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# OMICS International Conferences

OMICS International is a pioneer and leading science event organizer, which publishes around 500 open access journals and conducts over 500 Medical, Clinical, Engineering, Life Sciences, Pharma scientific conferences all over the globe annually with the support of more than 1000 scientific associations and 30,000 editorial board members and 3.5 million followers to its credit.

OMICS Group has organized 500 conferences, workshops and national symposiums across the major cities including San Francisco, Las Vegas, San Antonio, Omaha, Orlando, Raleigh, Santa Clara, Chicago, Philadelphia, Baltimore, United Kingdom, Valencia, Dubai, Beijing, Hyderabad, Bengaluru and Mumbai.

A Novel Oral Supplement  
**Androgenic Alopecia**

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# Topics to be covered

- Androgenic Alopecia – Introduction
- Hair loss scientific aspects
- The Hamilton-Norwood Scale
- Gainmore™ M: A novel oral supplement to treat androgenic alopecia
- Gainmore™ M Study

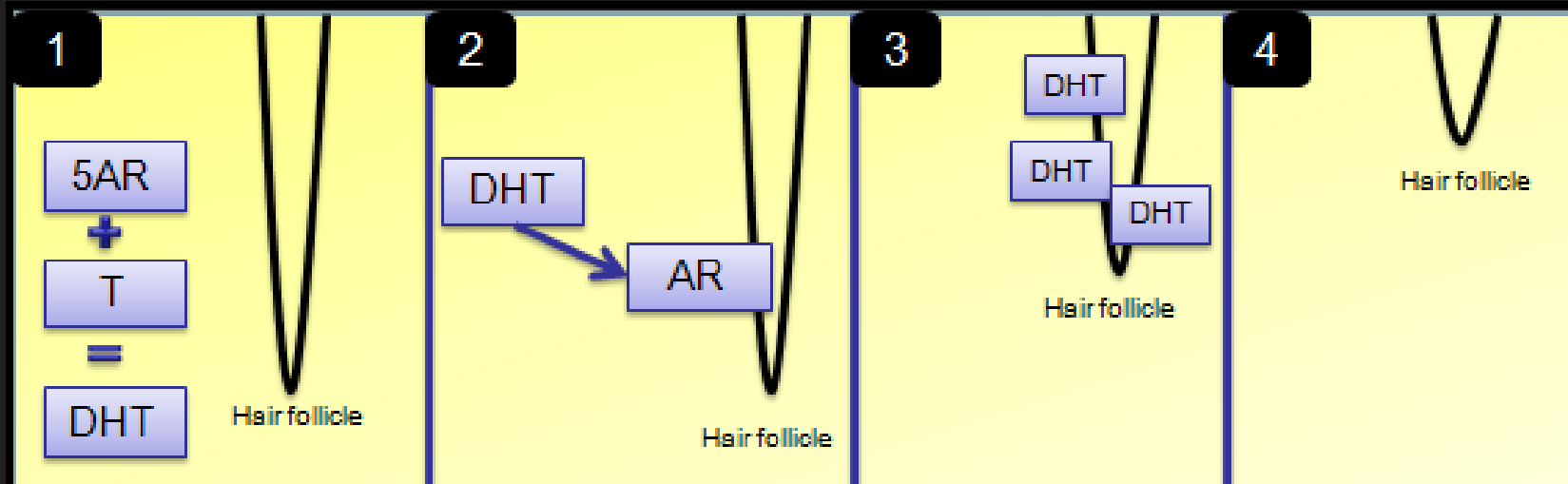


# Androgenic Alopecia - Basics

- Also known as Androgenetic Alopecia (AGA) or Male pattern hair loss (MPHL) is a genetically determined disorder
- Characterized by increased level of local androgen metabolite (Dihydrotestosterone) and increased androgen receptor binding in genetically predisposed men
- Considered to be the most common type of baldness characterized by progressive hair loss
- Can affect all races, but the prevalence rates vary

