

Hair Today

Science, Impact,
and the Future of
Hair and Hair Loss



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Director, Dermatopathology Fellowship
Emeritus Director, Dermatopathology
Past President, AAD, ADA, ASDP, WDS, AHRSCDS & ODA
Interest- alopecia, nutrition, medical dermatology and dermatopathology



As Derms, We Own Alopecia.
Patients need our help!



Alopecia Questions & Topics

- Why is scalp hair so important?
- Who seeks help?
- Self treatment proliferates
- Economic impact!
- Luminaries of hair research and treatments
- Who owns Alopecia?
- Safety of cosmetic hair ingredients (chemicals)
- Changes in the Alopecia Landscape
- Influencers of hair follicle cycle and hair growth
- Hair Disorders & Future Treatments

Why is Scalp Hair So Important?

Integral to identity & Self Esteem

Gavazzoni Dias MF. Hair cosmetics: an overview. *Int J Trichology*. 2015 Jan-Mar;7(1):2-15
Gavazzoni Dias MF. Hair cosmetics: an overview. *Int J Trichology*. 2015 Jan-Mar;7(1):2-15

Social & Cultural Significance

Trussi A, Barton VR, Ahgbai On et al. Psychosocial and psychiatric comorbidities and health-related quality of life in alopecia areata: A systematic review. *JAAD*. 2021;85:162-175

Indicator of Health & Vitality

Alnuqaydan AM. The dark side of beauty: an in-depth analysis of the health hazards and toxicological impact of synthetic cosmetics and personal care products. *Front Public Health*. 2024 Aug 26;12:1439027
Alnuqaydan AM. The dark side of beauty: an in-depth analysis of the health hazards and toxicological impact of synthetic cosmetics and personal care products. *Front Public Health*. 2024 Aug 26;12:1439027



Social Impact & Public Interest

Driven by societal beauty standards, cultural norms and acceptance.

Riopelle A, Watchmaker J, Goldberg L. Public Perception of Management of Hair Conditions in America: Results from a National Survey. *Skin Appendage Disord.* 2020 Jun;6(3):184-186.



Who seeks help for Hair Loss?



- Patients of all ages, genders & ethnicities
- Women, Men, & children equally affected
- Motivated by appearance, function, and self-image
- Impacts employment
- Stigma against people with hair loss

Hadshiew IM, Foitzik K, Arck PC, Paus R. Burden of hair loss: stress and the underestimated psychosocial impact of telogen effluvium and androgenetic alopecia. *J Invest Dermatol* 2004; 123: 455–7

Hunt N, McHale S. Reported experiences of persons with alopecia areata. *J Loss Trauma* 2005; 10: 33–50

García-Hernández MJ, Ruiz-Doblado S, Rodríguez-Pichardo A, Camacho F. Alopecia areata, stress and psychiatric disorders: a review. *J Dermatol* 1999; 26: 625–32

Koo JY, Shellow WV, Hallman CP, Edwards JE. Alopecia areata and increased prevalence of psychiatric disorders. *Int J Dermatol* 1994; 33: 849–50

Schneier FR. Social anxiety disorder. *BMJ* 2003; 327: 7414. 515

Prickitt J, McMichael AJ, Gallagher L, Kalabokas V, Boeck C. Helping patients cope with chronic alopecia areata. *Dermatol Nurs* 2004; 16: 237–41

Who Owns the Care of Hair Disorders?

Dermatologists (AAD surveys)

Dermatologist 11-90%

Family physicians 58%

Trichologists

Cosmetologists/Industry

Public

Recent Luminaries of Hair Research



Hair Health Summit Directors

Crystal Iguh, MD • Maryanne Senna, MD



International Federation
of Hair Research Society
World Congress of Hair
Research Every 2 Years

- American Hair Research Society
- Australasian Hair and Wool Research Society
- Chinese Hair Research Society
- European Hair Research Society
- Korean Hair Research Society
- Russian Hair Research Society
- The Society for Hair Science Research (Japan)
- Ukrainian Hair Research Society



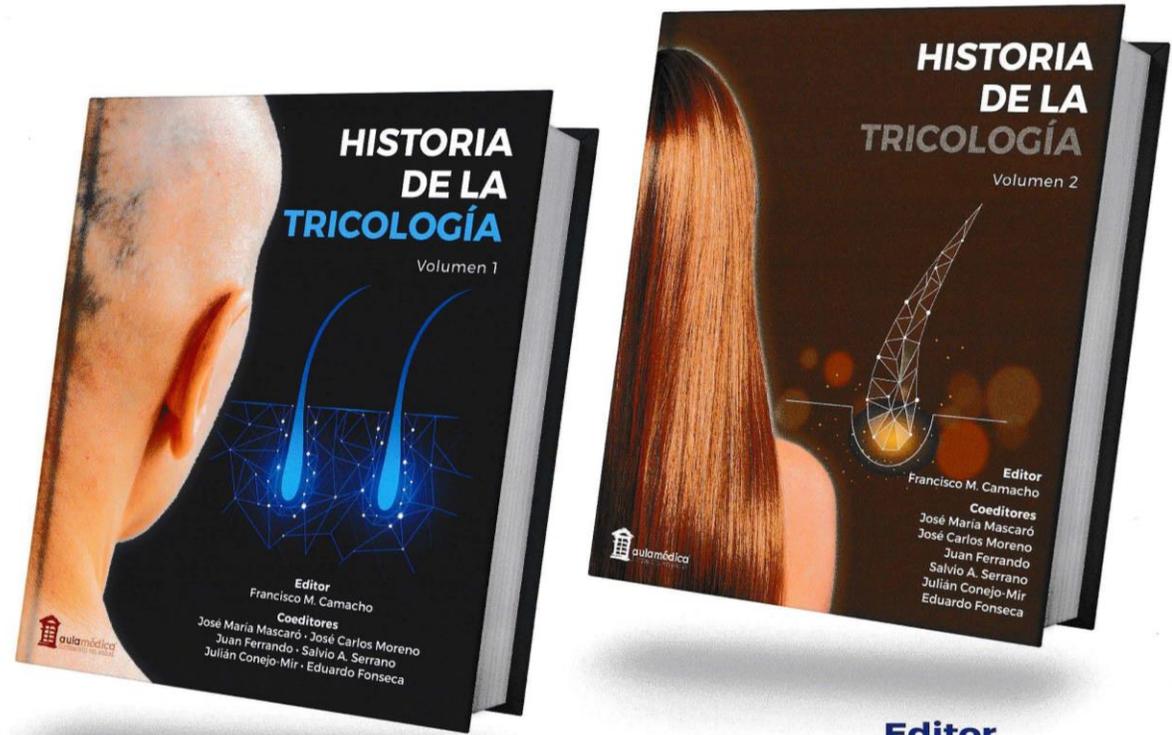


International Federation of Hair Research Society

World Congress of Hair Research 2026



Francisco Camacho Martinez, MD
Professor and Chairman, 1981-2011
Department Dermatology University
of Seville, Spain



Editor
Francisco M. Camacho

History of Hair

- Significant contributions to medical and surgical dermatology.
 - Published 850 articles and 22 books.
 - His research interests vary widely and his breadth of knowledge – from innovative advancement flaps to hypertrichosis, nail disease and sexually transmitted diseases – is phenomenal.
 - Honorary member of several dermatology organizations, including the British Association of Dermatology and the American Academy of Dermatology.
- English version of American History of Hair on AHRS website.

