While there are some actions for which the medical community lauds the FDA, practitioners collectively voice various concerns about the agency. Furthermore, local and national lawmakers continuously suggest the introduction or expansion of regulation for pharmaceutical marketing and distribution. Such measures range from protecting prescribing records—generally embraced by the medical community—to setting price caps or limits on marketing budgets. Meanwhile, “big pharma” seems regularly to confront charges of hiding or misrepresenting data about its blockbuster drugs.

Dermatology as a relatively small specialty is to some extent insulated from many of the controversies but is by no means immune. In an ever-more conservative regulatory/legislative environment, some in the specialty wonder if it will suffer as the pharmaceutical industry continues to turn its attention to therapeutic areas that offer apparently greater opportunities for high returns on investment.

For an update on the status of current and future drug development from within the industry, we spoke with Charles W. Stiefel, Chairman and CEO of Stiefel Laboratories, Inc.

**Historical Context**

Various ancient cultures and communities esteemed individuals knowledgeable in the arts of compounding therapeutic agents. From the prehistoric “medicine man” to the medieval barber/chemist, informed individuals have provided their peers with tinctures, salves, potions, and pills. However, only in relatively recent history has a true pharmaceutical industry existed.

Pharmaceutical standardization in the US began in 1820 with the establishment of the US Pharmacopeia, a compendium of standard drugs. Forty-two years later Abraham Lincoln appointed chemist Charles M. Wetherill—founder of the Bureau of Chemistry, the predecessor of the Food and Drug Administration—to serve in the new Department of Agriculture. With the Biologics Control Act of 1902, legislators addressed purity and safety of serums, vaccines, and similar products. Four years later brought passage of the original Food and Drugs Act, which addressed interstate trade of foods, drinks, and drugs. Passed in 1938, the Food, Drugs, and Cosmetics Act remains the backbone of current FDA organization and function. It set forth pre-market review requirements and gave the agency new powers to regulate drug claims and prosecute false statements.

Just 27 years after publication of the US Pharmacopeia, the history of Stiefel...
Laboratories begins. His great, great grandfather candle maker John David Stiefel took the suggestion of friend Ferdinand von Hebra, founder of the New Vienna School of Dermatology, to incorporate active ingredients in medicated soaps to deliver them to the surface of the skin, Mr. Stiefel explains. In 1847 John David founded the company that ultimately became Stiefel Laboratories, Inc. He worked closely with von Hebra and another friend Paul Unna, who together suggested active ingredients that could optimally be incorporated into soaps. By 1910, the company marketed more than 100 therapeutic soaps around the world. However, the Smoot-Hawley Tariff, which reduced global trade nearly 70 percent, brought business to a virtual halt in 1930.

In 1944, Werner Stiefel (Charles’ father) with his brother Herbert and their father August reincorporated the business in Preston Hollow, NY and began developing dermatological products in non-soap vehicles, “virtually always as a result of a suggestion from a dermatologist friend,” Mr. Stiefel says.

Dermatology is served predominantly by pharmaceutical companies that, like Stiefel, specialize exclusively in the field (or perhaps just one or two other related sub-specialties). Narrowing the scope of development and marketing may pose risks, as a company limits its potential market and ultimately potential revenues. But specialization confers potential benefits, too, Mr. Stiefel says. “We owe our very existence to the advice and support we have received from our friends and partners in the specialty of dermatology,” he says, “and we are thus very mindful of our obligation to give back.” From his perspective, Mr. Stiefel identifies shifting approaches to dermatologic drug development.

The Current Focus

In the early years of last century, the need for effective dermatologic thera-pies “was extremely high,” according to Mr. Stiefel. “Many of our most important drugs in dermatology did not exist in 1900. There were no topical or oral antibiotics, no topical corticosteroids, and no prednisone—it was not invented until the 1950s.” Of course there were no biologics, and, Mr. Stiefel adds, methotrexate was not approved until 1953. “On the surgical front, Mohs did not develop the surgical technique that bears his name until 1938,” he observes.

