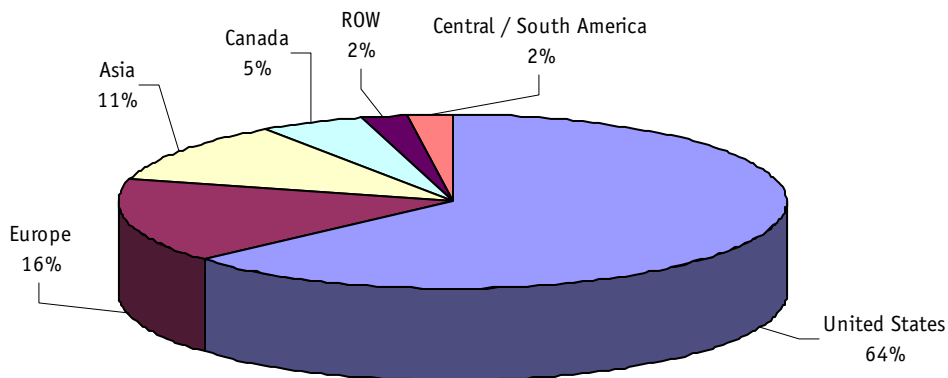


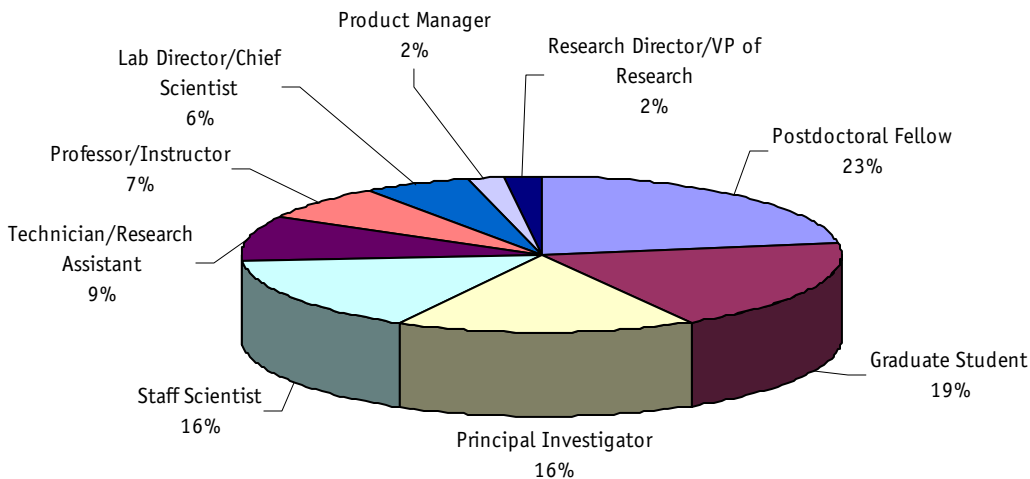
siRNA: On the Forefront of Discovery

Demographics and Questions

siRNA Survey Demographics



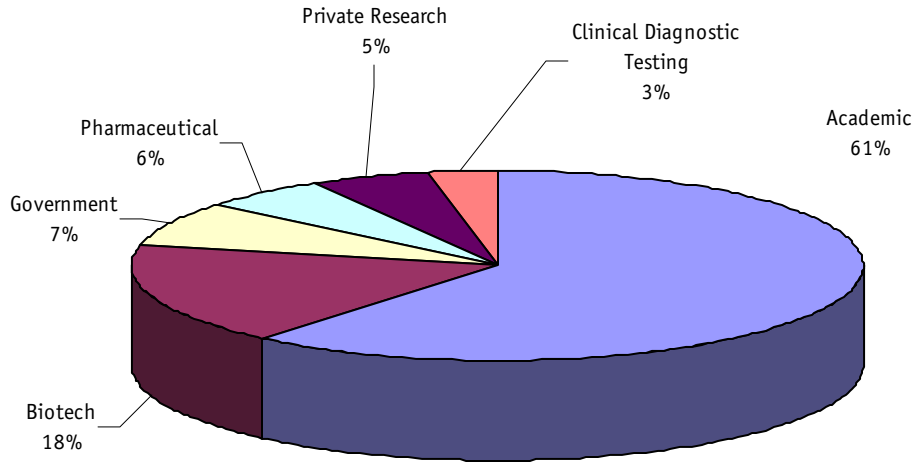
Title



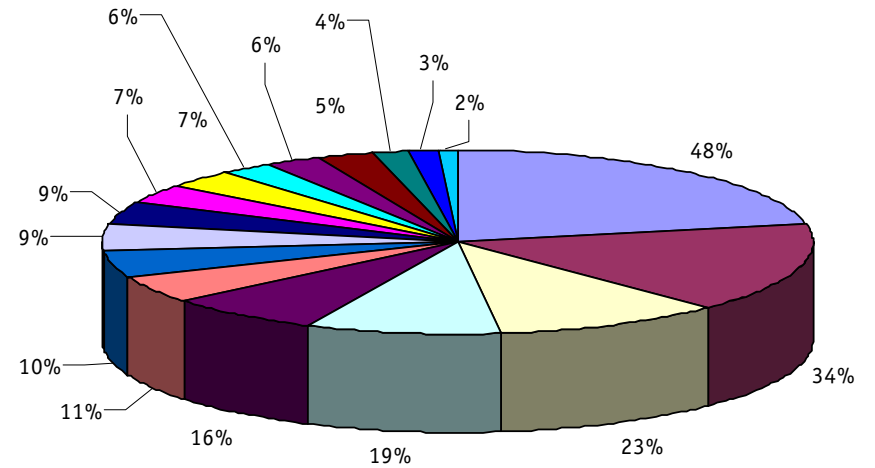
QUICK STATS:

- ✓ Total number of survey participants: **929**
- ✓ A total of **272** participants are planning on starting a new lab. Of these, **70** will be starting a new lab in **6 months or less**.
- ✓ **Centrifuges, thermal cyclers, incubators, microscopes, 1D gel electrophoresis systems, and imaging / gel documentation systems** dominate as the items people plan to purchase within the next 6 months.