Dermatologist & Scientist – Healthy Hair

Numerous hair disorders

Hair loss a frequent complaint of Patients

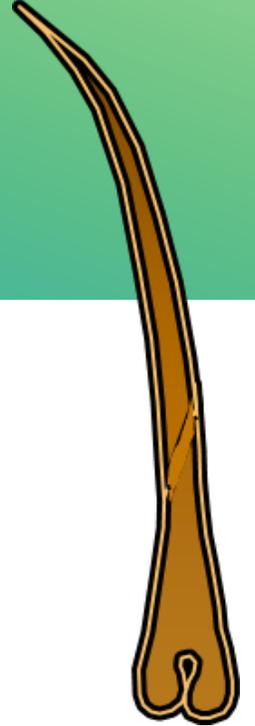
Expanding research Hair Follicle Biology

- **Understanding drivers of hair disorders & targeted Therapies**
- **Increase in research**

Increase in Therapeutic Options

Expanding interest of Cosmetic Industry & the Public

New Information/ Science available Physicians & Public

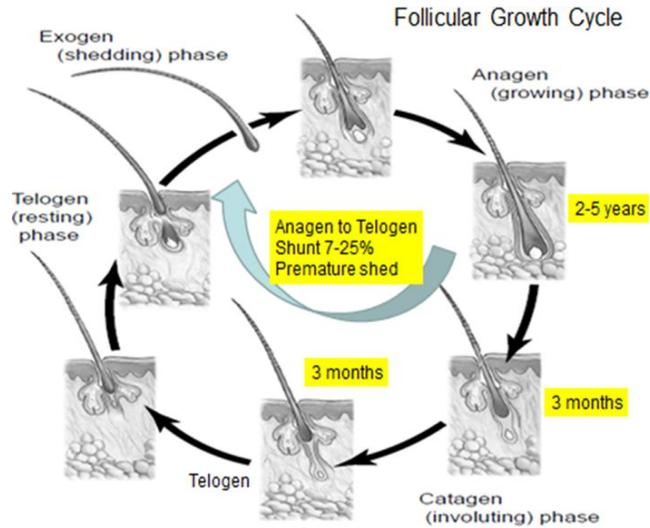


Why the Interest?

Hair Follicle – Regeneration Rate

Affected by a nutrient-rich diet, adequate sleep, hydration, regular exercise, and avoiding toxins -support optimal cell renewal and repair.

- **Skin cells regenerate roughly every 14 – 30 days**
 - Gut lining cells renew in 4 – 5 days
 - Bone marrow renewal in 20 days
 - Red blood cells renewed every 3 – 4 months
 - Liver cells regenerate in 6 – 12 months
 - Bone cells take about 10 years to fully renew
- **Skin, Intestinal lining, Bone marrow & Liver are among the fastest-regenerating tissues in the body due to their constant exposure to environmental, and micro-environment stress**
 - **Skin & the hair follicle are easy to study – observe**



Cellular Regulation in Hair Follicle Growth

Epidermal Stem Cells – Bulge

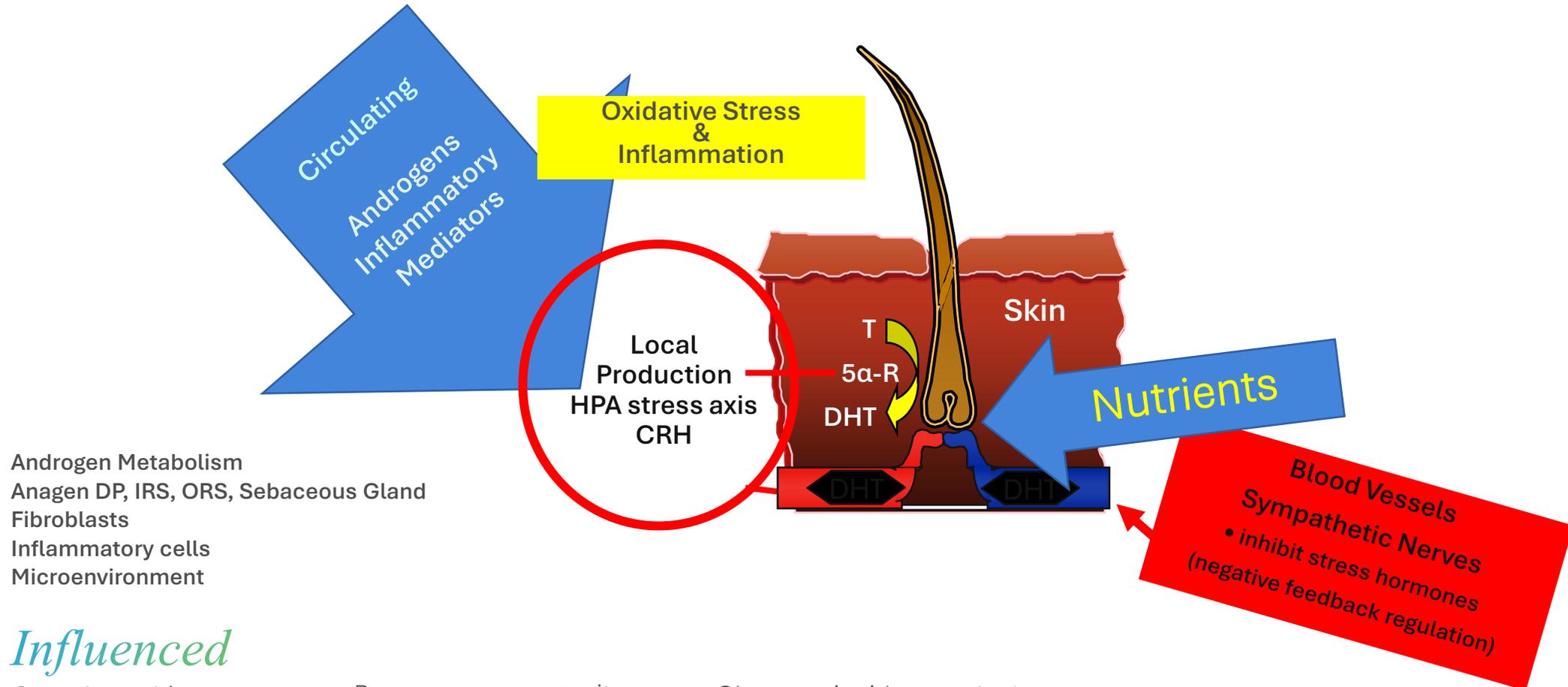
- Multipotent stem cells give rise to progenitor cells – matrix keratinocytes

