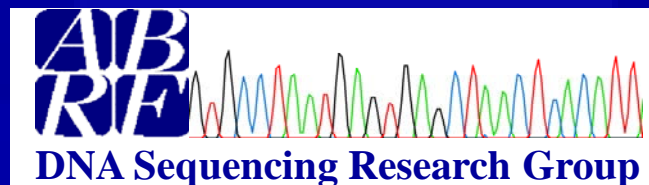


# The 2009 DNA Sequencing Research Group General Survey: Second Generation Sequencing Instruments and Services in Core Facilities

Bintzler, D.<sup>1</sup>, Detwiler, M.<sup>2</sup>, Dewar, K.<sup>3</sup>, Escobar, H.<sup>4</sup>, Kieleczawa, J.<sup>5</sup>, Perera, A.<sup>6</sup>,  
Schweitzer, P.<sup>7</sup>, Singh, S.<sup>8</sup>, Steen, R.<sup>9</sup>, Zianni, M.<sup>10</sup>

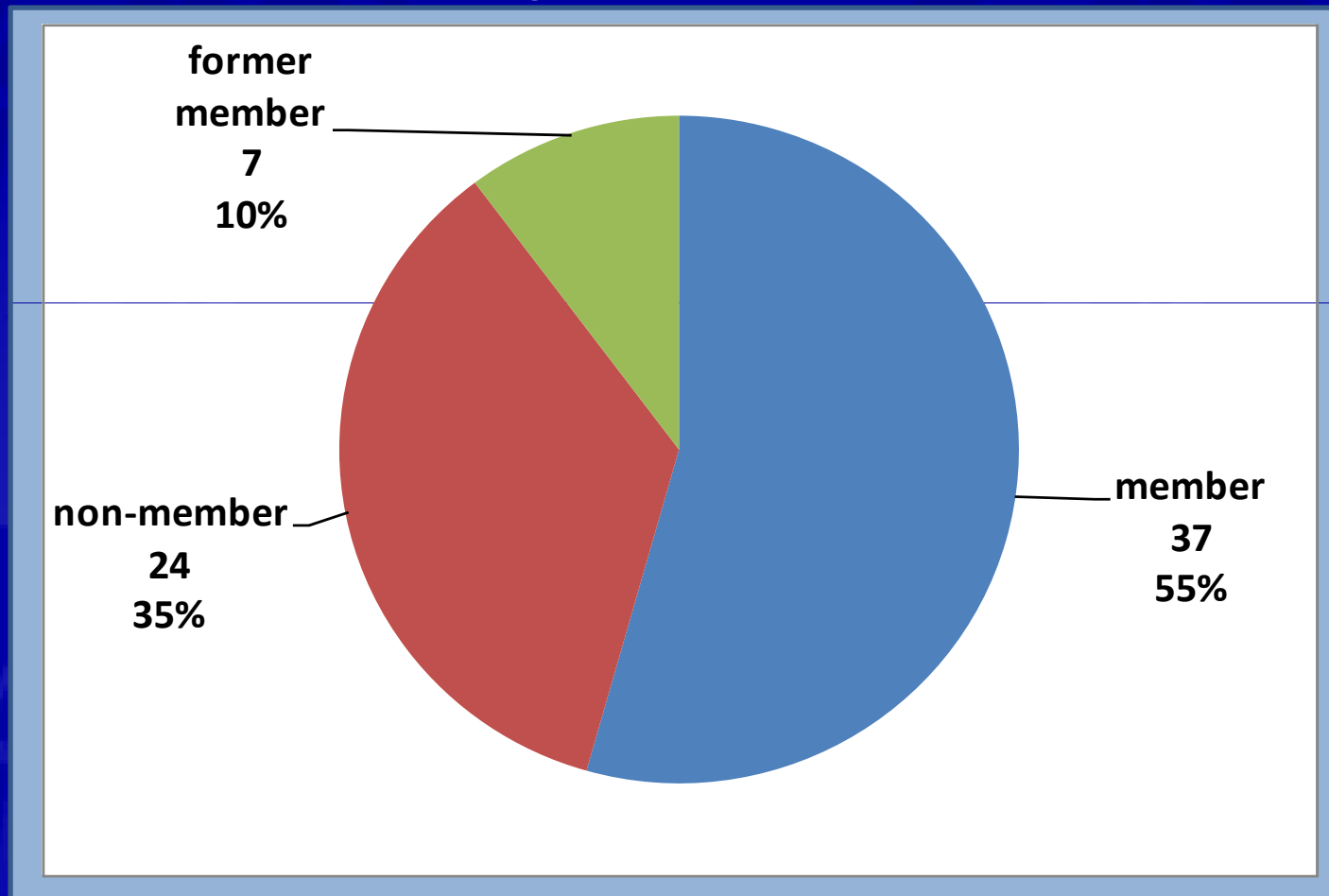
<sup>1</sup> DNA Analysis, Inc., <sup>2</sup> Roswell Park Cancer Institute, <sup>3</sup> McGill University and  
Genome Quebec Innovation Centre, <sup>4</sup> University of Utah,  
<sup>5</sup> Wyeth Research, <sup>6</sup> Stowers Institute, <sup>7</sup> Cornell University, <sup>8</sup> University of  
Minnesota, <sup>9</sup> Harvard Medical School, <sup>10</sup> The Ohio State University