Institution Type

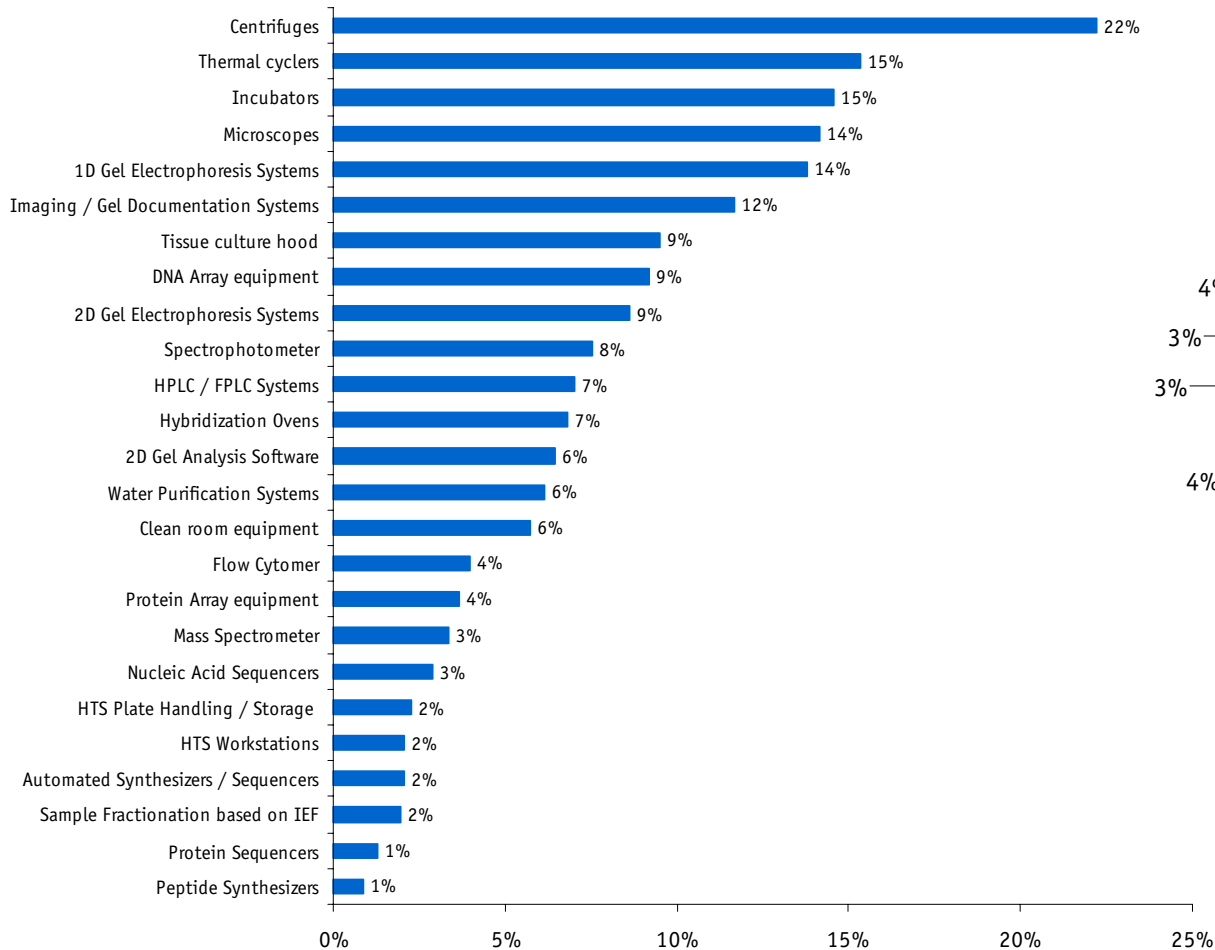


Principal Area of Research or Work

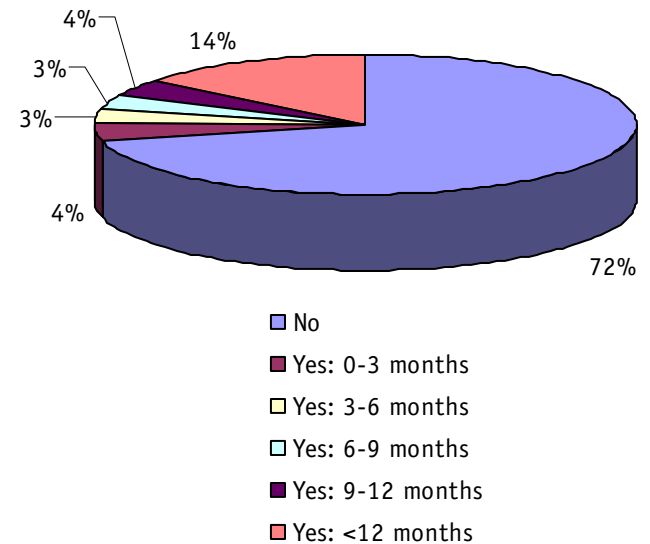


- Molecular Biology
- Cell Biology
- Biochemistry
- Genomics / Genetics
- Immunology
- Neuroscience
- Microbiology / Virology
- Drug Discovery
- Proteomics
- Bioengineering
- Pharmacology / Toxicology
- Diagnostics / Pathology
- Bioinformatics
- Other (please specify)
- Marketing / Sales
- Administration
- Purchasing

Which of the following types of equipment are you planning to purchase in the next 6 months?



Are you planning to start a new lab?



