

Stiefel and the scientific art of topical formulations

Are topical formulations science or art? That was one of the questions posed by Dr. Marco Taglietti during a podium presentation at Dermatology Update in Montreal.

Dr. Taglietti was making the point that while topicals can be some of the most difficult kinds of therapies to develop, recent advances in materials and technology have provided the basis for new excipients and improved delivery systems.

Topical formulations are complex, he said, since they need to provide a stable chemical environment for compounds with differing physical and chemical characteristics. That goal can be quite a challenge. He is Senior Vice-President, Head of Global Research and Development, Stiefel Laboratories, Inc., Research Triangle Park, N.C.

Dr. Taglietti added that Stiefel is continually developing and refining the formulations of the company's topical therapies. Stiefel has made this ongoing evaluation process a priority, he said, to accommodate the expectations of customers seeking cosmetic acceptability, ease of application, and convenience in their topical medications.

One way that topical therapies are refined is through the development of new delivery technology. He described some of the background involved in the development of these topical therapies—including new formulations of foams and novel polymers.

"We had a challenge a few years ago at Stiefel," he said. "We wanted to develop a stable gel formulation containing 5% benzoyl peroxide and 1% clindamycin, which was not an easy task." One approach was to consider keeping the benzoyl peroxide in suspension and the clindamycin in solution, but the problem that developed was that benzoyl peroxide tends to sediment when in suspension. The answer to this issue was to develop a new acrylic acid polymer formulation that could act as the vehicle.

One of the characteristics of the new acrylic acid polymer is that it turns into a gel in the presence of water. The water, then, is trapped in microcells in the formulation, so the clindamycin remains in solution and the benzoyl peroxide in suspension as required, he said.

Stiefel researchers determined that the negative charges developed by the ioniza-

tion of the primary polymer structure could be utilized to keep the polymer structure open and stable. As a result, the unique stable formulation of Clindoxyl was developed.

As part of his presentation, Dr. Taglietti also provided an overview of Stiefel's approach to scientific discovery, and an overview of the company's branch plants and laboratories throughout the world. Stiefel Laboratories was founded in 1847, and has been developed into the largest international, independent pharmaceutical company specializing in dermatology.

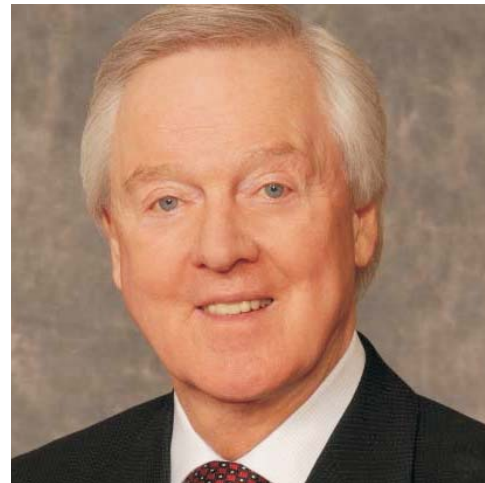
The new global headquarters in Research Triangle Park in North Carolina was opened in 2006. It has 46,000 square feet of laboratory space with full R&D capabilities, and 110,000 feet of office and support staff space. In Palo Alto, California, the company's skin biology center also has full R&D capabilities with over 50 employees. At Maidenhead, U.K., Stiefel employs over 90 people who conduct R&D. In Guarulhos, Sao Paulo, Brazil, the company has more than 70 employees with full R&D capabilities. Stiefel's innovation center in Melbourne, Australia employs 18 workers who investigate novel technologies, and the center is fully integrated with the company's other R&D centers.

Richard J. MacKay, the president of Stiefel Canada, was recently appointed to the position of Vice Chairman of Stiefel Laboratories, Inc., Board of Directors. Mr. MacKay will assess the issues faced by the company and industry across the globe, and work with the board and CEO on key projects and relationships.

"Richard MacKay has been unstinting

in his contribution to the growth and development of Stiefel worldwide. He has demonstrated his talent for global vision and shown exemplary leadership in a number of international executive positions," said Charlie Stiefel, CEO and Chairman of the Board, Stiefel Laboratories, Inc., in a statement. "He is one of the key leaders in our company's history."

Mr. MacKay has been associated with Stiefel Laboratories and their products for more than 40 years. For 20 of those years, he has served on the board of the Canadian Dermatology Foundation. In 2003, the Canadian Dermatology Association presented him with the Association's first Award of Honour, in recognition of his efforts to improve healthcare in Canada.



Charlie Stiefel, CEO and Chairman of the Board, Stiefel Laboratories, Inc., said of Richard J. MacKay (above): "He is one of the key leaders in our company's history."

Supplement to The Chronicle of Skin & Allergy, June 2007. Chronicle is an independent medical news service that provides educational updates regarding medical developments around the world. Views expressed are those of the participants and do not necessarily reflect those of the publisher or sponsor.

Support for distribution of this report was provided by Stiefel Canada Inc. through an educational grant without conditions. Information provided in this report is not intended to serve as the sole basis for individual care.

Printed in Canada for Chronicle Information Resources Ltd., 555 Burnhamthorpe Rd., Suite 602, Toronto, Ont. M9C 2Y3. Telephone 416.916.2476; facsimile 416.352.6199; e-mail: health@chronicle.org. Copyright 2007 by Chronicle Information Resources Ltd., except where noted. All rights reserved. Reproduction in any form is expressly prohibited without written permission of the publisher.