Hair's the Question*

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**The questions presented by the author are not taken from the ABHRS item pool and accordingly will not be found on the ABHRS Certifying Examination.*

In the November/December 2012 issue of the *Forum* (22(6):238), Dr. Marco Barusco reviewed the book "Cicatricial Alopecia: An Approach to Diagnosis and Management," by Drs. Vera Price and Paradi Mirmirani.[1] Always on the lookout for new hair-related text books (and an easy topic on which to quiz myself!), this little volume turned out to be a gem. It is packed with clinical pearls and the latest diagnoses and treatments for scarring (cicatricial) alopecias, and I highly recommend it—especially if you want to ace the next sets of quiz questions! Here's the first. Enjoy!

**Please note that the terms scarring and cicatricial are used interchangeably throughout the referenced monograph and as such should be considered equivalent in this question set.*

1. Scarring (cicatricial) alopecias can be either primary or secondary. Which of the following defines a secondary scarring alopecia?

A. Replacement of the hair follicle with fibrous tissue
B. Incidental follicular destruction (i.e., due to a non-folliculocentric process or injury).
C. Follicular destruction as a result of a targeted inflammatory attack
D. Follicular destruction that results from infection only

2. What determines the reversibility or irreversibility of hair loss in a cicatricial alopecia (and, by extension, all alopecias)?

A. Length of time between onset and initial treatment
B. Location of the perifollicular (inflammatory) infiltration (i.e., in the infundibulum and isthmus, which causes stem cell destruction)
C. Race, sex, and age of the patient
D. Duration of perifollicular (inflammatory) infiltration (i.e., the longer the inflammation, the more destructive the process)

3. Why is alopecia areata NOT considered a scarring alopecia?

A. Because it is responsive to steroids (whereas true scarring alopecias are not responsive to steroids)
B. Because the inflammatory infiltrate is located in the hair bulb and is therefore potentially reversible
C. Because the inflammatory infiltrate is located in the bulge/stem cells and is therefore potentially reversible
D. Because it has an unpredictable course which is sometimes scarring and sometimes not

4. CCCA stands for which of the following?

A. Chronic Cutaneous Cellulitis Alopecia
B. Central Centrifugal Cicatricial Alopecia
C. Centrally Calcified Cicatricial Alopecia
D. Clinically Confounding Cutaneous Alopecia

5. Which cicatricial alopecia is known to run in families?

A. Folliculitis Decalvans
B. Central Centrifugal Cicatricial Alopecia (CCCA)
C. Androgenetic Alopecia (AGA)
D. Frontal Fibrosing Alopecia (FFA)

6. Traction alopecia is distinguishable from FFA, AGA, or CCCA by which of the following physical exam findings?

A. Areas of scalp that are completely bare (i.e., bald)
B. Scattered terminal hairs
C. Loss of follicular ostia on microscopic exam
D. Fringe sign where hairs outline the original hairline

7. Which of the following physical exam findings is the hallmark of the cicatricial alopecias?

A. Diminished or absent follicular ostia
B. Negative "Pull Test" (i.e., 1-4 telogen hairs)
C. Positive "Pull Test" (i.e., 5 or more anagen hairs)
D. Tapered distal ends of hairs observed using a Hair Card

8. Which of the following items in a patient's hair loss history makes cicatricial alopecia less likely?

A. Absent family history of similar alopecia
B. History of hair regrowth
C. Family history of androgenetic alopecia
D. History of self-treatment with exogenous androgens

9. Which of the primary cicatricial alopecias has the highest incidence according to available demographic data?

A. Pseudopelade (of Brocq)
B. Lupus Erythamatosus (Discoid)
C. Lichen Planopilaris (LPP)
D. Central Centrifugal Cicatricial Alopecia (CCCA)

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1. **B.** Think of patients with tumors, burns, traction, infection— their hair loss is due to causes that are not folliculocentric. D is not completely true since secondary scarring alopecias can also include infiltration or physical trauma. C is the definition of a primary scarring alopecia, and A happens in both primary and secondary alopecias.
2. **B.** A can be a factor, as can D, but the reason an alopecia is potentially reversible at all is the survival of the stem cells due to being spared direct inflammatory involvement.
3. **B.** (I am in a rut with all these "B" answers, I know!) However, you, Dear Reader, should have gotten this one easily if you had mastered Question 2.
4. **B** is correct. Ha.
5. **B** (again). April Fools! C runs in families but is NOT a cicatricial alopecia!
6. **D.** While it is true that some sparsely sprinkled "survivor" hairs often mark the area where a hairline once existed in male AGA, the Fringe Sign is different because it extends all along the old hairline. Loss of follicular ostia, answer C, is the hallmark of a scarring alopecia. And you thought all the answers would be "B."
7. **A.** Those who check their answers after each question had an unfair advantage on this one. C is often correct in that it IS found during active cicatricial alopecia, but since it may also be found in patients undergoing chemotherapy (anagen arrest) or Loose Anagen Syndrome, it is not the hallmark of cicatricial alopecias. D is the hallmark of miniaturization occurring most often in AGA.
8. **B.** B is correct again, because I longed once again to use this letter as the answer! Cicatricial alopecias do not typically run in families (see Question 5) but AGA can simultaneously occur.
9. **C.** I was trying not to be too predictable, Dear Reader. The three that seem to have the next highest incidence include (depending on which study you read) Folliculitis Decalvans, Central Centrifugal Cicatricial Alopecia (CCCA), and Pseudopelade (of Brocq).

Reference

1. Price, V., and P. Mirmirani. *Cicatricial Alopecia: An Approach to Diagnosis and Management.* Springer Science + Business Media, LLC, 2011.◆

Pardon Us...

We sincerely apologize, but an error was made in last month's "Hair's the Question". The correct answer to Question 8 is C and not D.

Meetings and Studies

David Perez-Meza, MD *Mexico City, Mexico* DrDavidPM@permanenthairsolutions.com

Following are two excellent summaries of great and important hair meetings. First, Dr. Nilofer Farjo summarizes the highlights of the 2nd International Congress on the Use of Growth Factors, Cell Therapy, and PRP in Dermatology. Different and important topics were discussed at this meeting in Milan, Italy, especially regarding the use of growth factors, which has been a hot topic in hair meetings.

