

A Universal Antidote

Among technology transfer examples in the field of transportation is an exceptionally versatile disinfecting compound for automotive and many other uses

For years, auto manufacturers have had a problem: customers, especially those in hot, humid climates, complained about the mold that forms in car air conditioners or, more specifically, about the obnoxious musty odor the mold causes. It was a problem because potential mold-killing substances could also leave lingering toxicity, and the alternative—removing the air conditioner from the vehicle for cleaning and disinfecting—was costly.

Last fall, two of the Big Three U.S. automakers concluded arrangements with Alcide Corporation, Norwalk, Connecticut for distribution of Alcide's patented Ren New Air Conditioning Disinfectant. The special properties of the Alcide® formulation, which has been approved by U.S. regulatory authorities, enable it to destroy mold and fungus, as well as bacteria and viruses, with minimal harm to humans, animals or plants. This allows use of the product to disinfect and deodorize auto air conditioners without removing them and without any lingering toxicity.

The disinfectant/deodorizer is one of a wide range of Alcide formulations engineered for a variety of purposes, spanning automotive, medical, agricultural, pharmaceutical and consumer markets. Alcide is not, strictly speaking, a spinoff from aerospace technology. But the products themselves and the company that makes them are beneficiaries of assistance provided by NERAC, Inc., Tolland, Connecticut, one of NASA's nine

An Alcide Corporation chemist performs a quality control check on a sample of Alcide, a multipurpose compound that destroys mold, fungus, bacteria and viruses without harming human, animals or plants.



A technician is spraying Alcide disinfectant into the evaporator case of an auto air conditioning system; the product eliminates musty odor by killing the odor causing molds and bacteria that grow in the warm humid environment of many car air conditioners.



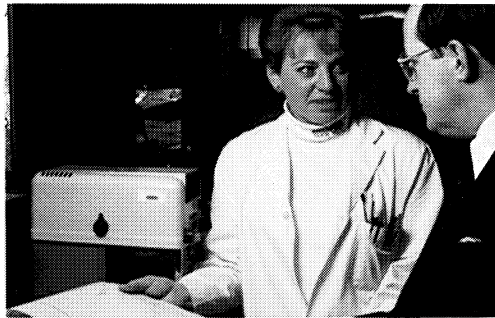
Courtesy Crest Lincoln Mercury, New Haven, Connecticut

A Universal Antidote *(Continued)*



After several years of development and test, Alzide Gungorhan has brought to the commercial marketplace a product of important potential for dairy farmers: a germicidal barrier feed dip that contributes to reduced mastitis in dairy herds by destroying the organisms that cause the infection, thus aiding increased production of higher quality milk.





Industrial Applications Centers, which provide information retrieval services and technical help to industry and government clients. The story of Alcide Corporation's genesis and product development offers an example of the type of assistance centers like NERAC provide.

The exceptional properties of the Alcide compound were discovered by Howard Alliger in 1977 and further developed by Robert D. Kross, Alcide Corporation's vice president of research and development. While he was developing a compound for sterilizing ultrasonic cleaning tanks, Alliger found that the compound killed bacteria, viruses and fungi on or shortly after contact, yet was nontoxic to humans, animals and plants, whose tissues lack the chemical environment to which Alcide reacts.

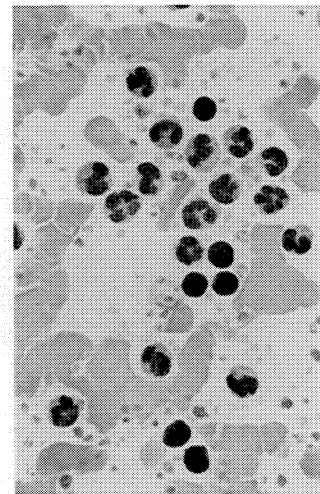
Alliger recognized that he had found something with potential for many uses other than tank sterilization. He teamed with fellow inventor Elliott J. Siff and, in 1980, formed a company to develop, market and license the compound. Today, Siff is president and chief executive officer of Alcide Corporation; Alliger is no longer active in the company.

After an additional series of tests established the broad potential of Alcide compound, the company requested NERAC's aid in identifying possible applications and the types of businesses that might have a need for such a product. NERAC conducted a computer search of more than a dozen databases and uncovered scores of applications, among them treatment of viral, fungal and bacterial infections in animals; treatment of human skin diseases; disinfection and sterilization of medical facilities; as a sterilant for food production machinery and food preservation; as a preservative for cutting oils and paints; and as a deodorant/disinfectant for

carpets, chemical toilets, public conveyances and meeting places.

Alcide Corporation developed and tested specific compounds for some of these applications and some of them are now commercially available, but regulatory approvals slowed the commercialization process for several years. However, Alcide is now beginning to make major advances in the U.S. and abroad. The year 1987 was a big one for the company. In addition to the auto company arrangements, Alcide also made agreements with Bausch & Lomb for disinfecting contact lenses; with Procter & Gamble for mouthwash, toothpaste and other oral care applications; with W.R. Grace's American Breeders Service Division and the French firm O.H.F. Santé Animale for distribution of a barrier teat dip designed to help prevent mastitis in cows.

Among major research in progress, Alcide Corporation is teaming with Koor Foods in Israel to develop an antimicrobial food wash; with Cobe Laboratories, Denver, Colorado, in testing a new formulation for cleansing kidney dialysis machines; and with the University of Connecticut Medical School to study the effect of the Alcide compound on human wound healing and scar tissue suppression. At Israel's Hebrew University Dental School, trials are in progress on a plaque reducing mouthwash and in England researchers are meeting success in human clinical trials of treating herpes and other sexually transmitted diseases with appropriate Alcide formulations. ▲



At left center, researchers are conducting one of a series of tests to determine whether Alcide formulations can alter the course of lung disease. This is one of a number of research projects, in the U.S. and abroad, investigating the potential of Alcide technology in such diverse medical applications as wound healing, treatment of acne, herpes and cystic fibrosis. In the top photo, researchers are checking the results of tests relative to the anti-inflammatory and anti-scar properties of Alcide. The photo above is a representation of what the Alcide compound looks like in microscopic view.

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