# DSRG 2009 Survey

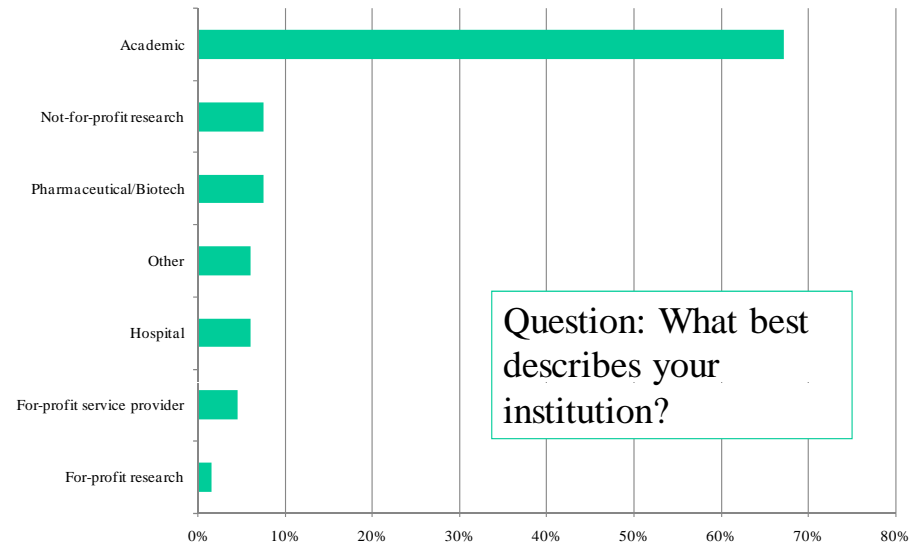
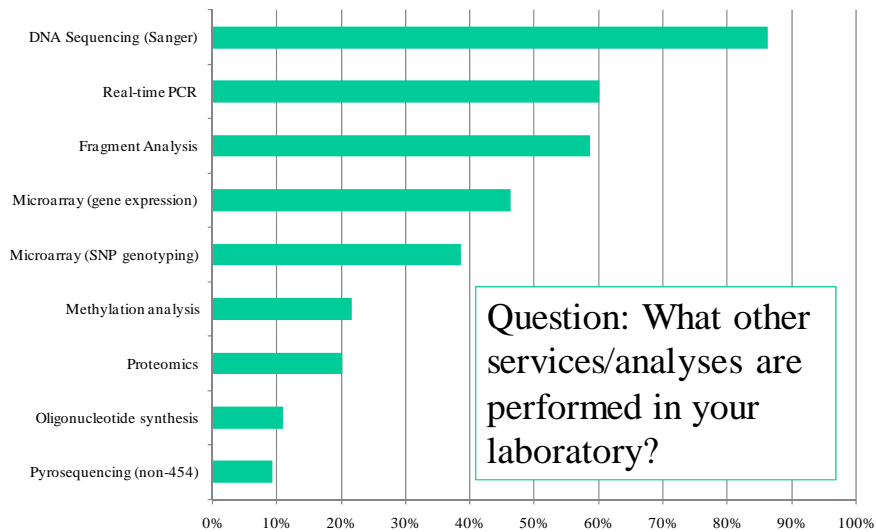
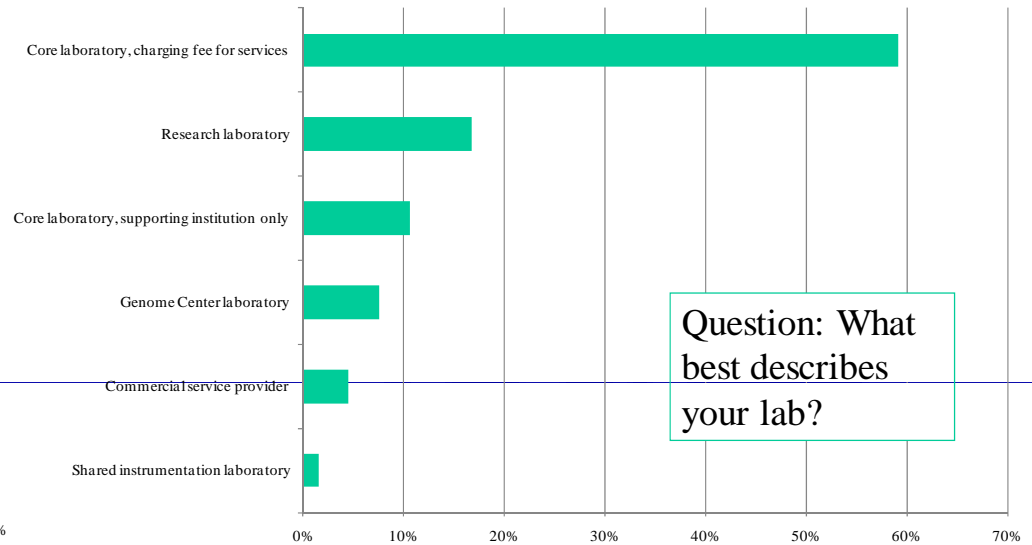
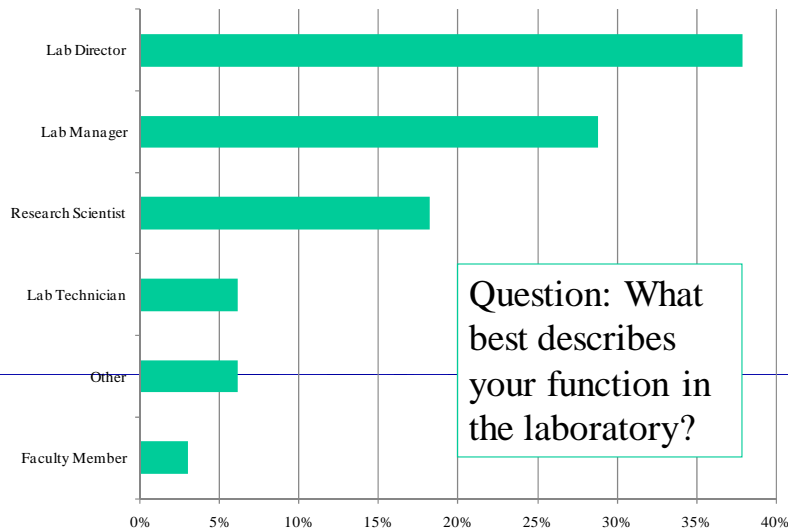
- 39 questions, minimum of 17 depending on answers
- Demographics
- Current NGS instrumentation and sources of funding
- Uses of current NGS instrumentation (types of projects, types of protocols used, analysis methods)
- Lab practices (technicians, bioinformatics services)
- Outsourcing
- Future acquisitions of NGS instrumentation
- Sanger Sequencing
- Newsgroups/meeting/professional memberships

