

C α LECIM[®]

PROFESSIONAL

Advanced Hair System

Product Overview & Potential for Clinics
Powered By PTT-6[™]



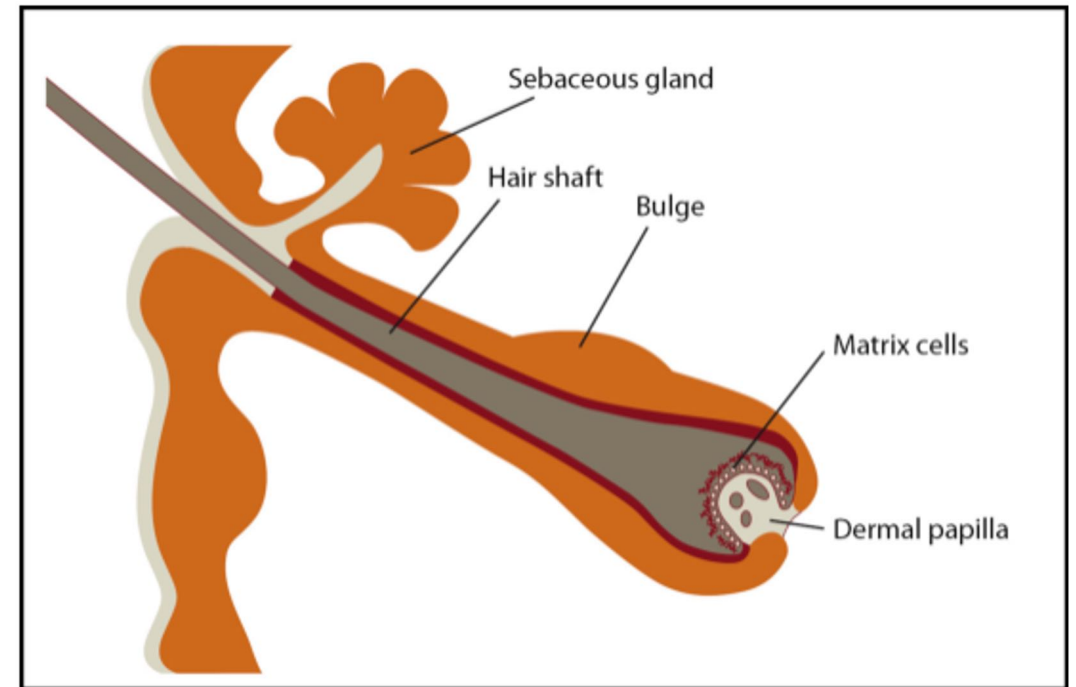
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- Hair & Hair Loss Overview
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Hair Overview: The Dermal Papilla Cell

Dermal Papilla Cells (DPs) are mesenchymal cells at the base of the hair follicle in the dermal papilla.

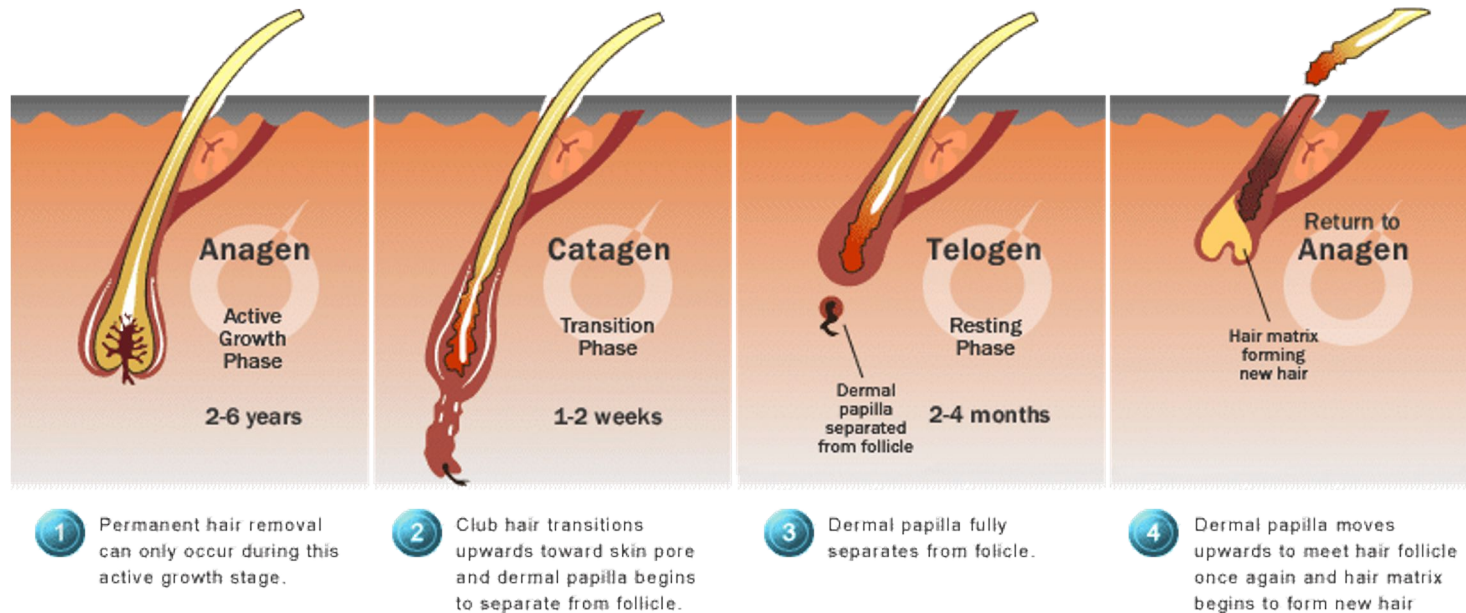
These cells play crucial roles in hair growth, formation and cycling, predominantly by secreting growth factors and molecules responsible for constructing the extracellular matrix.