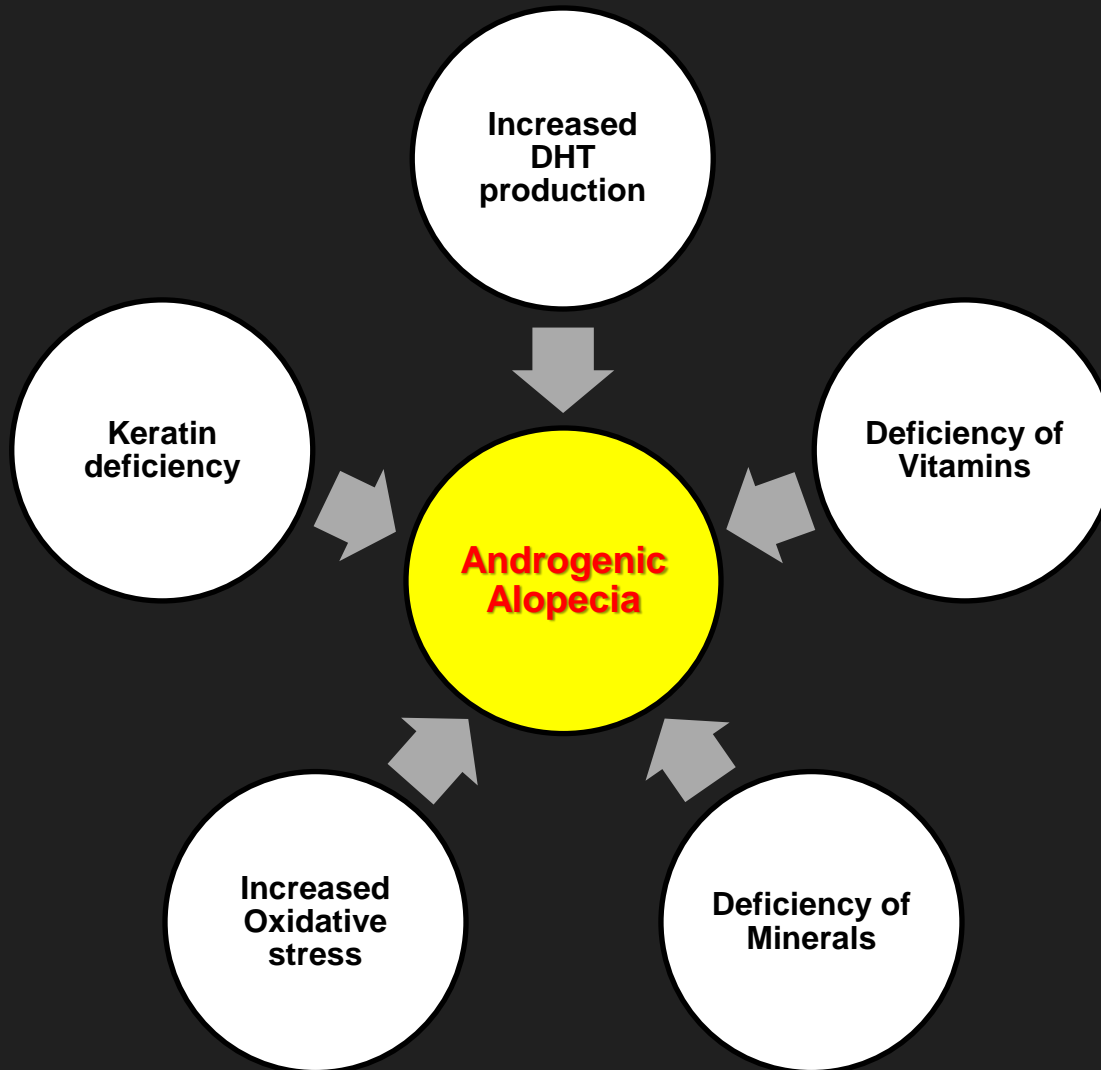
In the Indian context, a population based study of 1005 subjects showed a **58% prevalence of AGA** in males aged 30-50 years

# Hair loss scientific aspects



1. The enzyme 5 Alpha-Reductase (5-AR) converts Testosterone(T) to Dihydrotestosterone (DHT)
2. Dihydrotestosterone (DHT) binds to Androgen Receptors (AR)
3. DHT causes increased hair loss and gradual miniaturization of the hair follicle.
4. Over time the hair follicles die and the scalp becomes visible.