# ABRF Membership Status of Respondents

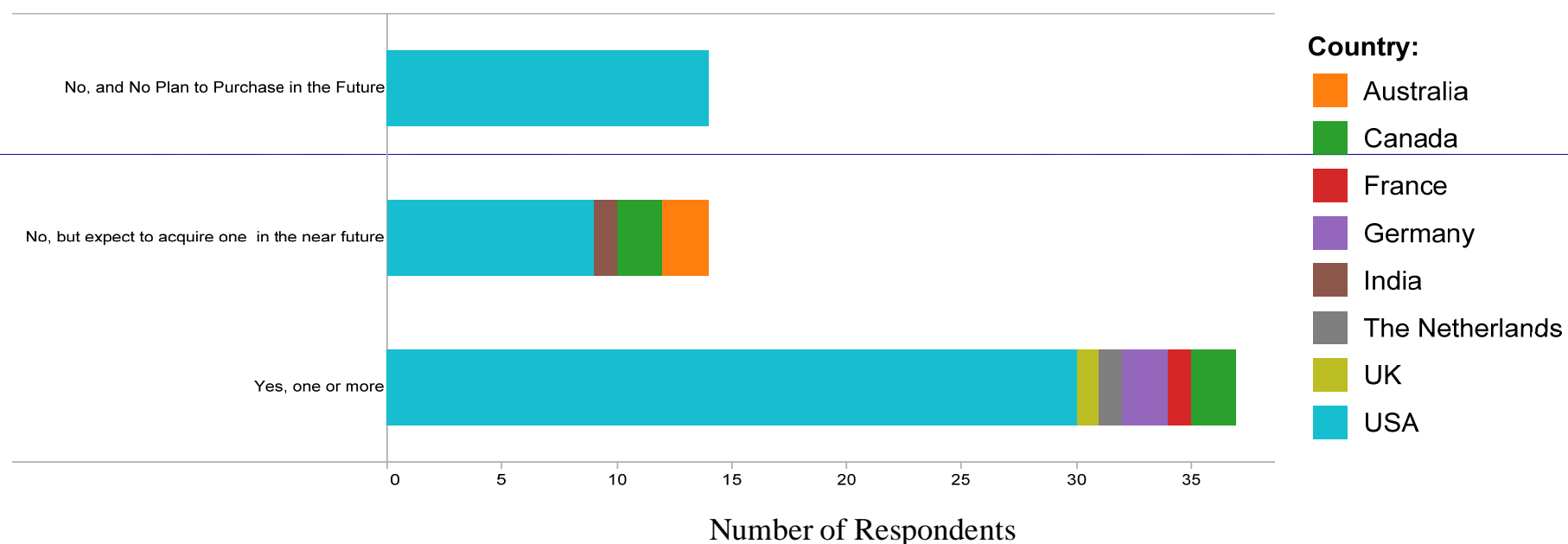


69 valid responses

# Demographics of Respondents

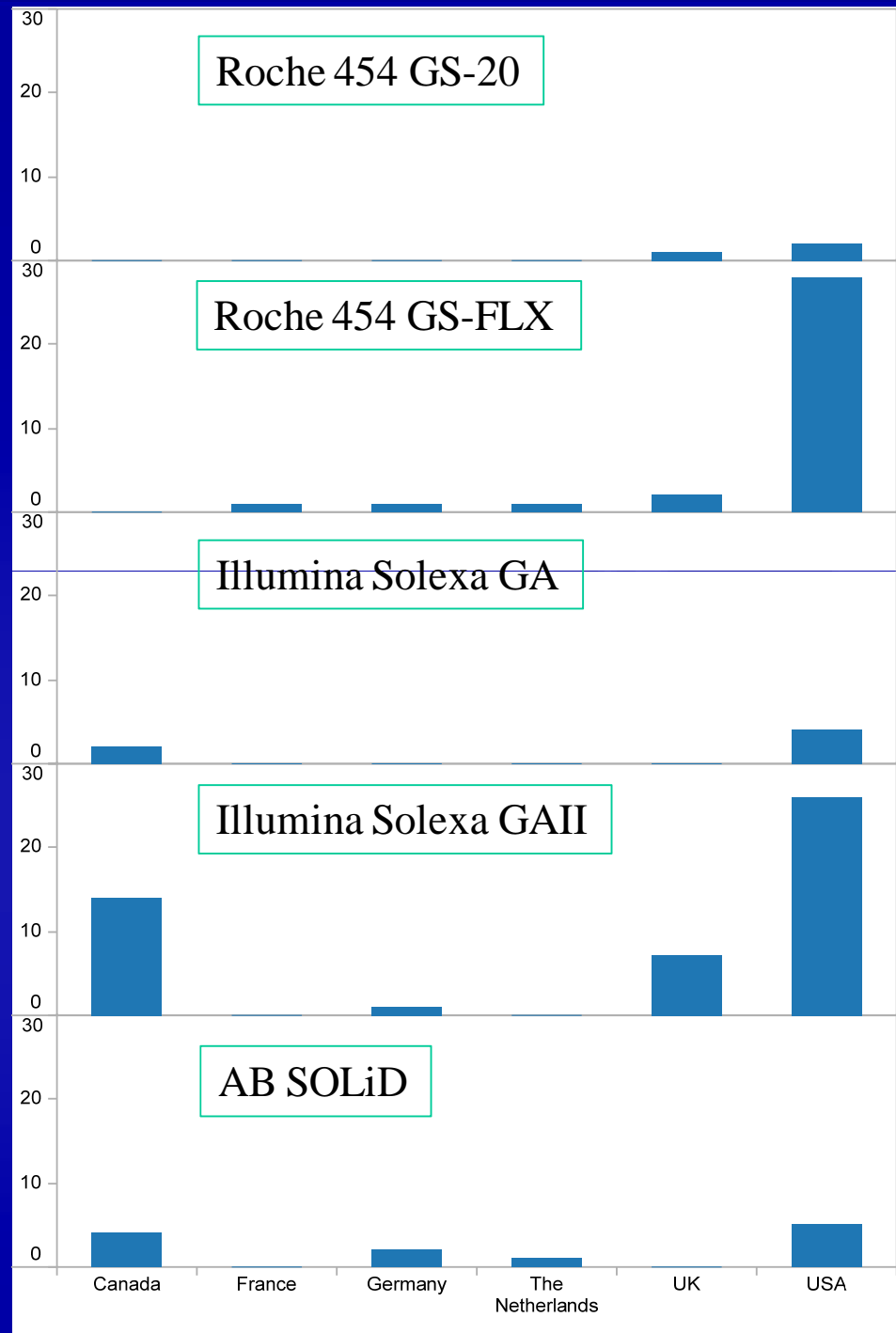


## Question: Do you currently operate a Next Generation Sequencing (NGS) platform in your laboratory?



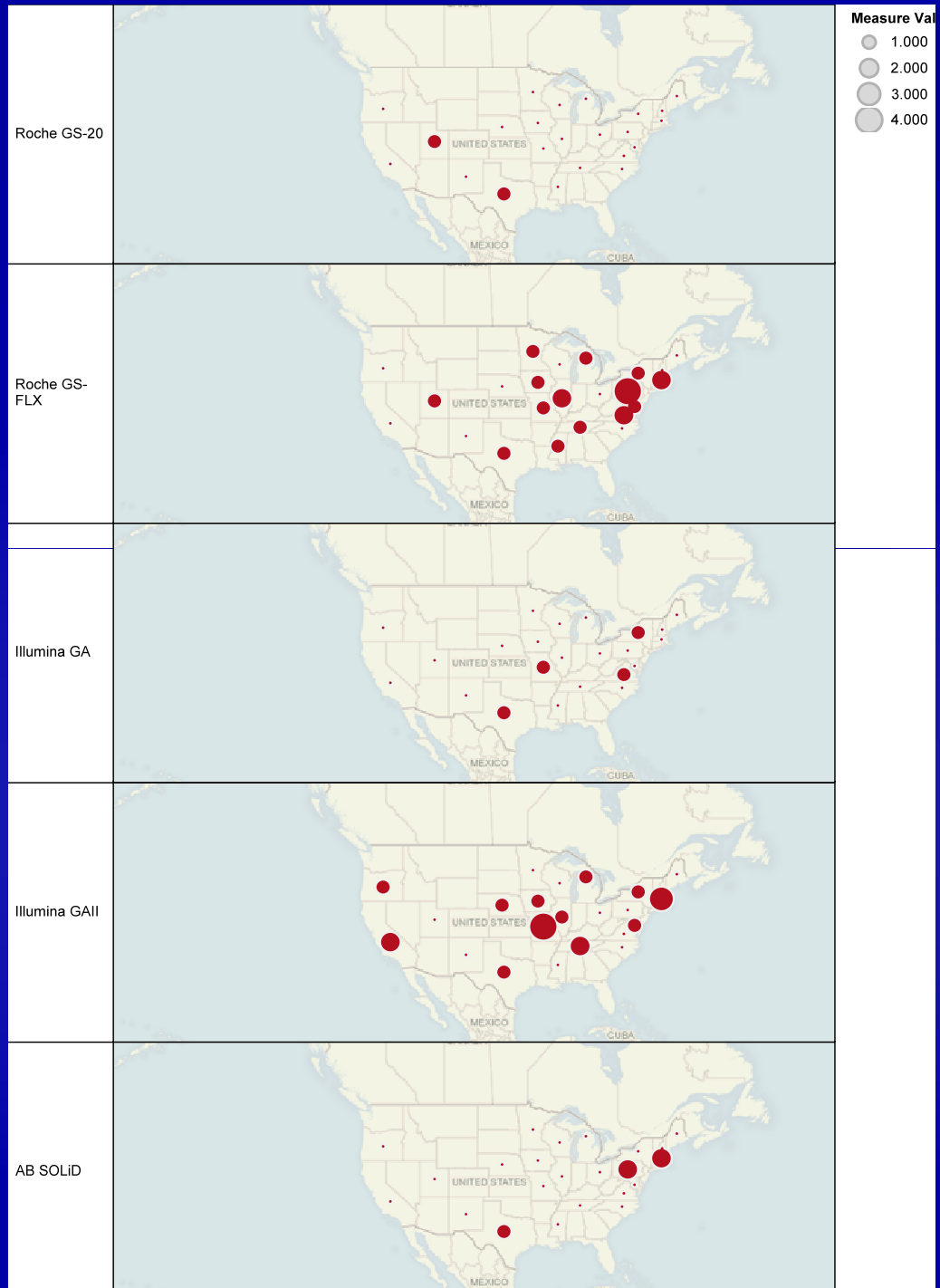
Fifty-seven percent of all respondents have 1 or more NGS instruments and 56% of all respondents expect to acquire NGS instrumentation in the next 2 years. Forty-nine percent of those already with NGS instruments are expecting to acquire additional instruments.

