The Need: Most insect repellents contain the chemical DEET, and while the Environmental Protection Agency has found DEET to be safe for adults, recent reassessments have raised concern about DEET and child safety. Yet DEET-based products are by far the most effective insect repellents currently available.

Serving the Need: Dr. Michael Roe, William Neal Reynolds Professor of Entomology in the College of Agriculture and Life Sciences at North Carolina State University, discovered a naturally occurring substance derived from wild tomato plants that effectively repels mosquitoes and ticks. HOMS, LLC, a North Carolina-based biotech company, acquired the right to use the compound in commercial applications, combining the compound with a proprietary emulsion technology to develop an all-natural insect repellent called BioUD. The Environmental Protection Agency has approved the active ingredient in BioUD as a safe insect repellent for direct skin application with no child restrictions. Testing has shown BioUD to be 100 percent effective at repelling mosquitoes up to three hours after application and 99 percent effective up to four and a half hours after application in forest and marsh conditions. Unlike many DEET products, BioUD is not flammable and does not melt plastics. It is as effective as DEET against mosquitoes and repels disease-carrying ticks. It became commercially available in 2007 under the name Bite Blocker.

Impact beyond North Carolina: The availability of BioUD gives consumers a choice. BioUD is as effective as DEET, is all-natural and has been shown to be safe for use on children. In addition to use as a personal insect repellent for adults and children, BioUD has wide-ranging potential applications. It may be used to control insects on livestock, around the home and in organic gardening.

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