In addition, Dr. Sharon Keene shares a very informative summary of the Cowgirl Workshop in Houston that was hosted by Dr. Carlos Puig and the ISHRS. This workshop covers female pattern hair loss (FPHL), which is different and separate from male pattern hair loss (MPHL).

Review of the 2nd International Congress on the Use of Growth Factors, Cell Therapy, and Platelet Rich Plasma in Dermatology *January 18-19, 2013 • Milan, Italy*

Nilofer Farjo, MBChB *Manchester, UK* nfarjo@gmail.com

Dr. Fabio Rinaldi put on another interesting program covering some of the newer interventions in dermatology and in hair loss. This congress brought together a mix of scientists, researchers, dermatologists, and hair restoration surgeons. The faculty included many eminent people from Italy and abroad. Here I will outline a few of the talks that were given. Unfortunately, I was unable to attend the full meeting or the early morning workshops that discussed some of the more practical aspects of the new therapies.

Some of the meeting faculty *(L to R)*: Drs. Fabio Rinaldi, Joseph Greco, Jerry Cooley, Mario Marzola, and Ryan Welter.

Dr. Rinaldi gave an overview of the use of platelet rich plasma (PRP). He discussed the antibacterial and anti-inflammatory effects of growth factors in platelets. In ulcer healing, the use of PRP already has a well-established base. He showed examples of ulcer healing as well as a case of improvement in rosacea following treatment with PRP.

Congress Organizer, Dr. Fabio Rinaldi

Dr. Mike Philpott gave a talk entitled: "*In Vitro* Model of the Role of Growth Factors during the Hair Cycle and Therapeutic Opportunities." He discussed the *in vitro* observations in cultured hair follicles. He stated that you can see anagen-to-telogen transformation occurring in 5-10% of hair follicles, but it's difficult to see catagen-to-telogen in culture. Telogen to anagen is even more difficult to see. Dr. Philpott said that he has only seen this phenomenon once in 20 years. He explained that mouse whisker follicles are used *in vitro* because they are good for seeing the whole growth cycle. He described the difficulty in finding factors that stimulate anagen and says it is easier to find factors that delay catagen (references: A. Messenger's report with cyclosporine A, Val Randall and work with prostamides). Stimulating the IGF-1 receptor causes growth factors to be stimulated, which in turn causes hair growth. In this respect, IGF-1 is 1,000 times more potent than insulin at stimulating anagen. In culture conditions, endothelial growth factor (EGF) has been added to cultures. When hair follicles are starved of EGF, however, the result is that follicles go into catagen. Interestingly, Dr. Philpott described TGF-beta as stimulating growth in the lower part of the follicle but inducing catagen if applied to other parts of the follicle.

Dr. Ralf Paus gave his usual entertaining talk on neuroendocrine control of human hair follicle epithelial stem cells. He described the interplay between the nervous system and the hair follicle. There is a large network of nerves around the hair follicle at the level of the stem cells so there must be a strong link between the two systems. He described the role of prolactin production in the hair follicle and that of ACTH in repigmentation. Interestingly, he mentioned that in men prolactin stimulates catagen, but in women it has the opposite effect. We know that stress hormones affect the hair follicle. As an example of this effect, Dr. Paus described experiments in mice in which an external stressor was used, in this case sound. The mice were found to have fewer proliferating cells and skin inflammation. Other factors discussed were Beta endorphin, ACTH, and MSH, which are involved in pigment stimulation; CRH inhibits hair follicle growth in cultures and stimulates mast cell degranulation; and prolactin stimulates K15 expression. But there are large individual differences. He stressed that it is important to understand hair follicle biology as the hair follicle is a system (except for melanoctyes) that cycles forever and, therefore, has important implications in understanding anti-aging therapies. Finally, he discussed endo-cannabinoids and showed that cannabinoid receptor 1 (CB1) is important for

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hair growth control. CB1 stimulation has opposite effects of decreasing hair growth (as well as keeping mast cells in check with resultant decrease in pain and itch) and, at the same time, stimulating CK15+ cells.

Dr. Francisco Jimenez speaking on grafting into ulcers.

Dr. Des Tobin spoke about melanocytes, specifically in relation to bone morphogenic proteins (BMP). Melanocytes are derived from the neural crest and so are not just present in hair follicles and skin but also in the ear, heart, and meninges. Melanin granules are formed during anagen I to IV, but their biosynthesis is not well understood. In skin, melanocytes give their melanin to keratinocytes, which uses it and then degrades it. With age, there is difficulty in this degradation process so we see the development of skin lesions such as solar lentigenes. In Caucasian skin, the melanin is not present in the upper layers; that is, it has been degraded, but in the hair follicle there is no significant degradation up the hair follicle. With anomalies such as melasma, freckles, and solar lentigenes, there are the normal number of melanocytes but there is some breakdown in communication between melanocytes and keratinocytes. Dr. Tobin's research has shown the mechanism of transfer of melanin between the melanocyte and the keratinocyte is via filopodia. The growth factor BMP-6 has been shown to stimulate the melanin transfer by increasing numbers of filopodia. The highest rate was produced at a concentration of 100ng/l in culture. I asked Dr. Tobin if applying BMP-6 to the scalp would help to reverse greying and he stated, "No, this is a very dangerous substance. It should not be used this way."


(L to R) Drs. Ralf Paus, Nilofer Farjo, Fabio Rinaldi, and Des Tobin

Dr. Mario Marzola travelled from Australia to learn the latest thinking on growth factors and stem cell therapies. He gave a talk in which he showed some of the new equipment that he has invested in to use ultrasound to separate mesenchymal stem cells (MSCs) from abdominal fat. The stromal vascular fraction contains these MSCs, which have paracrine secretions containing growth factors and cytokines. There is evidence that these secretions when used both IV and intra-articularly are effective in treating osteoarthritis. It appears that in patients treated over the past 3½ years that the improvement in symptoms is sustained. So Dr. Marzola would now like to try this therapy for hair restoration, but the main question to be answered is, Where should these stem cells be placed? Dr. Ryan Welter also spoke about his experience in using adipose-derived stem cells. He described different possible methods of using the cells. For example: IV injection vs. local application vs. intradermal vs. incubation with grafts. Dr. Tobin raised the point that local morphogens produced the same effect in existing hair follicles so unless you can individually label cells it would be difficult to know what effect you are getting, if any, from the proposed stem cell therapy.