# Distribution of NGS Instrumentation by Country and Type of Instrument:

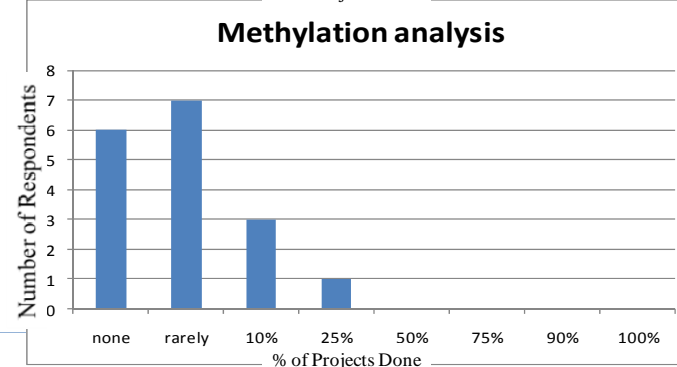
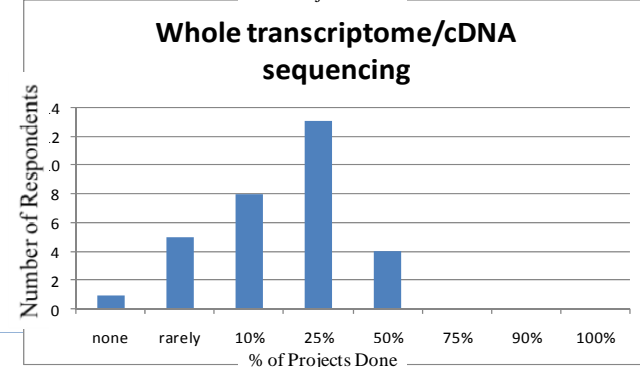
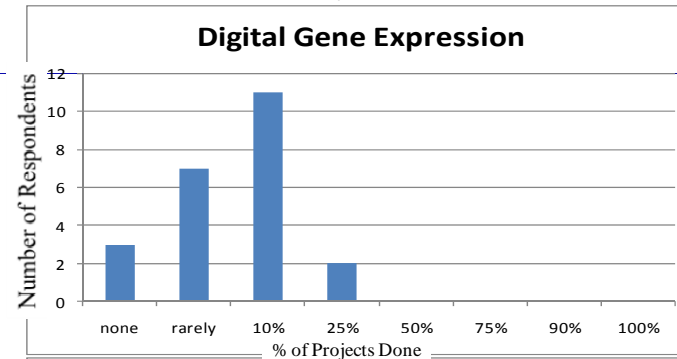
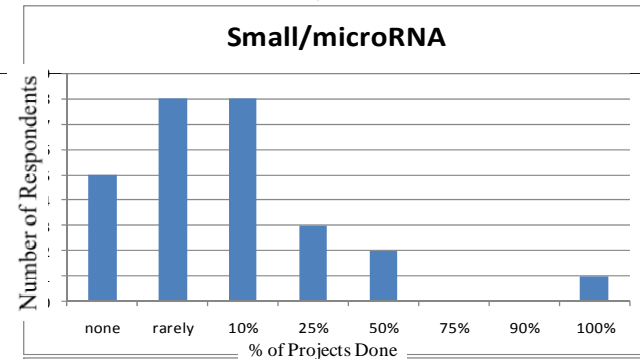
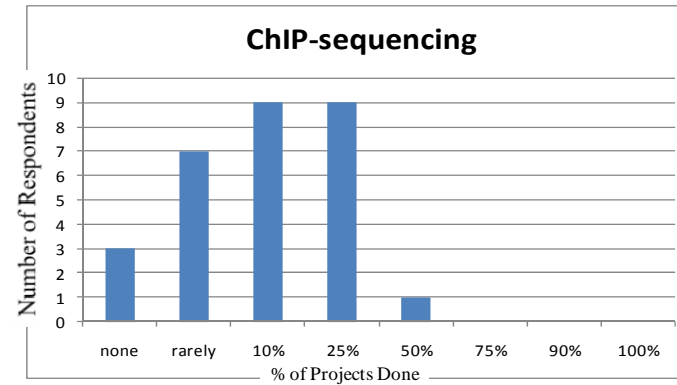
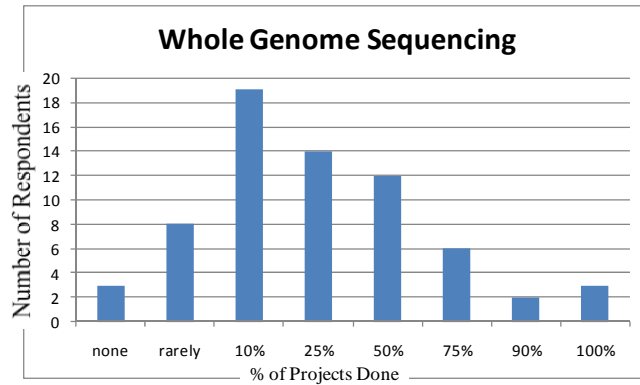