# Overall causes of Androgenic Alopecia



A caloric deprivation or deficiency of several components, such as proteins, minerals, and vitamins, caused by reduced uptake, can lead to hair loss\*

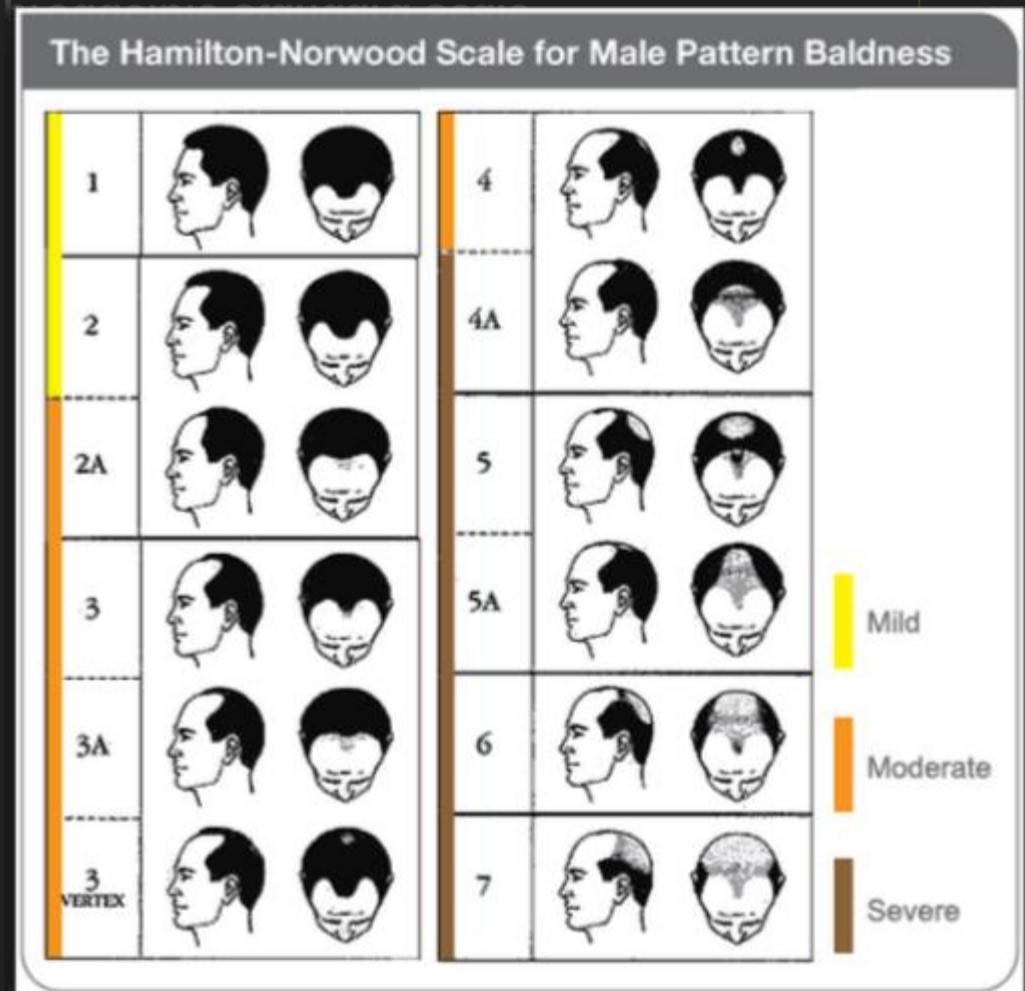
DHT: Dihydrotestosterone

\*Finner et.al. Dermatol Clin. 2013 Jan;31(1):167-72.

# The Hamilton-Norwood Scale

Widely accepted,  
accurate and reproducible standard scale

- **Type 1**: No hair loss
- **Type 2**: Minor recession of the frontal hairline
- **Type 3**: further frontal loss, and is considered 'cosmetically significant'
- **Type 4 to 6**: further frontal and vertex loss
- **Type 7**: only the occipital scalp region maintains significant amounts of hair.





