Successful therapies for facial hypopigmentation following deep peels have eluded dermatologists for several years. A number of approaches have been attempted, ranging from excimer lasers to topical creams, but none of these has yielded optimal results. However, a new study presented at the American Society for Lasers in Medicine and Surgery (ASLMS) annual meeting last month suggests that bimatoprost ophthalmic solution 0.03% (Latisse, Allergan) in combination with other common therapies may yield strong efficacy in repigmenting hypopigmented lesions. While the study was small, its findings may represent a significant step in the treatment of facial hypopigmentation. Ahead, author Richard Fitzpatrick, MD, Director of Cosmetic Dermatology at La Jolla Cosmetic Surgery Centre in La Jolla, CA and a Volunteer Clinical Professor at University of California San Diego, discusses the study and its potential influence on future research.

What was the impetus for this study?
Dr. Fitzpatrick notes that for several decades physicians have lacked sufficient treatment options for facial hypopigmentation that develops after cosmetic procedures. “We have learned over the years that there are pigmentation cells that must be stimulated in order for repigmentation to occur, but this has proven difficult with most procedures and treatments,” he notes. Dr. Fitzpatrick observes that excimer lasers have been mildly successful in stimulating these cells, but the results are often short-lived, and thus successful treatment would require nearly constant treatments.

“Topical therapies such as Retin-A (tretinoin, Ortho Dermatologics) and Elidel (pimecrolimus, Novartis) have all been mildly successful because they each increase melanocyte mobility, and fractional lasers also have a similar effect,” he further explains.

However, Dr. Fitzpatrick discovered that a relatively common drug in ophthalmology called bimatoprost ophthalmic solution—now marketed for eyelash growth as Latisse—may be an effective agent to encourage pigmentation, because it increases the production of pigment rather than increasing cell division. “Some reports have indicated that bimatoprost can actually change the pigment of eyes with little pharmacologic effect, which suggested that it may yield similar results in hypopigmentation,” Dr. Fitzpatrick says.

Can you explain the study and its findings?
The study examined five patients with long-standing partial facial or scar hypopigmentation who were treated with one to four sessions of Fraxel re:store (1550nm), followed by BID application of bimatoprost solution 0.03% (Latisse) and qhs application of Retin-A cream 0.025% and evaluated at one to six month intervals in comparison to their pre-treatment photos. “The reason for a combination approach is that the laser and topical treatments allow for better penetration of the bimatoprost,” notes Dr. Fitzpatrick. Results were very encouraging, he noted. “All five patients uniformly demonstrated clinically significant repigmentation, and they responded almost immediately,” he explained.

In terms of long-term effects, Dr. Fitzpatrick notes that the study’s limitations did not allow for
evaluation over longer periods of time. However, in follow-up evaluations with his own patients, Dr. Fitzpatrick found that the results were maintained for long durations, with one patient whose results last approximately three years. Moreover, bimatoprost is associated with a benign pharmaceutical effect, indicating a level of safety as well.

Dr. Fitzpatrick also addressed a concern pertaining to the growth of hair, and whether bimatoprost would encourage hair growth in the scarred/treated area. “If it is being used on true scar tissue, then the question of hair growth is of minimal concern because true scar tissue does not have hair follicles,” explains Dr. Fitzpatrick.

**What is the significance of the results of this study?**
Given the convincing nature of the results, there appears to be great interest in exploring the potential of bimatoprost ophthalmic solution in larger studies.

“While this study examined a niche group of patients, there may be other potential uses and applications of this drug in broader cases of hypopigmentation and possibly vitiligo as well,” notes Dr. Fitzpatrick.

According to Dr. Fitzpatrick, these findings remind of the importance of thinking “outside of the box,” in terms of how to approach clinical data and uses of drugs and procedures. “More often than not, it is the little things that help us to learn more about a given drug or procedure, therefore I would recommend that physicians use their powers of observation to take notice of details,” says Dr. Fitzpatrick.