Dermal Papillae

- Central regulators of hair follicle cycling
- Stimulate transition of telogen to anagen
- Contain mesenchymal cells that secrete growth factors, e.g.
 - FGF – promotes hair elongation
 - IGF-1 – prevents apoptosis
 - VEGF – triggers

Mehta A, Motavaf M, Raza D, et al, Cells, 2025 May 28;14 (11):779.

Anagen Follicle - Metabolic Factor - Micro Environment



Influenced

Gonadotrophins
 Insulin growth factors
 Cytokines-Wnt/ b-catenin

Bone marrow progenitors
 Insulin
 Sonic Hedgehog(SHH)

Glucocorticoids
 Estrogens
 Progesterone

Androgens
Antiandrogens
Prostaglandins

Thyroid-parathyroid

Common Alopecia

Non-Scarring

Telogen Shed (TE)

Patterned alopecia

- Androgen excess
- Dysmetabolic syndrome
- Genetic influence
- Inflammatory PHL

Androgen excess

Alopecia areata

Traction (early)
/trichotillomania)

Trichodystrophies

Acquired

Congenital

Senescent alopecia

Scarring

FFA

Lichen planopilaris

Lupus erythematosus

CCCA

Folliculitis decalvans

Dissecting folliculitis

HAIR LOSS



30% Woman



70% Men

Causes



Genetic predisposition



Certain medications



Pregnancy



Improper care



Bad ecology



Stress



Infection



Nutritional deficiency



Age



Hormone imbalance

Non-Scarring

Follicular Drop-Out

Scarring

Telogen or anagen effluvium



Alopecia areata



• All Result in Hair Loss
Temporary or Permanent

Androgenetic alopecia
Trichotillomania
Traction alopecia



Discoid lupus erythematosus
Lichen planopilaris
Dissecting cell of the scalp
Acne keloidalis
Folliculitis decalvans

Influencing Factors of Public Interest



Hair Growth & Cosmetic & Pharma Industry Nutraceuticals Hair cosmetics

Multibillion
dollar business
& Growing

Initiate / Increase / prolong anagen

Cycling – other mechanisms for Hair

Growth & Hair quality

Hair damage repair



Growth Promotion
Anti-inflammatory
Anti - oxidants
Anti-androgens
Hormones

Nutrients-micronutrients
Prostaglandins
Cytokines
Micro-skin trauma
Hair fiber enhancement

Commonly added supplements – Healthy Hair & Scalp

5 alpha reductase inhibitors

Saw Palmetto, *Serenoa repens*

Curcuma

Zinc

Cimicifuga racemosa (black cohosh)

Cuscuta reflexa

Ganoderma lucidum (mushroom)

Urtica dioica

Acacia concina

Camellia sinensis

Anagen induction

Capsicum frutescens

Plant prostaglandins

Antioxidants

Anti-inflammatory

Aeruginosa (palmetto)

Cucurbita pepo (pumpkin)

Trifolium pretense (red clover)

Panax ginseng



Saw Palmetto



Curcuma



Capsicum

Specific Multi-Vitamins/Supplements *Marketed for Hair Growth*



In 2023, Level Evidence 2 for Some supplements

- *Clinical studies – see summary 2023*
- *Drake L, Mostaghimi A, et al. Evaluation of the safety and effectiveness of nutritional supplements for treating hair loss. A systemic review. Jama Dermatol. (January 2023, 159(1) 79- 86*

Many contain:

- **Anti androgens**
- **High levels of collagen**, biotin, rice
- Anti-stress herbs
- Chamomile (GREEN TEA)
- **Antioxidants** herbals
- **Anti-inflammatory** herbals
- Vitamin E (tocopherol)
- **Protein**

Generally, not harmful but be aware of biotin & mineral content

Toxicity (minerals) or interference with blood tests (biotin)

FDA Regulations Oversee Product Safety

The US FD&C Act does not require pre-market approval but it absolutely requires . . . 1938 –



Cosmetic products and ingredients must be Safe for Consumers under labeled or customary conditions of use

Manufacturers who market cosmetics have a legal responsibility for the safety of their products and ingredients

Manufactures avoid adulterated or misbranded cosmetics whether from ingredients, contaminants, processing, packaging, or shipping

Cosmetic act 1938 – many amendments

FDA regulations – Volunteer reporting of cosmetic ingredients

Recent changes

FDA regulations: Mandatory reporting of cosmetic ingredients

2023 – 2024 MoCRA (companies greater 1 Million dollar)

FDA – Approved Drugs – Hair Loss



Hair Growth Agents:

Female and Male Pattern Hair Loss

- Topical minoxidil 2% (Rogaine), (1988) for men and later 5% for men and for women (2014); (6-amino-1,2-hydroxyl-2-imino-4-piperidinopyrimidine)
- Finasteride 1 mg, (Propecia) for MPHL (1977)
- Low-level light laser for hair loss (FDA-device approval men 2007; Women 2011)

Alopecia Areata

- Baricitinib (Olmiant) Lilly (2022), 2, 4 mg/day Alopecia areata moderate to severe
- Ritlecitinib (Litfulo) Pfizer (2023) 50 mg/day for 12 years and older for moderate to severe Alopecia areata
- Deuruxolitinib (Legselvi) Sun Pharma (2024) 8mg a day, for adults 18 years and older

Safety of Cosmetic Ingredients (CIR)

www.cir-safety.org



CIR Safety Cosmetic ingredients:
i.e. dyes-colors, shampoos, conditioners
& styling products

