myDNAmap
pharmacogenetic

myDNAmap
the power of your genetics

myDNAmap is a medical genome company that was established with the aim of helping the general public to access all of the information included in their DNA, so they can better care for their health and that of their family.

myDNAmap offers a unique and comprehensive service in the field of preventative medicine. We sequence the whole genome containing all of the genes associated with a person's health and wellbeing. We provide pre- and post-sequencing advice, which will answer any questions and explain the results. We have developed **myDNAapp,** a mobile app where you can consult your results, contact health and science professionals and enter information regarding your health, which helps to personalise your genetic report. Furthermore, **myDNAmap** offers annual updates, which include the most recent discoveries in the field of genetics.

We know that every one of us is unique and individual just like our DNA.

Knowing your genetic profile will help you to take care of your health and that of your family. Today, tomorrow and always.

Always check **mydnamap.com** for the latest updates of our services.

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Our Pharmacogenetic panel allows you to:

- improve the results of drug treatments.
- reduce the possible adverse effects of drugs.
- receive customised prescriptions.
- reduce treatment costs.

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The effect of drugs can be influenced by both environmental (diet, lifestyle etc.) and genetic factors. In the case of genetic factors, certain DNA variants can cause medications have different effects to those expected. This is because the proteins that metabolise and transport and/or their therapeutic targets (receptors) are affected. This influences both drug efficacy and safety. By means of DNA testing, we can find out if a drug, or a treatment combining various drugs, will be beneficial for your health; or if, on the contrary, it may cause damaging effects.

Each person is unique just like their genetic makeup. For this reason, health-related drug treatment must be too. The same drug can produce maximum efficacy without toxicity or alternatively zero benefit and maximum toxicity.

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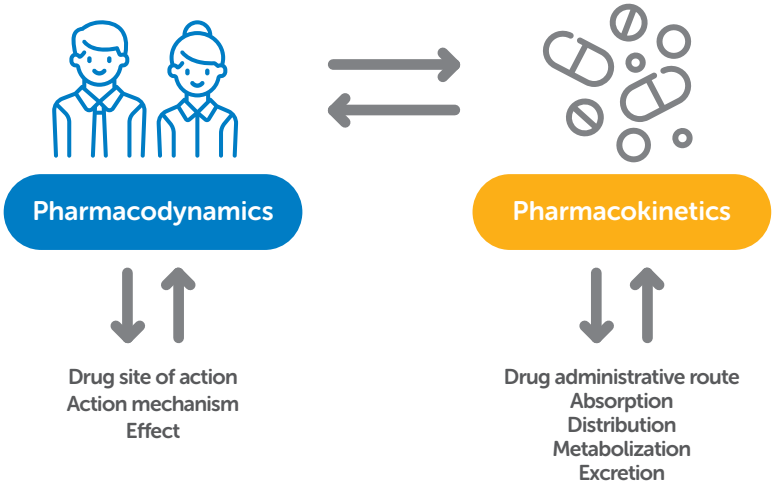
Drug action tests are based on two central principals:

• Pharmacokinetics which describes the quantity of the drug needed to achieve its aim within the body and involves four processes: absorption, distribution, metabolism and excretion.

• Pharmacodynamics which describes how the target cells respond to the drug. Target cells include receptors, ionic chains, enzymes and components of the immune system.



Genetic variation in the genes of the metabolising enzymes (drug receptors and transporters) are associated with an individual variability in **drug efficacy and toxicity**. Genetics also underlie **hypersensitivity reactions in patients allergic** to certain drugs.

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Due to all of these factors, pharmacogenetics constitutes one of the fundamental pillars of precision and preventative medicine. It offers the opportunity to tailor drug treatment depending on individual genetic characteristics, both when choosing the best treatment, as well as prescribing an appropriate dose. This means administrating the correct drug, at the correct dose, to the correct person.

In the **myDNAmap Pharmacology panel** we offer the pharmacogenetic test of more than 200 drugs, including the following therapeutic areas: diseases, infections, cardiology, neurology, oncology, psychiatry, respiratory airways, gastroenterology, urogynaecology, rheumatology, metabolism, anaesthesia and pain treatment.

Some of the drugs included in the Pharmacology myDNAmap Panel

Infectious diseases: abacavir, nalidixic acid, boceprevir, chloroquine, daclatasvir, dapsone, dasabuvir, dolutegravir, efavirenz, elbasvir, erythromycin, grazoprevir, isoniazid, ledipasvir, mafenide, nitrofurantoin, ombitasvir, paritaprevir, paritaprevir, peginterferon alpha-2b, pyrazinamide, primaquine, raltegravir, rifampicin, ritonavir, ritonavir, simeprevir, sofosbuvir, sofosbuvir, sulfamethoxazole, quinine sulphate, sulfisoxazole, telaprevir, trimethoprim, velpatasvir, voriconazole, voxilaprevir.

Cardiology: acenocoumarol, apixaban, carvedilol, clopidogrel, dabigatran, isosorbide dinitrate, hydralazine, losartan, metoprolol, isosorbide mononitrate, nebivolol, prasugrel, propafenone, propranolol, ticagrelor, warfarin.

Anaesthetics: enflurane, isoflurane, succinylcholine, sevoflurane.

