

“Real time PCR in a Core Facility: Helping others to help themselves”

Deborah S. Grove in place of
Pamela Scott Adams

Nucleic Acid Research Group (NARG)

- **To facilitate the use of nucleic acid-based technologies in research**
- **To examine current trends of nucleic acid-based technologies**
- **To assist member laboratories in self-evaluation and growth**
- **To promote, encourage, and reward excellence in member laboratories**

NARG Functions

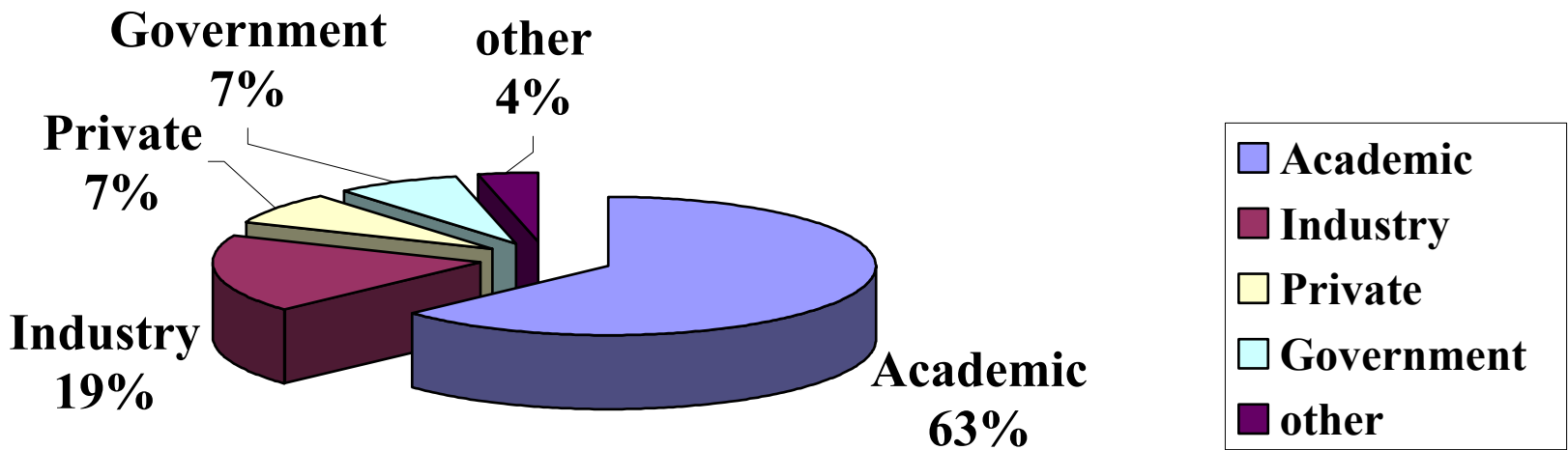
- **Round Table Discussions: ABRF 2002 Discussion on service related and technical issues concerning real time PCR**
- **2003 Project: Study on Synthesis of dual-labeled TaqMan probes by DNA Synthesis labs (published in Feb. issue of Biotechniques).**
- **2004 Project: Design a set of TaqMan Primers and probe for a comon gene.**
- **2004 Survey: Current status of real-time PCR technology in laboratories around the world, especially Core laboratories.**

Current NARG Membership

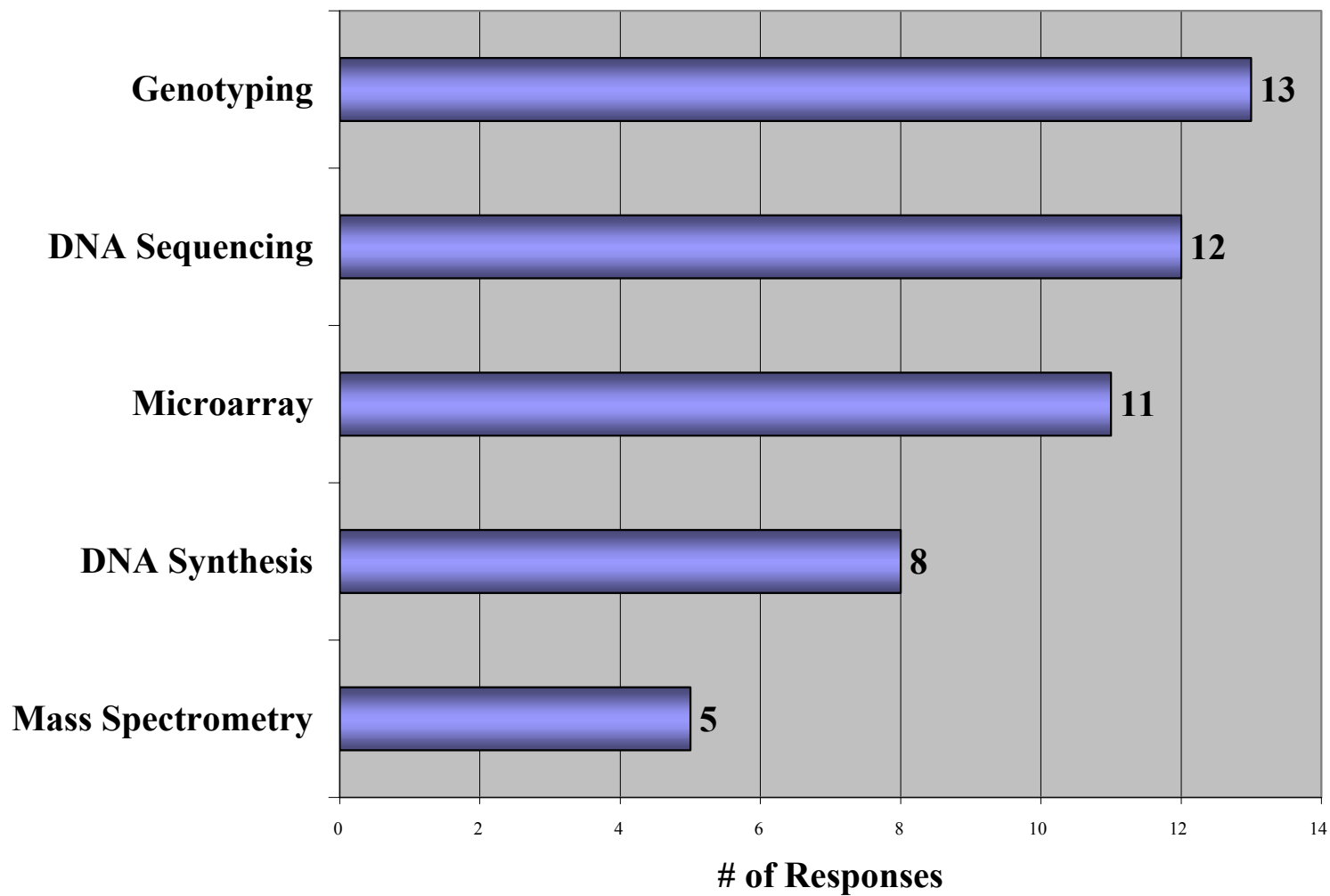
- **Pamela Scott Adams (Chair) - Trudeau Institute, NY**
- **Yongde Bao - Univ of Virginia Sch of Med**
- **Deborah S. Grove - Pennsylvania State Univ.**
- **Brian Holloway - CDC, Atlanta**
- **Steven Scaringe - Dharmacon Research, Inc.**
- **Dr Gregory L. Shipley - UT Health Science Center - Houston**
- **Dr. Anthony T Yeung - Fox Chase Cancer Ctr**
- **Dr Susan H Hardin (Ad hoc) (EB liaison) - University of Houston**

- What does the researcher need?
- What can you afford to do?
- What do you want to do?