Dermal Papilla on a healthy hair follicle

Hair Overview:

Understanding the Dermal Papilla Cell in Hair Follicle Cycling



The hair growth cycle has 3 distinct stages:

- Anagen
- Catagen
- Telogen

The activity of the Dermal Papilla Cells plays a key role in the management of this cycle.

Wound Repair Regen. Nov-Dec 1998;6(6):524-30. doi: 10.1046/j.1524-475x.1998.60605.x. Role of hair papilla cells on induction and regeneration processes of hair follicles

T. Matsuzaki, K. Yoshizato

Cell Reports, Volume 24, Issue 4, 24 July 2018, Pages 909-921.e3 The Mesenchymal Niche of the Hair Follicle Induces Regeneration by Releasing Primed Progenitors from Inhibitory Effects of Quiescent Stem Cells, EfratAvigad Laron¹EmilAamar¹DavidEnshell-Seiiffers^{1,2}

Science Direct, Regeneration of Epidermal Structures, David L. Stocum, in Regenerative Biology and Medicine (Second Edition), 2012, Understanding the cellular basis of skin growth

L. Guo, in Biomaterials for Treating Skin Loss, 2009 Hair follicle dermal papilla cells at a glance

Ryan R. Driskell,¹ Carlos Clavel,² Michael Rendt,^{2,*} and Fiona M. Watt^{1,3,*}

Hair Loss Overview: Causes of Hair Loss

Causes of Hair Loss:

- Inherited genetic susceptibility
- Hormonal clutters
- Immune system
- Poor nutrition
- Internal and external environmental elements
- Mental disorders
- Aging

All Factors impact the hair cycle and hair follicle recovery via:

- Cell Death
- Inflammation around the tissue of the follicular
- Release of damaging free radicals.

Owczarczyk-Saczonek, A.; Krajewska-Włodarczyk, M.; Kruszewska, A.; Banasiak, Ł.; Placek, W.; Maksymowicz, W.; Wojtkiewicz, J. Therapeutic Potential of Stem Cells in Follicle Regeneration. Stem Cells Int. 2018, 5, 1049641.

Hair Loss Overview:

Forms of Hair Loss

- **Androgenic Alopecia (AGA)** – AGA known also as male & female pattern hair loss is the most common form of hair loss. It has a range of causes, mostly due to hormones and genetics.
- **Alopecia Areata (AA)** – AA is an autoimmune condition that causes patchy hair loss. It occurs when the body's immune system mistakenly attacks the hair follicles, leading to hair loss in small, round or oval patches on the scalp or other areas of the body.
- **Telogen Effluvium (TE)** – TE is a form of temporary hair loss characterized by excessive shedding of hair. Examples would be Post Partum & Menopausal hair loss as well as post-COVID-19 Hair Loss.
- **Traction Alopecia (TA)** – TA is a form of hair loss caused by prolonged tension or pulling on the hair. The constant tension on the hair follicles can lead to inflammation and damage, resulting in hair breakage and hair loss.