Dr. Joseph Greco speaking on alternative applications for regenerative therapy

Dr. Ramon Grimalt gave an overview of updates in hair multiplication. I have not described his updates here as Dr. Jerry Cooley has written a very comprehensive overview on this topic in the last issue of the Forum that covers the update from Dr. Grimalt.

Dr. Joe Greco gave a talk entitled, "Alternative Applications Utilizing Regenerative Cell Therapy." He described the use of concentrated plasma in spinal disc injury, burns, ulcers, acne, dry eyes, post-herpetic neuralgia pain, and veterinary uses. There is a lot of available data via the veterinary college that Dr. Greco collaborates with on wound repair with some very impressive results. He also described his use of this treatment in hair restoration over the past 5 years including one possible use of injecting it into donor scars.

Dr. Alfredo Rossi spoke about his clinical experience of using PRP. He found that when treating AGA there was an increase in hair calibre but not an increase in hair numbers. Macrophotography showed that the hair looked better.

Dr. Cooley spoke about his experience using ACell and lysosomal ATP. In the last issue of the *Forum* (Vol. 23, No. 2), you can see one of these applications by Dr. Cooley in a patient who had hair loss following radiotherapy. His most dramatic improvements, however, are related to wound healing. He showed some very impressive results when treating hand injuries. Dr. Cooley notes that the use of PRP and ACell in hair growth has not been overwhelming. He feels it may be good in female pattern hair loss, but he doesn't know how long will the results last.

Dr. Yuvol Ramot spoke about the use of spermidine in culture. He describes a 20% increase in anagen elongation. However, spermidine is easily metabolized so the question was, Is this a direct effect? So they next experimented with alpha-methylated spermidine, which isn't degraded, and they found that it produced a direct effect of stimulating anagen. So the next question to ask was, Should spermidine be added to PRP/stem cell therapy? Dr. Ramot thought that it should.

Finally, a number of Italian doctors relayed their experiences using PRP in dermatology applications such as in treating necrobiosis lipoidica, anti-aging, genital disease, acne and other scars, and inflammatory conditions. They all described some degree of success with PRP. However, it was noted that, in the majority of cases, multiple therapies were used and also that there was a great deal of variation in the way that PRP is both prepared and applied.

Overall, this was a very interesting congress full of possibilities for future therapies. No doubt there will be much more on the topic of growth factors and stem cell therapy in future meetings.◆

Review of the 2013 ISHRS Cowgirl Hair Loss Workshop
March 14-17, 2013 • Houston, Texas, USA

Sharon Keene, MD *Tucson, Arizona, USA,* drkeene@hairrestore.com

It was again my pleasure and privilege to participate as faculty for the second semi-annual Cowgirl Hair Loss Workshop in Houston, Texas, under the auspices and planning of our esteemed ISHRS president, Dr. Carlos Puig. The workshop has evolved with a goal of providing attendees with an updated review of issues pertaining to female hair loss including its diagnosis as well as its surgical approach, with its techniques and artistry, which are distinct from male hair loss patients. The workshop's low student-to-faculty ratio presented a unique opportunity to interact closely with doctors from varying backgrounds and with varying degrees of experience with female hair loss and restoration, resulting in an unparalleled and focused learning opportunity.

Workshop faculty and participants.

Dr. Sharon Keene and participants.

While Dr. Puig reviewed the pertinent methods to make a correct diagnosis of female pattern hair loss (FPHL) and ways to avoid confusion in diagnosis; I tackled the increasingly complex and evolving subject of the pathophysiology of hair loss in women—beyond the traditional concept of genetically determined, androgen mediated, progressive miniaturization of hairs—and how these differences may impact treatment. Hand-in-hand with this subject was genetic evidence in sync with male pattern hair loss (MPHL), in addition to emerging evidence suggesting that some of the polygenic contributions for female AGA and FPHL may be different. A general consensus among faculty and alluded to, but that is not well differentiated in the medical literature, was that diffuse thinning hair loss in women is likely to be a different clinical entity than patterned thinning more characteristic of male androgenetic alopecia, where thinning does not involve side or occipital hairs. Diffuse thinning generally is not amenable to surgery and deserves a full medical evaluation to exclude medically treatable causes. As part of the diagnostic evaluation, a review of hormonal tests that can be performed to assist in appropriate medical treatment was given. In the process of reviewing supporting medical literature, evidence for a more comprehensive approach to thyroid evaluation beyond a simple TSH was presented, along with an update on the prevalence and presentation of non-classical 21 hydroxylase deficiency—one of the most common and yet unrecognized genetic recessive entities that contributes to cases of PCOS and FPHL. Additional faculty lectures from our learned, eloquent and always entertaining past president, Dr. Russell Knudsen, provided attendees with the important determinants for choosing conservative, medical management of hair loss in females. He then transitioned into the critical considerations for the surgical approach when this is determined to be appropriate and discussed the unique aspects, survey data, and applied artistry for creating a feminine hairline. He also presented several cases of transgender patients whose hairlines were transformed and feminized using these feminine design principles. Important information was provided by faculty member Dr. Sara Wasserbauer, who discussed methods to manage the post-operative patient, including newer modalities and non-narcotic medications (long acting EXPAREL®) to achieve post-operative analgesia, as well as appropriate ways to manage post-operative complications. Dr. Wasserbauer then provided participants with pearls on techniques and the performance of eyebrow and eyelash restoration in women.

Dr. Russell Knudsen shows how to entertain a crowd.