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Some of the drugs included in the Pharmacology myDNAmap Panel

Oncology: abemaciclib, mycophenolic acid, ado-trastuzumab emtansine, afatinib, alectinib, anastrozole, atezolizumab, avelumab, belinostat, binimetinib, brentuximab vedotin, brigatinib, cabozantinib, capecitabine, ceritinib, cetuximab, cisplatin, cobimetinib, crizotinib, dabrafenib, denileukin diftitox, dinutuximab, durvalumab, enasidenib, encorafenib, erlotinib, everolimus, exemestane, fluorouracil, fulvestrant, gefitinib, imatinib, irinotecan, lapatinib, letrozole, mercaptopurine, midostaurin, neratinib, niraparib, nivolumab, obinutuzumab, olaparib, olaratumab, osimertinib, palbociclib, panitumumab, pazopanib, pembrolizumab, pertuzumab, rasburicase, ribociclib, rituximab, rucaparib, tamoxifen, tioguanine, trametinib, trastuzumab, tretinoin, vemurafenib, venetoclax.

Gastroenterology: metoclopramide, omeprazole, ondansetron, palosentron, pantoprazole, rabeprazole, sulfasalazine.

Rheumatology: Aziathioprine, carisoprodol, celecoxib, flurbiprofen, lesurinad, pegloticase.

Respiratory system: Arformoterol, formoterol, indacaterol, ivacaftor, lumacaftor, tezacaftor, umeclidinium.

Gynaecology/urology: Avanafil, drospirenone, ethinylestradiol, sildenafil, tadalafil, tamsulosin, tolterodine, vardenafil.

Neurology: valproic acid, carbamazepine, clobazam, deutetrabenazine, dextromethorphan, diazepam, eteplirsen, phenytoin, galantamine, lacosamide, meclizine, oxcarbazepine, quinidine, tetrabenazine, valbenazine.

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Pain treatment: acetylsalicyclic acid (aspirin), codeine, diclofenac, flurbiprofen, ibuprofen, lidocaine, lornoxicam, piroxicam, prilocaine, tramadol.

Metabolism: atorvastatin, glimepiride, glipizide, glyburide, chlorpropamide, rosuvastatin.

Psychiatry: amitriptyline, aripiprazole lauroxilm, atomoxetine, biperiden, brexipiprazole, cariprazine, citalopram, clomipramine, clonazepam, clozapine, desipramine, desvenlafaxine, doxepin, duloxetine, escitalopram, fluoxetine, fluvoxamine, haloperidol, iloperidone, imipramine, lamotrigine, lorazepam, mirtazapine, modafinil, naltrexone, nefazodone, nortriptyline, olanzapine, paroxetine, perphenazine, pimozide, promethazine, protriptyline, quetiapine, risperidone, sertraline, thioridazine, trimipramine, venlafaxine, vortioxetine.

Others: eltrombopag.

They are considered to be clinically relevant by the American Food and Drug Administration (FDA) and the European Medicine Agency (EMA). Always consult our website for new additions.

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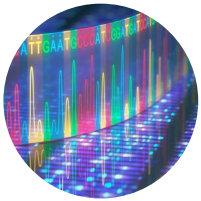
Related panels



myDNAmap neurology

The **myDNAmap** report given to you by our genetic counselors includes the result of the analysis of 10 genetic panels covering the areas of: sport, nutrition, cardiology, fertility, cancer, genetic compatibility, ancestry, pharmacology, addictions and neurology.

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Technology used

Whole genome sequencing (WGS) using Illumina HiSeq X10 or NovaSeq 6000 systems. Illumina PE150, QQ30 ≥80%, aligned with the human reference genome GRCh37/hg19. The classification and analysis of variants is carried out based on the recommendations of the American College of Medical Genetics and Genomics (ACMG). The variants reported are mentioned based on the recommendations of the Human Genome Variation Society (HGVS).

Our report: is the scientific-technical communication of the results. It is written in a precise yet simple manner, intended for both our users and health professionals. It is provided within the framework of a consultation with one of our genetic counsellors. This can take place via videoconference. During the consultation the specialised professional will explain the details, answer any user queries and clear up any doubts that may occur.

Note: the detection of genetic variants only provides a predisposition or potential, but never provides a certainty of developing diseases. Under no circumstances is the genetic information provided valid for diagnostic use. It does not imply the potential to determine the age you will be when it starts nor the type or severity of the disease(s); nor does it allow us to rule out the existence of clinical or genetic heterogeneity.

Bibliography:

• Ahmetov II, Fedotovskaya ON. **Current Progress in Sports Genomics**. Adv Clin Chem. **2015**; 70:247-314. doi: 10.1016/bs.acc.2015.03.003. Epub 2015 Apr 11. Review. PubMed PMID: 26231489.

• Guth LM, Roth SM. **Genetic influence on athletic performance**. Curr Opin Pediatr. **2013**;25(6):653–658. doi:10.1097/MOP.0b013e3283659087

• Mattsson CM, Wheeler MT, Waggott D, Caleshu C, Ashley EA. **Sports genetics moving forward: lessons learned from medical research**. Physiol Genomics. 2016 Mar;48(3):175-82. doi: 10.1152/physiolgenomics.00109.2015. Epub 2016 Jan 12. Review. PubMed PMID: 26757801.

• Brazier J, Antrobus M, Stebbings GK, Day SH, Heffernan SM, Cross MJ, Williams AG. **Tendon and Ligament Injuries in Elite Rugby: The Potential Genetic Influence. Sports (Basel). 2019** Jun 4;7(6). pii: E138. doi: 10.3390/sports7060138. Review. PubMed PMID: 31167482.

• Wilson GC, Mavros Y, Tajouri L, Singh MF. **The Role of Genetic Profile in Functional Performance Adaptations to Exercise Training or Physical Activity: A Systematic Review of the Literature**. J Aging Phys Act. **2019** May 5:1-23. doi: 10.1123/japa.2018-0155. [Epub ahead of print] PubMed PMID: 30676214.


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