

2005 RNAi Survey

1. In what type of institution do you work?

Private Research
Government
Biotech
Pharmaceutical
Clinical Diagnostic Testing
Academic
Other

2. Which title best applies?

Professor/Instructor
Process Engineer
Business Development Director/Manager
Research Director/VP of Research
Department Head
Technician/Research Assistant
Account Manager
Graduate Student
Staff Scientist
Principal Investigator
President/CEO/Owner/VP
Lab Director/Chief Scientist
Postdoctoral Fellow
Procurement Manager
Consultant
Other

3. Which best describes your purchasing authority?

Authorize
Recommend
Evaluate
No Purchase Role

4. 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: In more than 12 months
No

5. What is your principle area of research or work? (check all that apply)

Bioinformatics
Microbiology/Virology
Immunology
Genomics/Genetics
Cell Biology
Diagnostics/Pathology
Drug Discovery
Administration
Biochemistry
Marketing/Sales
Pharmacology/Toxicology
Molecular Biology
Bioengineering
Neuroscience
Proteomics
Purchasing
None of the Above
Other (please specify)

6. Please characterize your siRNA research.

I am currently using siRNA in my research.
I plan to use siRNA within 3 months.
I plan to use siRNA within 6 months.
I plan to use siRNA within 12 months.
I do not work or plan to work with siRNA. (Exited from survey)

7. What is the goal of your RNAi research?

Therapeutics
Drug development
Target identification (Screening)
Target validation
Functional genomics
Basic research
Kit development
Other (please specify)

8. What species do you use in your siRNA experiments? (check all that apply)

Rat
Mouse
C. elegans
Human
Zebrafish
Drosophila melanogaster
Plant
Other (please specify)

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

Manufacturer-designed Single siRNA
Custom-designed Single siRNA
Manufacturer-designed siRNA Pools
Custom-designed siRNA Pools
siRNA Libraries
Lipid-mediated Deliver Kits
Antibody Specific to a siRNA Target
Chemically Modified siRNAs
Kits for preparing individual siRNAs by in vitro transcription
Kits for preparing siRNA populations by Dicer
Kits for preparing siRNA populations by RNAase III
siRNA Expression Vectors – Plasmids
siRNA Expression Vectors – Empty Viral Vectors
siRNA Expression Template Kits – PCR-based
Morpholinos for gene knockdown
Electroporation buffers or kits

10. Where do you think improvements need to be made on siRNA kits and reagents? (check all that apply)

Improve software for Identifying siRNA Oligos.
Increase Transfection Efficiency
Reduce Delivery Reagent Toxicity
Increase siRNA Silencing Efficiency
Reduce Off-Target Effects
Increase siRNA Nuclease Resistance
Increase Number or Type of RNAi Applications
Other (please specify)

11. Where do you see the trends in the siRNA market? (check all that apply)

microRNA
Vector-based siRNA
shRNA
Modified siRNA
Single-stranded siRNA
Different siRNA Lengths

12. How do you measure gene silencing efficiency in your RNAi experiments? (check all that apply)

Reporter gene assays (e.g. Luciferase)
Quantitative RT-PCR/Real-Time quantitative PCR
Northern blot
Branched DNA (b-DNA)
Western Blotting
ELISA
Microarray
Other (please specify)

13. How many gene targets are you currently focusing on or planning to focus on within the next twelve months?

- Less than 10
- 11 – 100
- 101 – 500
- 500 +

14. Do you use RNAi starter kits?

- Yes
- No (skip next question)

15. Which supplier(s) of siRNA starter kits do you use? (check all that apply)

- Dharmacon
- Upstate
- Invitrogen
- Qiagen
- Other (please specify)

16. How do you typically generate your siRNA?

- In Vitro transcription
- Dicer/RNase III
- Expression in Cells from a siRNA/shRNA Expression Plasmid or Viral Vector
- Expression in Cells from a PCR-derived siRNA Expression Cassette
- Synthetic - from a Commercial Supplier
- Synthetic - Made In-house
- Other (please specify)

17. Which supplier(s) of synthetic siRNA do you use? (check all that apply)

- Ambion
- Bioneer
- B-Bridge
- Integrated DNA Technologies
- Dharmacon
- Qiagen
- Invitrogen
- OligoEngine
- Thermo Electron
- Proligo
- Eurogentec
- MWG
- Do Not Use Synthetic siRNA
- Other (please specify)

18. How do you prefer to buy your synthetic siRNA? (check all that apply)

Annealed
Single-stranded
With modifications
96-well plate
24-well plate
Packaged in Vials
Libraries
Do Not Use Synthetic siRNA
Other (please specify)

19. Please rank the following siRNA features from 1 to 5 on a scale of importance to your research. (1 = Extremely important, 5 = Not at all important)

Affordability
Purity
Quality documented by mass spectrometry
Ready to use (i.e. no Desalting, Deprotecting, or Annealing)
Timely Delivery

20. How many siRNA oligos do you plan to purchase over the next six months?

1 – 5
6 – 20
21 – 100
101 – 1000
1000 +
None

21. Which of the following supplier(s) software do you use to design your siRNA? (check all that apply)

Promega
Mirus Bio
Imgenex
Qiagen
MWG
Invitrogen
Dharmacon
Genscript
OligoEngine
InvivoGen
I Buy Manufacturer-designed siRNA
Other (please specify)

22. Do you use proprietary software to design your siRNA?

Yes
No (skip next question)

23. Which supplier(s) proprietary software do you use? (open-ended)

24. Have you considered using advanced antisense oligos (e.g. Morpholinos) to avoid common siRNA problems (such as changing expression of non-targeted genes or triggering an interferon response)?