After a day of didactic lectures and a full morning of live surgery on two female patients chosen to illustrate the concepts discussed in the lectures, it was rodeo time! As the Grand Finale to the workshop, faculty and participants were treated to an afternoon and evening at the annual Houston Rodeo and Livestock Show, where we watched champion rodeo cowboys ride bucking horses who happily took their bow after making every effort to kick their heels high, and were often successful in tossing their riders into the stadium sand. Likewise, a similar fate was afforded the bull riders brazen enough to climb on the backs of the feisty Brahma bulls. Later that evening, and inspired by these events, two of the young workshop participants along with Dr. Knudsen displayed their own cowboy prowess by riding the mechanical bull at one of Houston's popular Western night clubs. It was an entertaining and unique end to a unique workshop and learning experience. For those who know Dr. Knudsen well, and are aware how deft he is at "slinging the bull," we now know he can ride one too (at least on slow to medium speed)!◆

Letters to the Editors

Re: History of Help Hair Shake

Larry J. Shapiro, MD *Hollywood, Florida, USA* *Flhairdoctor@gmail.com*

I would like to respond to the editors' comments regarding Dr. Jennifer Martinick's Letter to the Editors in the March/April *Forum.* A brief history of the development of the Help Hair Shake would shed light on its current use. In South Florida, in the late 1990s, I started to notice a majority of my patients complaining of hair loss from anabolic products. They requested a product that they could use to work out without the side effect of hair loss. I developed an Enhanced Low Anabolic Whey Protein. We tested the shake and HT patients started calling and claiming growth starting at 6-8 weeks and full growth by 4-6 months with minimal shock loss. And patients had minimal shedding when stopping the finasteride at 8 months if they stayed on the shake 2-3 times a week. We subsequently followed over 800 patients who reported similar results. We also discovered that patients who added their own anabolic products to the Help Hair Shake would get slower regrowth. Now we always screen for anabolic use and place them on a Low Anabolic Profile (LAP). We have even used the shake by pre-loading poor donor and they have become more viable HT candidates. Help Hair Shake plus the Low Anabolic Profile is called AFR, or Accelerated Follicular Restoration.

The shake, however, was only intended for my patients. Dr. Jerry Cooley approached me at the ISHRS 2010 convention and wanted to try it. After many emails explaining the Low Anabolic Profile, he reproduced my AFR results. Dr. Martinick has also reproduced my results and we currently have 15 AFR clinics worldwide whom I have trained. Drs. Zakarias and Schmitz showed an AFR patient at the Live Patient Viewing during the last ISHRS convention. The criticism seems to be that we do not have supportive results. Reproducibility is a very good start.

Help Hair is not a giant pharmaceutical company that has the resources to do a large double blind study. Had I known I was going to be under such close scrutiny, I would have taken picture perfect photos when I started years ago. And then I discovered that even with such photos I would have a COI, so I would rather leave it to the AFR clinics worldwide to prove my point. I think my staff did an outstanding job of calling, following up, and getting patients to send proof by email photos or follow-up in the office, if local. We have over 90 AFR patients documented online with hundreds of before and after pictures. Again, just getting consistent, fast results had us thrilled. Dr. Martinick was brilliant enough to try it on an Alopecia Totalis patient. I cannot comment on a single case but there are several published studies on the connection between elevated IGE levels and Alopecia Totalis. Glutathione derived from Leucine may decrease IGE. These and other biochemical pathways are outlined on my SHAPIRO Chart including an Anabolic Index Rating.

I think that over time hair transplant physicians will use AFR to benefit their patients in ways that I could only imagine. We want to thank Dr. Martinick for taking on the challenge of double blind studies, and we encourage the AFR clinics to show off their work at various venues, including this one if allowed. There is a paradigm shift that occurs in medicine every once in awhile. This is one of those times.◆

Re: Dr. Bernstein's article on the Robotic System (*Forum*, 2012; 22(6):228-229)

John P. Cole, MD, Alpharetta, Georgia, USA, *john@forhair.com*

My personal view is that there are three reasons to own a robot at this point: Marketing, lack of an FUE skill set, and no desire to personally perform the procedure. If you are going to buy one, however, I do feel that allowing your assistant to make the decisions while running the robot is potentially a medical violation or ethical problem. If we do not address this, the neografters will just move on to the next target, which is the new robot physician who will allow the assistant to run the robot, remove the grafts, determine the donor area, and place the grafts after making sites. If this is what we are headed toward, perhaps many might all better get on board.

In reviewing Dr. Bernstein's comments regarding the ARTAS® Robotic System, I felt compelled to elaborate and offer rational reasoning to avoid adding robotic surgery to your practice at this time. First, there are many proven methods to perform FUE with many years of consistent results. Second, other methods of doing FUE have lower follicle transection rates. Third, the quality of grafts with other methods is equal to or better than that of the robot. Other methods of FUE are much faster and can do sessions greater than 3,000 grafts in one day. Other methods of FUE allow for a non-shaven approach to FUE whereas the robot does not. One can perform other methods of FUE in one room. There are a variety of different punches and techniques available through other methods of FUE whereas one is far more limited with the robot. One can cut grafts and place them simultaneously with other methods of FUE. Other methods of FUE can be learned in a single week. Finally, other methods of FUE are far less expensive.

With other non-robotic methods of FUE there are many ways to approach a high follicle transection rate. This is how other methods of FUE are able to achieve much lower follicle transection rates. These options are not available with the robot.

We have already discussed the concerns of allowing unlicensed individuals to perform FUE. With regard to the robot, Dr. Mario Marzola questioned the legality of allowing an unlicensed individual to manage the controls of the robot under physician supervision. This made me question my own interest in owning a robot. How could my assistant run a robot under my supervision when I'm in another room? I could hire another physician to run the robot, but then I could train that physician how to do FUE much faster without the robot. Due to my concerns over the legalities surrounding the robot, I elected to postpone ownership of a robot.

There are many decisions that must be made during FUE including donor area, depth, punch size, and the proper graft to choose. What changes should I make if the follicle transection rate is high or if there are incompletely dissected grafts? Another option with the robot is to over-ride the robot's choice of grafts. These are physician decisions. While the promoters of the robot state that the physician can give guidance to the technician regarding a variety of choices, is there a difference between asking an unlicensed individual to cut grafts under physician supervision with a rotating punch? Unless the physician is physically behind the controls during the entire procedure, many choices are left to

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Review of the Literature

Nicole E. Rogers, MD *Metairie, Louisianna, USA* nicolerogers11@yahoo.com

Hair transplantation: friend or foe?

