



TrichoTest™

Pharmacogenetic approach to personalize alopecia treatment



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Pharmacogenetic approach to personalize alopecia treatment in males and females

About Alopecia

Alopecia is an abnormal hair loss that most commonly affects the scalp and is caused by an interruption in the hair growth cycle, whether due to age, autoimmune conditions, or stress.

The efficacy of the most recognized alopecia treatments is not absolute

Each person's body is unique, and their response to treatment can vary. Some people may experience significant hair growth with a particular treatment, while others may not see any improvement.

38% of patients

Low efficacy of Minoxidil

Although topical minoxidil exhibits a good safety profile, its efficacy remains relatively low in the overall population.

4-6 months

Trial before noticing improvement

And must be used indefinitely to maintain a response.

Only <11%

Responds to Finasteride

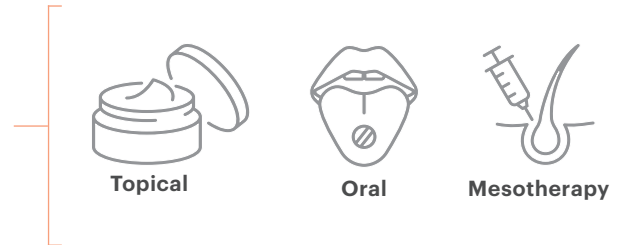
Although arrests hair loss, few achieve marked hair regrowth.





TrichoTest™ provides personalized treatment recommendations for all administration ways

Its algorithm combines genetic data with relevant patient's anamnesis and possible contraindications to select the most appropriate vehicles and active pharmaceutical ingredients (APIs) among a list of 11 vehicles and 62 APIs (Finasteride, Minoxidil, Latanoprost, 17-a Estradiol, Cetirizine, Spironolactone, Triamcinolone acetoneide, among others).



TrichoTest™ analyzes 26 polymorphisms

associated with metabolic pathways predicting treatment responses with relevant patient's anamnesis (intolerances, hypersensitivity, diseases, medication, blood pressure, among others).

All patients, with scalp or hair problems, are candidates for TrichoTest™

Male & Female



Suitable for the most common Alopecia

- Androgenetic Alopecia
- Alopecia Areata
- Telogen Effluvium

The genetic variations analyzed are associated with 9 categories

① Prostaglandins and sulphotransferase

④ Stimulation of circulation

⑦ Vitamins

② Anti-inflammatory drugs

⑤ Collagen synthesis

⑧ Minerals

③ Anti-androgens

⑥ Insulin-like growth factor

⑨ Antioxidants

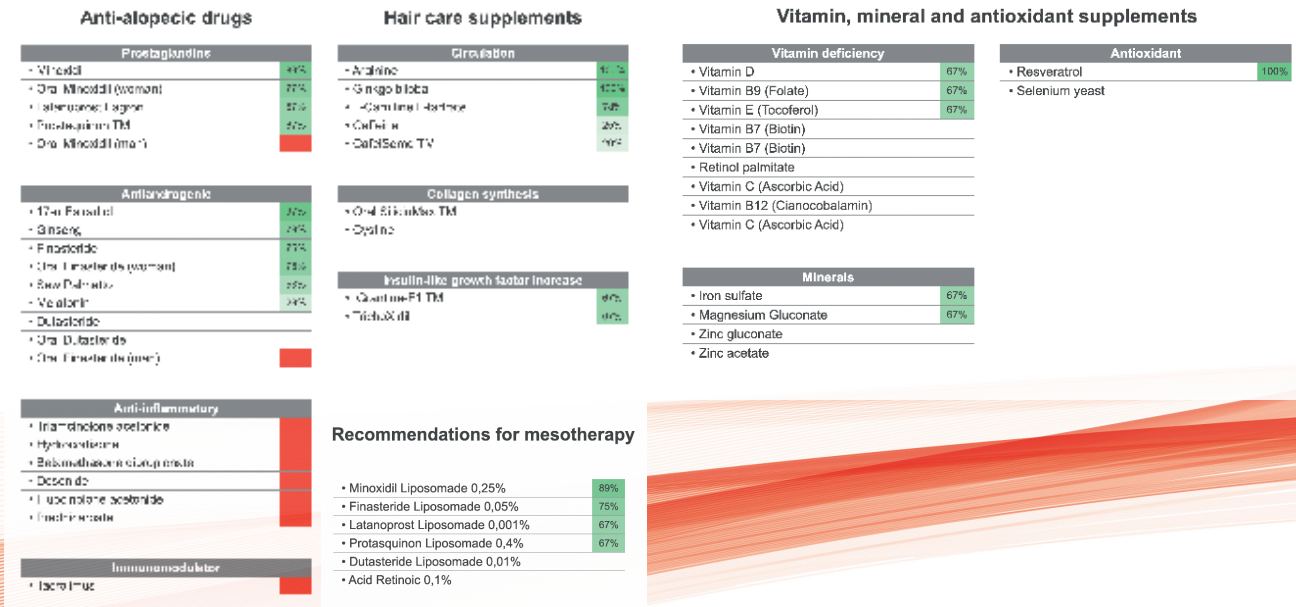


TrichoTest™ Report

Accurate and Clinically actionable results to help you make better informed decisions.

