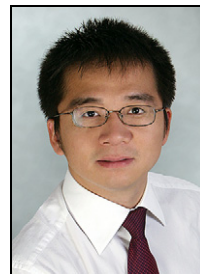


# Nanomedicine: About This Special Issue



Joseph C. Liao, M.D.  
Stanford University  
Stanford, CA



Tony Jun Huang, Ph.D.  
Pennsylvania State  
University  
University Park, PA

“Nanotechnology holds the potential to transform clinical diagnostics and therapeutics”

This special issue of the *Journal of Association for Laboratory Automation* provides a series of timely articles on the rapidly emerging field of nanomedicine, a branch of nanotechnology that addresses highly specific medical interventions at the molecular scale. What makes nanotechnology particularly attractive for medicine is that it operates at the same length scale as DNA, RNA, and proteins, the building blocks of biological processes. Nanotechnology holds the potential to transform clinical diagnostics and therapeutics, because it offers a vantage point with unprecedented resolution to study and manipulate biological pathways in complex human diseases. Because nanomedicine is by definition a multidisciplinary field, it is appropriate that the guest editors represent both engineering (T.J.H.) and medicine (J.C.L.) disciplines.

The contributing authors of this special issue are recognized authorities from leading institutions in the areas of nanosensors, microfluidics, and materials science. Contributions include two versatile biosensor platforms (magnetic nanosensors and photonic crystal arrays) that are highly adaptable for a variety of human diseases; an innovative chip-based portable

diagnostic system based on gold nanoparticles; a novel approach for surface treatment of microfluidic devices; a microfabricated cryopreservation device that may hold important future applications in infertility; and the application of nanopipettes for nanoscale cellular surgery. These are exciting examples of the current innovations in nanomedicine. We are grateful to the invited contributors for sharing their expertise and discoveries in this forum.

The production of this special issue would not have been possible without the gracious support and service of the referees who, as nanomedicine experts, provided extremely constructive comments that assisted the authors with the production of their manuscripts. Finally, special thanks go to Dean Ho, Ph.D., and Nan Hallock, editor in chief and managing editor, respectively, of JALA for serving as the catalysts for getting this issue off the ground. It has been a pleasure and honor serving as the guest editors of JALA's Special Issue in Nanomedicine.

Sincerely,



Joseph C. Liao, M.D.



Tony Jun Huang, Ph.D.

Correspondence: Joseph C. Liao, M.D., Department of Urology, Stanford University, 300 Pasteur Drive, S-287, Stanford, CA 94305-5118; Phone: +1.650.852.3284; E-mail: [jliao@stanford.edu](mailto:jliao@stanford.edu) or Tony Jun Huang, Ph.D., Pennsylvania State University, Department of Engineering Science and Mechanics, 212 Earth-Engineering Sciences Building, University Park, PA 16802-6812; Phone: +1.814.863.4209; E-mail: [junhuang@psu.edu](mailto:junhuang@psu.edu)

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