- Donovan, J.. Lichen planopilaris after hair transplantation: Report of 17 cases. *J Dermatol Surg.* 2012; 38:1998-2004.
- Kossard, S., and R.C. Shiell. Frontal fibrosing alopecia developing after hair transplantation for androgenetic alopecia. *Int J Dermatol.* 2005; 44:321-323.
- Crisostomo, M.R., et al. Hair loss due to lichen planopilaris after hair transplantation: a report of two cases and a literature review. *An Bras Dermatol.* 2011; 86:359-362.

Dermatologist Dr. Jeffrey Donovan recently published 17 patients who developed the scarring form of alopecia called lichen planopilaris (LPP) after hair transplantation. They were identified from his clinic patients between January 1, 2010, and April 30, 2012. Their diagnoses were made at variable time points (4 to 36 months after surgery) after they were observed to have poor growth. Handheld dermoscopy demonstrated perifollicular erythema, perifollicular scale, or scalp erythema, which are all features associated with the scarring alopecias. Their diagnoses were confirmed via 4mm punch biopsy that was read by a dermatopathologist. Fifteen patients were male and 2 were female. None had evidence of LPP prior to surgery, or lichen planus of the skin, nails, or mucosa. The most common symptom was itching, present in 53% of patients, but 38% had no symptoms whatsoever.

The author reminds readers how cutaneous lichen planus can develop as a result of trauma (Koebner phenomenon), and suggests that LPP may also result from this process. This is supported especially by the observation that one patient developed LPP in and around the occipital donor area. Other trauma-related etiologies included in the literature include face-lift surgery and breakdancing.

Comment: LPP is a relatively unusual condition but it appears to be increasing in prevalence along with its sister condition, frontal fibrosing alopecia. The etiology of these conditions is still unknown, but trauma has been identified by previous authors including Kossard and Shiell, Crisostomo, and Chang who each reported 1-7 patients developing LPP after hair transplantation. As hair surgeons, we must focus on learning to identify these conditions before surgery, where possible, and remember to consider LPP in the differential diagnosis when poor growth cannot otherwise be explained.◆

Arrector pili plays role in regrowth

- Yazdabadi, A., et al. Miniaturized hairs maintain contact with arrector pili muscle in alopecia areata but not in androgenetic alopecia: a model for reversible miniaturization and potential for regrowth. *Int J Trichology.* 2012; 4:154-157.

Dermatologists in Australia led by Dr. Rodney Sinclair teamed up with Dr. David Whiting to publish some very interesting observations about the anatomical connections between the arrector pili muscle (which contains stem cells in the bulge area) and miniaturized follicles of various hair loss conditions. Normally, follicular units of 1-4 hairs are served by a single arrector pili muscle, which attaches to the outer root sheath. In this study, histologic sections were taken from patients with male pattern hair loss (MPHL), female pattern hair loss (FPHL), alopecia areata, and chronic telogen effluvium (used as control). Researchers observed that only in alopecia areata was a connection maintained between the arrector pili muscle and the outer root sheath of miniaturized follicles. In MPHL and FPHL, the connection was either lost altogether or was maintained only with the single remaining follicle. They suggest that this helps explain the reversible nature of alopecia areata, as well as how the miniaturization in MPHL and FPHL can be difficult or impossible to reverse. Specifically, the authors conclude that the arrector pili muscle supports or stimulates a stem cell population in the bulge or dermal sheath, "via a yet uncharacterized biochemical or mechanical mechanism." Loss of direct contact may induce a miniaturization process.

Comment: This article contains important anatomic insights specifically related to the fact that the attachment of the arrector pili muscle appears necessary to ensure the reversibility of the miniaturization process. It certainly begs further questions: Have long-standing, chronic alopecia areata patients lost their arrector pili connection? Do the recalcitrant follicles of alopecia areata (occipital scalp in ophiasis pattern) have a different (poorer) anatomical connection with the arrector pili than other parts of the scalp or body? It also prompts us to imagine what will be the next best medical treatment for hair thinning: a drug called CAPM, an acronym for "Connect the Arrector Pili Muscle"?◆

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the unlicensed assistant including depth. With the robot, there are grafts that are not fully dissected or missed attempts. When this happens, is it more appropriate for a licensed physician to be at the controls? Unfortunately, the entire robotic process is quite slow especially when compared to other techniques of FUE.

It is natural for a physician to be tempted to have unlicensed individuals harvest grafts with the robot due to the enormous commitment of time. Is this the appropriate decision, however? What I have not heard from those involved in robotics is a statement that it is legal for a physician to delegate these duties to an unlicensed assistant.

These are all things that anyone considering a robot should consider prior to making a significant investment in the robot.◆

Message from the 2013 Annual Scientific Meeting Program Chair

Robert True, MD, MPH *New York, New York, USA* drtrue@hairlossdoctors.com

I want to thank all of you who submitted abstracts for review. Even though we limited submissions to two per person, we had the largest number of submissions in the Society's history. We found many outstanding papers among the abstracts and we can look forward to high-quality presentations at the meeting.

I would like to highlight the workshop and symposia offerings planned for San Francisco. Dr. James Harris has put together a great line-up.

Wednesday, October 23, we will offer three non CME mini-courses in FUE: 1) Utilizing the SAFE System—James Harris, MD; 2) Utilizing the Programmable Cole Isolation Device (PCID)—John Cole, MD; and 3) Utilizing Manual, Non-Powered Techniques and Instrumentation—Jose Lorenzo, MD.

San Francisco Travel Association photo by Phillip H. Coblentz

Also on Wednesday, the Advanced/Board Review Course under the direction of Bertram Ng, MBBS, and Paul McAndrews, MD, and the Basics in Hair Restoration Course, directed by Jon Ballon, MD, and Sam Lam, MD, will be offered.

