

**Education**

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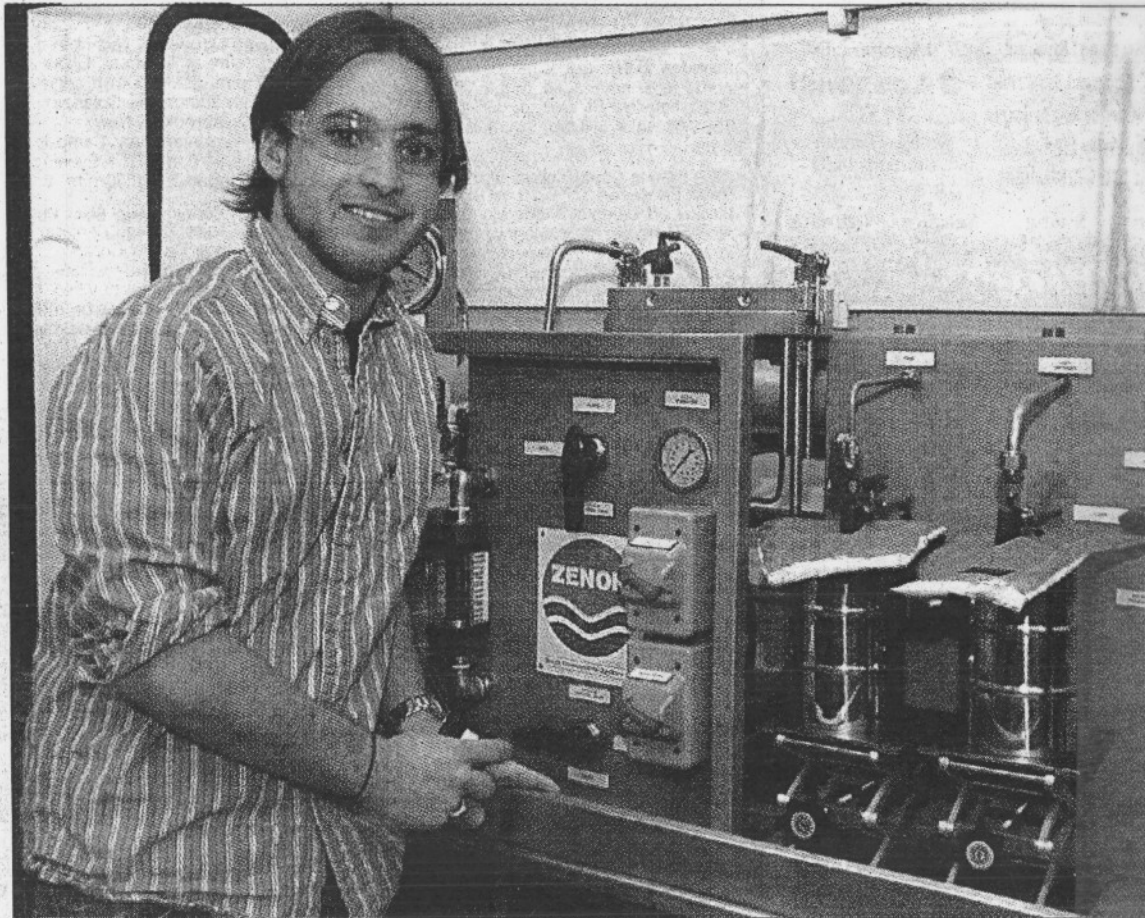
**Student Spotlight**

**Scott Barnes**, 21, of Washington Township, a junior chemical engineering student at Rowan University.

**The project:** Bristol-Myers Squibb pharmaceutical scientists and a Rowan engineering team are working together on a project to use green engineering design in pharmaceutical development. The Rowan group is researching how improvements can be made in drug development.

**What is green engineering?** It incorporates the development of products and implementation of processes and systems that meet technical and cost objectives while protecting human health and welfare and the environment. It makes the pharmaceutical industry more environmentally friendly and helps reduce costs.

**How are you doing this?** We have created a solvent selection table that rates solvents by their "greenness," which really means how environmentally friendly they are. With this table, hopefully the industry will select the greener solvent early in a drug's research and development phase.



**Rowan engineering student Scott Barnes** with the equipment used in his research as part of a team working with Bristol-Myers Squibb scientists to develop environmentally-friendly solvents for the pharmaceutical industry.

JOAN FAIRMAN KANES / Inquirer Suburban Staff

**Why is green engineering so important?** It's one of the few industries that are fully "batched," meaning they make a drug in one run, then clean the

equipment, then make another run. Nothing can be used batch-to-batch. Recycling solvents and waste is nearly impossible. A "greener" process

also can help the industry save money since the Food and Drug Administration and the Environmental Protection Agency reward greener efforts.