The Science: Our Stem Cells

The Advantages of Cord Lining

- The highest-yielding source of stem cells, **12 Billion** at first growth. This is 1000 x more than the next best source
- The highest purity source, **99%** using our techniques
- Two types of Stem Cell, Mesenchymal & Epithelial
- Ethically Sourced, without any harm to humans or animals
- Young and active
- Easy to process

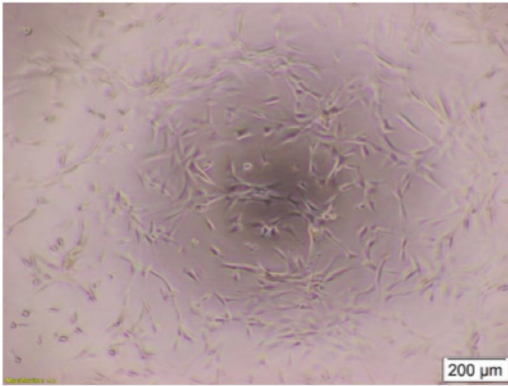
*Cord Lining Stem Cells CytoMate Video capture by Dr Robert Chang,
University of Colorado*

The Science: Our Active Ingredient

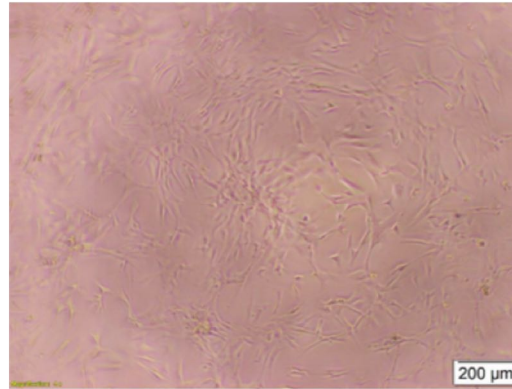
- PTT-6™ is a cultured media using our proprietary techniques to harness 1000's of powerful Stem Cell proteins.
- 1 Million stem cells are used to produce just 1ml of PTT-6™
- In-Vitro Results: PTT-6™ for Hair
 - 24% increase in Dermal Papilla Cell Proliferation:
At the optimum concentration of PTT-6™, dermal papilla cells displayed positive growth of 24%. This study shows that PTT-6™ DP cell proliferation function is on par with the industry 'gold standard' of Minoxidil.
 - 30x reduction in inflammation:
When exposed to PTT-6™ TNF Alpha was demonstrated to be reduced by up to 30x which is comparable to that of Vitamin D.

The Power of
PTT-6™
It's No Miracle. It's Science.®

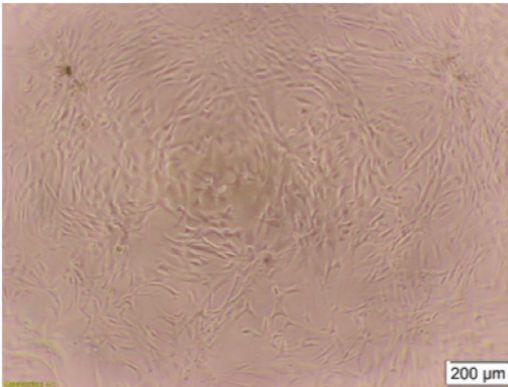
In-Vitro Trials of PTT-6[™] on Human Follicle DP Cells