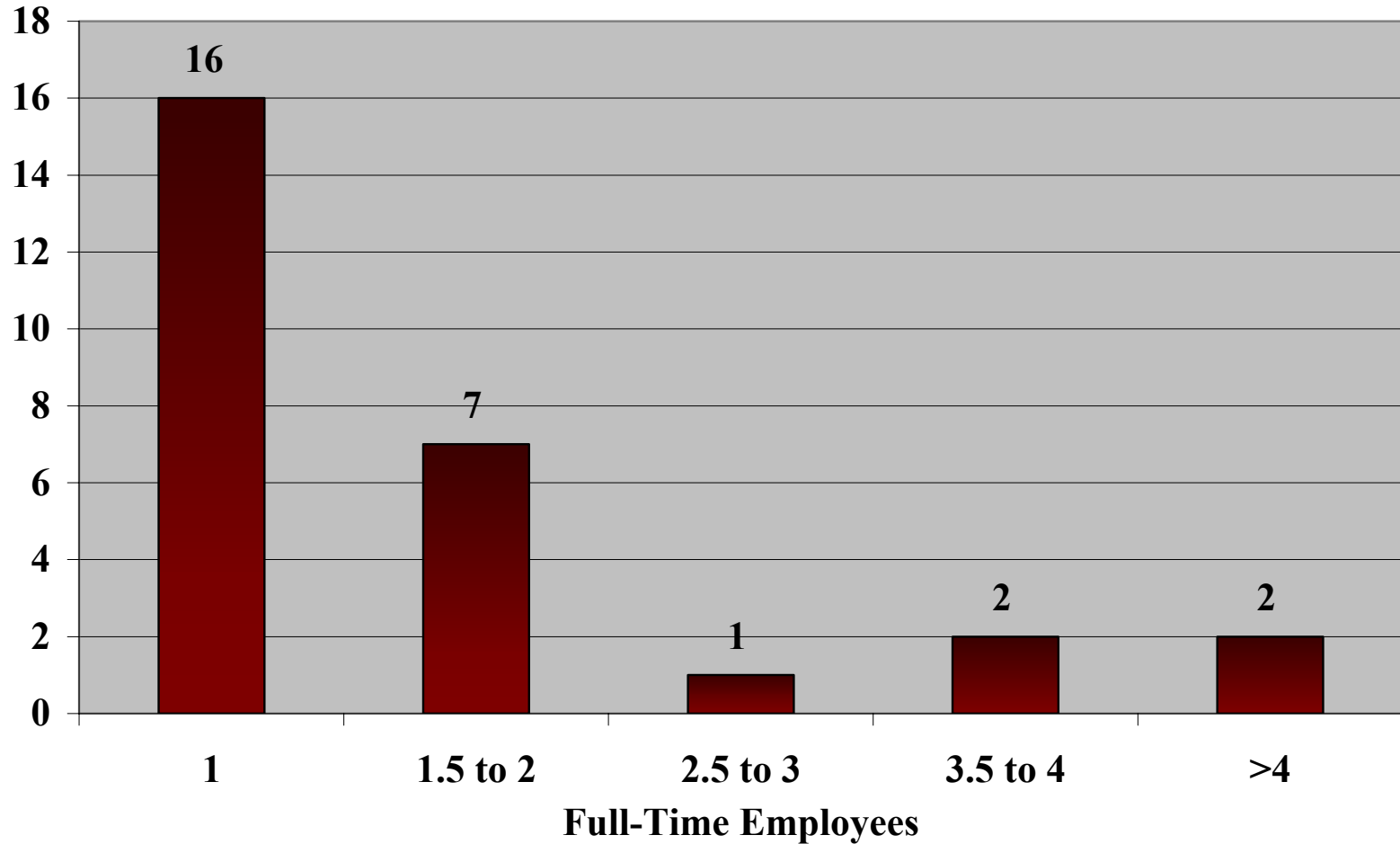
What type of Core Facility?