# Gainmore™ M – A novel proprietary blend

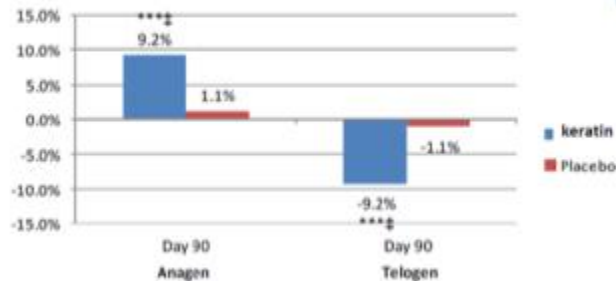
Parameters	Ingredient
Hair Protein	Oral Keratin
Vitamins	L-methylfolate
	Biotin
	Niacinamide
Minerals	Zinc
	Selenium
Antioxidant	Grape Seed Extract
<b>DHT Inhibitor</b>	<b>Saw palmetto</b>

- Dosage: 1 capsule in a day for a duration of 6 months

# Solubilized Oral Keratin

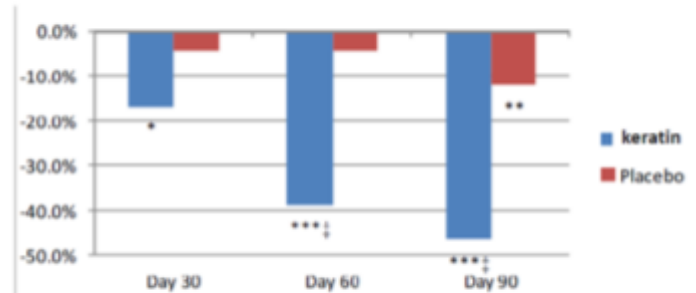
- Bioavailable ingestible keratin capable of binding to the keratin which comprises the majority of hair

**9.2% Increase in Anagen phase & 9.2% Decrease in Telogen phase of Hair**



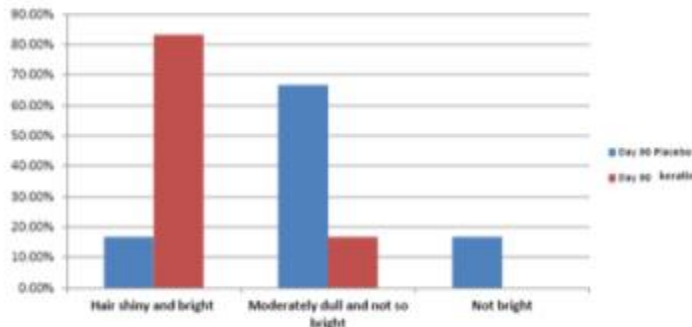
Over 90% of subjects on keratin had at least a 4% increase in hair in Anagen phase, whereas less than 30% had the same effect on placebo  
effect over placebo was **greater than 8 times**

**4 times decrease in Hair loss in Hair Pull Test**



- Hair Pull Test evaluates hair loss from every day activity such as washing & brushing
- 100% of keratin group had minimum decrease in hair loss of at least 20%, compared to placebo where only 37.5% showed a reduction of 20% or more

**Keratin vs. Placebo: Hair Brightness at day 90**



By day 90, keratin increased hair shine and brightness to 83.3% Only 16.7% shiny hair were observed in Placebo after 90 days

# Saw palmetto

## 1. Inhibits formation of DHT

- Saw palmetto or *Serenoa repens* acts as **inhibitor of DHT**
- Increases the activity of **3-alpha-hydroxysteroid-dehydrogenase**. This enzyme is responsible for the conversion of DHT to weaker androgen androstenediol

## 2. Inhibits binding of DHT to AR

- **Blocks approximately 50% of the binding of DHT** to receptors in the target cells
- Strongly **inhibits** the action of **5 alpha-reductase**
- Unlike finasteride, a synthetic 5 alpha-reductase inhibitor, *Serenoa repens* **does not seem to have the side effects** of loss of sex drive or impotence

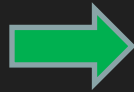
# Other ingredients & their role

**L-methylfolate**



➤ An active form of folic acid required for hair follicle growth<sup>1</sup>

**Biotin**



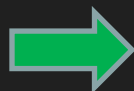
➤ An essential coenzyme for several important enzymes for hair growth<sup>2</sup>