8000 ingredients

3115 CIR reviewed for safety

2721 / 3115 Safe as used:

160 insufficient, 147 not supported

61 safe w qualifications

9 unsafe (removed or restricted use)

Hair Products use 6,400 ingredients

350,000 USA Cosmetic Products

Public Cost



- **Significant economic burden:**
treatments, doctor visits & cosmetic products
- **Hidden costs:**
lost productivity, psychological toll



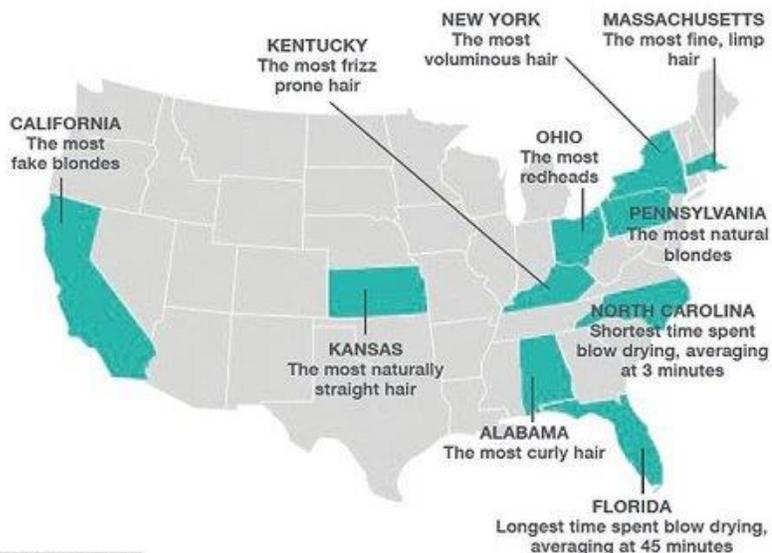
Impact of Marketing on Public Perception

How Much Money the Average Women Spends on Hair Care

According to a new survey equate to roughly \$80 and 11 hours per month.
Average woman spend **\$55,000** in a lifetime on hair products and treatments.

Global 2025 113.93 Billion
USA 2025 13.86 billion
Natural 2024 10.7 billion

HAIR HABITS OF AMERICA



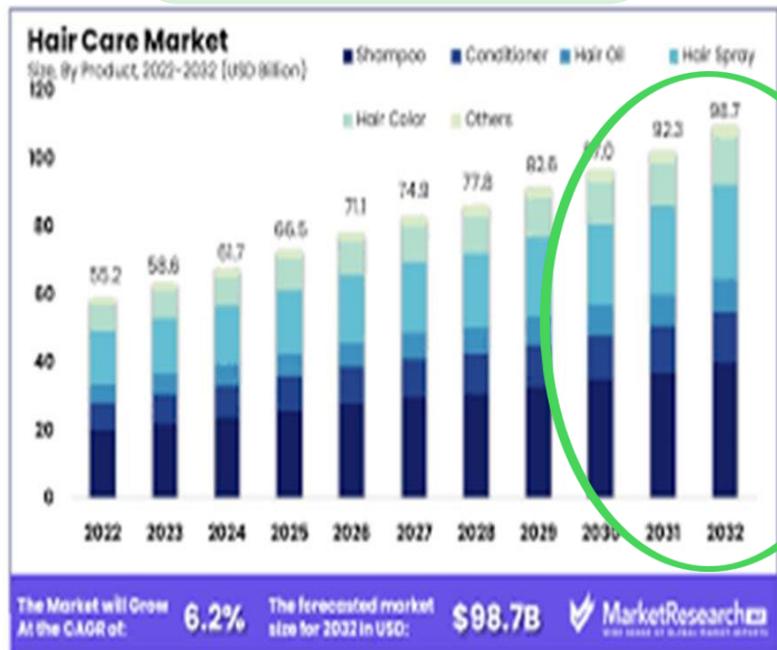
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THE CHEAPEST HAIR IN THE STATES*	
North Carolina	\$20
Washington	\$30
Kentucky	\$30
Michigan	\$35
Wisconsin	\$40

* Money spent on hair per month

MOST EXPENSIVE HAIR IN THE STATES*	
California	\$150
Florida	\$130
Texas	\$120
Ohio	\$110
New York	\$100

* Money spent on hair per month



The Market will Grow At the CAGR of: **6.2%** The forecasted market size for 2032 in USD: **\$98.7B** MarketResearch.com

Changing Landscape

New Therapies:

JAK inhibitors, Minoxidil LDOM, Monoclonal ab, more Biologics, Growth initiators & Inhibitors, Targeted Key Signally Pathways & targeted key Inflammatory mediators



More Participants:

Dermatologists, PCPs, Trichologists, Beauty professionals, Individual self treatment, Growing cosmetic industry

Increased available information:
On Line



Growing Consumer Awareness
and Self treatment

Increased availability Cosmetics &
Pharmaceuticals



Female/Male Pattern Hair loss

Current therapies

Anti Androgens:

- Hormonal Therapy
- Spironolactone
- Finasteride*
- Dutasteride

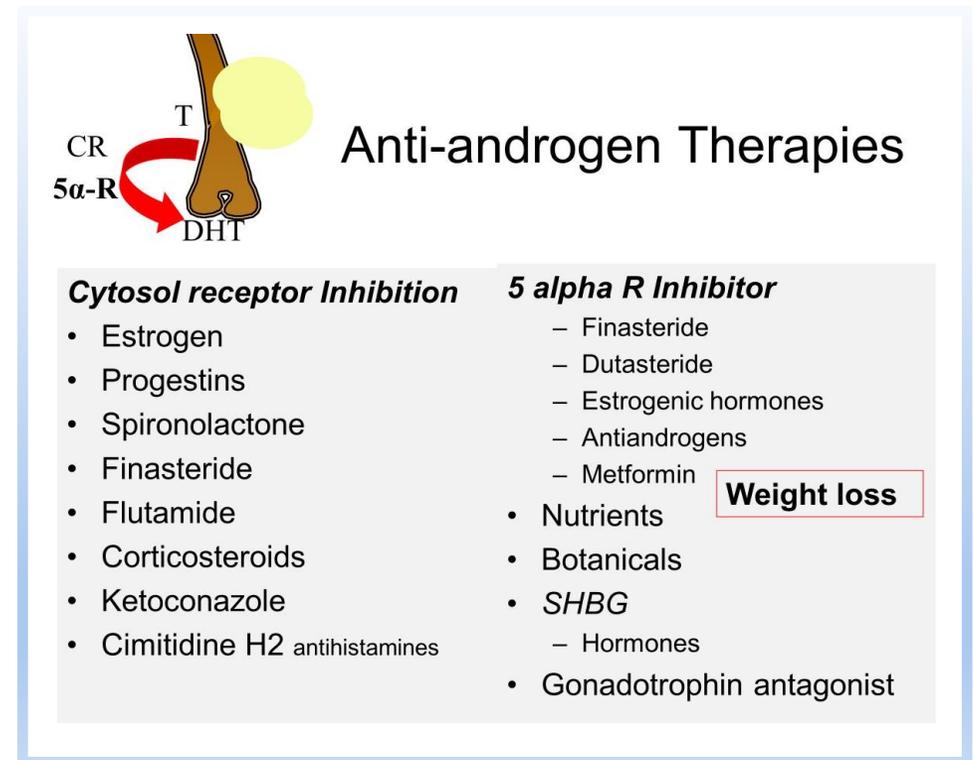
Hair Growth Promotors:

