Meds Directly Into Eyes

An Auburn University engineer and his students have invented contact lenses that may keep you from crying over summer allergies and other eye irritations.

Researchers in the Samuel Ginn College of Engineering are seeking a patent for hydrophilic (soft) contacts that deliver liquid medicine directly into wearers' eyes using a lens-friendly polymer. The lenses can hold medication in concentrated, renewable doses and release it periodically as part of a treatment process. When placed in the eyes, the drug-filled contacts release six times the amount of medication of instant and time-release-type drops and ointments, and can be "reloaded" with medicine as part of a wearer's daily cleaning regimen.

Mark Byrne, assistant professor of chemical engineering, and his assistants, senior Parker Sizemore and doctoral candidate Siddarth Venkatesh, are optimistic that their work will attract funding from manufacturers.

Building a better contact lens represents "a great engineering exercise," says Byrne, who also studied biology and physiology. In the future, the team plans to look at medication delivery through oxygen-permeable, silicon-based lenses—not only for people who wear contacts normally but also for those who suffer from eye injuries or disease.

Auburn engineers have invented a contact lens designed to treat allergies and other ailments.