Morning workshops will include:

- *What the Hair Restoration Surgeon Needs to Know: The Medical and Surgical Management of Non-Androgenic Alopecia,* Vera Price, MD, and Marcelo Pitchon, MD
- *Corrective Surgery and Strategies,* Jerzy Kolasinski, MD, PhD
- *Hairline Design and Recipient Area Planning,* Antonio Ruston, MD
- *Body Hair FUE,* Alex Ginzburg, MD
- *Ethnic Considerations in Hair Restoration,* Kapil Dua, MD

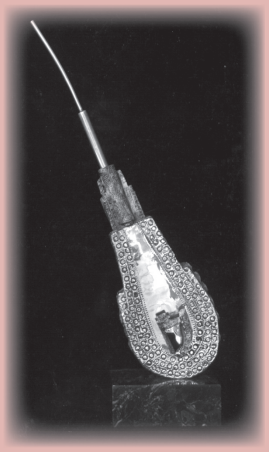
Lunch Symposia will include:

- *HT Complications and Their Avoidance,* Michael Beehner, MD
- *Question the Expert* (aimed at the newcomer), Sharon Keene, MD
- *HT Outcome Improvement* (PRP, ACell, storage solutions, technical aspects of surgery, etc.), Francisco Jimenez, MD
- *HT Marketing Strategies,* Bessam Farjo, MBChB

These courses have been designed to respond to educational needs identified in this year's ISHRS Member Needs Assessment Survey. We anticipate the demand for these courses to be very high, so be sure to sign up early when meeting registration opens.◆

CALL FOR NOMINATIONS

2013 ISHRS Follicle Awards



GOLDEN FOLLICLE AWARD — Presented for outstanding and significant clinical contributions related to hair restoration surgery.

PLATINUM FOLLICLE AWARD — Presented for outstanding achievement in basic scientific or clinically-related research in hair pathophysiology or anatomy as it relates to hair restoration.

DISTINGUISHED ASSISTANT AWARD — Presented to a surgical assistant for exemplary service and outstanding accomplishments in the field of hair restoration surgery.

How to Submit a Nomination:
Include the following information in an e-mail to: info@ISHRS.org

- Your name,
- The person you are nominating,
- The award you are nominating the person for, and
- An explanation of why the person is deserving; include specific information and accomplishments.

Nominating deadline: July 15, 2013

See the Member home page on the ISHRS website at www.ISHRS.org for further nomination criteria. All awards will be presented during the Gala at the ISHRS 21st Annual Scientific Meeting, October 23-26, 2013, San Francisco, California.

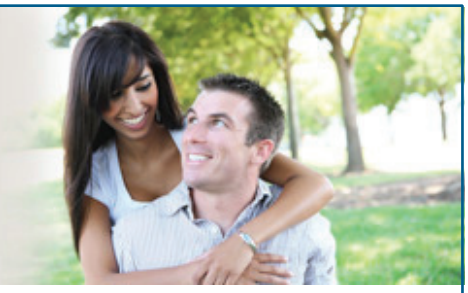
ISHRS Research Grants Available

The International Society of Hair Restoration Surgery (ISHRS) offers research grants for the purpose of relevant clinical research directed toward the subject of hair restoration. Research that focuses on clinical problems or have applications to clinical problems will receive preferential consideration. There are several opportunities this year for hair-related research grant funding through the ISHRS with typical amounts of $1,200 to $2,600 USD per grant. ISHRS members in good standing may apply.

The deadline for grant applications is **July 15, 2013.**

Further information and a full application can be obtained on the ISHRS website at **www.ISHRS.org/member-grants.htm.**

ISHRS Cheryl Pomerantz Surgical Assistants Training Resources Center



After several years in the making, we are pleased to announce a new and extremely valuable training resource for ISHRS Physician Members.

The ISHRS Cheryl Pomerantz Surgical Assistants Training Resources Center (http://www.ishrs.org/content/ishrs-cheryl-pomerantz-surgical-assistants-training-resources-center) is now available and contains materials to help physicians train new hair transplant surgical assistants. The training resources have been developed by a task force composed of ISHRS members who are devoted to the education and quality training of other professionals in their field.

The Surgical Assistants Training Resources Center is organized by topic. The format of this resource center includes videos, Word documents with references and tips, and sample PowerPoint slides for you to tailor to teach your surgical assistants. Topics covered include:

1. Job Description
2. Basic Science for the Beginner Technician
3. Instrumentation
4. Dissection: Slivering and Graft Preparation
5. Graft Placement
6. Trainer Placer Board
7. Quality and "H" factors (human factors)
8. Efficiency Standards
9. Surgical Assistant Resource Manual

This resource is available to ISHRS Physician Members and Physician Pending-Members on a monthly or quarterly basis at the following rates:

ISHRS Physician Members*
Monthly lease (30 days): $750.00 USD
Quarterly lease (90 days): $2,000.00 USD

ISHRS Physician Member-Pendings†
Monthly lease (30 days): $900.00 USD

**Quarterly lease rate not available to Physician Member-Pendings.*
†Physician Member-Pendings, please call or email the ISHRS Headquarters to request a login. It's ready for you to access today!

The Surgical Assistant Training Resource Center is available for lease via our online gateway. A confidential URL and password will be emailed to you after your payment has been processed. Your password will automatically expire after your 30- or 90-day usage term. You may lease subsequent months by repeating the online lease process or by contacting the ISHRS Headquarters at telephone 1-630-262-5399 or U.S. Tollfree at 1-800-444-2737 or info@ISHRS.org.

We are confident that you will find this to be a priceless resource for training your staff.

Follow the link to the Surgical Assistant Training Resources Center:
https://www.registration123.com/ishrs/STF5/

Surgical Assistants Corner

Ailene Russell, NCMA *Charlotte, North Carolina, USA* arussell@haircenter.com

In my opinion, the real purpose of attending conferences or submitting information and ideas is that information is knowledge. The following description is from a newcomer to our Society, who hit this concept on the head in the opening for her article: "…it is never too late to share my experience on attending my first ISHRS Annual Meeting"!

I hope when you read this, it takes you back to the first time any of you attended. I applaud Kelsey Salinas, an RN from the Kienecker Medical Ltd. Clinic, who traveled to attend from King's Cross London. A big thank-you to this newcomer for stepping up to the plate!

It is exciting and a little intimidating to attend the first time. I remember mine very well—2002 in Chicago. I got a warm welcome both from some who are no longer with us and also from those who have structured what has evolved into the Assistants Auxiliary.

So I have challenge for all of you: I would like you to think about your first conference and then perhaps share it with us, what made the most sense, and what impressed you (and, of course, include how much fun you had and the new friends you made).◆

My experience at my first ISHRS Annual Scientific Meeting

Kelsey Salinas, RN *London, United Kingdom*

I believe it is never too late to share my experience on attending my first ISHRS Annual Meeting, which was held in the beautiful setting of the Bahamas.