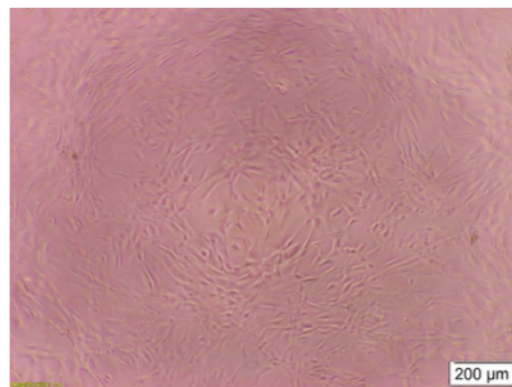
Dermal Papilla Cells Before



Dermal Papilla Cells Negative Control



Dermal Papilla Cell Proliferation
with 2µg/ml Minoxidil



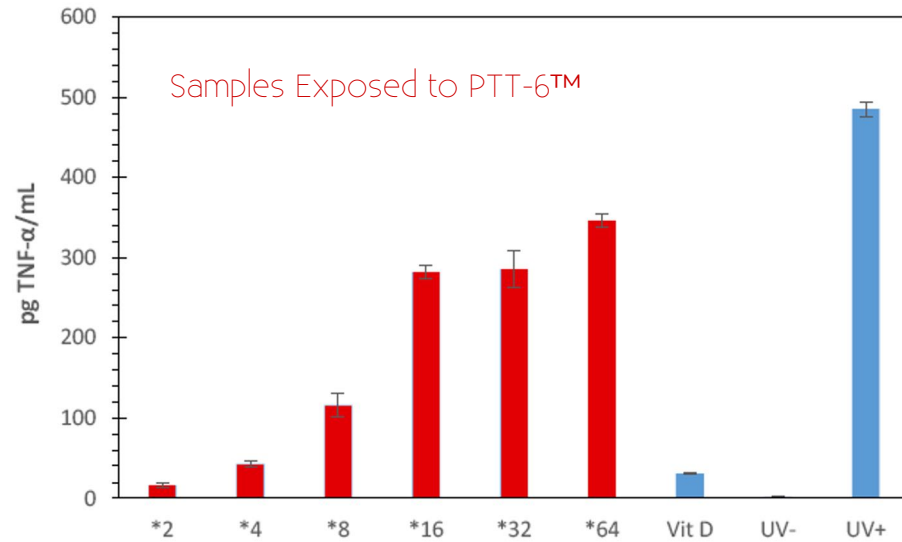
Dermal Papilla Cell Proliferation
with PTT-6[™]

Propagation of human follicle dermal papilla cells:

Conducted by Singapore Polytechnic, Dept of Technology, Innovation and Enterprise, by Dr Li Chun Xiang and Dr Yin Hui

Human follicle DP cells when exposed to PTT-6[™] showed a **24%** increase in Cellular Proliferation compared to the Negative Control. This was statistically similar to the DP Cell Proliferation when exposed to Minoxidil at a **2µg/ml** concentration.

In-Vitro Trials of PTT-6[™] on anti-inflammatory activity



S/No	Sample ID	Conc of TNF-alpha (pg/ml)
1	CALECIM x 2 Dil with UV Induced NHEK	16.19
2	CALECIM x 4 Dil with UV Induced NHEK	42.69
3	Vitamin D (Experimental Positive)	30.62
4	Non-UV Induced NHEK (Baseline Control)	1.62
5	UV-Induced NHEK (no CALECIM added)	485.13

Anti-inflammatory activity on TNF alpha:

Conducted by Singapore Polytechnic, Dept of Technology, Innovation and Enterprise, by Dr Li Chun Xiang and Dr Yin Hui

TNF alpha is an inflammatory cytokine and is responsible for a diverse range of signalling events within cells, leading to apoptosis.

The concentration of TNF-Alpha was reduced by up to **30x** when exposed to PTT-6[™]. This was statistically comparable to Vitamin D, known to be an effective solution within the industry for reducing inflammation.

The Product:

CALECIM[®] Advanced Hair System

2 Key Modes of Action:

- Increased Dermal Papilla Cell Proliferation
- Reduced Scalp Inflammation

Quick & Meaningful Results:

- Visible results within 6 weeks
- Improved hair thickness, strength and condition
- Increased number of hairs per follicle and active follicles
- Decreased shedding and distance between follicles
- High customer satisfaction



The Product:

Application Protocol

There are 2 Different Ways of Using the Product

IN-CLINIC — 6 Treatments (1 Per Week)

1. Disinfect the scalp
2. Apply 2.5ml of CALECIM[®] AHS and needle into the treatment area using a derma stamp with 0.5mm – 2mm long microneedles
3. Apply an additional 1.5ml CALECIM[®] AHS following the derma stamp treatment and gently rub it into the scalp
4. The patient takes home the remaining 1ml of CALECIM[®] AHS to be applied periodically over the next day
5. Advise patient not to wash their hair following the treatment for optimally 24 hours after.

AT-HOME — 12 Treatments (2 Per Week)

1. Wash Hair in the shower
2. Sterilize the dermastamp with the disinfectant swab supplied in the kit
3. Stamp gently across the scalp parting the hair section by section
4. Apply 2.5ml of the Advanced Hair System to the scalp
5. Gently massage into the scalp

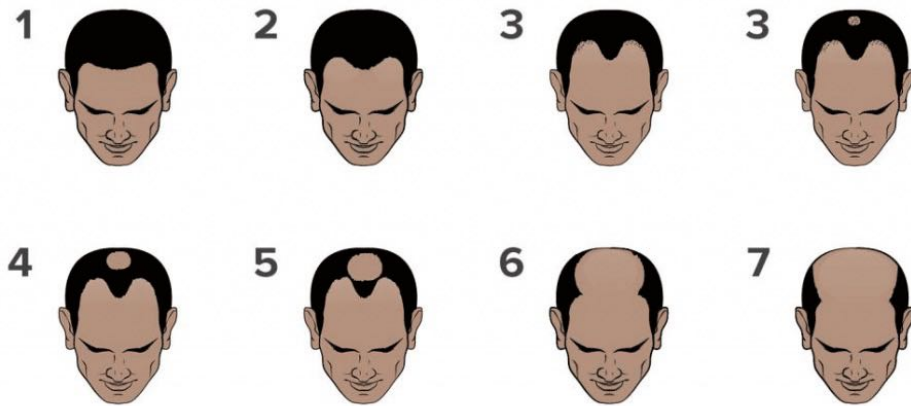
The Product:

Application Protocol – Choosing Patients

How Severe is the Hair Loss?