Demographics

1. Salutation
2. First name
3. Last name
4. Email address
5. Institution or Company
6. Department
7. Mailing Address
8. PO Box / Bldg. / Room #
9. City
10. State / Province
11. ZIP / Postal Code
12. Country
13. Phone number
14. Which title best applies?
 - Principal Investigator
 - Lab Director/Chief Scientist
 - Professor/Instructor
 - Research Director/VP of Research
 - Staff Scientist
 - Technician/Research Assistant
 - Postdoctoral Fellow
 - Graduate Student
 - Department Head
 - President/CEO/VP/Owner
 - Business Development Director/Manager
 - Product Manager
 - Process Engineer
 - Consultant
 - Procurement manager
15. Institution type
 - Academic
 - Government
 - Biotech
 - Pharmaceutical
 - Private Research
 - Clinical Diagnostic Testing
16. Principal Area of Research or Work
 - Administration
 - Biochemistry
 - Bioengineering
 - Bioinformatics
 - Cell Biology
 - Diagnostics / Pathology
 - Drug Discovery
 - Genomics / Genetics
 - Immunology
 - Marketing / Sales
 - Microbiology / Virology
 - Molecular Biology
 - Neuroscience
 - Pharmacology / Toxicology
 - Proteomics
 - Purchasing
17. What techniques or techniques do you use in your lab? (Check all that apply)
 - 2-D Electrophoresis
 - 1-D Electrophoresis
 - Antibody-Based Technologies
 - Cell / Tissue Culture
 - Chromatography
 - Cloning
 - Crystallography / Crystallization
 - DNA Isolation & Purification
 - DNA Microarrays
 - Gene Expression Analysis
 - Gene Transfer
 - High-Throughput Screening
 - Image Analysis
 - Laser Capture Microdissection
 - Mass Spectrometry
 - Microscopy
 - Mutagenesis
 - Nucleic Acid Hybridization
 - Nucleic Acid Labeling and Detection
 - Nucleic Acid Sequence Analysis
 - Nucleic Acid Synthesis
 - PCR / RT-PCR
 - Protein Isolation & Purification
 - Protein Microarrays
 - Protein Sequence Analysis
 - Protein-DNA Interaction Analysis
 - Protein-Protein Interaction Analysis
 - Real-time PCR
 - Recombinant Protein Expression
 - RNA Isolation & Purification
 - SNP Analysis
 - Spectroscopy
 - Vector Design / Construction
 - None of the above

18. Are you planning to start a new lab?
- Yes: within 0-3 months
 - Yes: within 3-6 months
 - Yes: within 6-9 months
 - Yes: Within 9-12 months
 - Yes: >12 months
 - No
19. Please indicate which of the following types of equipment you are planning to purchase in the next 6 months: (Check all that apply)
- 1D Gel Electrophoresis Systems
 - 2D Gel Electrophoresis Systems
 - 2D Gel Analysis Software
 - Automated Synthesizers / Sequencers
 - Centrifuges
 - Clean room equipment
 - DNA Array equipment
 - Flow Cytometer
 - HPLC / FPLC Systems
 - HTS Plate Handling / Storage
 - HTS Workstations
 - Hybridization Ovens
 - Imaging / Gel Documentation Systems
 - Incubators
 - Mass Spectrometer
- Microscopes
 - Nucleic Acid Sequencers
 - Peptide Synthesizers
 - Protein Array equipment
 - Protein Sequencers
 - Sample Fractionation based on IEF
 - Spectrophotometer
 - Thermal cyclers
 - Tissue culture hood
 - Water Purification Systems
 - None of the above
- siRNA**
20. Please characterize your siRNA / RNAi research:
- I am currently involved in siRNA research
 - I plan to begin siRNA experiments within 3 months
 - I plan to begin siRNA experiments within 6 months
 - I plan to begin siRNA experiments within 12 months
 - I do not work with siRNA
21. What is the goal of your siRNA research?
- Therapeutics
 - Drug development
 - Target identification
 - Target validation
 - Functional genomics
22. How do you generate your siRNA?
- In vitro* transcription
 - Dicer / RNase III
 - Expression in cells from an siRNA Expression plasmid or viral vector
 - Expression in cells from a PCR-derived siRNA expression cassette
 - Synthetic, from a commercial supplier
 - Synthetic, made in house
23. How do you assess the activity of your siRNAs?
- RT-PCR
 - Northern
 - Western
 - Phenotypic assay
 - None of the above
24. Where do you think improvements need to be made on the kits and reagents commercially available?
- Improve software for identifying siRNA oligos
 - Increase transfection efficiency
 - Decrease interferon response or other non-specific effects
 - Increasing siRNA potency
 - Increasing siRNA specificity
 - Increasing siRNA stability

siRNA Oligos

25. What is the most important feature in siRNA oligos?

- cost
- purity
- pre-annealed
- quality documented by mass spec
- ready to use (i.e., no desalting, deprotecting, or annealing)
- low level of toxicity
- silencing effectiveness

