

Gene Transfer

Delivery and Expression of DNA and RNA

A Laboratory Manual



Edited by Theodore Friedmann, *University of California, San Diego*, and John Rossi, *Beckman Research Institute of the City of Hope, Duarte, California*

Understanding gene function and regulation requires rigorous testing in live cells and organisms. Recent advances have provided a variety of new strategies for delivering DNA and RNA into cells and probing their expression, as well as new clinical applications that rely upon the introduction of genetic material. The vast number of available techniques for clinical and laboratory research often makes selecting the optimal method a difficult process. *Gene Transfer: Delivery and Expression of DNA and RNA* provides the first comprehensive guide to technical approaches for delivering nucleic acids into cells and organisms and of ensuring (even manipulating) appropriate expression. The detailed, step-by-step protocols cover a variety of methods, both well established and newly evolving. These include viral and nonviral methods of gene delivery, transgenic approaches, strategies for the regulation of transgene expression, and modification of the host response. The introductory matter to each chapter includes concise technical and theoretical discussions with considerations for selection of the appropriate system and strategies for delivery.

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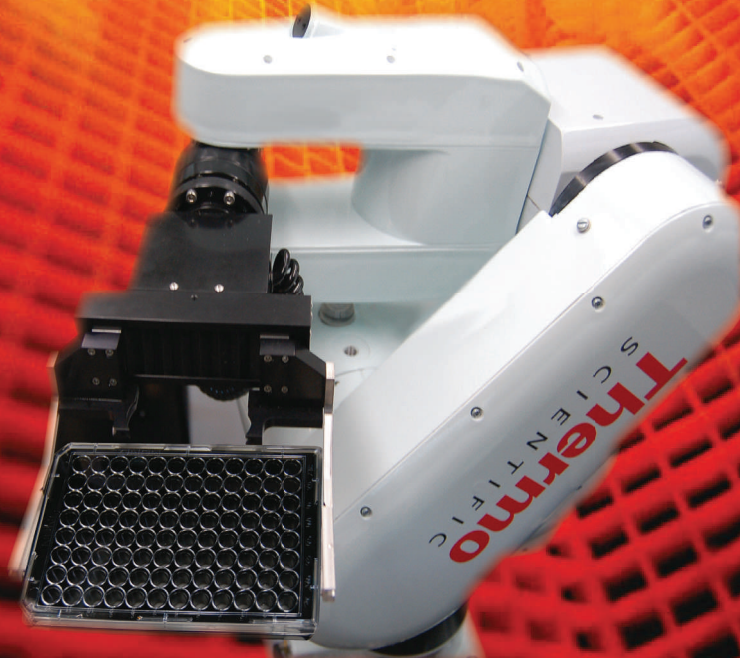
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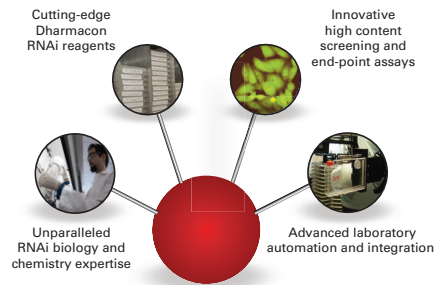
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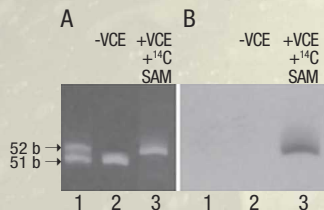
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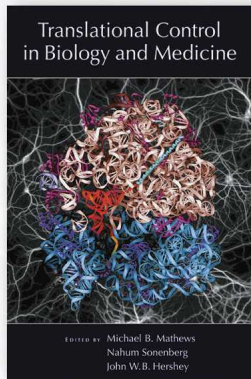


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Edited by Michael B. Mathews, *UMDNJ-New Jersey Medical School, Newark*, Nahum Sonenberg, *McGill University, Montreal, Canada*, and John W. B. Hershey, *University of California, Davis*

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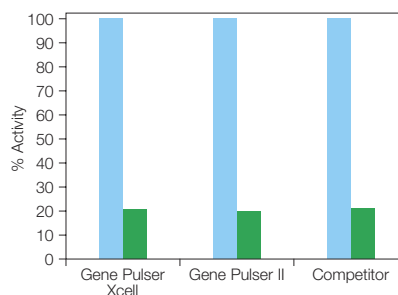
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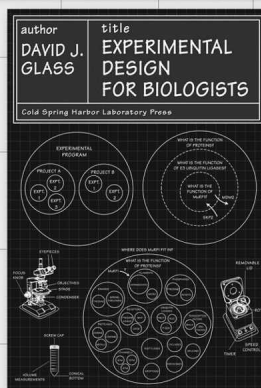
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Reporting to the CSO and VP Sirna Therapeutics, the successful candidate will be responsible for establishing and guiding research programs focused on the optimization of siRNA therapies in order to establish Merck-Sirna as a global center of excellence and world leader in RNAi technology. As the senior scientific leader within the Merck-Sirna RNA Therapeutic initiative with headquarters located on the Mission Bay Campus of UCSF in San Francisco, CA, you will be responsible for enhancing an understanding of RNA chemical modifications on siRNA activity and safety, microRNA as a target and a therapeutic, combination siRNA therapies and in vivo analysis of on- and off-target siRNA effects.

Requirements include a Ph.D. with managerial experience and an established international research reputation in nucleic acid structure/function. Greater than ten years of post-Ph.D. work in industry or as an independent investigator preferred. Must be an accomplished scientist, recognized by peers as a leader in your field.

- SCI003232 - Director, In Vivo Biology
- MOL000190 - Sr. Methods Developer
- MOL000187 - Research Molecular Biologist
- MOL000188 - Research Chemist
- MOL000189 - Associate Program Coordinator
- MOL000192 - Automation Associate
- MOL000196 - Sr. Systems Analyst
- MOL000197 - LIMS Analyst/LIMS Programmer
- MOL000204 - Sr. Research Scientist/Data Analyst
- MOL000205 - Research Scientist, Bioinformatics

West Point, PA

Researchers here will play a critical role in the discovery and development of RNA-based therapeutics. In this collaborative and multidisciplinary environment, scientists will work to leverage their expertise culminating in the design and development of oligonucleotide therapeutics and safe and effective delivery vehicles, in support of multiple therapeutic areas at Merck.

- BIO001506 - Sr. Research Biologist, Nucleic Acid Delivery
- BIO001507 - Biologist, Microscopy Cell Based Assay Support
- BIO001508 - Biologist, siRNA Biology & Pharmacology
- BIO001497 - Medicinal Chemist, RNA Therapeutics Group - RNAi Technology
- BIO001499 - Analytical Chemist, RNA Therapeutics Group - RNAi Technology

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RNAi Europe

Conference & Exhibition
20-21 September 2007

Barcelona, Spain

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Distinguished Faculty



Reuven Agami
Associate Professor
Division of Tumor Biology
Netherlands Cancer Institute



Jens Kurreck
Group Leader
Institute for Chemistry and
Biochemistry
Free University of Berlin



Judy Lieberman
Professor of Pediatrics
Harvard Medical School



Dmitry Samarsky
Director, Technology
Development
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