quotations without assigning any reason whatsoever.

Sealed quotations in separate envelopes of Technical and Commercial bids kept in one sealed outer envelope (super-scribed "Quotation for software for analysis of fingerprinting gels") should be addressed to **Dr. Shilpi Sharma, Department of Biochemical Engineering and Biotechnology, IIT-Delhi, Hauz Khas, New Delhi 110016** and should reach the Department of Biochemical Engineering and Biotechnology, IIT-Delhi by 1200 hrs on December 27, 2013.