- Topical Minoxidil* LDOM, topical, LLLD*

Correction of nutritional deficiencies

Correction or stabilization of & other medical disorders

FDA approved only (minoxidil,* finasteride males,* LLLD)



Oral minoxidil Pattern Hair Loss

Women 1.25 mg - 2.5 mg/day — Men 2.5 - 5 mg/day

Non-FDA approved



Dose Range

0.625- 5 mg /D

Child 0-12 , 2.5mg/D

Men/Women 1.25-5 mg/D

Low Cost

Response Durable While on LDOM

Side Effects Minimal

Hypertrichosis 78%

< 2% :

- Dizziness
- Palpations
- Edema
- Shortness of breath
- Weight gain

Olsen EA, Sinclair R, Hordinsky M, Mesinkovska NA, Sadick N, Shapiro J, Bergfeld W. Summation and recommendations for the safe and effective use of topical and oral minoxidil. JAAD. 2025Aug;93(2):457-465

Vano-Gavan et al, JAAD,2021;84(6a0):1644-1651
Villani A et, al,EADV.2021;35(7):1485-1492
Williams KN et. al, DermatolTher,2024;14(7):1707-1727
Akiska, YM er al. JAMADermato,025;161(1):87-95

Female pattern hair loss
(FPHL) (60%)

Male pattern hair loss
(MPHL) (14%)

Alopecia areata
(AA) (15%)

Scarring alopecia
(10%)

Telogen effluvium
(TE) (1%)

Patients were majority female (80.5%)
with FPHL – White (82.9%) – Avg Age 54

Cleveland Clinic study 2023 – 2024 Barcelona Hair Meeting

Table 5.4 Parameter estimates from mixed effects multinomial regression models

Outcome:	Patient Reported Outcome		Physician Global Assessment		Patient Reported Symptoms	
	Odds ratio (95% CI)	p-value	Odds ratio (95% CI)	p-value	Odds ratio (95% CI)	p-value
V2 vs V1	8.5 (4.5, 16.1)	< 0.001	43.6 (14.5, 131.0)	< 0.001	1.9 (0.87, 4.2)	0.11
V3 vs V2	0.04 (0.02, 0.07)	< 0.001	1.9 (0.84, 4.5)	0.12	0.48 (0.16, 1.4)	0.18
V3 vs V1	0.31 (0.17, 0.57)	< 0.001	84.8 (23.2, 309.8)	< 0.001	0.91 (0.32, 2.6)	0.86

Female pattern hair loss

Table 7. Parameter estimates from mixed effect regression using raw scale scores

Parameter	Outcome: Savin Scale		Regional Hair Density Scale	
	Odds ratio (95% CI)	p-value	Odds ratio (95% CI)	p-value
V2 vs V1	8.7 (3.3, 22.6)	< 0.001	0.83 (0.67, 1.03)	0.089
V3 vs V2	2.7 (0.64, 11.7)	0.17	0.76 (0.46, 1.3)	0.27
V3 vs V1	23.7 (5.2, 108.9)	< 0.001	0.64 (0.39, 1.05)	0.074

CI=Confidence Interval

- pending publication 2025

Alopecia Areata Update

- Complex, heterogeneous, polygenic disease
Immune-Mediated Disease – Innate and Adaptive immunity
Inflammatory - Immune targets
- Anagen hair follicle-keratocyte, melanocyte, external root sheath Nails
- Other organs: Cardiac, Thyroid, Parathyroid, Pancreas, GIT, CNS, Ovaries, Testes, +



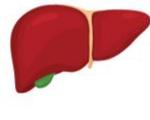
Lungs



Heart



Brain



Liver



Stomach



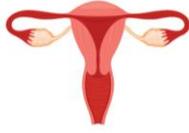
Thyroid



Nasopharynx



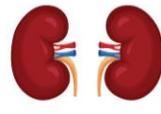
Male Reproductive System



Female Reproductive System



Intestines



Kidneys



Bladder



Thymus Gland



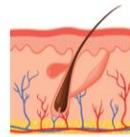
Muscle



Artery



Blood



Skin



Pancreas



Spleen

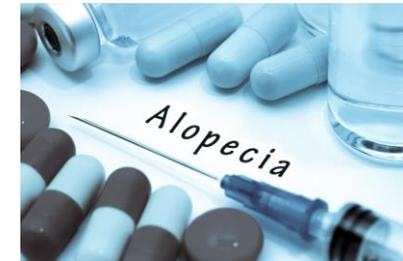


Gallbladder



Knee joint





Summary Table: FDA-Approved Treatments for Alopecia Areata

Drug name	Generic name	Manufacturer	Mechanism	FDA approval date	Ages indicated for severe AA
Olumiant	baricitinib	Lilly	JAK 1 / 2 inhibitor	June 2022	Adults 18+
Litfulo	ritlecitinib	Pfizer	JAK 3 / TEC* inhibitor	June 2023	Adolescents & adults 12+
Leqselvi	deuruxolitinib	Sun Pharma	JAK 1 / 2 inhibitor	July 2024	Adults 18+

*TEC - tyrosine kinase expressed in hepatocellular carcinoma



Alopecia Areata Therapies

7 studies – Adults with severe AA

- **Abbvie**- Upadacitinib (Rinvoq) Jak ½- NDA - Jak ½ phase 3 studies oral
- **Pfizer** - etrasimod (Vesifty) S1-P modular Phase 2
- **Amgen** (Horizon) daxdukunab anti-IL-17 monoclonal ab Phase 2
- **Bristol** - Myers Squibb deucravacitinib TK2 (Jak1) Phase 2
- **Regeneron** / Icahn School of Medicine dupilumab (Dupixent) - anti-IL-4 Ramonoclonal ab (inhibits TH2)- phase 2 injection Phase 2
- **Aslan Pharma** farudodstat inhibits DHODH (dihydroorotate dehydrogenase enzyme) Phase 2
- **Suzhou Zelgen Biopharmaceuticals** Jaktinib Jak I oral in study

Therapeutic summary of Alopecia studies/treatments . . .