1. Drug Efficacy Panel

The report shows on a color scale which compounds the algorithm recommends. Percentages and color scale indicate the level of efficacy of each Active Ingredient for the patient. Medications blocked due to intolerances or contraindications are shown in red.



2. Complete Treatment approach



Topical



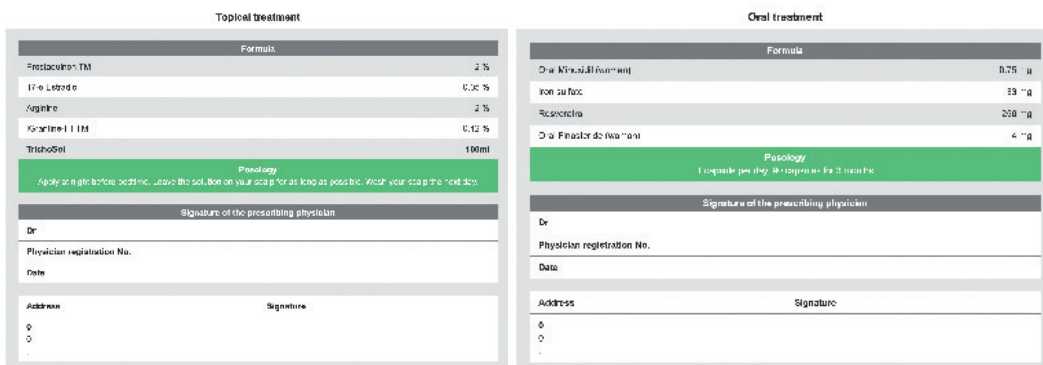
Oral



Mesotherapy

3. Prescription Ready

The most suitable formulations are selected considering the genetics, the type of alopecia, and the relevant history of the patient. All formulas have been tested and are suitable for compounding.



Check a Demo Report by scanning the QR.



Man report



Woman report





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They work with us



Dr. Gorana Kuka-Epstein

M.D. - HAIR CENTER SERBIA
Leading hair transplantation
Specialist Founder of the FoundHair
Training program and the Women's
Center for Hair Loss.
Diplomate of the American Board
of Hair Restoration Surgery.



Dr. Philippe Ginouves

NHT EUROPE
Highly skilled plastic and
reconstructive surgeon.
Focus on hair loss treatment since 1985.
World FUE Institute, ISHRS, member.

Clinical Case

Before treatment



After treatment



Case information

Male patient suffering from **androgenetic alopecia (AGA)** had been attempting treatment with minoxidil for 1 year without success. However, after undergoing a TrichoTest genetic profile, it was revealed that the patient was a non-responder to minoxidil due to a specific genotype of the **SULT1A1** gene. Based on this information, the patient's treatment was adjusted accordingly and he began to show improvement in hair regrowth and reduction in hair shedding. The **TrichoTest™** proved to be a valuable tool in helping to personalize the patient's treatment plan, leading to better results and a more successful outcome.





What is pharmacogenomics and what is it for?

Determine the safest, most effective treatments for patients

- Pharmacogenomics use the genetic information of a patient to study its individual response to drugs.
- Genetic variations can be associated with a particular drug response in a patient. Identifying those variations helps to target medication changes that can be safer and more effective.
- Pharmacogenomics testing allows the Doctors to make better informed decision and eventually adjust the dosage or choose a different drug.

The goal of pharmacogenomics is to develop strategies to individualize patient therapy and optimise outcomes

Personalized Medicine offers many benefits for patients:

- Optimized dosing and efficacy.
- Reduced trial and error prescribing.
- Reduced risk of ineffective medications and adverse side effects.
- Achieving desired therapeutic benefit sooner for improved patient outcomes.

What is evaluated?

