

Scientists work to 'camouflage' devices

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Two U.S. researchers have received a government grant to study ways to prevent the body from developing scar tissue around implanted biomedical devices.

Florida State University Professor Joseph Schlenoff and Associate Professor Thomas Keller have been awarded a four-year, \$1 million grant from the National Institutes of Health. Together, they will work to develop ways of coating coronary stents, synthetic heart valves and other biomedical devices with thin films that discourage vascular smooth muscle cells from adhering to their surfaces. Such adhesions often lead to scarring and new blockages.

"For years, surgeons have used stents to reopen clogged coronary arteries -- only to see the stents themselves cause new blockages ...," said Schlenoff. "In our research project, we're looking for ways to 'camouflage' biomedical devices so the body doesn't even know they're there."

The project also involves Michael Davidson, director of the Optical Microscopy group at Florida State University's National High Magnetic Field Laboratory; Scott Olenych, a postdoctoral researcher; and Maroun Moussallem, a graduate student in the Schlenoff lab.

Davidson will provide molecular photographs that chronicle the interaction, or lack thereof, between the researchers' polymers and biological cells.

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