Treatment	indication	Strength	Limitation
Finasteride Minoxidil topical LDOMinoxidil	FDA+ , Male AGA FDA + Male/Female AGA No approval	+ efficacy & safety Minoxidil+ finasteride improves Publications support efficacy and safety	M - sexual side effects F - unwanted hair
WNT/B-catenin Modulation: LLLT,PTD-DBM,GS3KB	No approval Mouse studies	Direct modulation of central hair follicle neogenesis pathway LDOM increase hair growth	Expected off target effects: carcinogenic: colon- liver
Jak inhibitors: Baricitinib, Ruxolitinib, Tofactinib Ritlecitinib	FDA + AA Baricitinib 2022 Ritlecitinib 2023 Deurxolitinib 2024	Human Trials AA + hair growth** Improved ADE than corticosteroids	ADE: liver enz & lipids Limited use other alopecias & scarring alopecia
Stem cells iPSCs DPCs, Auto- grafts	No approval Experimental	Pluripotency leads to folliculogenesis in vitro	Immune rejection core issue Possible tumorigenicity
Growth Factors VEGF,IGF-1,FGF-7	No approval Experimental	Limited studies show remission and hair growth, ? Synergistic with other Rx	Limited research Significant variability response Many Rx treatments needed No chronic studies

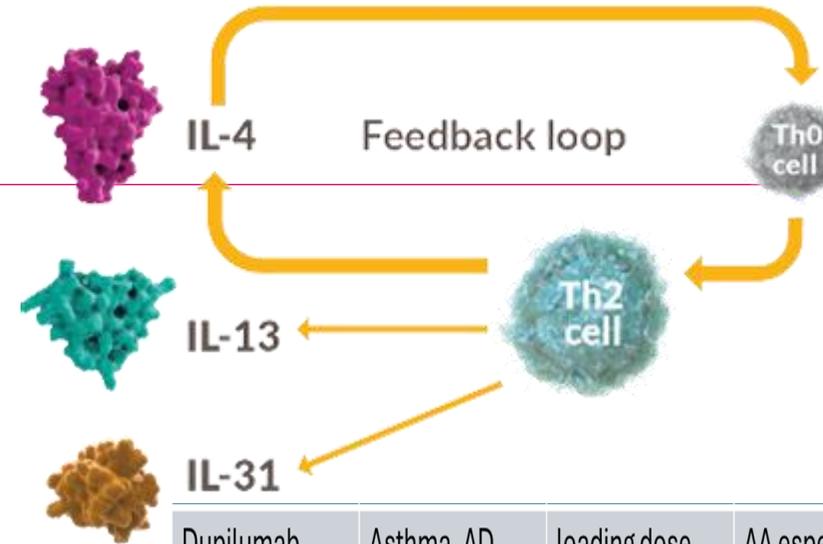
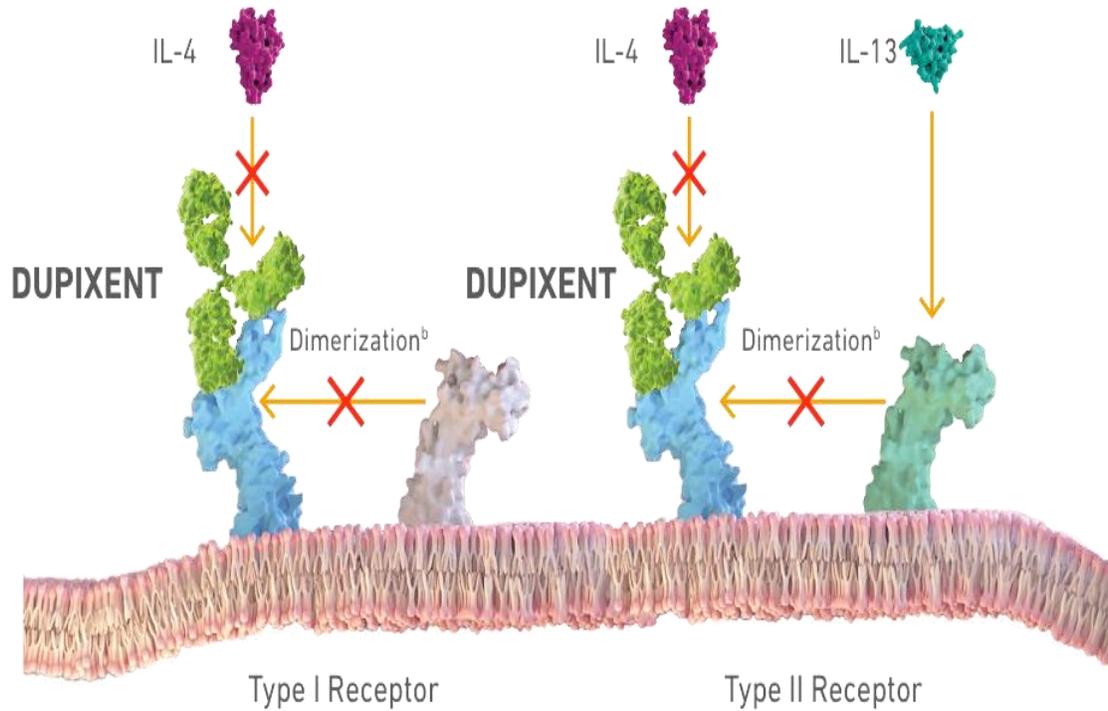
Therapeutic summary of Alopecia studies/treatments . . .

