

medicamina

Open-source precision medicine



Current medical practices

- The current practice of medicine involves a feedback loop where the physician diagnoses and prescribes a medication, the patient then takes the medication and reports side effects back to the doctor which can result in an altering of medication, dosage or frequency



Who we are

medicamina is an application
which is aimed at providing
precision medicine technologies
to the public.

Privacy aware

A focus on protecting the privacy of our customers personal information.

Avoid drug misdiagnosis

Use genetic data to avoid pharmacogenetic interference.

Study family history

Build a family tree and study the history of genetic disease in your ancestry.

Keep your medical record

Move the center of data from the doctors filing cabinet to your pocket.

Record fitness information








Record your heartrate and activity and share information with your physician.

Book appointments

Find and book a doctors appointment near you.

What can we do

Our mission statement

-  Our goal is to bring easy to read genetic data to mass market
-  On iOS, Android and Web
-  To help make intelligent therapeutic decisions and avoid misdiagnosis
-  Designed for physicians and non-professionals
-  So you can learn about drugs and diseases
-  View an ancestry map, build your family history
-  And discover inherited diseases

The leitmotif

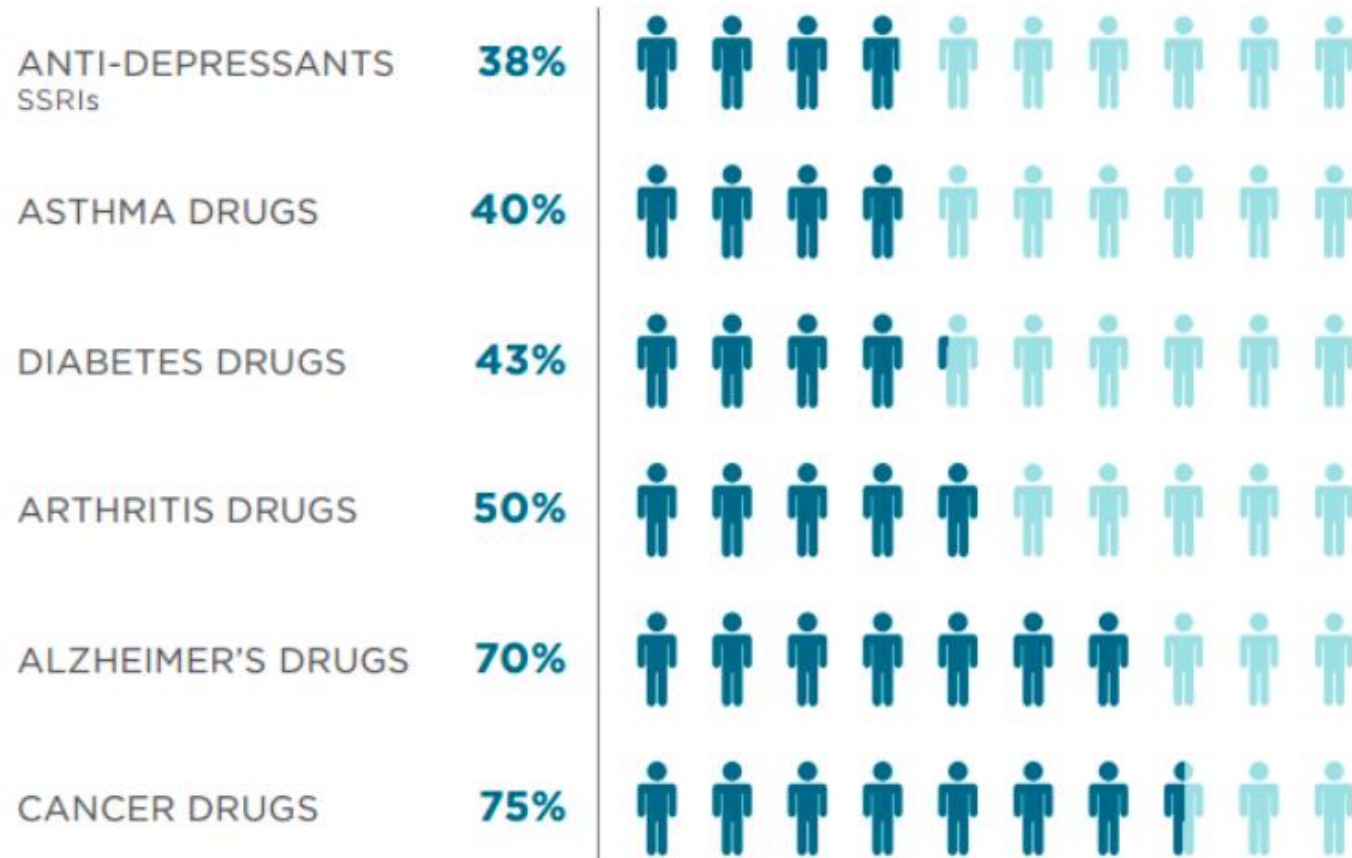
Reduce the misdiagnosis of medications by using genetic data prior to the prescription phase to better target individuals by using their genomic data, introducing precision medicine and artificial intelligence available to every physician at a reasonable price and on every person's smartphone

100% open source



The problem space

Percentage of the patient population for which a particular drug in a class is ineffective



Source: Brian B. Spear, Margo Heath-Chiozzi, Jeffrey Huff, "Clinical Trends in Molecular Medicine," Volume 7, Issue 5, 1 May 2001, pages 201-204.

