
PREFACE

At the time that the *Methods in Enzymology* volumes from which this book was taken were going to press, American Paul C. Lauterbur and Briton Sir Peter Mansfield have just been selected for the Nobel Prize in Medicine and Physiology for their discoveries leading to the development of the MRI.

The *Washington Post* ran a story on October 6, 2003, announcing the accolade and noted. "Magnetic resonance imaging, or MRI, has become a routine method for medical diagnosis and treatment. It is used to examine almost all organs without the need for surgery, but is especially valuable for detailed examination of the brain and spinal cord." The article would have been farsighted, had it mentioned the additional role of this technique in basic research, but it did not.

The usefulness of this technology in both clinical and basic science is reflected in tens of thousands of articles on PUBMED—and more than tens of thousands of people helped both in the clinics and by the new technologies that basic scientists have developed.

MRI and other imaging methods have made it possible to glance inside living systems and, for some, obviated the need for surgery. Because of the great value and continuing utility of these approaches, we are pleased that Academic Press has chosen to feature these methods in this new volume.

The authors were selected based on research contributions and their ability to describe their methodological contributions in a clear and understandable way. They have been encouraged to make use of graphics and comparisons to other methods, and to provide insight into the tracks and approaches that make it possible to adapt methods to other systems.

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