Medication	Indications	Dosage	Additional indications	Cautions/ Contraindications	Other
Tofacitinib oral (Pfizer: Xeljanz) Jak I	RA, Ps, JRA	5-22 mg/day	AA Off label	Infection Thrombosis/CVE	FDA 2012
Baricitinib oral (Lilly: Olumiant Jak I: 1,2) Oral	AA	2, 4mg/day 18- older	RA Covid-19	Elevated lipids, infection, thrombosis, CVE -MACE, malignancy	FDA 2023
Ritlecitinib oral (Pfizer: Litfulo JakI: 3/Tec) l	AA	50 mg/day 12 y -older		No lipid abn Infection, thrombosis, CVEMACE,maligna ncy	FDA 2023
Upadacitinmib oral extendedrelease (ABBvie: Rinvog Jak I)	RA, PS, Crohn's, Arthritis	Gradual Increase from 15- 40 mg/day	AA Off label (studies ongoing)		FDA 2024
Acrocitinib (Pfizer:Cibinqo) Oral	AD	100mg/day (200mg/day) 600 Kids -older	AA Off label	Avoid anti platelet therapies first 3 months except ASA Infection, HA, GIT, thrombosis	6mo-17 y kids FDA approved AD

Therapeutic summary of Alopecia studies/treatments . . .

Treatment	Indication	Strength	Limitation
Gene Editing CRISPR/Cas9	No approval Experimental	Modulation of genes in cashmere goats, rabbits, C57BL/6mice, and BALB/c mice /increases hair growth and reduces hair loss	Need of off-target mutations major concern Limited research, and long term ADE Concerns of accessibility, public perception, ethical and regulatory issues
Prostaglandin Analog: Latanoprost Bimatoprost	Bimatoprost FDA+ eyelashes Experimental AGA,AA	Bimatoprost effective as Minoxidil e less hypertrichosis Latanoprost some promise mild AGA	Limited efficacy AA Local side effects: eye irritation, dry eye, conjunctival irritation, pruritus, change of eye color

Monoclonal antibody Dupixent, Alopecia areata & Atopic dermatitis (Inhibits two cytokines: IL-4, and IL-13 (targeted therapy) FDA Off label use for AA with eosinophilia



Dupilumab (Sanofi/ Regeneron Dupixent) Inject	Asthma, AD, eosinophilic esophagitis, PN, Chronic obstructive pulmonary disease	loading dose then adults 600 mg, > 300mgQ2wks IM	AA especially with AD, or eosinophilia	Blepharitis Exacerbation AD, Asthma, Chronic pulmonary disease, Infections
		CYP2C19 poor metabolizers, Adjust dose for renal impairment		

Inflammatory Scarring Alopecia

No FDA approved therapies
Needs a Targeted Therapy



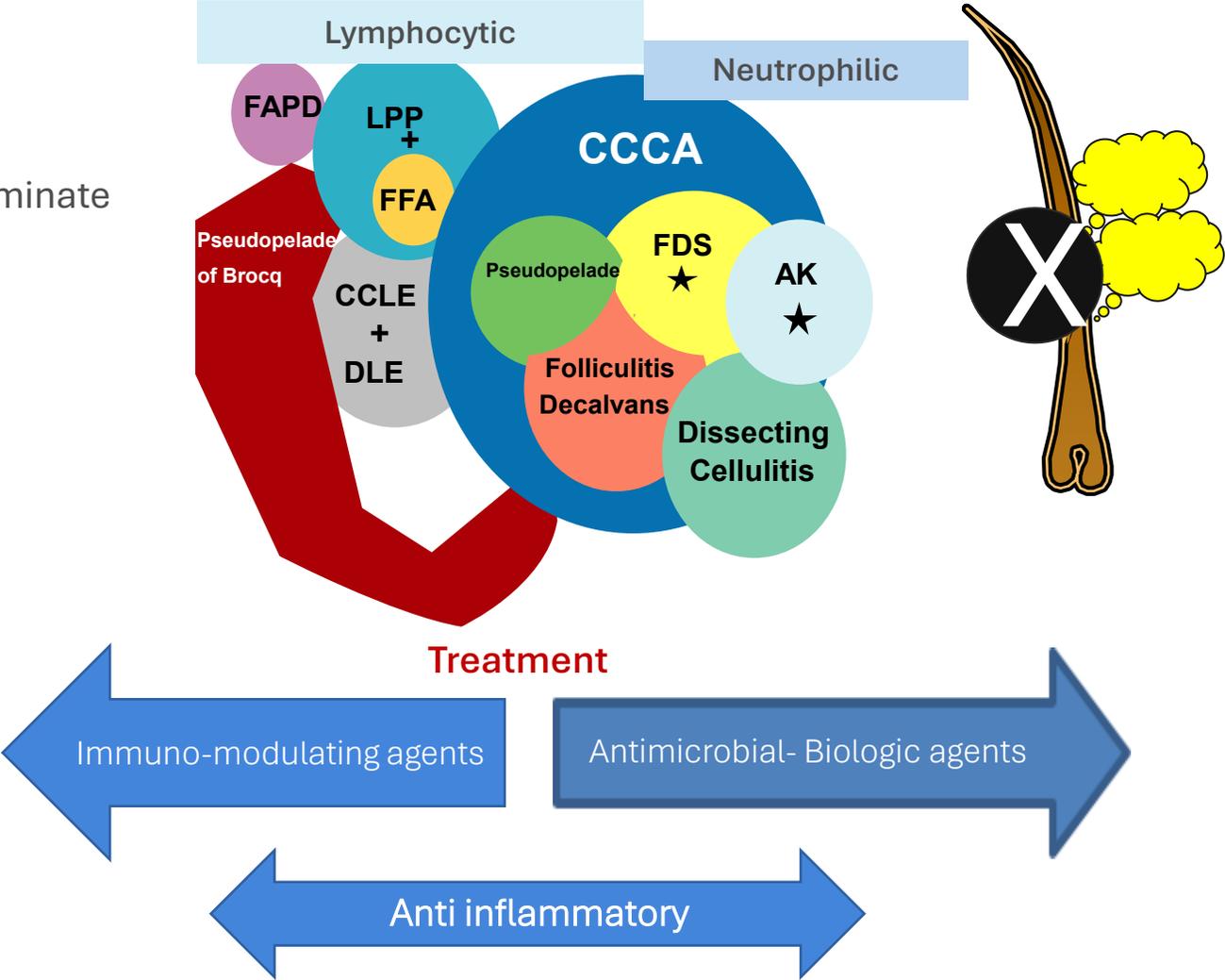
Discoid lupus erythematosus
Lichen planopilaris
Dissecting cell of the scalp
Acne keloidalis
Folliculitis decalvans