The cost of misdiagnosis

- Globally, the cost associated with medication errors has been estimated at \$42 billion USD annually.
- *Source: <https://www.who.int/initiatives/medication-without-harm>*

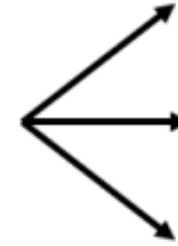
Today



Average
patient



Standard
treatment



Improved
Outcome

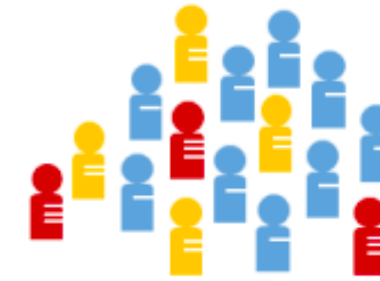


No
benefit

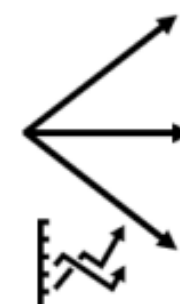


Adverse side
effects

Precision medicine



Population
health data



Data
analytics



Personalised
treatment



Improved
Outcome



Improved
Outcome



Reduced
side
effects

What is precision medicine

Current precision medicine

- Current precision medicine practise is tedious and involves shifting through genetic data searching for single mutations and comparing it to relevant data sets

What a future with medicamina looks like

- Medicamina can make medicine fun, compelling to use and convenient by always being available in your pocket thus reducing bureaucracy
- Medicamina wants to give medicine a purpose outside of your relationship with your GP and give you a reason to open the app, offering relevant information to guide your counselling
- Precision medicine with medicamina will be streamlined and guided by machine learning, automatic database searches and in-house research

It starts with a
genome
sequence

- Medicamina starts by taking a sample of your DNA and analysing it, then storing it in a database and making it available to you, this initial data set will make available the information to you about how likely you are to develop diabetes, cancers and other diseases
- Current whole genome sequences cost about \$600, but researchers have reduced it to \$100, this cost could be paid for by a user or by medicare under a hypothetical precision medicine scheme



WIRED

BACKCHANNEL

BUSINESS

CULTURE

GEAR

IDEAS

POLITICS

SCIENCE

MORE ▾

SIGN IN

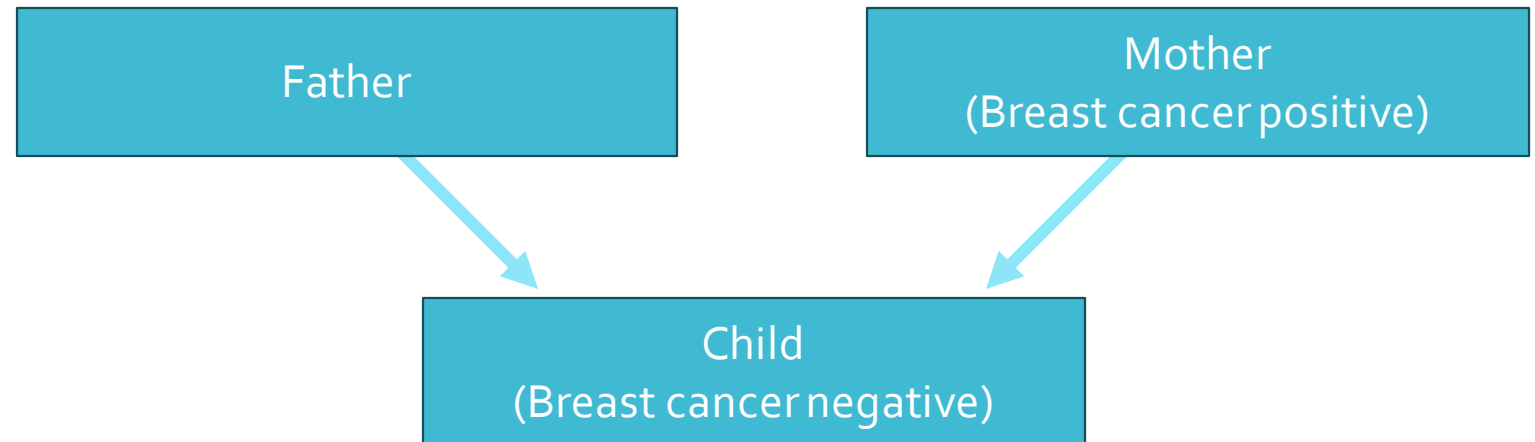


The Era of Fast, Cheap Genome Sequencing Is Here

Illumina just announced a machine that can crack genomes twice as fast as its current version—and drive the cost down to \$200 a pop.

