

New use for a fragrance chemical to fight head lice.

Poseidon scientists discovered that the menthol derivative, menthol propyleneglycol carbonate, is useful in eliminating lice in hair.

New York, NY (August 30, 2006). Cases of head lice, particularly in children, are in the upswing in many countries. This is again worrisome for public health and school officials now that the children will soon be back to school. It takes only one infected child to re-infect the entire class. The conventional treatment involves the use of insecticides, such as pyrethrins and pyrethroids, which cause paralysis and death to the louse. If this fails, the next step is to use a more dangerous chemical called malathion. But, resistance against these chemicals have developed over the years so that insecticide resistant head lice can now be found in parts of the US, UK and other countries. Resistance to five different insecticides has been observed in some strains of head lice. While there have been numerous natural alternatives and repellents in the market to treat head lice, these products have been ineffective in scientific studies.

Poseidon scientists, working on nontoxic approaches to control insect pests, recently found a new use for a derivative of menthol called menthol propyleneglycol carbonate or MR08. This compound, commonly used in toothpastes as a cooling agent to give a 'fresh minty feeling,' turned out to be a versatile chemical with a wide variety of other biological actions. MR-08 proved to be very unpleasant. They actively avoid surfaces with this chemical on them. This discovery opened the way for potential uses as nontoxic approach to repelling mosquitoes, termites, stable flies, ants and sand flies. More recently in children, MR-08 was discovered to keep head lice from clinging to human hair when added to a common shampoo enabling easy removal with the use of a fine-toothed comb. Over 90% of the lice are removed by this treatment and complete removal followed after continued use. This new finding is being presented at the forthcoming *Second International Conference on Applied Hair Science* (September 18-19) organized by TRI/Princeton.

The mechanism of how MR08 affects the biology of the head louse is currently under intensive investigation. "It certainly is not through a toxic mechanism since the lice removed from the hair after the MR08 shampoo remained alive but unable to re-attach back to the hair to re-infest its host. As a GRAS ingredient (*generally recognized as safe by the US FDA*), MR08, when used in a shampoo, provides a novel, convenient and safe alternative to the use of pesticides in the management of head lice problem in the general population," says Jonathan R. Matias, Executive Director of Poseidon Sciences.

Poseidon Sciences Group is a research and development organization in New York which focuses on the discovery of alternative technologies to replace toxic chemicals in current use. Initially organized to discover natural products from the oceanic environment, the company has expanded its discovery program in biopharmaceuticals, cosmetics and industrial applications.

For more information on the web, please see: www.poseidonsciences.com

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