	Genetic variations analyzed	Gene	Evaluated effect	Recommended APIs
1	Prostaglandins and sulphotransferase	GPR44	Activity of PGD2 receptors	Prostaquinon™
		PTGFR	Activity of PGF2a receptors	Latanoprost
		PTGES2	Activity of PTGES2 enzyme	Minoxidil
		SULT1A1	Activity of sulfotransferase	Minoxidil
2	Anti-inflammatory drugs	GR-alpha	Resistance to glucocorticoids therapy	Anti-inflammatory glucocorticoids & Immunomodulators
3	Anti-androgens	CYP19	Activity of aromatase	17α-estradiol
		SR5DA	Activity of 5α-reductase type 1 and 2	Finasteride, Dutasteride
4	Stimulation of circulation	ACE	Activity of angiotensin-converting enzyme	Circulation modulators
5	Collagen syntesis	COL1A1	Synthesis of collagen	Collagen synthesis enhancers
6	Insulin-like growth factor	IGFR-1	Activity of IGF-1 receptors	IGrantine-F1™
7	Vitamins	CRABP2	Intracellular transport of vitamin A	Retinol
		BTD	Activity of biotinidase	Vitamin B7 (biotin)
		SLC23A1	Blood Vitamin C levels	Vitamin C
		MTHFR	Folate deficit	Vitamin B9 (folate)
		GC	Vitamin D deficit	Vitamin D
		FUT2	Vitamin B12 deficit	Vitamin B12
		ZPR1	Vitamin E deficit	Vitamin E
8	Minerals	SLC30A3	Blood Zinc levels	Zinc (Sulfate, gluconate or acetate)
		MUC1	Blood Magnesium levels	Magnesium gluconate
		TMPRSS6	Blood iron levels	Iron sulfate
		DMGDH	Blood selenium levels	Selenium Yeast
9	Antioxidants	NQO1	Oxidative capability	Astaxantin



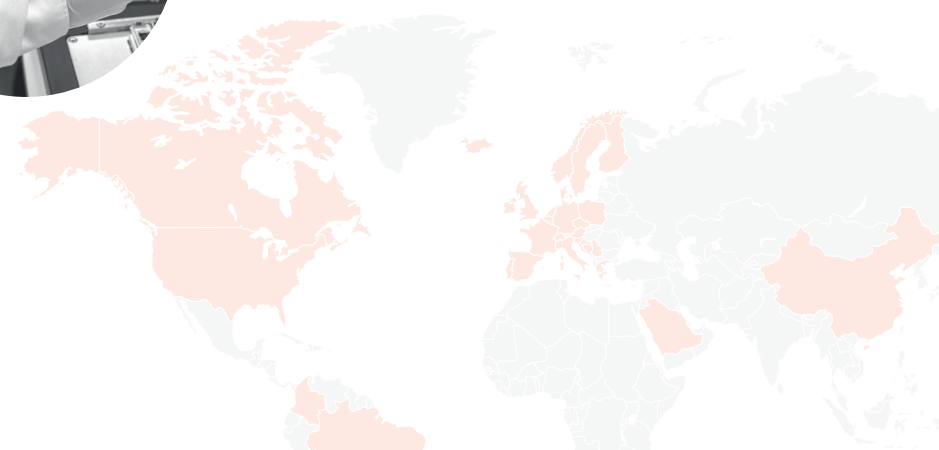
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How do we guarantee expertise, quality and service?



Fagron Genomics is an **in vitro** medical device manufacturer specializing in the **development and servicing of medical genetic algorithms**, oriented to deliver personalized treatments to patients.



Best-in Class Lab

Our proprietary laboratory has been built to perform high-volumes with accurate precision.

They Relied on us!

+65 countries	+3,000 doctors	+35,000 patients
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Trustability

Our processes and documentation comply with the most widely used standards worldwide.



Infrastructure

Genetic Labs facilities with latest technology in genetics analysis operating under GLP and GCP standards.



World-wide network

Services, logistics hubs, and professional support from any location around the globe.



Quality
is at the center of our DNA



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LEGAL DISCLAIMER

Fagron Genomics, S.L.U expressly reserves any legal actions in case of an inappropriate, negligent or incorrect use or interpretation of the results of our tests. It is the responsibility of the healthcare professional who requests a test to guarantee to the patient the appropriate genetic advice as foreseen by Law 14/2007, of 3rd July, of biomedical research. As Fagron Genomics, S.L.U does not have access to the personally identifiable information about the patient from whom the sample comes, it is the responsibility of the requesting healthcare professional to comply with the applicable data protection Laws and regulations.

Fagron Genomics, S.L.U carries out genetic tests upon request by healthcare professionals, in relation to biological samples from patients obtained by the healthcare professional. Our tests do not replace a medical consultation, nor do they make up a diagnostic or treatment, nor should they be interpreted this way. Only healthcare professionals can interpret the results of said tests, based on their knowledge of the clinical records of the patients and other relevant factors and, under their responsibility, give a diagnosis or prescribe treatment to the patient. We decline all responsibility derived from the use and interpretation of the results of our tests by the requesting healthcare professional.