I prefer to use siRNAs because they are widely used for gene knockdown

I am unaware of the advantages of advanced antisense oligos for gene knockdown

I am already using advanced antisense oligos for gene knockdown

I am not using gene knockdown in my research

25. Which supplier(s) of siRNA construction kits do you use? (check all that apply)

Invitrogen

Imgenex

Ambion

NEB

Promega

Genlantis

Do Not Use siRNA Construction Kits

Other (please specify)

26. Which supplier(s) of transfection kits or reagents do you use? (check all that apply)

Ambion

BD Biosciences Clontech

B-Bridge International

Bio-Rad

Imgenex

Novagen

Stratagene

Qiagen

Invitrogen

Mirus Bio

GenoSpectra

OligoEngine

Promega

Dharmacon

Roche Applied Science

Thermo Electron

New England Biolabs (NEB)

Upstate

Open Biosystems

Stratagene

Ozbiosciences

QBiogene

Pepscan

Genlantis

Do Not Use siRNA Transfection Kits
Other (please specify)

27. Please rate the following siRNA transfection reagent features from 1 to 5 on a scale of importance to your research. (1 = Extremely important, 5 = Not at all important)

Efficient siRNA Delivery in a Single Cell Line (high percentage of transfected cells)
Efficient siRNA Delivery to a Variety of Different Cell Lines
Efficient Silencing of Endogenous Gene (High Level of Knockdown)
Reproducible Cellular Delivery
Cell Viability
Ease to Use Protocol
Works in the Presence of Serum
Price
Effective at Multiple Cell Densities
Effective at Multiple siRNA Concentrations

28. Into what cell type(s) are you transfecting siRNA? (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, HepG-2)
Neuroblastoma (CLBPEC, SHEP)
Leukemia cells/Lymphoblasts (Jurkat, K562)
Melanoma
Monocytes/macrophages
Myotubes/myoblasts/muscle cells
Keratinocytes
Primary cells
Other (please specify)

29. How do you typically transfect siRNA into cells?

Traditional transfection procedure
Reverse transfection procedure
Electroporation
Other (please specify)

30. Which supplier(s) of siRNA/shRNA expression vectors do you use? (check all that apply)

Ambion
BD Biosciences Clontech
Imgenex
Invitrogen
Promega
Stratagene
OligoGene

InvivoGen

GenScript

Genlantis

Upstate

OligoEngine

Open Biosystems

Origene

Mirus Bio

Epicentre

Abgent

Biovision

I use a vector developed in my lab or by a colleague

Other (Please specify)

I do not use siRNA expression vectors

31. Please rate the following siRNA company attributes from 1 to 5 on a scale of importance to you. (1 = Extremely important, 5 = Not at all important)

Helpful Technical Support

Offers Educational Materials

Offers only siRNA Products

Offers siRNA and Other Life Science Research Products

Knowledgeable Sales Staff

32. If you were to purchase a siRNA library, how important would each of the following be in your decision?

Delivery/Manufacture Time

Price

Customer-defined Number and Type of Gene Targets

Manufacturer-defined Number and Type of Gene Targets

Format Options (Packaged in vials or pre-dispensed in a plate)

33. Are you currently studying microRNA (miRNA)? If so, for how long?

Yes: For less than 3 months

Yes: Between 3 – 6 months

Yes: Between 6 – 12 months

Yes: For over 12 months

No: But plan to in the next 12 months

No: Do not plan to at all (skip next question)

34. What microRNA product(s) do you currently use or plan to use in the next twelve months? (check all that apply)

Synthetic miRNA

miRNA Inhibitors

miRNA Detection Products

miRNA Purification Products

miRNA Microarrays

Other (please specify)

35. If viral delivery of shRNA was gene target-specific, safe, easy and efficient would you prefer it over using a transfection reagent and synthetic siRNA?

Yes

No

36. If an efficient system to regulate the expression of shRNA in stably transfected cells were available, would you use it in your research?

Yes

No

37. If you could have an inducible siRNA that enables each of the following which TWO would be MOST useful to your research?

Decoupling the transfection event and gene silencing

Inducing cells with all compounds after transfection but without any gene silencing effect

Activating siRNA as desired

Having a real-time control for your siRNA

Observing the desired phenotype only after at-will activation of siRNA

Controlling the amount of gene knockdown

Observing the effect of gene silencing only after at-will activation of siRNA

38. What RNAi product or service, currently not available commercially, would be help facilitate your RNA research? (open-ended)