26. What synthesis scale for siRNA do you currently use, and what scale would you like to have available?

| | Currently Use | Would like to use |
|-------------------|---------------|-------------------|
| 20 nmol | | |
| 200 nmol | | |
| 1 μ mol | | |
| >1 μ mol | | |
| None of the above | | |

27. What level of purity do you require for siRNA oligos?

- >97%
- >90%
- 80-85%

28. Which supplier(s) of siRNA oligos do you use? (Check all that apply)

- Ambion
- Dharmacon
- QIAGEN
- Sequitur
- SuperArray Bioscience
- Thermo Hybaid
- Molecula Research Laboratories
- Proligo
- None of the above
- Other (please specify)

29. How do you buy your siRNA oligos? (Check all that apply)

- duplexed
- single-stranded
- with modifications
- 96-well plate
- 24-well plate
- single tube
- ready to use

30. Are you interested in customized arrays using siRNA?

- Yes
- No

31. Would it be helpful to have a gene-specific antibody sold with the siRNA to the same gene?

- Yes
- No

32. Which of the following software do you use to design your siRNA oligos? (Check all that apply)
- Promega's siRNA Designer
 - Ambion's free web tools: siRNA Target Finder and siRNA Design Tools
 - Invivogen's siRNA Wizard™
 - Whitehead Institute's siRNA Selection Program
 - Dharmacon's siDesign Center
 - Dharmacon custom SMARTpool Design service
 - GenScript's siRNA Target Finder
 - GenScript's siRNA Construct Builder
 - Sequitur's Standard Target Site Selection
 - None of the above
 - Other (please specify)

siRNA Kits and Reagents

32. Which of the following reagents, kits and services do you use in your lab? (Check all that apply)

| | Use | Would like more information |
|--|-----|-----------------------------|
| Starter kits for siRNA optimization | | |
| Starter kits for validation | | |
| siRNA localization | | |
| <i>In vitro</i> transcription kits | | |
| Commercial siRNA oligo synthesis | | |
| Transfection kits | | |
| siRNA oligo sets for high throughput screening | | |

34. What is the most important feature in transfection reagents?
- efficient siRNA transfection
 - high endogenous gene silencing efficiency
 - reproducible cellular delivery
 - low toxicity
 - easy to use
 - efficiency in a variety of cell lines
 - works in the presence of serum
 - price
35. What cell type are you using for transfection? (check all that apply)
- Epithelial-like cells (HeLa; CaCo2....)
 - Fibroblast-like cells (HEK 293; COS-7.....)
 - Endothelial-like cells (HUVEC; BAEC.....)
 - Hepatocyte-like cells (HEPA-1; HepG2....)
 - Neuroblastoma (CLBPEC; SHEP.....)
 - Leukemia cells/lymphoblasts (Jurkat; K562.....)
 - Melanoma
 - Monocytes/macrophages
 - Myotubes/myoblasts/muscle cells
 - Keratinocytes
 - Primary Cells
 - None of the above