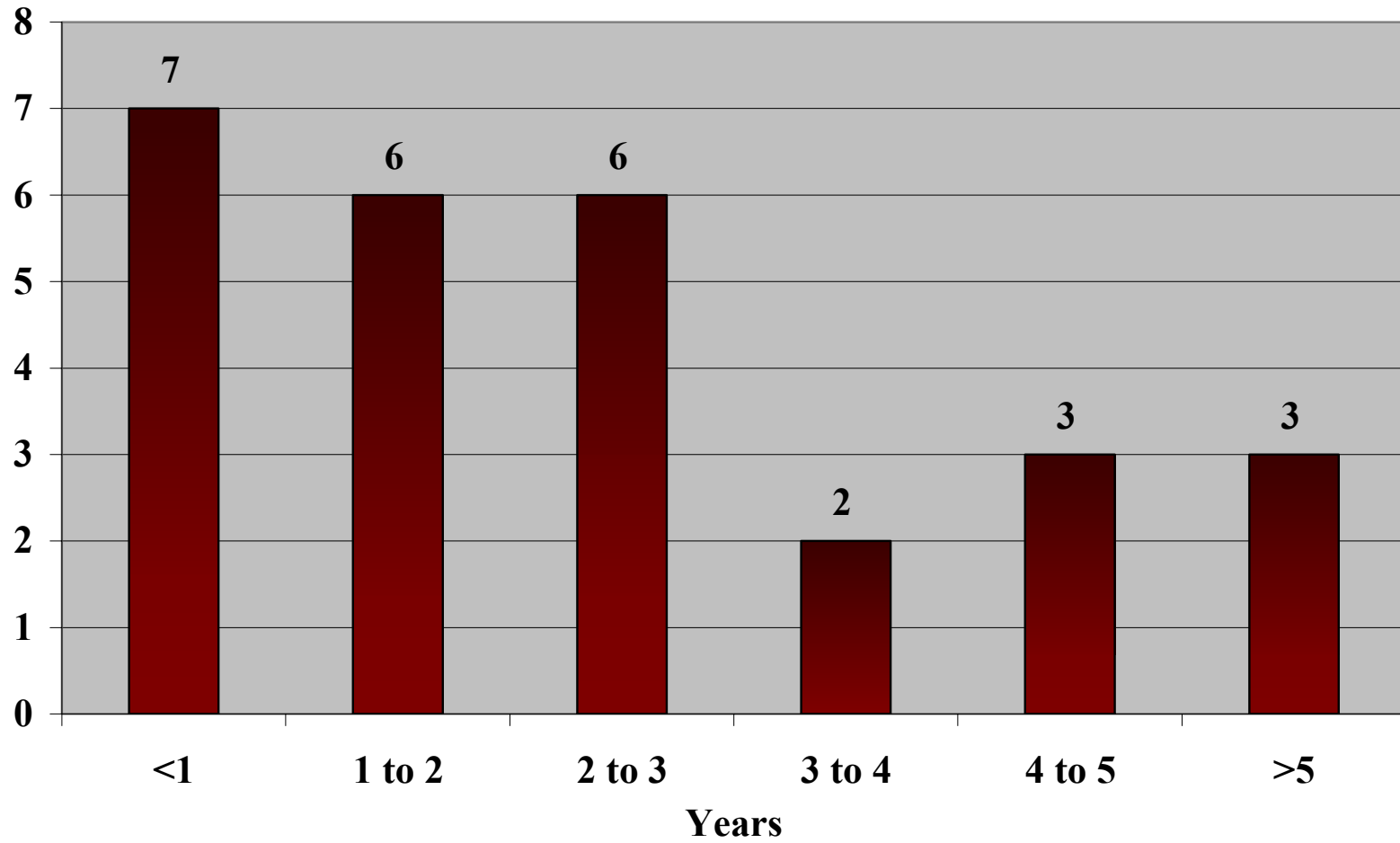
Other Core Services



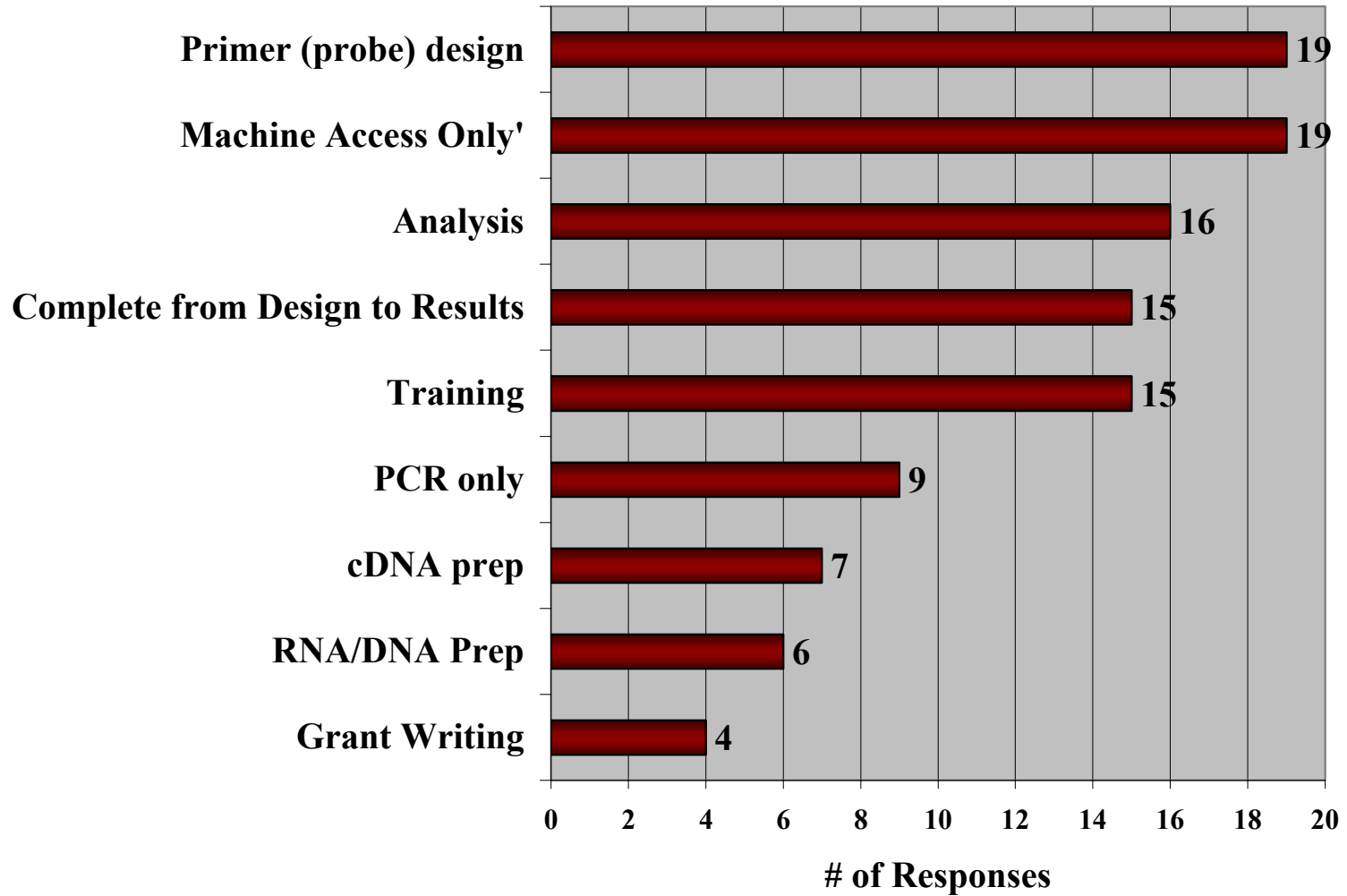
How many FTE perform QRT-PCR?



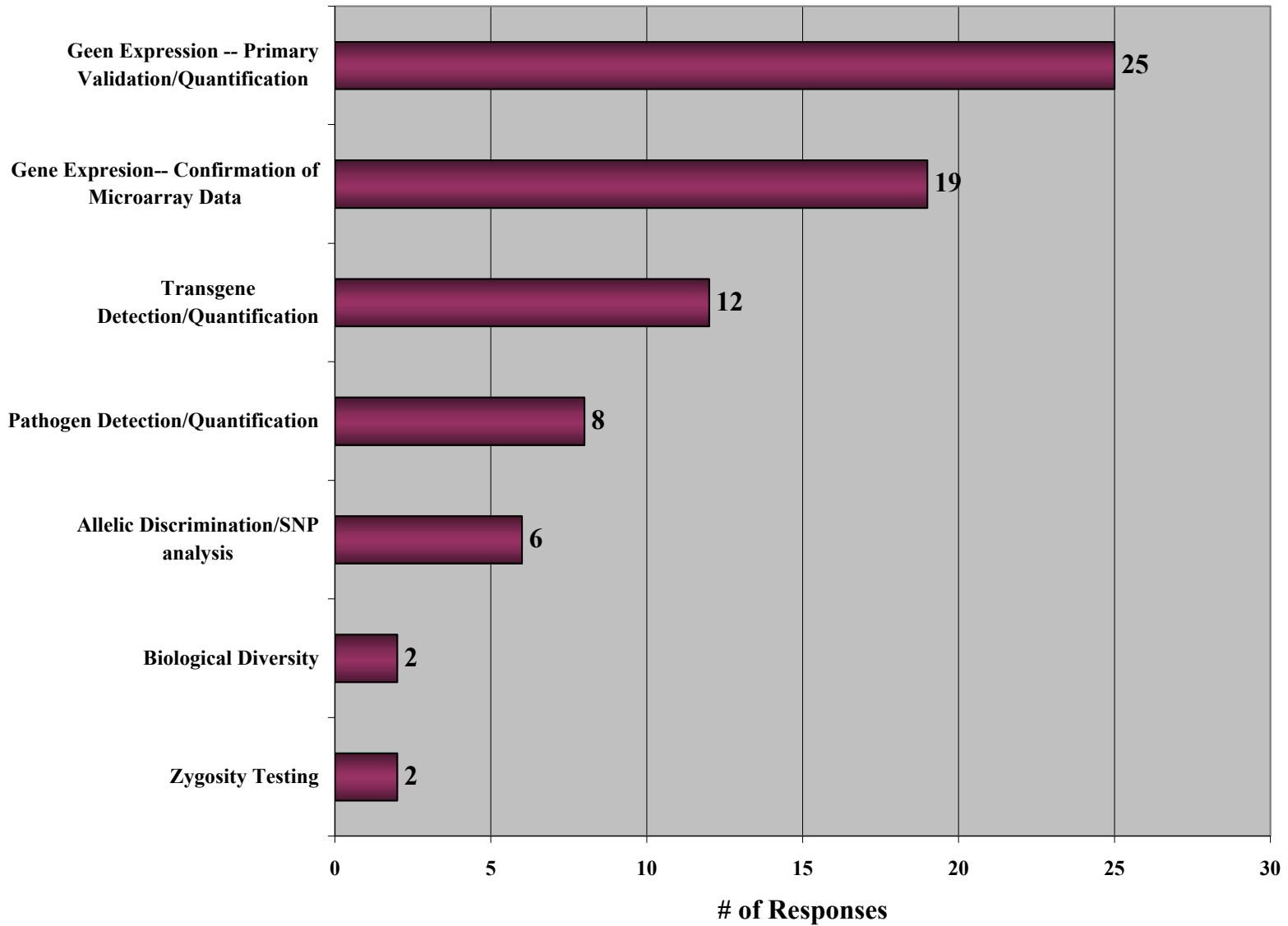
How many years of experience?