# Geographic Distribution (USA) and Number of NGS Instruments of Respondents

Genome Centers Excluded  
(and apologies to  
Canada.....take it up with  
the Tableau folks!)

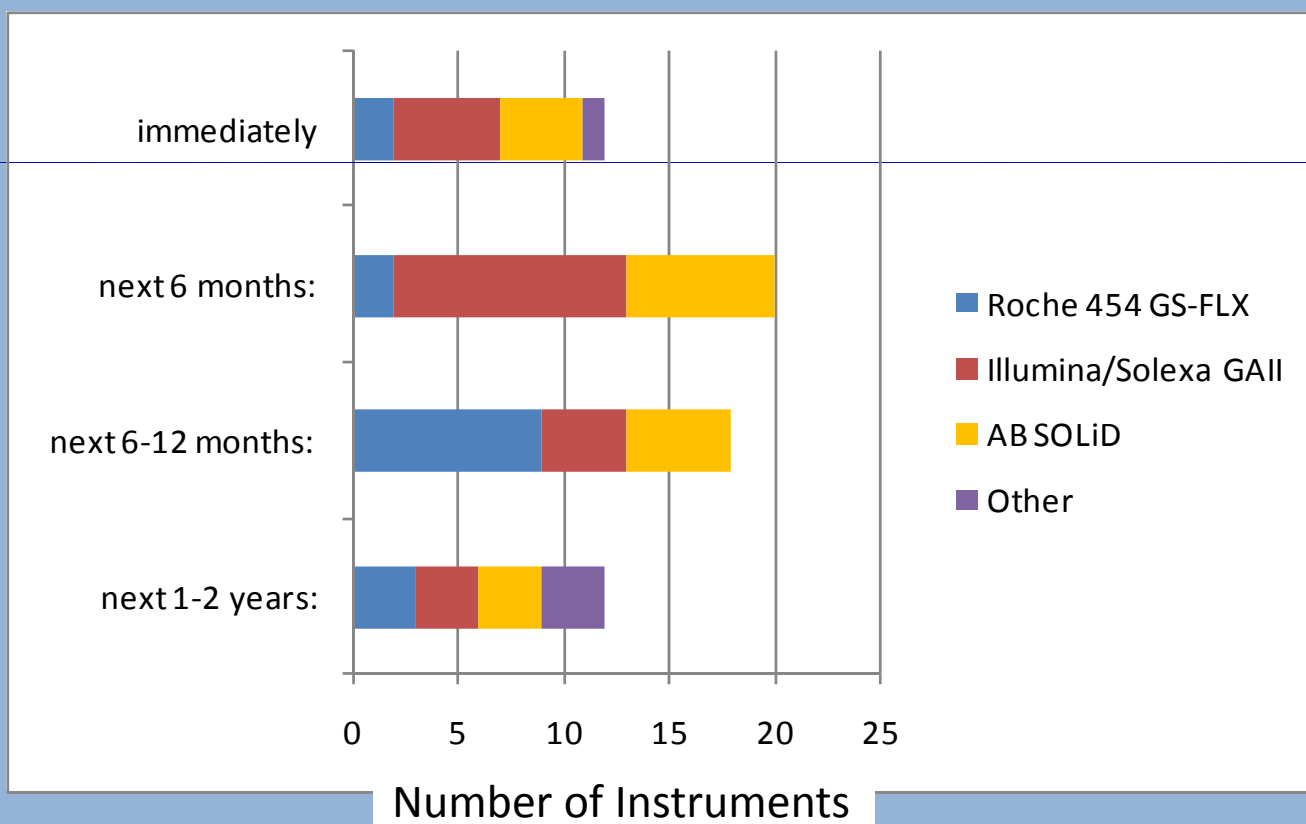


## Types of Sequencing Projects done using NGS Instrumentation (includes outsourced projects):

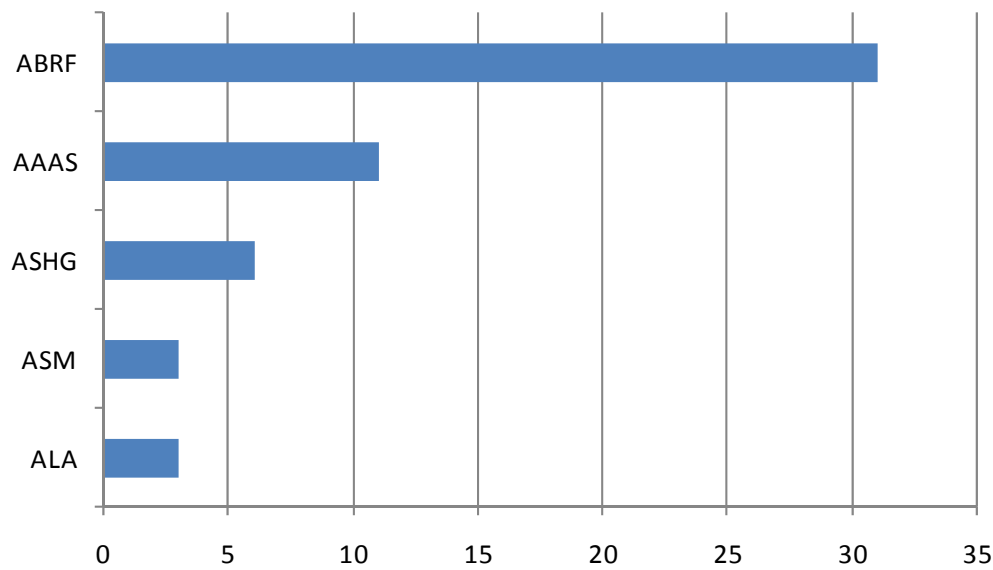