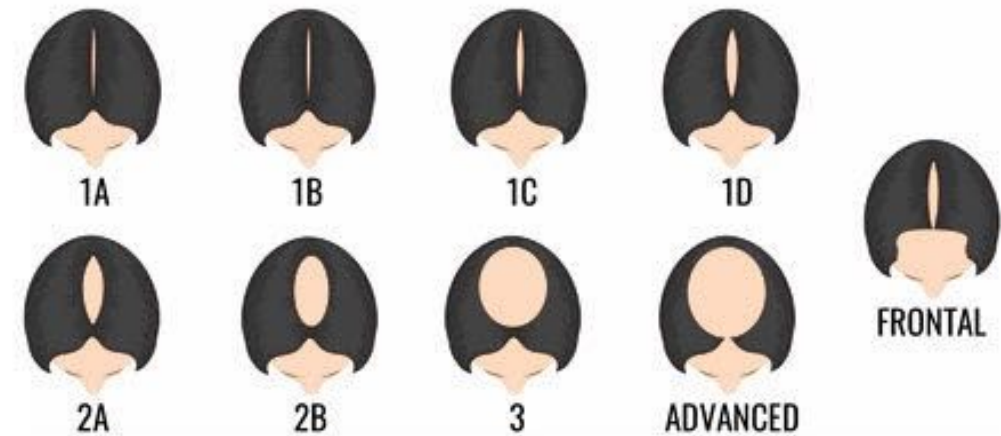
In Men - Norwood Scale

- For men, the product is recommended to be used on up to 5 on the Norwood scale
- For 6 & 7 the recommendation is a hair transplant



In Women – The Ludwig Scale

- For women, we recommend the product be used on up to 2B on the Ludwig scale.
- For 3 & advanced the recommendation is a hair transplant



The Product:

Clinical Results

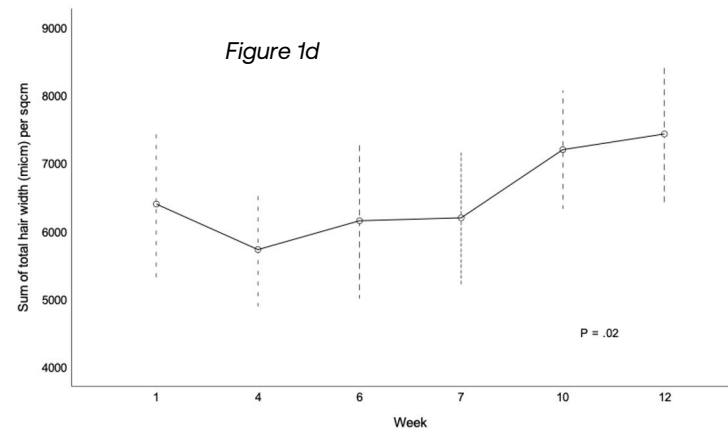
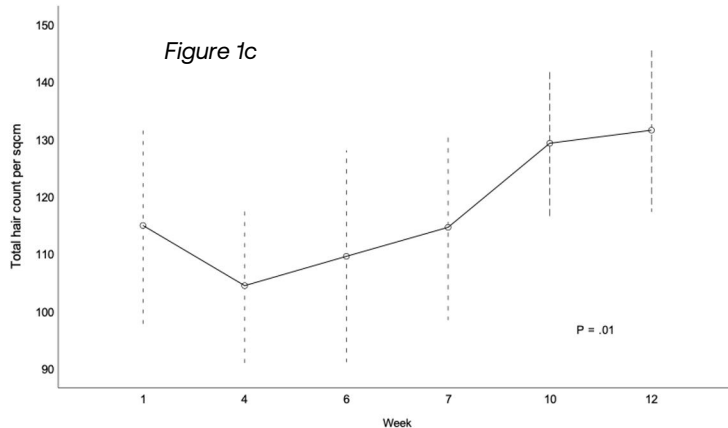
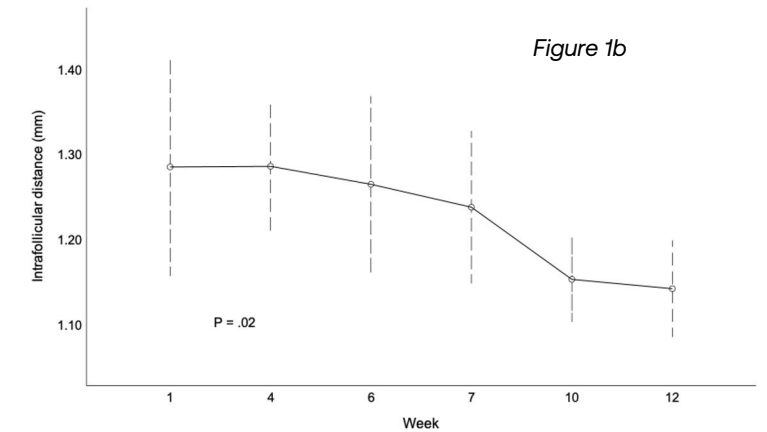
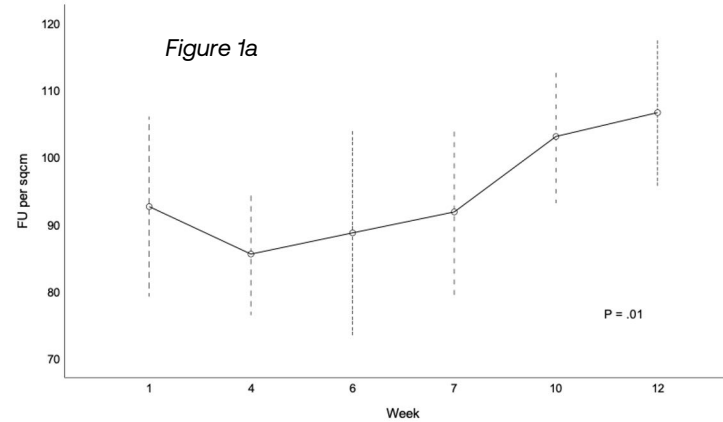
- Over 6 Papers – [Please find here](#)
- Evidence of Effectiveness on [Androgenic Alopecia](#)
- Evidence of Effectiveness on [Post-COVID-19 Telogen Effluvium](#)
- Evidence of Effectiveness on [Alopecia Areata](#)

The Advanced Hair System has shown highly promising results in a clinical setting with data being published on a regular basis.

Trial Primary Investigator	Publication	Time Period	No. of Patients	No. of Patients Responding**	% Success Rate
Kelly Morrell	CRCH Internal Data	6 Weeks	5	5	100%
Faz Iqbal	CRCH Internal Data	12 Weeks	8	8	100%
Dr Lee Shu Jin	Plastics & Reconstructive Surgery	20 Weeks	1	1	100%
Dr Nikolaus Duschek	Cosmetics•	12 Weeks	10	9	90%
Dr Michelle Ng	World Congress of Dermatology	12 Weeks	62	58	94%
Dr Matthew Jafarzadeh	World Congress of Hair Research	6 Weeks	9	9	100%
TOTAL			95	90	95%
<i>*Submitted for Publication</i> <i>**Objective improvement based on specialist visual inspection</i>					

Dr Nikolaus Duschek & YUVELL

“After 12 weeks of treatment, a significant amplification of the follicular units per square centimetre (sqcm) ($P < .05$) with an associated decreased intra-follicular distance ($P < .05$) was detected, as illustrated in Figure 1a and b.”



“Likewise, the total hair count per sqcm increased ($P < .05$) and thus, the sum of hair width per sqcm ($P < .05$), as shown in Table 3 and Figure 1c and d. Subjectively, the standardized questionnaires demonstrated a significant improvement in hair growth, less need to hide hair and an increased quality of life associated with hair loss, as presented in Table 4 and Figure 2a-c. 9 out of 10 patients said they would recommend the product.”

Dr Nikolaus Duschek & YUVELL

The Advanced Hair System in Numbers



Increase in total hair count from baseline to week 12.

The number of individual hairs on the scalp increased by 14% from the start to end of treatment.



Increase in total hair width from baseline to week 12.

The hairs were 16% thicker at the end of treatment compared to the start.



Increase in follicular units from baseline to week 12.

The number of follicles per square centimetre on the scalp increased by 15%.



Increase in terminal hair width from baseline to week 12.

The existing hairs that were present prior to treatment became 16% thicker over the course of treatment.



Decrease in intrafollicular distance from baseline to week 12.

The distance between the follicles on the scalp decreased by 12%, due to the increase in thickness and number of follicles.