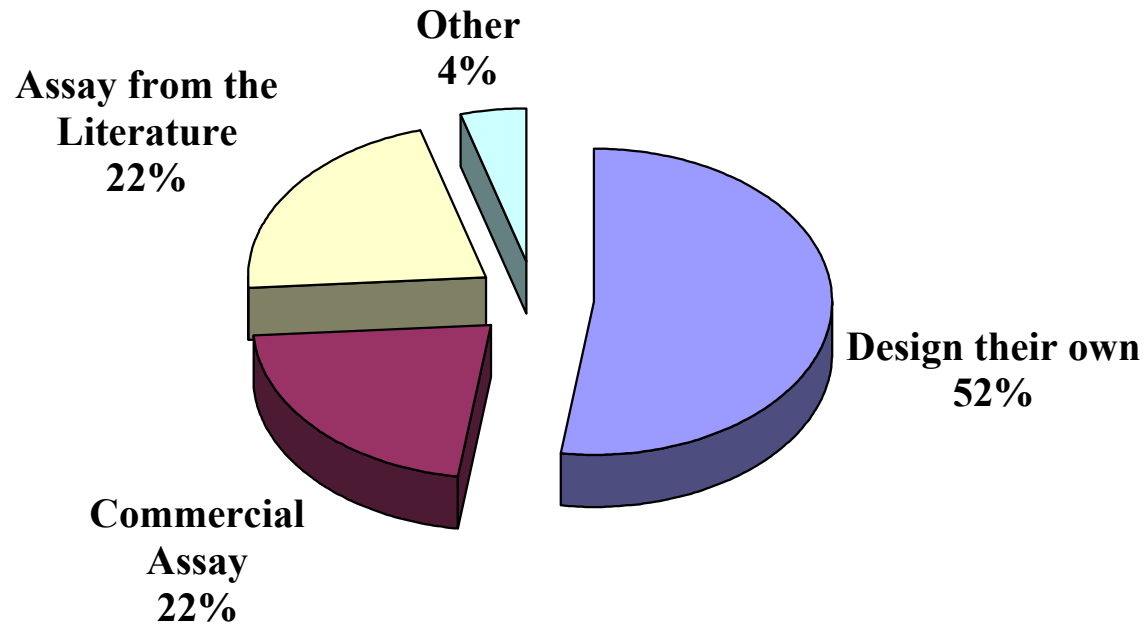
Level of Service



Types of Applications

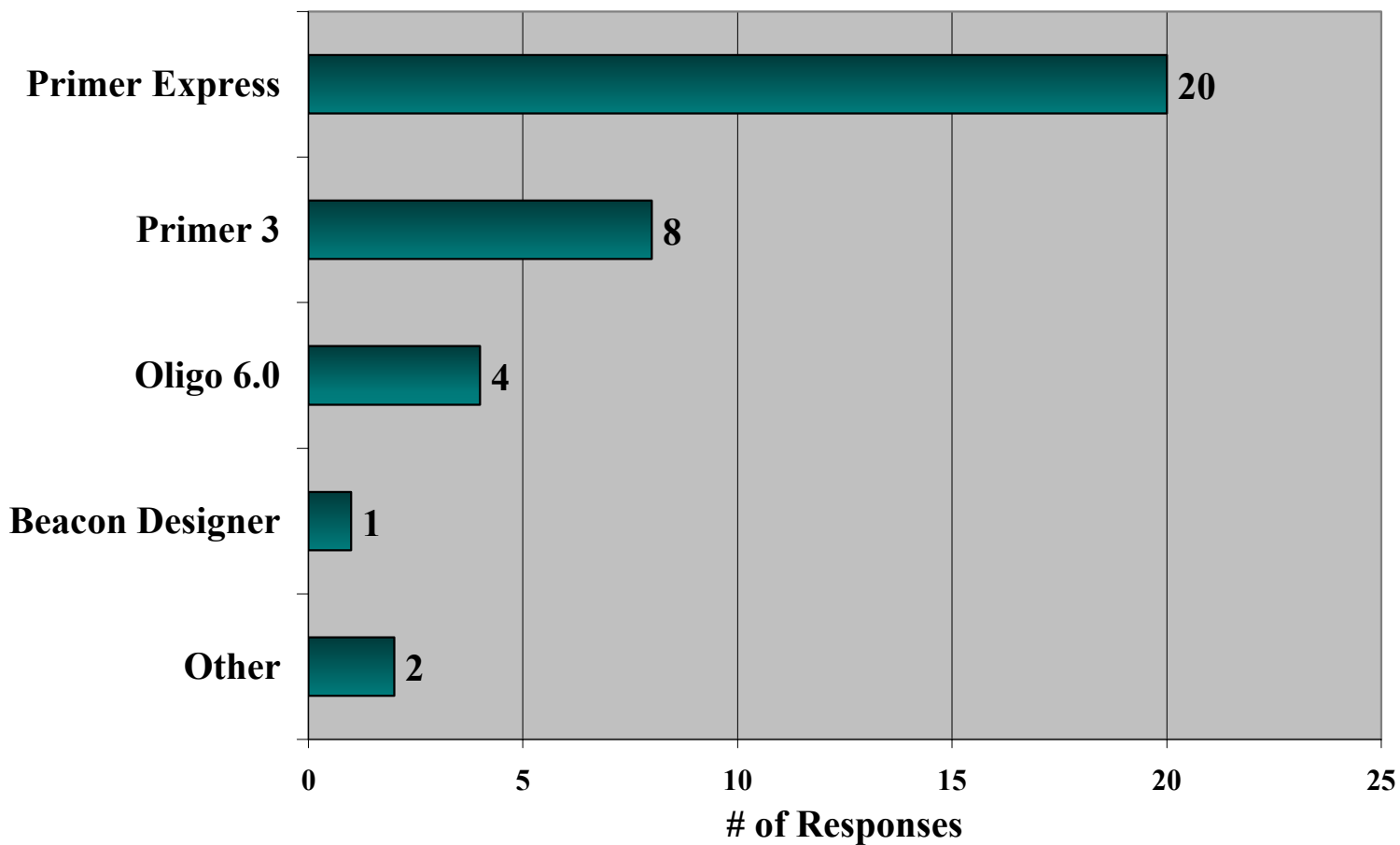


What method(s) are used to develop an assay?

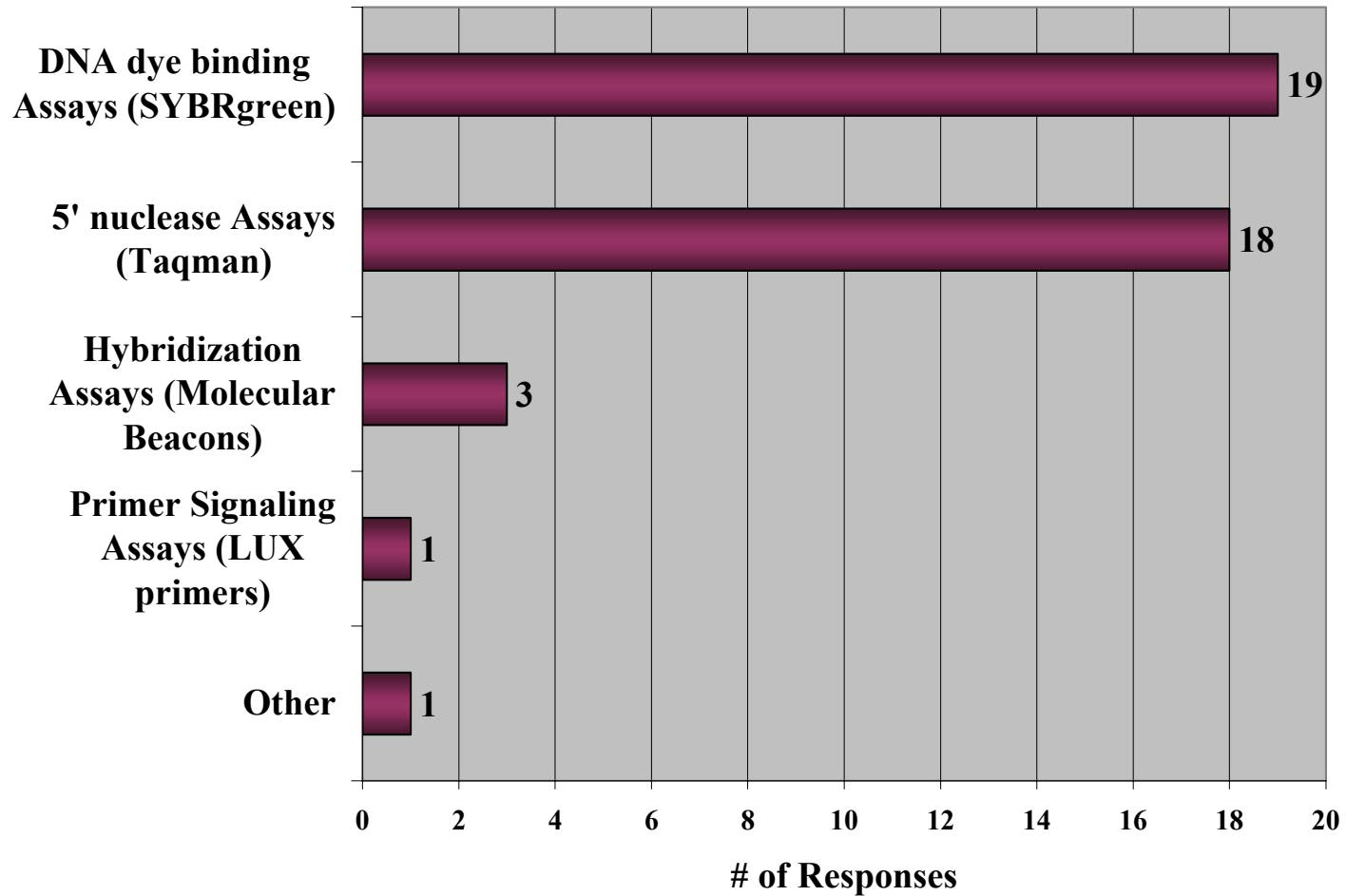


50% of those who design their own assays never use other assays.