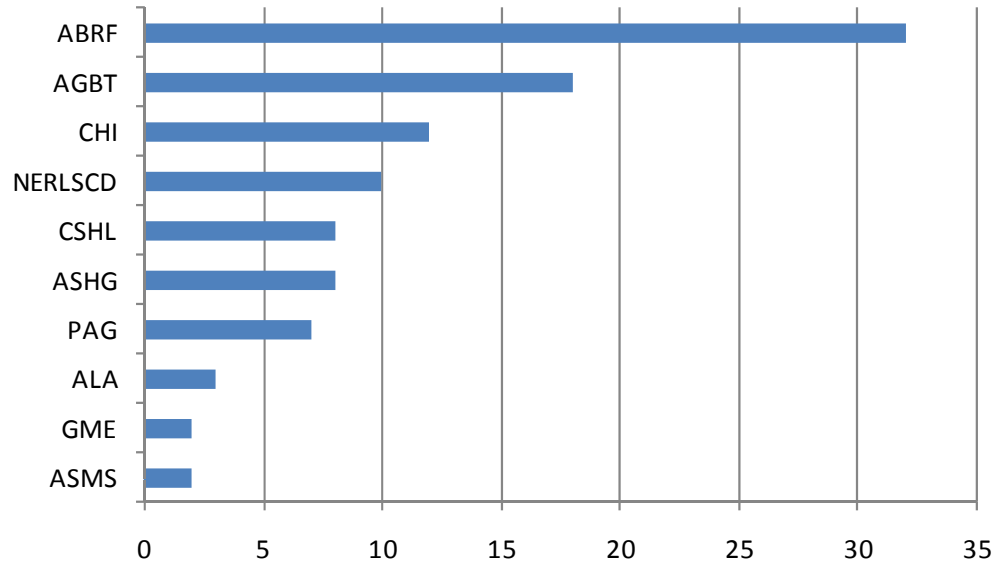


Several labs perform exclusively one type of analysis (3, whole genome sequencing; 1, small/microRNA), and the predominant projects performed are whole genome sequencing. ChIP-sequencing and transcriptome/cDNA sequencing are the next-most performed analyses. Digital gene expression and methylation are the least-performed types of analyses.