**Niacinamide**



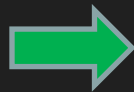
➤ Activates the oxygen transport to hair follicles thus stimulation of hair growth<sup>3</sup>

**Zinc**



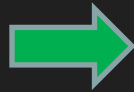
➤ A potent inhibitor of hair follicle regression, and accelerates hair follicle recovery<sup>4</sup>

**Selenium**



➤ Increases selenoproteins responsible for keratinocyte function<sup>5</sup>

**Grape seed extract**



➤ Shows remarkable hair-cycle-converting activity from telogen to anagen phase<sup>6</sup>

1. Indian J Dermatol. 2014 NovDec; 59(6): 630.  
4. Ann Dermatol Vol. 25, No. 4, 2013

2. J Clin Aesthet Dermatol. Nov 2012; 5(11): 28–34.  
5. PLoS One. 2010 Aug 18;5(8):e12249.

3. <http://www.kyowa.eu/files/pdfs/Niacinamide.pdf>  
6. Takahashi et.al. 1998

**Gainmore™ M: An oral  
supplementation in men with  
Androgenic Alopecia for reduction in  
hair loss & new hair growth**

Study conducted at Dept. of Dermatology and Venerology,  
Maulana Azad Medical College (MAMC), Delhi, India.

- Dosage: 1 Gainmore™ M capsule in a day for a duration of 6 months

# Study design

## INCLUSION CRITERIA

- Men with Androgenetic alopecia as classified by Norwood-Hamilton classification scale.
- **Total number of men:** 50
- **Age:** Men aged 18 to 41 years
- **Type:** mild to moderately severe vertex MPHL (Male pattern hair loss) according to a modified Norwood/Hamilton classification scale (II/II Vertex, III/III Vertex, IV or V)

## EXCLUSION CRITERIA

- Significant abnormalities on screening physical examination or laboratory evaluation
- Surgical correction of scalp hair loss,
- Topical minoxidil use within one year,
- Use of drugs with androgenic or antiandrogenic properties,
- Use of finasteride or other 5-alpha reductase inhibitors,
- Alopecia due to other causes
- Symptomatic cardiac problems, uncontrolled hypertension, autoimmune disorders

# Efficacy & Safety measurements

1. **Hair counts**, obtained from colour macro photographs of a 1-inch diameter circular area (5.1 cm<sup>2</sup>) of clipped hair (length 1 mm). 11-12 pixel camera
2. **Patient self assessment** of scalp hair
3. Independent assessment of standardized **clinical global photographs of the vertex scalp** by a panel of three dermatologists who are blinded to treatment and experienced in photographic assessment of hair growth, using the standardized 7-point rating scale.

## Safety measurements

Clinical and laboratory evaluations, and adverse experience reports.

# Hair counts

**Grade 1 (0-25%)**



Before



After



Before



After



Before



After



Before



After

**Grade 2 (25-50%)**  
[at the end of 3½ months]

**Grade 3 (50-65%)**  
[at the end of 4 months]

**Grade 4 (>65%)**  
[at the end of 6 months]



# Results

- 50% of the participants reported a noticeable decrease in hair loss after 45 to 60 days of treatment.
- At the 6<sup>th</sup> month there is a improvement in the hair growth from a mean of >65%.
- It is advisable to prolong the therapy more than 6 month to 9 month.
- By the end of the study majority of men reported new growth of hair.

Side effect	No. of patients
Gastric discomfort	1
Hyperacidity	1
Sexual dysfunction	1

## **Conclusions:**

Gainmore™ M oral supplementation in men with androgenic alopecia is effective in reducing hair loss and improving hair growth

# Limitations of the study

- The study is an observational ongoing trial, thus no statistical analysis done
- No comparative head-to-head study conducted with available oral formulations for alopecia
- Study involved only Indian subjects
- Further study involving large number of population required for conclusive data

Thank You



# Let us meet again..

We welcome you all to our future conferences of OMICS  
International

**5<sup>th</sup> International Conference and Expo  
on**

**Cosmetology, Trichology & Aesthetic Practices**

**On**

**April 25-27, 2016 at Dubai, UAE**

**<http://cosmetology-trichology.conferenceseries.com/>**