While these various milestones of development focus on the identification of novel molecular entities, today, Mr. Stiefel says, “the push in development is to identify improvements or enhancements of available therapies. I believe that there will always be a need for safer and more effective medications. Optimizing the safety/efficacy profile is the name of the game.” This emphasis is not limited to medical dermatology but extends to surgical and aesthetic dermatology, as well, he suggests.

Identifying opportunities for improvement requires scrutiny of the market. “I cannot speak for all dermatology companies, but at Stiefel Laboratories, we look at every disease that presents in a dermatologist’s office and attempt to develop a better product for that indication,” Mr. Stiefel says. According to him a better product, “might mean a new molecular entity, but it can also mean a product that is less irritating, requires less frequent dosing, obviates the need for pharmacist compounding, or otherwise enhances patient compliance.”

Mr. Stiefel explains that the December 2006 acquisition of Connetics Corporation reflects this improvement-focused approach to therapeutics and the “compelling” data that “patients prefer foam vehicles, particularly when treating hairy areas of the body.”

Prospects for Development

“I believe that, in the short term, we will see fewer new molecular entities in dermatology, and a greater emphasis on incorporating known active ingredients into more cosmetically elegant delivery systems,” Mr. Stiefel observes. “In the long term, as we gain deeper insights into the underlying causes of skin diseases, I would anticipate the development of exciting new immunologic and gene-based therapies.”

The greatest obstacle to development may not be science or technology. “In my opinion, the biggest single obstacle is cost,” Mr. Stiefel maintains, noting that his company will spend

NEW In Your Practice

SOS to the World. You can simplify post-procedure skin care and enhance repair and healing with Avene’s new Post Procedure S.O.S. Kit, the company says. Designed to reduce inflammation, redness, itching, sensitivity, and other symptoms following various dermatologic procedures, the kit includes Eau Thermale Spring Water Spray, Thermal Spring Water Gel, and Cicalfate Restorative Skin Cream, which includes sucralfate to heal and protect along with copper sulfate, zinc sulfate, and zinc oxide for anti-bacterial, anti-fungal, and antiseptic properties, according to the manufacturer. Studies show that thermal spring water reduced edema and TNF-alpha in skin exposed to a vasodilating neuro-mediator. The kit, dispensed exclusively through dermatologists, retails for $58.00.
Despite the expenditure, “there are nevertheless some very interesting product concepts that we cannot pursue due to budget constraints. The cost of developing a new product and obtaining FDA approval can be astronomical, and this cost escalates significantly every year.” Plus, he reminds, “only a small percentage of projects in a pharmaceutical company’s pipeline successfully emerge as marketed products.”

The other challenge may be legislators. “I think that if the politicians who complain about drug prices had a better understanding of the enormous investment that must be undertaken before a drug is approved by the FDA, then perhaps there would be less pharmaceutical company bashing,” Mr. Stiefel says.

A Global Context

Some patients, physicians, and industry observers suggest that foreign countries grant drug approvals more easily than the US does. “Regulatory requirements differ from country to country, but two constants are that you must prove safety and you must prove efficacy,” Mr. Stiefel explains. “FDA sets the bar higher than most other regulatory authorities, as a result of which several countries will accept FDA approval as sufficient proof of safety and efficacy.”

Interestingly, some countries will not permit placebo-controlled trials, deeming it unethical to provide a patient non-treatment. “In these countries our clinical protocols are different: instead of comparing active versus placebo, we compare active versus a positive control, i.e. a drug already approved for the same indication,” Mr. Stiefel says.

Marketing regulations also differ from country to country. “In some countries, for example, physician dispensing is illegal. In other countries, we are prohibited from giving dermatologists samples of our products,” he says. “We deal with price restrictions in many markets, which can be extremely challenging.”

Greener on the Other Side?

While some other countries may have specific advantages over the US when it comes to drug development and patient care, Mr. Stiefel defends the US overall. “Many people criticize the US healthcare system, and admittedly it is far from perfect,” he says. “But I nevertheless believe that it is the best in the world. Speaking as a recently-cured cancer patient rather than a pharmaceutical executive, I feel very, very fortunate to be living in the United States.”