The Product: Competing Products & Treatments

	Patented	Drug-Free	Suitable for Men & Women	Known Side Effects	Results	Price
Advanced Hair System	Yes	Yes	Yes	No	90% Within 6 Weeks	\$360 At Home, \$1,200 In Clinic
Minoxidil	No	No	Yes	Yes	50% Within 6 Months	\$15-30 Per Month
Finasteride	No	No	No	Yes	70% Within 2 Years	\$20-60 Per Month
PRP	No	Yes	Yes	No	Mixed Within 3 Months	\$1.5-2k
Hair Transplant	No	Yes	Yes	Yes	90-95% Success Rate	\$10-15k

The Advanced Hair System can be used in conjunction with all the competing products & treatments listed above.

The Product: Consumer Feedback

34%

Repeat Purchase Rate for At-Home

40%

Repeat Treatment Rate In-Clinic*

*As reported by clinics after patient had undergone full initial 6 sessions. [View More Feedback Here](#)

It's No Miracle. It's Science.®

INVCC-
3 reviews US

★★★★★ Verified Feb 20, 2023

A game changing

I can't stop using the **hair** product or my **hair** will fall out again, even if I reduce the frequency or the amount but I don't care since is the only thing that has stopped my alopecia also, I use the skin product, it's awesome, I never got so many compliments on my skin. I tell everyone about this magnificent discovery, I'm so grateful to Calecim it's a life changing.

Date of experience: February 20, 2023

Useful Share

Sophie Coleridge
1 review GB

★★★★★ Verified Mar 6, 2023

Easy to use and best of all actually...

Easy to use and best of all actually works!! I did the 6 week program and have definitely noticed results. I never had one bald patch, per se, but I had thinning and sparse **hair** in lots of places. It has made me feel much more confident. Would recommend to friends

Date of experience: March 05, 2023

Useful 1 Share

MR JOHN MULLIN
1 review US

★★★★★ Verified Jan 22, 2023

Hair growth

High quality product , after six weeks, my **hair** is definitely thicker.

Date of experience: January 11, 2023

Useful Share

emma parlanti
10 reviews GB

★★★★★ Verified Mar 26, 2023

Amazing product and does what is says...

Amazing product and does what is says on the tin! After first six weeks very noticeable **hair** growth and new **hair** shoots, so I went for a second round of treatment. I'm so pleased so far.

Date of experience: March 18, 2023

Useful Share

Melisa
1 review FR

★★★★★ Verified Nov 2, 2022

Hope for hair loss

My long **hair** stopped falling after I used Calecim's **hair** serum. What's more, lots of baby **hair** is growing back in the spots where they fell. And the new **hair** is black!!! I never thought that a cure for **hair** loss would be found but apparently I was wrong!!!

Date of experience: November 01, 2022

Useful Share

Traci
4 reviews CA

★★★★★ Verified Jan 9, 2023

I have been using Calecim for 6 weeks...

I have been using Calecim for 6 weeks and I am very happy with the results!!! My **hair** is coming in and where it was lacking there is a lot of new growth. I will continue to use this product. Thank you.