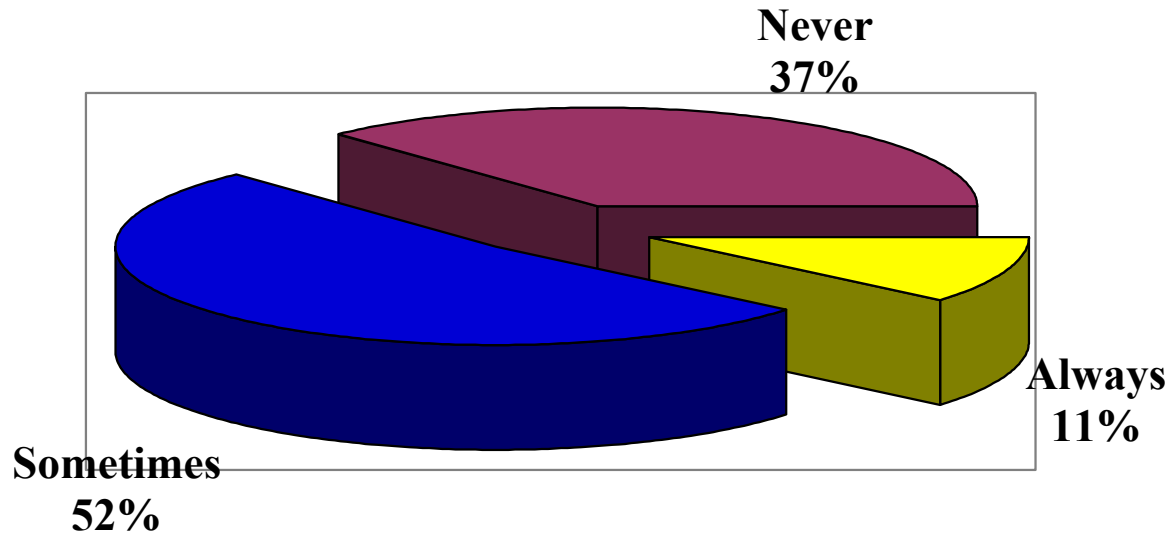
What method was used to design primer/probe set?