36. Which transfection kit(s) or reagent(s) do you use or would like more information on? (Check all that apply)

| | Currently Use | Would like more information |
|---|---------------|-----------------------------|
| Ambion's siPORT™ <i>Amine</i> Transfection Agent | | |
| Ambion's siPORT™ <i>Lipid</i> Transfection Agent | | |
| Ambion's siPORT™ XP-1 Transfection Agent | | |
| Ambion's Silencer™ Transfection Kit | | |
| SuperArray Bioscience's SureSilencing™ siRNA kits | | |
| Targeting System's <i>Targefect</i> -siRNA Transfection kit | | |
| IMGENEX's Transfection Reagent | | |
| Novagen's RiboJuice™ siRNA Transfection Reagent | | |
| Stratagene's GeneEraser™ | | |
| Qbiogene's jetSI™ | | |
| Amata Biosystem's Nucleofactor™ | | |
| QIAGEN's TransMessenger Transfection Reagent | | |
| QIAGEN's RNAiFect Transfection Reagent | | |
| Invitrogen's Lipofectamine™ 2000 | | |
| Invitrogen's Lipofectamine™ | | |
| GTS's GeneSilencer siRNA Transfection Reagent | | |
| Mirus' <i>Trans</i> -IT-TKO® Transfection Reagent | | |
| Neuromic's i-Fect™ siRNA Transfection Reagent | | |
| Sequitur's Transfection Optimization Kit | | |
| None of the above | | |

37. Do you prefer transfection agents to be included in your siRNA kits?

- Yes
- No

38. Which RNAi Transcription kits are you using? (Check all that apply)

- MEGAscript™ RNAi Kit (Ambion)
- Silencer*™ Construction (Ambion)
- GeneSuppressor Construction Kit (IMGENEX)
- HiScribe™ RNAi Transcription Kit (New England Biolabs)
- Knock-down siRNA Kit (Spring Bioscience)
- SilenCircle™ RNAi Transcription Kit (Allele Biotechnology)
- None of the above

39. Assuming the level of gene knockdown was equal between the two systems, which would you prefer?

- Plasmid-based siRNA expression vectors
- Chemically synthesized siRNA

40. Which vectors and/or kit(s) do you use? (Check all that apply)

1. *pSilencer*™ (Ambion)
2. *pSEC*™ (Ambion)
3. GenScript's siRNA vectors
4. SureSilencing™ siRNA kit (SuperArray Bioscience)
5. GeneEraser™ shRNA (Stratagene)
6. *psiRNA*™ (Invivogen)
7. LineSilence™
8. *siXpress*™ PCR Vector System (Mirus)
9. LITMUS™ Plasmids (New England Biolabs)
10. Voyager™ Vectors (Invitrogen)
11. Stratagene's GeneEraser™ shRNA Expression Vector system
12. Promega's T7 RiboMAX™ Express RNAi System
13. Promega's siLentGene™ U6 Cassette RNA Interference System
14. None of the above

41. How do you measure gene silencing efficiency in your RNA interference experiments? (Check all that apply)
- Fluorescence microscopy
 - Reporter gene assays (e.g. luciferase)
 - Quantitative RT-PCR/real time quantitative PCR
 - Northern blot
 - Branched DNA (b-DNA, Bayer Quantigene)
 - Western blotting
 - ELISA
 - Microarray
 - None of the above
42. Which quantitative RT-PCR / real time PCR products do you use?
- ABI Taqman assay
 - Invitrogen Lux primer
 - SYBR Green RT-PCR
 - SuperArray MultiGene-12TM RT-PCR Profiling
 - Eurogentec Scorpion primers
 - None of the above
 - Other (please specify)
43. Which microarray product(s) do you use? (Check all that apply)
- Affymetrix GeneChip
 - Agilent oligo or cDNA microarray
 - Amersham Codelink
 - SuperArray Bioscience GE Arrays
 - In house spotted array
 - None of the above
 - Other (please specify)
44. Do you track siRNA delivery and localization inside your cells?
- Yes
 - No
45. Which label(s) do you prefer? (Check all that apply)
- Fluorescein
 - Biotin
 - Rhodamine
 - Cy™3
 - Cy™5
 - FAM
 - Other (please specify)
46. Which kit(s) do you use? (Check all that apply)
- <I>Label </I>IT® siRNA Tracker™ Kits (Mirus)
 - <I>Silencer</I>™ siRNA Labeling Kit (Ambion)
 - Fluorescent siRNA for Uptake Assessment (Sequitur)
 - Other (please specify)
47. What do you use starter kits for?
- Optimize siRNA conditions
 - Validate controls for current experiments
 - Do not use
 - Other (please specify)