Date of experience: November 29, 2022

Useful Share

Results: Before & After

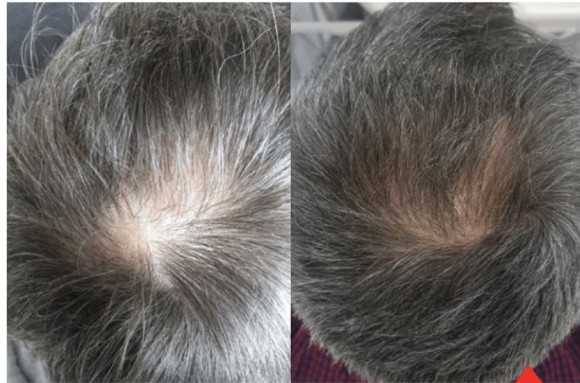


6 Weeks use of the Advanced Hair System to improve overall hair quality & reduce shedding.

Kelly Morrell, Scalp Confidential, London

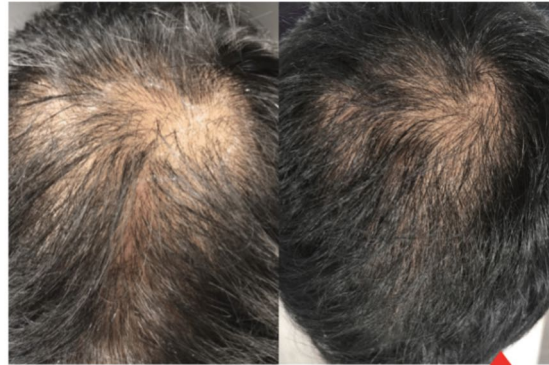


Results: Before & After



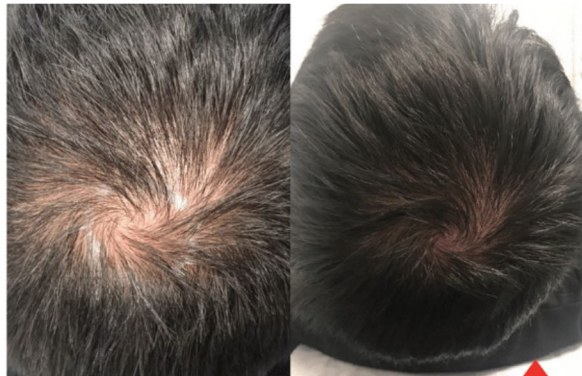
Before

After



Before

After



Before

After

6 Weeks of treatments in the clinic. Improved hair density, Coverage & Pigmentation.

[VIEW MORE B&A's HERE](#)

It's No Miracle. It's Science.®



THE  TIMES

“I tried the new wonder serum for thinning hair

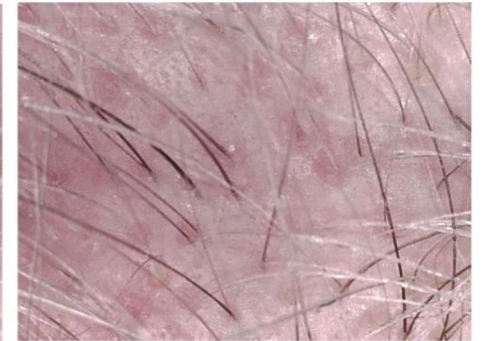
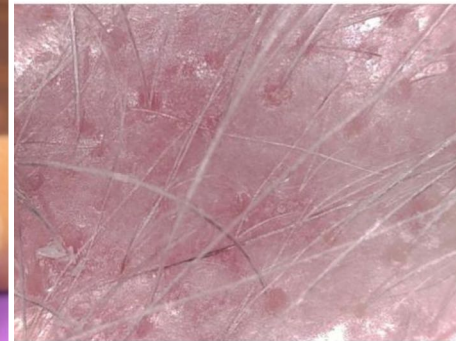
A revolutionary treatment to regenerate follicles promises to restore your mane in just six weeks — and you can even apply it at home”

—Olivia Falcon
Veteran Beauty Editor

Results: Before & After



Patient with Alopecia Areata, 6 Treatments with
the Advanced Hair System
Kelly Morrell, Scalp Confidential



Results: Before & After

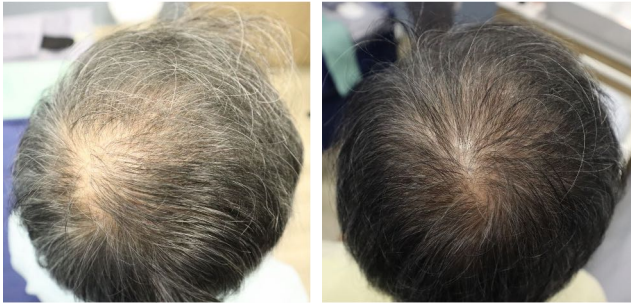


Patient with Androgenic Alopecia, 6 Treatments with
the Advanced Hair System
Mirka Figueroa, Dutch Hollow Medical Day Spa

It's No Miracle. It's Science.®



Results: Before & After



Weekly Treatments for 6 weeks, Dr Elendrus Tan

Weekly Treatments for 6 weeks, Kelly Morrell



Application: Weekly Treatments for 6 months
Treatment: Needling 0.8mm with Advanced Hair System

Improved hair density, thickness, quality & pigmentation

Faz Iqbal, Hair Technician

Sage Medical, Singapore

Application: Weekly Treatments for 12 Weeks

Treatment: Needling 1mm with Advanced Hair System

Improved hair density, thickness, quality & pigmentation

"With the right candidates, I've found CALECIM[®] Advanced Hair System delivers excellent results even in patients who were unresponsive to Minoxidil."

Kelly Morrell, Hair Technician,
Scalp Confidential, London



Results: Before & After

Patients with Androgenic Alopecia

6 Weekly Treatments, Before, After 6 weeks and after 3 Months.

Dr Michelle Ng, Hong Kong



The CALECIM® Advanced Hair System

Accessible Advanced
Hair Rejuvenation



It's No Miracle. It's Science.®