# Future Acquisitions:



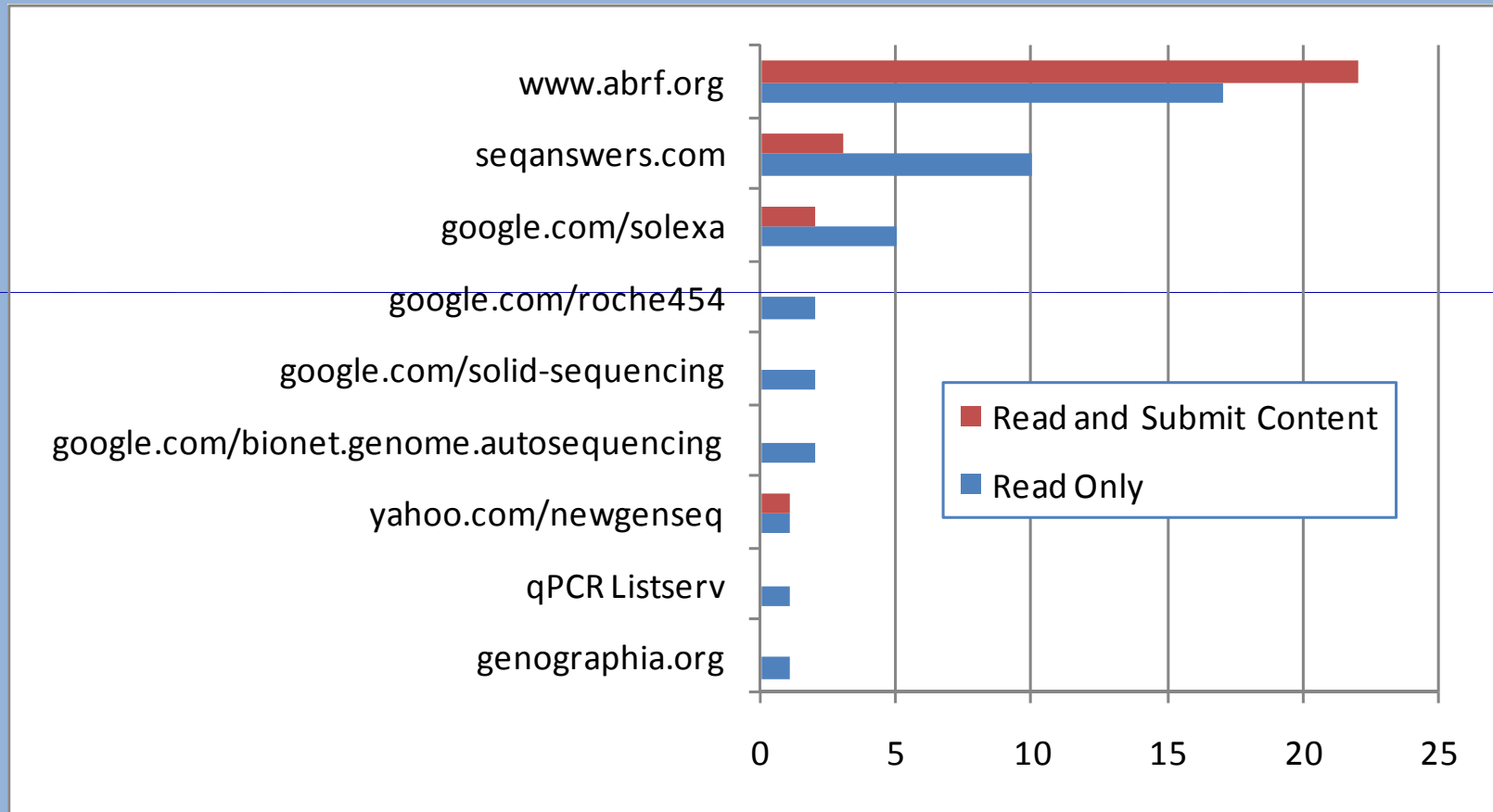
# Meetings and Professional Societies



Other meetings (one each): qPCR Symposium, Roche user symposium, American Society for Cell Biology, American Association for Advancement of Science, Meeting for Sequencing, Finishing and Analysis in the Future, American Society of Mass Spectrometry, Greater Boston Mass Spectrometry Discussion Group, Boston Area Molecular Biology Computer Types

Other Societies (one each): Analytical Laboratory Manager's Association, New York Academy of Sciences, American Chemical Society, Chemical Institute of Canada, National Academy of Sciences, American Society of Plant Biologists, American Society of Mass Spectrometry, Genetics Society of America, Greater Boston Mass Spectrometry Discussion Group, Boston Area Molecular Biology Computer Types, Federation of American Societies for Experimental Biology

# Newsgroups

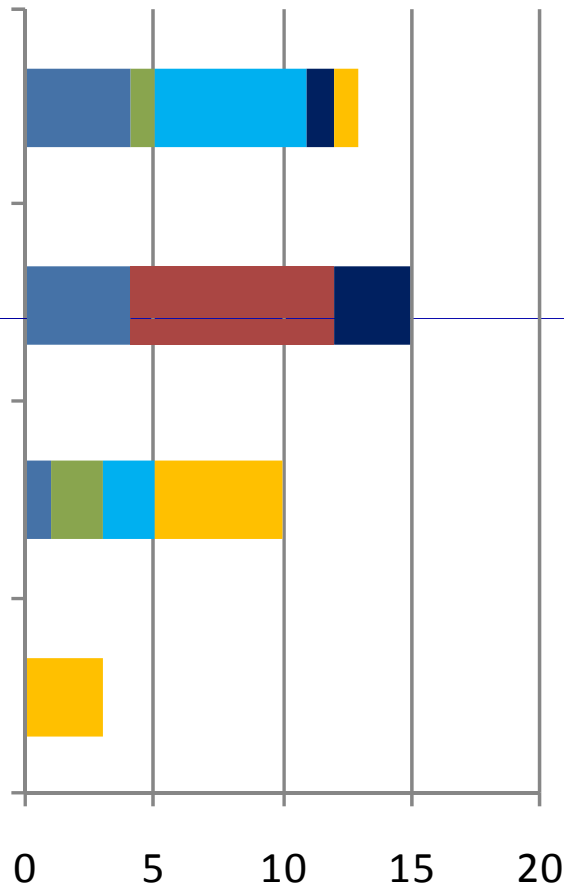


Sanger sequencing has increased somewhat

No change

Sanger sequencing has decreased somewhat

Sanger sequencing has dramatically decreased



### Is NGS the cause?

- no
- not applicable
- probably
- probably not
- unknown or no opinion
- yes

# In Conclusion:

- This will serve as the initial “snapshot” for NGS instrumentation
- We also collected information on Sanger Sequencing to update information from previous surveys in 2000, 2003, and 2006
- Additional data from this survey may be presented in the “Implementing Next Generation Sequencing Technologies” technical workshop (later today)
- The Poster and this presentation will be deposited on the DSRG page of the ABRF website
- Full summary will be submitted to JBT