

# PROGRESS REPORT

## 2004-2005

**The Laboratory conveys its thanks to the faculty, staff, and students of RLE for their generous cooperation in producing this publication.**

All design and production of this CD-ROM package was done by Krista Van Guilder.

Disk 1 - Progress Report 2004-2005: Each chapter of the Progress Report reflects stylistic and editorial layouts chosen by its authors. The Progress Report was assembled and edited by Josephina C. Lee with assistance from David W. Foss. The design and production of the print version of the Progress Report, as well as all HTML features of the CD-ROM version of the Progress Report, is by Krista Van Guilder.

Disk 2 - Progress Report 2004-2005 Extras: RLE Contact is written and edited by William Smith, editorial assistant is Krista Van Guilder, design and production is by Everett Design, and photography is by Greg Hren Photography. RLE group, center laboratory, and program websites are designed and coded by Krista Van Guilder, with content written by members of RLE, and with strategic direction provided by William Smith.

*Cover image: A sorting cytometer. The tweezers hold a chip that exploits electric fields generated by an array of microelectrodes to trap multiple single cells for microscopic observation. After observation, the cells can be sorted by turning off individual cell traps, enabling complex cell-based screens. Professor Joel Voldman / RLE Biological Microtechnology and BioMEMS Group.*

*Back Image: Excitation profile of an RF pulse. Severe radio frequency (RF) inhomogeneity occurs in magnetic resonance imaging (MRI) at high main magnetic field strengths, such as at 7Tesla. The image shows an excitation profile of an RF pulse technique developed at RLE that counters the expected inhomogeneity for a typical birdcage RF coil at 7Tesla. Professor Elfar Adalsteinsson / RLE Magnetic Resonance Imaging Group.*