As a first time attendee of an annual meeting, I was very anxious but at the same time excited on what the symposium had to offer. I had a lot of expectations and questions and concerns. Prior to traveling to the Bahamas, I had a long list in my mind that needed to be on paper so I could tick them off at the end of the conference. Getting to where I am now has been an interesting journey and so this is my story.

I was looking for work and stumbled on this job advertisement on the Internet: "Medical Assistants required." So I thought hmmm… no harm in trying. I wrote a cover letter, attached my résume, and clicked send with my fingers crossed. I was not expecting much because during that time (and still now), for every job opening there were hundreds of applicants vying for that one spot. Days passed when out of the blue I received a phone call that I had been shortlisted and that they wanted me to come for an interview. Hurray! Though nervous on the day, I went for the interview—and the rest, as they say, is history. Four years on and having attended my first ISHRS annual meeting, it is not a day I will ever regret. As a Registered Nurse educated and trained in my homeland (not England), I honestly had not heard of hair transplant until I came to London four years ago. I have since then been working as a Surgical Assistant for Dr. Ulf Kienecker at Kienecker Medical Ltd in London, United Kingdom.

Working in this field for four years and counting, I can say the experience has gone from zero to hero. From dissecting hair grafts with magnifying lenses and a light source from the room ceiling to working with these amazing Vision Mantis Elite Microscopes (which made the team's job more efficient and kept us from breaking our backs or necks). From sitting for hours and hours on uncomfortable swivel chairs to using ergonomic chairs for the assistant's comfort. From working at office space treatment rooms to a proper theatre room with the coolest theatre table and the brightest operation lights a surgical assistant (and a surgeon, of course) would ever want. And now, I have just attended my first ever ISHRS conference! Something I would not have dreamt of in a hundred years. It was an explosion of information for me from Day 1 until the conference ended that I literally had 9 paper pads all filled up back-to-back with notes, transcripts, and summaries to take with me and share with my colleagues back in cosmopolitan London. I also had my bag filled up with loads of brochures and information leaflets of products our clinic might find very useful. Amazing, right?! Of course, our clinic bought some instruments and equipment. Overall, the experience was very revealing, informative, and educational. The conference is something I can look forward to every year now (here's hoping my boss reads this). It has definitely broadened my skills and knowledge in this arena and has been a worthwhile involvement.

However, the most rewarding experience—and the one thing that always makes my day—is the positive feedback and results from satisfied patients. After all, at the end of the day, it is the client who should be the happiest.◆

Message from the 2013 Surgical Assistants Program Chair

Diana Carmona *La Jolla, California, USA* karis_137@yahoo.com

I am enjoying doing the preliminary work on the Surgical Assistants Program that is being held in San Francisco. It is coming together. We are excited and we encourage all of you to make your plans to attend. You can look forward to an expanded hands-on workshop. In this year's program, we will be hosting Question and Answer panels with the experts. With that in mind, please feel free to send me any ideas or questions that you may have for our panels.◆

Message from the 2013 Surgical Assistants Program Vice-Chair

Aileen Ullrich *Hillsboro, Oregon, USA* aileen@gabelcenter.com

I am honored to be this year's Surgical Assistants Vice-Chair and very excited about organizing the Surgical Assistants Dissecting and Implanting Workshop at the Annual Scientific Meeting in San Francisco.

For this year's workshop, our goal is to offer a program relevant to both beginning and seasoned surgical assistants, with ample time to learn and practice various methods and techniques for graft preparation and placement.

We will incorporate photographs and video at each station to share advanced techniques, convey key concepts, and explain basic principles. In addition, we will have the opportunity to utilize a new silicon model for teaching graft implantation.

I encourage you all to consider attending the workshop as it will be a dynamic learning opportunity. I welcome your comments, suggestions, and ideas. Please do not hesitate to contact me aileen@gabelcenter.com.

I look forward to seeing you all in San Francisco!◆

CODE OF ETHICS
of the International Society of Hair Restoration Surgery

PREAMBLE

Membership in the International Society of Hair Restoration Surgery is a privilege accorded to physicians of the highest moral and professional standards, it is not a right. The ethical principals adopted by the International Society of Hair Restoration Surgery define the essentials of honorable behavior for the hair restoration surgeon.

I. The member recognizes that a greater moral responsibility is necessary in cosmetic surgery than in many other fields because of the lack of oversight by government and/or peer review and the emotional involvement of the patient.

II. The member acknowledges that he or she is in a position of trust and will not betray that trust.

III. The member will not take emotional or financial advantages of patients.

IV. The member acknowledges that he or she is in a position to affect each patient's appearance, self-confidence, and possibly the success of the patient for his or her entire life. With every treatment the lifelong effect is considered in the light of continuing hair loss.

V. The member will recommend treatment for each patient as the member would recommend for themselves or another family member under the same circumstances. This does not mean that the treatment cannot be modified to accommodate the desires of the patient.

VI. Members will maintain truth and integrity in their advertising always avoiding deceptive communications. If a member promotes a technique or an opinion which is not accepted by the majority of the profession as a whole, the member should acknowledge that this opinion or technique is the opinion or technique of the individual physician and not shared by the profession as a whole. Trademarking and copywriting names for common terms are discouraged.

VII. Members will not denigrate their colleagues using false or misleading information with the intent of injuring the reputation or business of an ISHRS member by any means, either directly or indirectly to include print, radio, television, Internet advertising, Internet website activity, or any other public statement made by the member or his/her representative. Violation of this code will not be tolerated and is grounds for disciplinary action.

VIII. A member with knowledge of an illegal or improper act(s) by another physician should report such activity to the appropriate agency.

IX. A member shall continue to study, apply and advance scientific knowledge. A member shall pass knowledge on to colleagues.

X. The patient's confidences shall be kept private. Information will be divulged only with the permission of the patient except as otherwise required by law.

