

# **APPENDIX V**

## **SUMMARY OF CAMPUS-WIDE NEEDS ASSESSMENT SURVEY**

**Background:** The Biostatistics Advisory Committee and Bioinformatics Advisory Committee conducted a web survey during January 15-31, 2003, to evaluate biostatistics and bioinformatics needs in the areas of service, collaborative research, education and development. This report provides a summary of major findings.

**Materials & Methods:** A web survey was set up using the Survey Monkey (<http://www.surveymonkey.com/>). An email announcement was sent to department chairs and center directors, requesting them to ask their faculty members to participate in the survey. A follow-up email reminder was sent during the last week of January.

**Major Findings:** The survey results demonstrate existing needs for service and education in biostatistics, bioinformatics and computational biology. The detailed results are available in the attachment. Below is a list of key findings:

- Overall 549 faculty members participated in the survey. The breakdown for schools are: 64% SOM, 25% OGI, 5% SON, 4% ONPRC, and 3% SOD. Of those, 445 (81%) faculty members indicated that they were involved in research activities.
- The following results pertain to 445 faculty members who are engaging in research activities:
  - Major research areas: 43% basic science research and 23% clinical research.
  - Research involves the following computational activities: information retrieval (50%), data mining/querying of public databases (51%), image processing (42%), data integration (39%), computer programming/software distribution (37%), homology searches/NCBI BLAST (32%), computational modeling or simulation (31%).
  - Research involves the following statistical activities: regression, ANOVA and multivariate analysis (73%), descriptive statistics (61%), clinical trials (29%), statistical analysis of microarray data (25%), and statistical analysis of proteomics data (14%).
  - Research involves the following technologies: imaging (33%), microarrays (23%), genomics sequencing (22%), high performance computing (22%), proteomics (20%), and genetic mapping (16%). 40% indicated that their research does not involve any of the listed technologies.
  - *Major limitations of the research program are: no or limited grant funds (50%), lack of statistical support (22%), lack of appropriately trained research staff (22%), lack of computational/informatics support (15%), limited computing power (11%), lack of collaborators (10%) and others (28%).*

- Statistical support that is extremely likely or likely to be needed: data analysis and interpretation (70%), data analysis planning (61%), applied training (59%), sample size/power (57%), manuscript preparation and revision (52%), data management (49%), and protocol development and study design (48%).
  - Computational support that is extremely likely or likely to be needed: applied training (49%), data archiving/management (48%), imaging (39%), data distribution/web-based databases (38%), and data integration (34%).
  - 53% neither budget computational or statistical support in the grant application.
  - 52% have ever been in need of statistical support in the past. Of those, 67% have received the statistical support needed.
  - Comments regarding satisfaction level of the statistical support received indicate the excellent satisfaction level. However, the majority expressed concerns regarding the statisticians' availability, general heavy workload, and turn-around time.
- Among 549 respondents, 331 (60%) expressed interests in biostatistics and bioinformatics educational activities. Of those, the following educational activities are indicated as potential interests: short courses/workshops on statistical packages (77%), short courses in computational approaches to functional genomics and imaging (47%), short courses/workshops in applied research software packages such as GCG and Genehunter (46%), graduate degrees in biostatistics (applied emphasis 21%; theory & research emphasis: 23%), graduate degrees in computational biology (masters 18%; Ph.D. 20%), and professional degree in bioinformatics (22%).