Primary Inflammatory – Scarring Alopecia

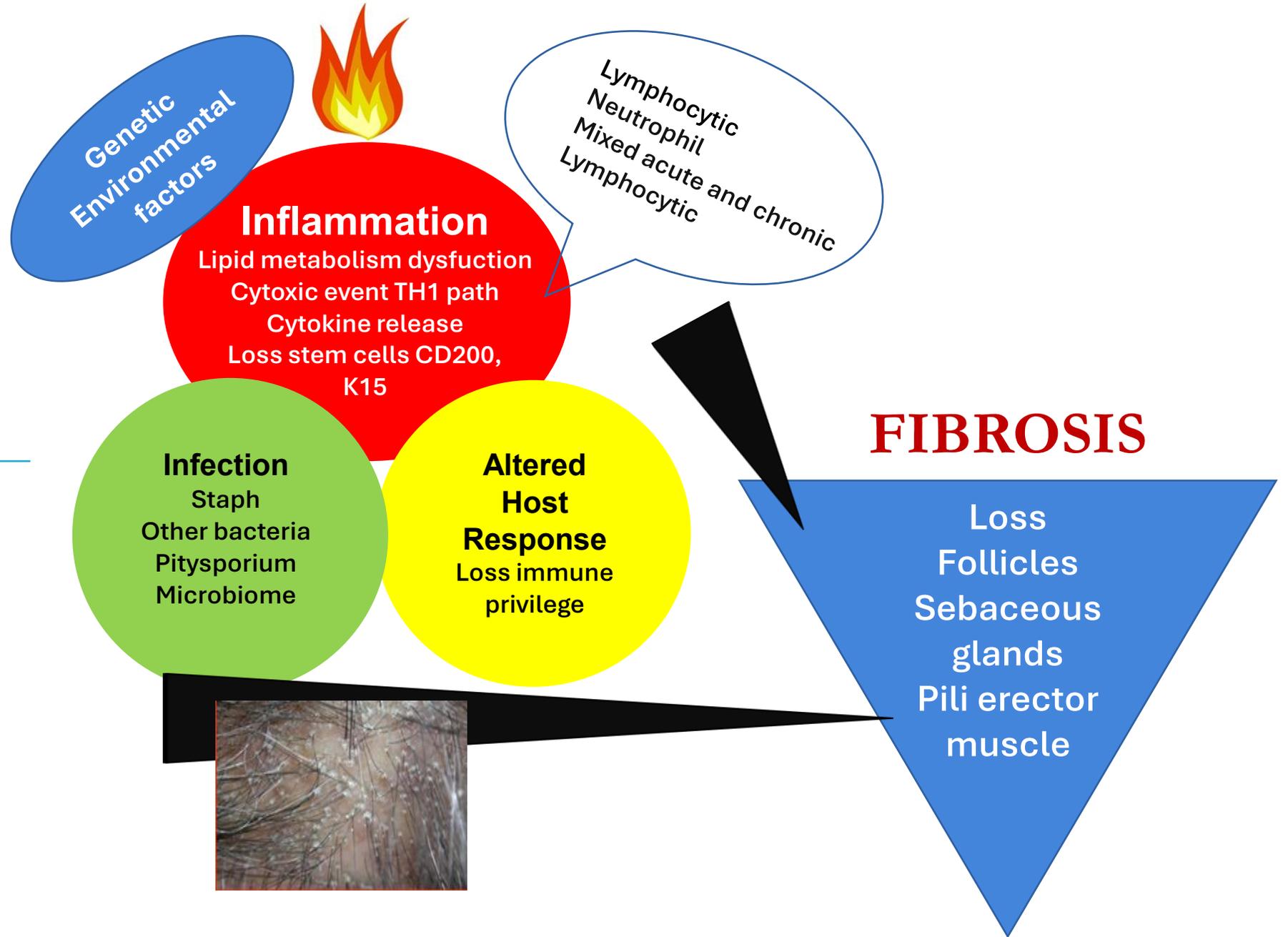
– Clinical & Histologic Overlap

• NO FDA approved therapies

- Lymphocytic
 - Neutrophilic
 - Mixed
 - Non-specific indeterminate
 - End stage
- JAAD 2003



Scarring Alopecia



Scarring Alopecia Today's Approach (non FDA approved)



- **GOAL**
- **Reduce** inflammation
- **Prevent** destruction follicle & sebaceous gland

Reduce Inflammation

- Anti inflammatory
- Anti oxidants
- Antibiotics
- Corticosteroids
- Anti malarial
- Anti androgens
- Immune modulators
- Anti mitotic
- Biologic agents
- Retinoids
- Anti diabetic drugs



Asymptomatic
but inflamed

Scalp dysesthesia (Trichodynia)

- Gabapentin
- Botox
- **R/O Contact dermatitis**

Regrowth & regeneration of normal follicle cycling

Immune modulators

- Topical Tacrolimus/Topical Jak I
- Minoxidil topical & LDOM
- Micro needling
- Platelets Plasma Rich (PRP)
- Low light laser
- Photodynamic therapy PDT
- Laser
- Biologic agents

Surgeries

- Follicular unit transplant
- Scalp reduction
- Artificial fibers
(non - immunogenic)

Frequency of Alopecia Hair Specialized Clinics

- **2,835** patients Frequency in 22 Hair Specialized Clinics
- **72.7%** females and 27.3% males with 3,133 diagnoses of alopecia
- **73%** were non-cicatricial and 27% were cicatricial alopecias
- **57** different types of alopecia were characterized

- **37.7%** Androgenetic alopecia (AGA)
- **18.2%** Alopecia areata (AA)
- **11.3%** Telogen effluvium (TE)
- **10.8%** **Frontal fibrosing alopecia** (FFA)
- **7.6%** Lichen planopilaris (LPP)
- **2.8%** Folliculitis decalvans (FD)
- **1.9%** Discoid lupus
- **1.8%** Fibrosing alopecia in a pattern distribution (FAPD)

Male predominance – Acne keloidalis nuchae, Dissecting cellulitis and FD

Female predominance – Traction alopecia, Central Centrifugal Cicatricial Alopecia, FFA, TE, FAPD and LPP

Future Challenges

Dermatologist – Must! Take the Lead

Collaborate & Support Hair Experts & Research

Stay Informed !

- New drugs & evidence of efficacy & safety
- Pharma & Cosmetic industry growing interest & products
- Nutraceuticals & Cosmeceuticals
- Evidence gaps & Consumer interest



Alopecia Patients Need You!

The Dermatologic Challenge
Science, Diagnosis & Treatment

Thank you

Wilma F. Bergfeld, MD • bergfew@ccf.org



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Alopecia Areata



Androgenetic Alopecia



Central Centrifugal Cicatricial Alopecia



Frontal Fibrosing Alopecia



Lichen Planopilaris

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