XI. Members will adhere to the codes of ethics of medical societies of their respective countries.

Classified Ads

Seeking Surgical Technicians/Medical Assistants

Ziering Medical is seeking experienced surgical technicians/medical assistants to join our team.
Excellent working environment, compensation, salary and benefits.
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Upcoming positions available in Atlanta, Beverly Hills, Chicago, Detroit, Newport Beach, New York, Philadelphia, and Texas.
Please e-mail your résumé to: **hairrestorationjobs@gmail.com**

Seeking Experienced Hair Transplant Technician

Experienced hair transplant technician needed at Anti-Aging & Aesthetic Medical Center near Raleigh, NC.
Flexible hours. Great working environment and benefits. Great pay. Moving Expenses.
All inquiries are completely confidential.
Please e-mail your résumé to **azacco@earthlink.net** AND call 919-362-5090.

Established Practice for Sale

Established San Diego/La Jolla hair transplant practice for sale. Terms flexible.
E-mail inquiries to **wreedmd@mac.com**.

To Place a Classified Ad

To place a Classified Ad in the *Forum*, simply e-mail **cduckler@ishrs.org**.
In your email, please include the text of what you'd like your ad to read. Classified Ads run $85 per insertion for up to 70 words.
Our rate sheet can be found at the following link: **http://www.ishrs.org/ishrs-advertising.htm**

PHYSICIAN PRACTICE ALERT!

The International Society of Hair Restoration Surgery (ISHRS) recently reviewed advertisements and other marketing materials directed at dermatologists, plastic surgeons, cosmetic surgeons, family practitioners, gynecologists, otolaryngologists, and other physicians encouraging them to incorporate hair restoration surgery into their practice via a proposed "turnkey" technology. **The ISHRS is concerned that the marketing materials jeopardize patient safety and place physicians at risk.**

The marketing materials offer to sell a mechanized device and provide technicians to perform hair restoration surgery with minimal input from a physician. Hair restoration surgery is a complex cosmetic procedure requiring attention to detail and proper long term treatment planning to ensure patient safety and achieve optimal results. While using non-physician personnel/technicians to perform hair restoration surgery may have economic benefits for a practice, doing so may jeopardize patient safety and create legal liability for physicians. In many if not all States, the harvesting of scalp tissue is considered surgery and/or the practice of medicine. In those jurisdictions, such action by non-physician personnel may constitute the unlicensed practice of medicine, potentially subjecting said personnel, the responsible physician(s), and the practice to civil and/or criminal liability. Furthermore, physicians utilizing non-physician personnel to perform procedures, who fail to notify their professional liability insurance carriers of the same, may jeopardize their coverage in the event of a claim.

Like all surgical procedures, hair restoration surgery must be taken seriously and should be performed only by physicians with the appropriate education, training, experience, and proven competence. Hair restoration surgery can be very rewarding to both patients and surgeons. If you are a physician interested in offering hair restoration surgery to patients, the ISHRS encourages you to diligently pursue the education, training and experience necessary to properly and competently perform hair restoration surgery.

The ISHRS is a nonprofit corporation, exempt from federal income tax pursuant to Internal Revenue Code Section 501(c)(3). The ISHRS seeks to advance the art and science of hair restoration by licensed, experienced physicians; educate and increase the level of knowledge of physicians and their assistants regarding hair restoration techniques, procedures, and related issues; encourage and facilitate the free interchange of ideas, knowledge, and experience among physicians and assistants providing hair restoration; and encourage professional excellence and patient safety in connection with hair restoration surgery.

ISHRS Headquarters | 303 W. State Street, Geneva, IL 60134 USA
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www.ISHRS.org

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Dates and locations for future ISHRS Annual Scientific Meetings (ASMs)

2013: 21st ASM
October 23-26, 2013
San Francisco, California, USA

2014: 22nd ASM
November 12-16, 2014
Bangkok, Thailand

2015: 23rd ASM
September 9-13, 2015
Chicago, IL, USA

2016: 24th ASM
September or October 2016
TBD

INTERNATIONAL SOCIETY OF ISHRS HAIR RESTORATION SURGERY

Advancing the art and science of hair restoration

Upcoming Events

Date(s)	Event/Venue	Sponsoring Organization(s)	Contact Information
May 24-26, 2013	2nd Mediterranean FUE Workshop ISHRS Regional Workshop *Madrid, Spain*	International Society of Hair Restoration Surgery Hosted by Alex Ginzburg, MD & José Lorenzo, MD *http://www.2ndmediterraneanfueworkshop.com*	Regarding the Program: *joselorenzo@injertocapilar.com* Tel: +34-610-0444-033 Regarding Registration: *info@ishrs.org* Tel: 1-630-262-5399
August 3-4, 2013	2013 FUE Palooza ISHRS Regional Workshop *Denver, Colorado, USA*	International Society of Hair Restoration Surgery Hosted by James A. Harris, MD Clinic Sponsor: Hair Sciences Center of Colorado *www.fue-palooza.org*	*jlmccasky@hsccolorado.com*
October 23-26, 2013	21st Annual Scientific Meeting of the International Society of Hair Restoration Surgery *San Francisco, California, USA*	International Society of Hair Restoration Surgery *www.ishrs.org*	Tel: 1-630-262-5399 Fax: 1-630-262-1520
October 27-28, 2013	Beautiful Brows ISHRS Regional Workshop *San Francisco, California, USA*	International Society of Hair Restoration Surgery Hosted by Sara Wasserbauer, MD *www.ishrs.org* or *www.eyebrowworkshop.com*	Tel: 1-925-939-4763 info@californiahairsurgeon.com
November 14-17, 2013	5th Annual Hair Restoration Surgery Cadaver Workshop *St. Louis, Missouri, USA*	Practical Anatomy & Surgical Education (PASE), Center for Anatomical Science and Education, Saint Louis University School of Medicine In collaboration with the International Society of Hair Restoration Surgery *http://pa.slu.edu*	*http://pa.slu.edu*
November 22-24, 2013	AAHRS 2013 and Haircon 2013 (Joint meeting of AHRS and AAHRS) *Hotel Le Méridien, Bangalore, Karnataka, India*	Association of Hair Restoration Surgeons (India) and Asian Society of Hair Restoration Surgeons *www.haircon2013.com*	*mysorevenkat@hotmail.com* *drvasa@gmail.com* *drkapildua@gmail.com* *pradeep@vacationsexotica.com*