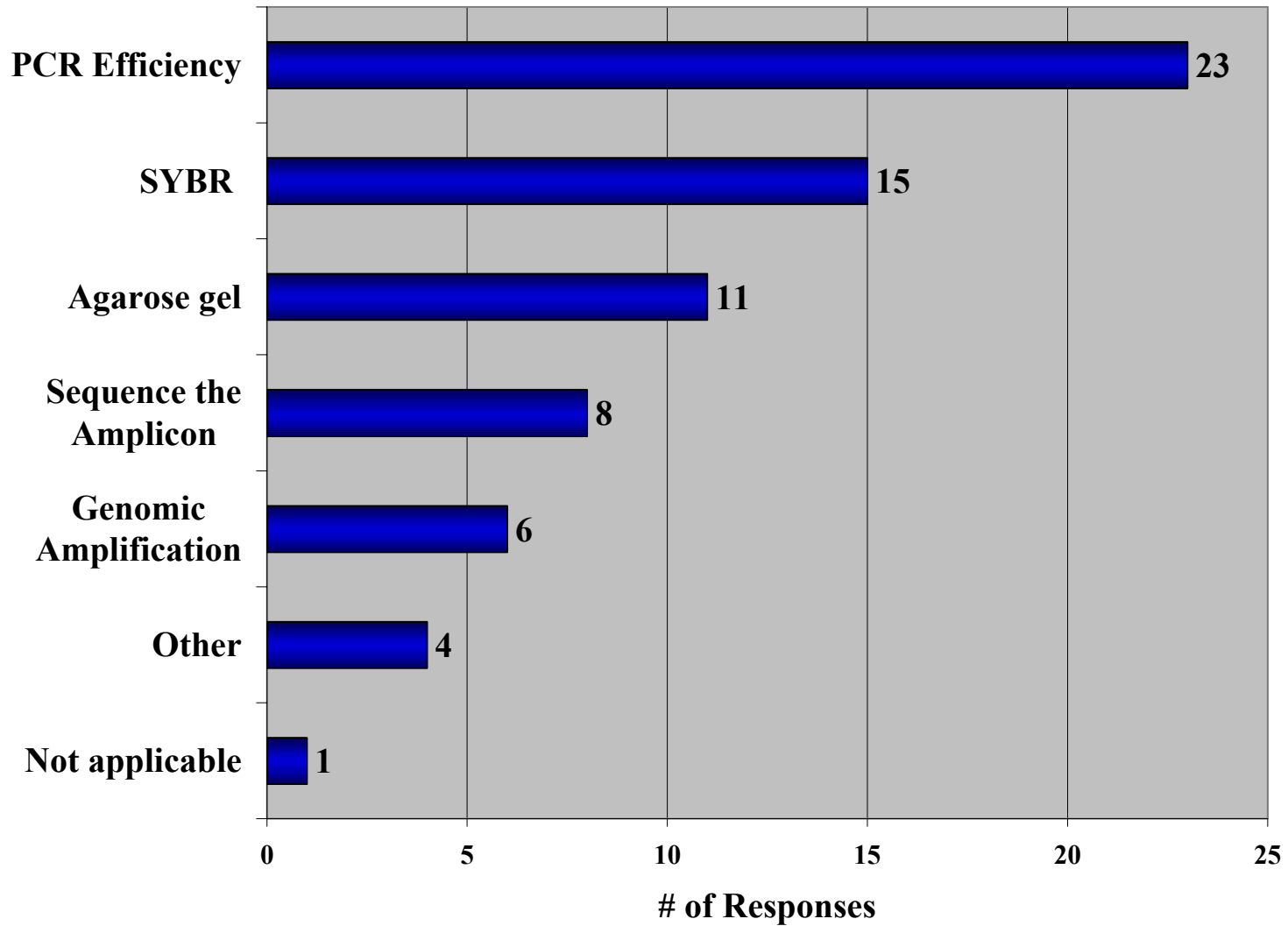
Types of Assays



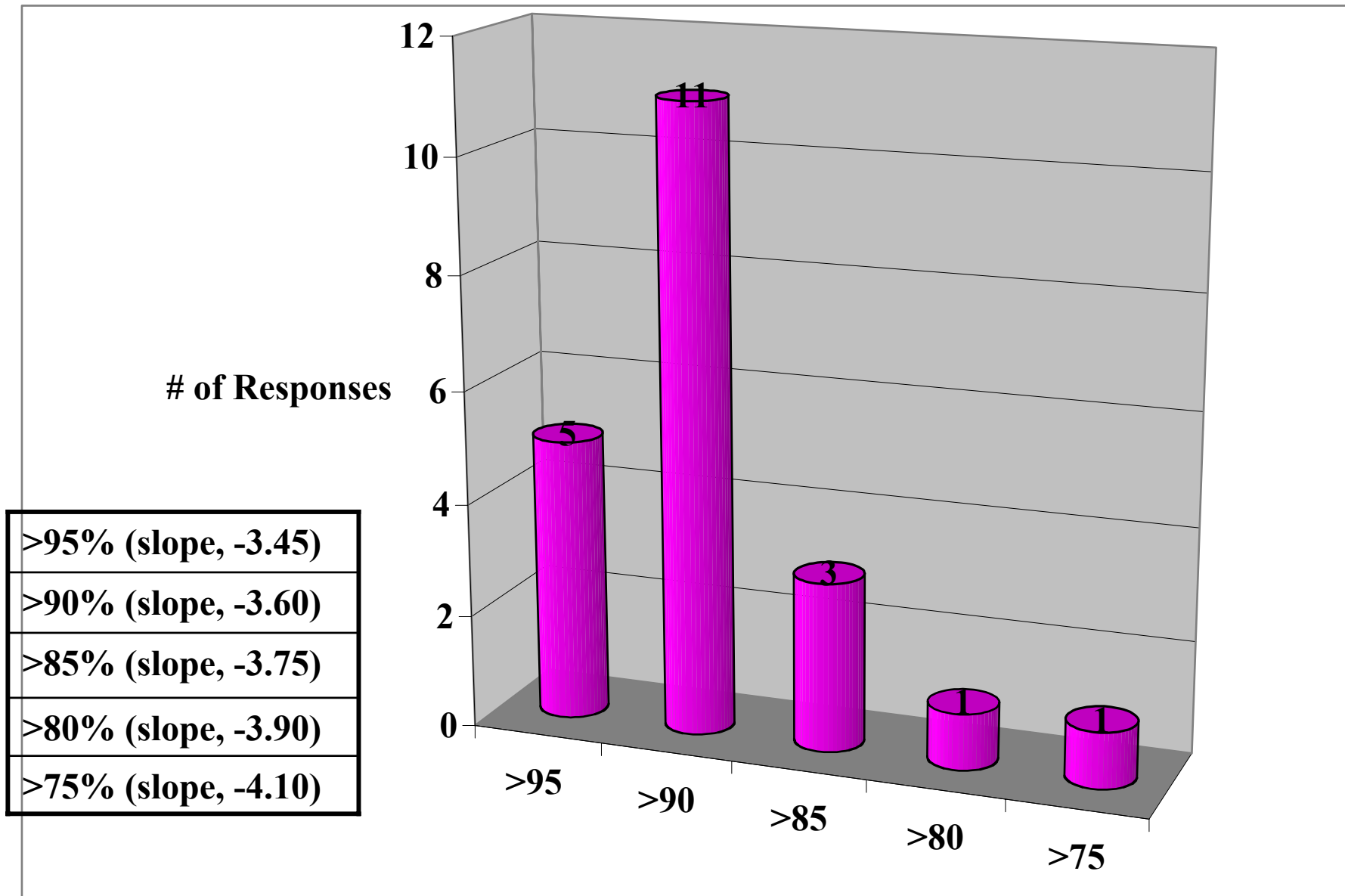
Do you Multiplex?



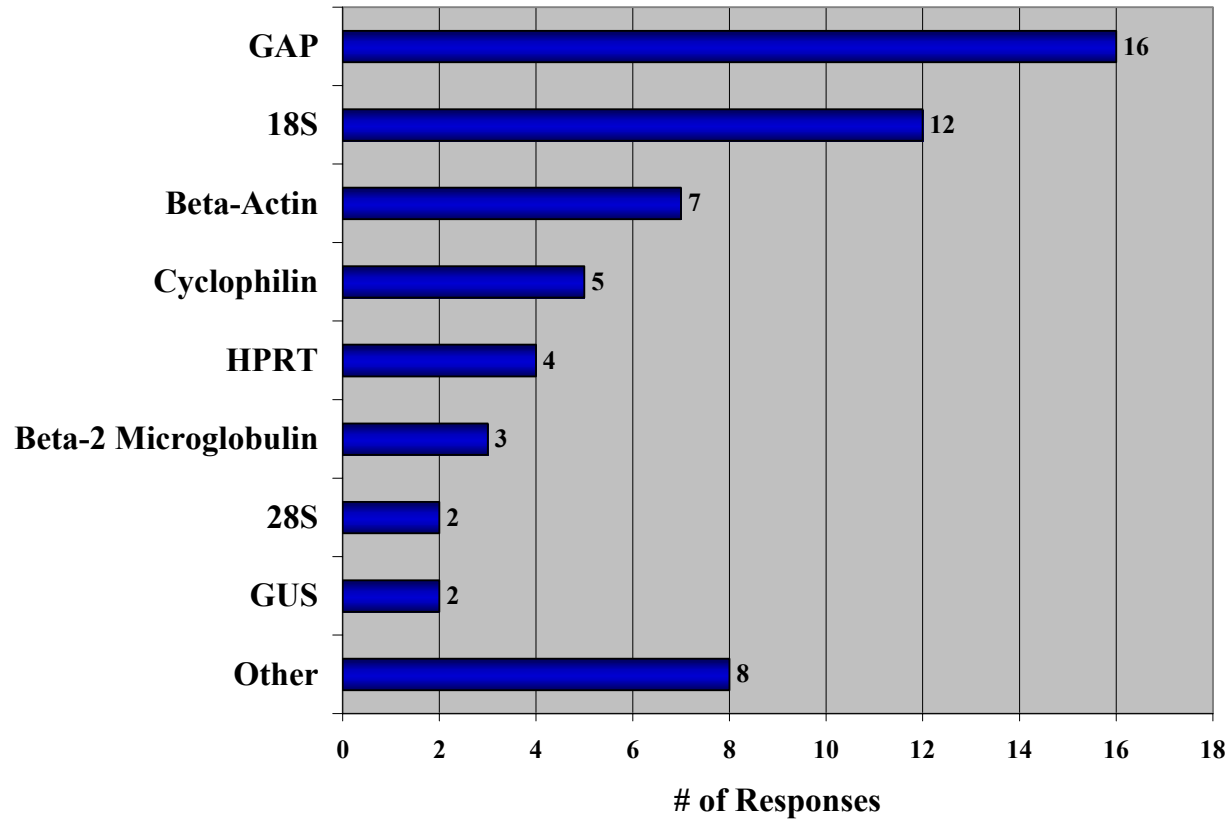
Validation of Assay



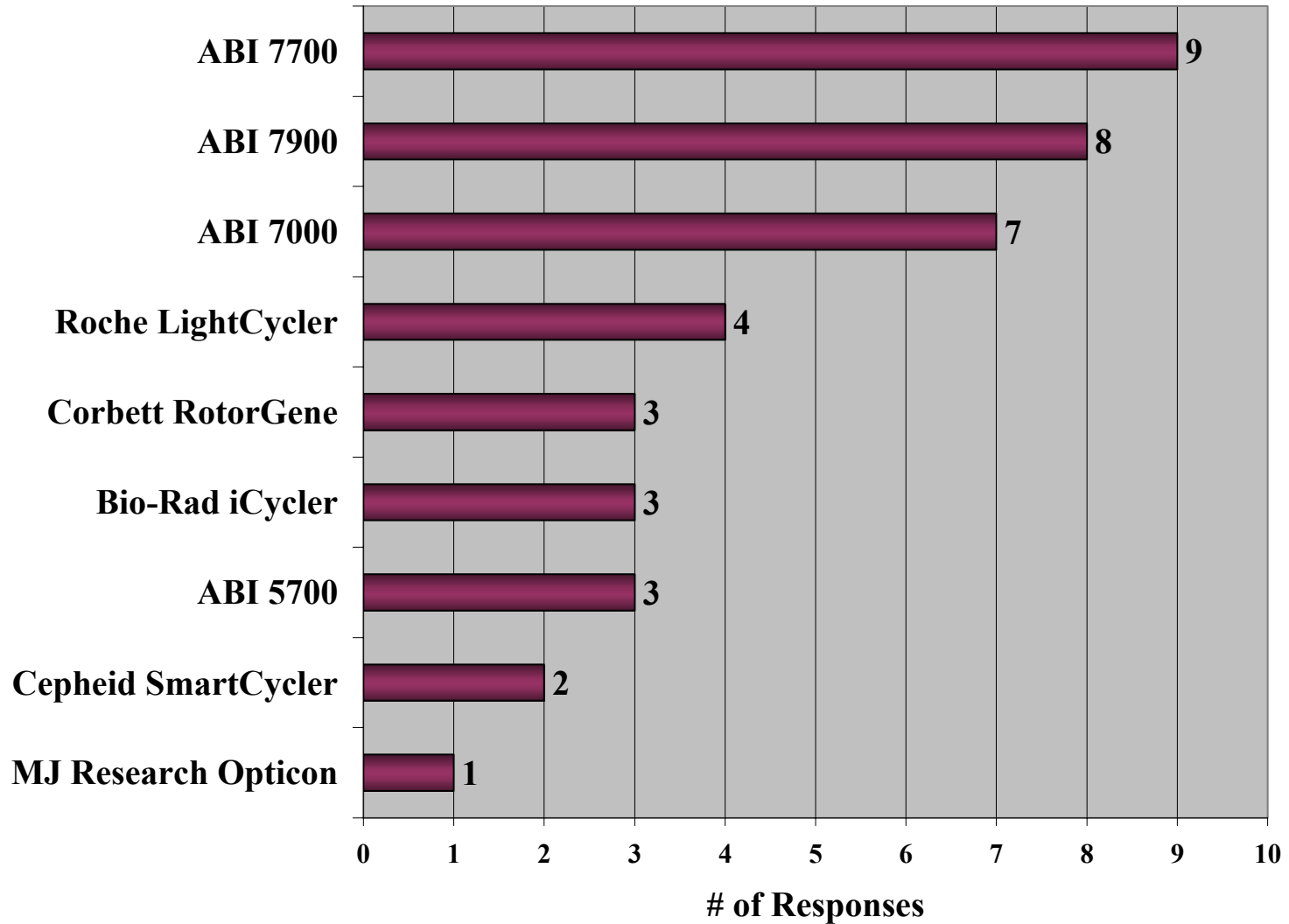
Efficiency Acceptance



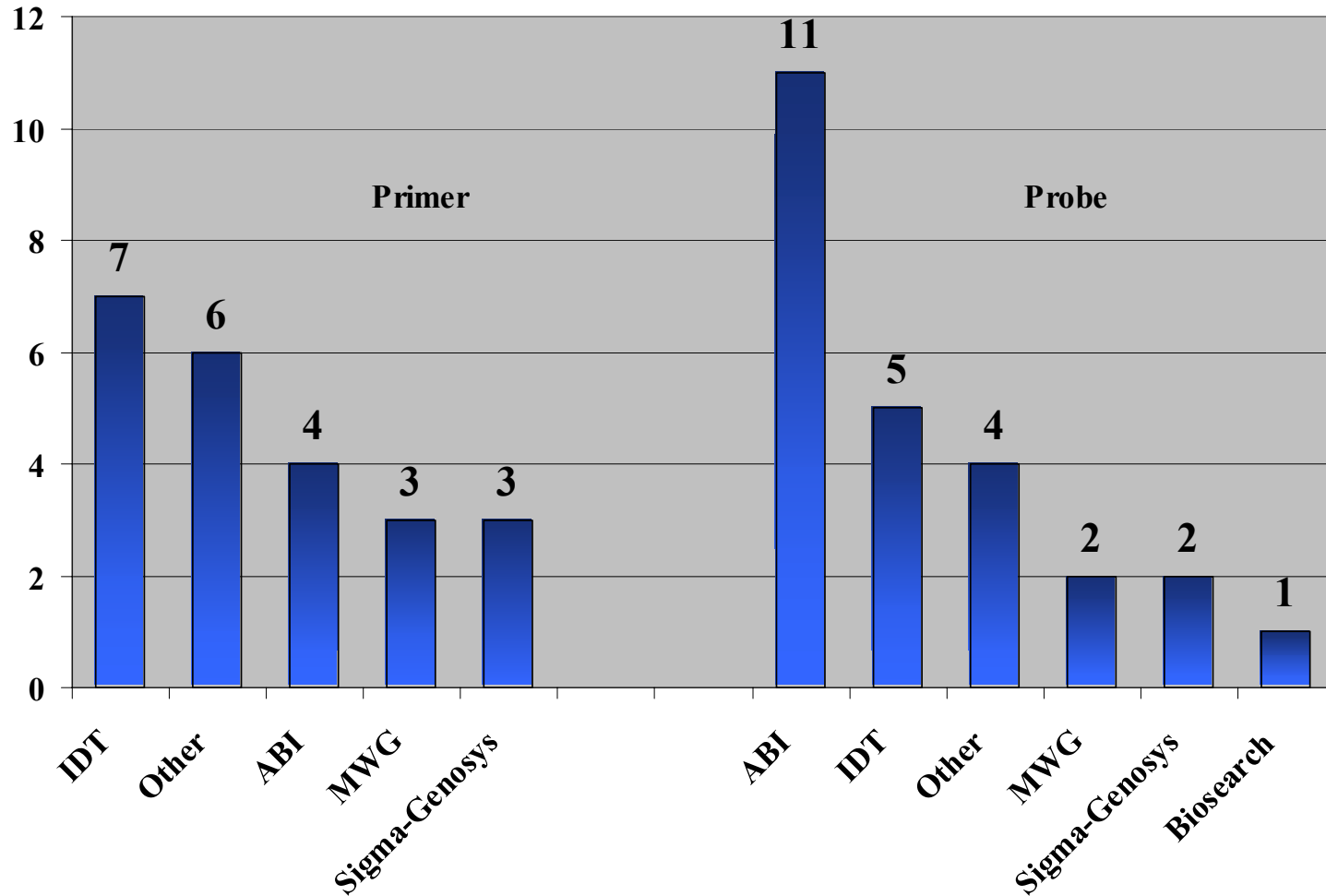
Housekeeping Genes

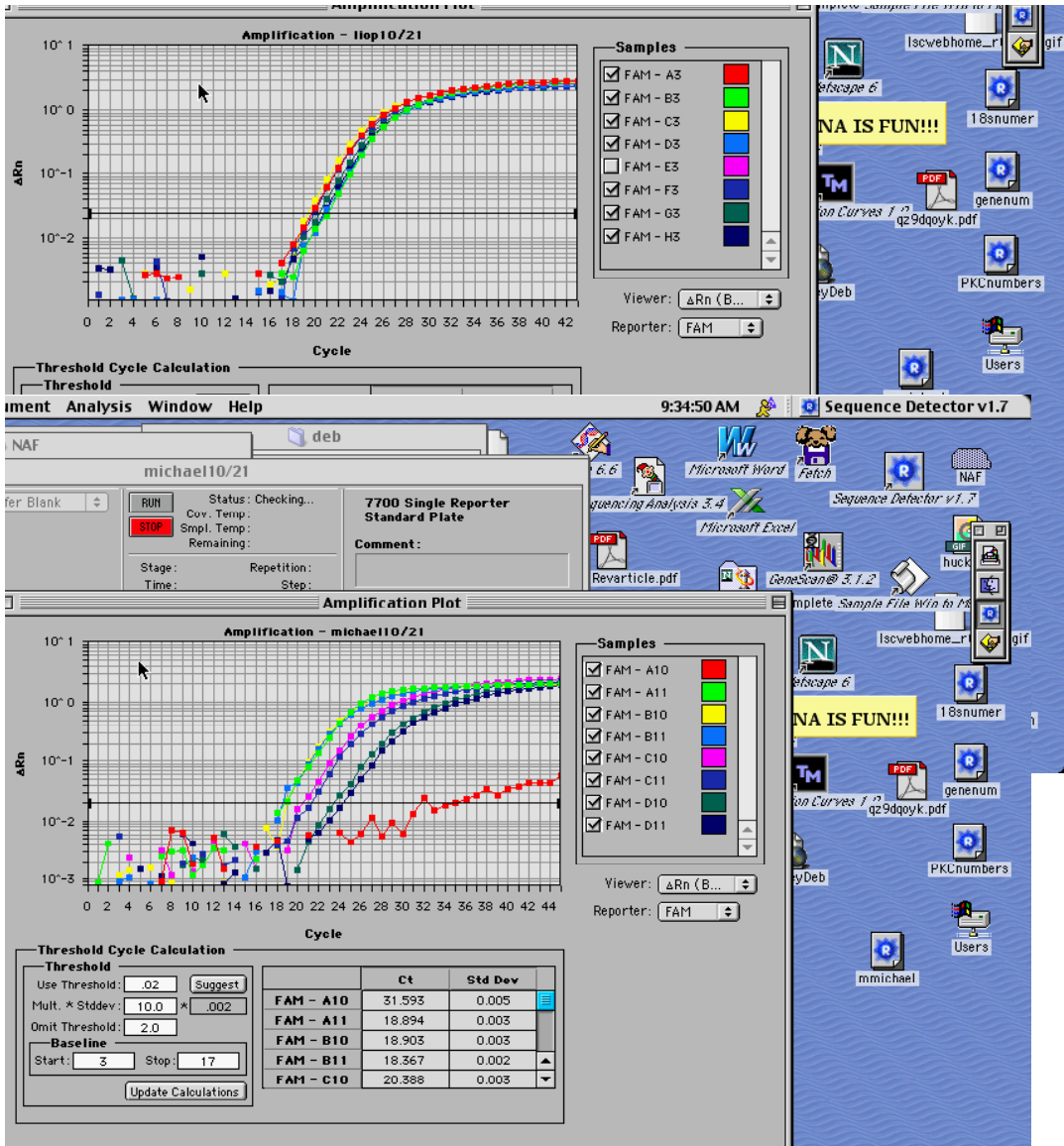


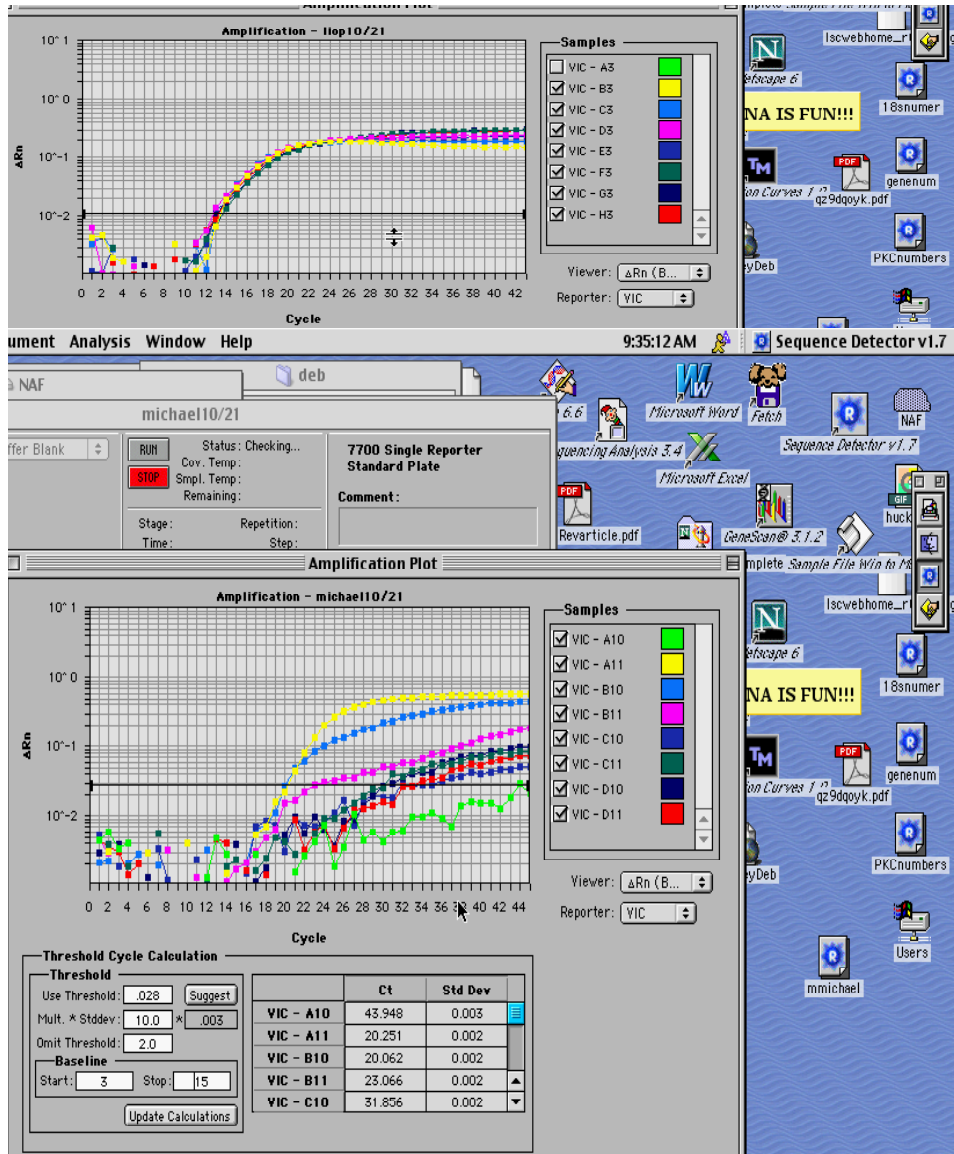
Instrumentation

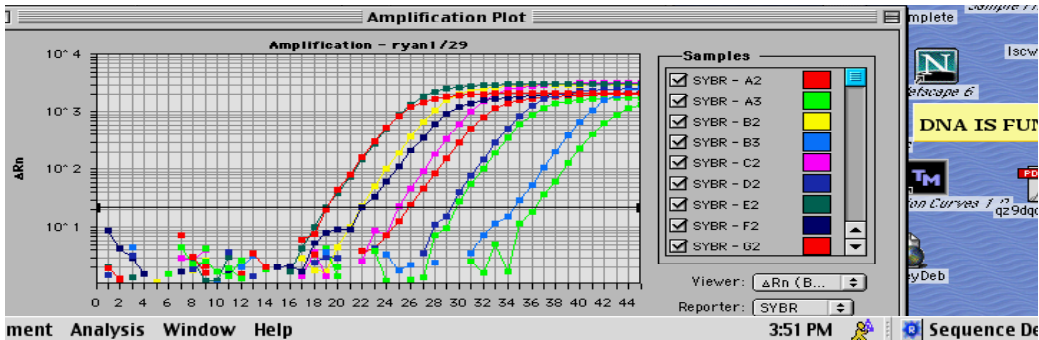


Source of Primers and Probes







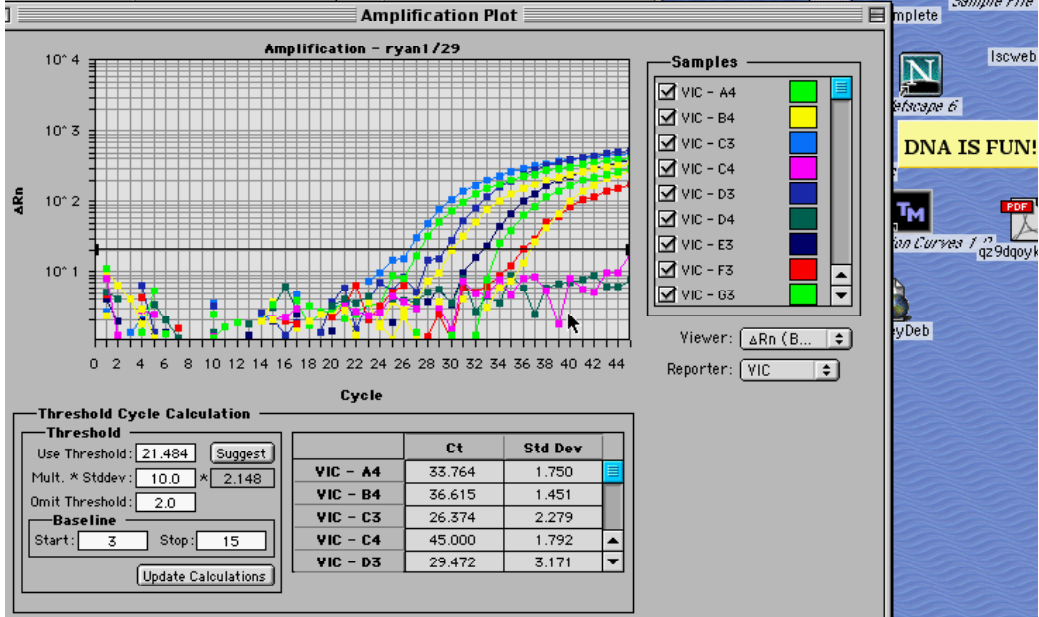


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RUN	Status: Checking...	7700 Single Reporter Standard Plate
STOP	Cov. Temp:	
	Smpl. Temp:	
	Remaining:	Comment:
Stage:	Repetition:	
Time:	Step:	



Pricing

- 1) Service Contract**
- 2) Labor**
- 3) Reagents**
- 4) Disposables**
- 5) Service on other equipment -- laminar flow hood, speed-vac, thermal cyclers, UPS batteries, printers etc.**
- 6) Replacement and/or new equipment**

Flat machine access fee

Price per replicate

Starting from DNA? RNA?

Some Good Practices from John Hawes

- 1) Offer advice on design and Preparation.**
- 2) Training services -- Mandatory?**
- 3) Make a sign-up sheet -- Enforce it!**
- 4) Meet with users and discuss experiences**

**In the end -- You can give them advice
but you can't make them take it.**