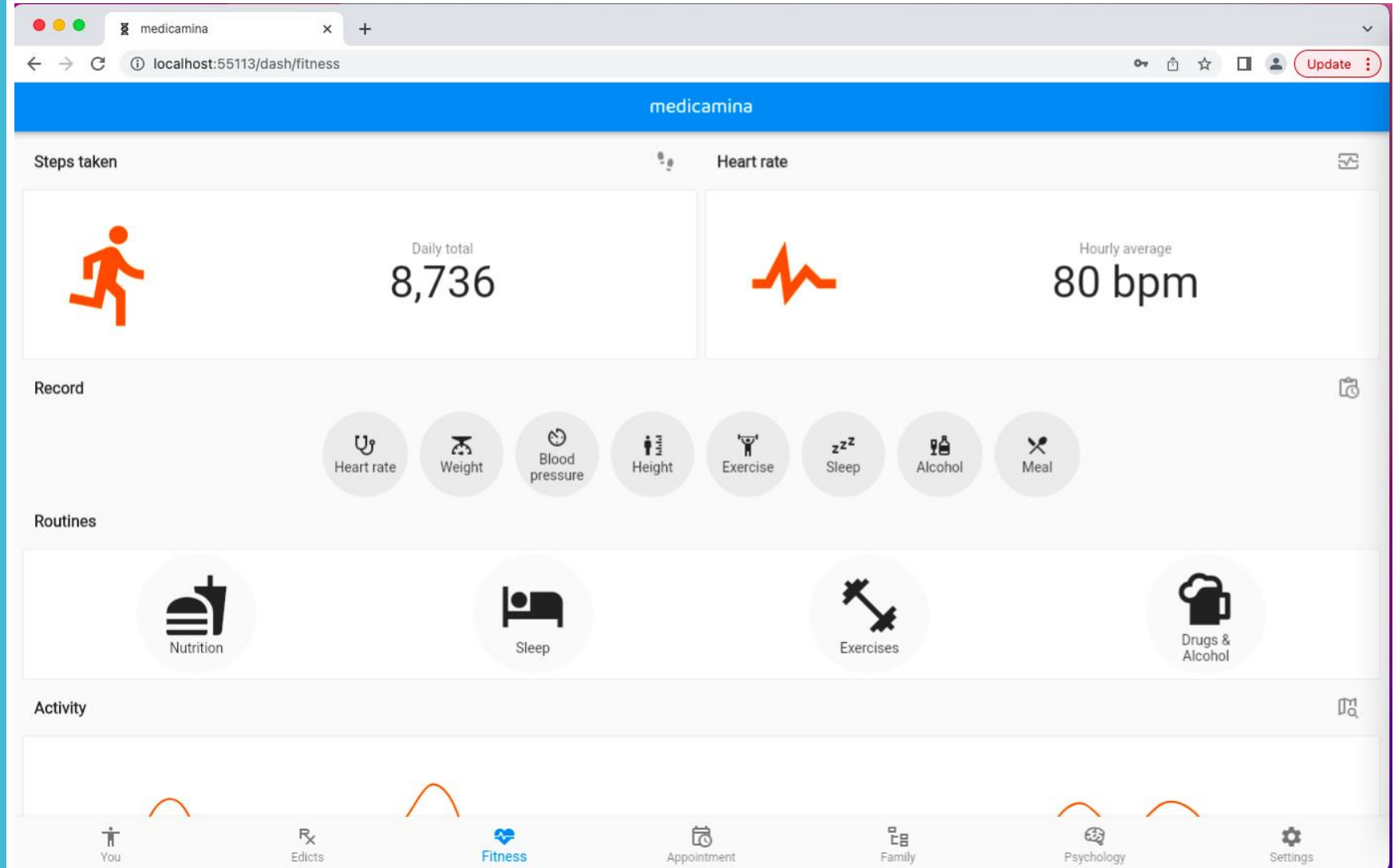
Your family's history in your palm

- By building a family tree and filling out your family's data you can choose to share your genome with your family members, allowing you to analyse which genes you inherited from which parent and learning about the likelihood that you pass a gene onto your child with your partner



Fitness tracking

Using a smartwatch you can import your fitness data and share it directly with your consultant so they know your workout routine and activity levels throughout the day



Your prescriptions online


Get prescription updates and medication reminders on your phone, so you can remember when to take your medications, how many repeats are left and read notes your doctor has added regarding the edict

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localhost:55113/dash/edicts

medicamina


Daily medications




Aspirin

2mg

8 AM







Insulin

1mg

11 PM







Metoprolol

3mg

10 AM






Re

0.5r

Recent doctor reports



Dr. Hugh Mungus

Prescription update

2mg Pencilin once daily 8am

Two months ago

E-scripts

You

Edicts

Fitness

Appointment

Family

Psychology

Sett

Find your genetic ancestry and inherited diseases

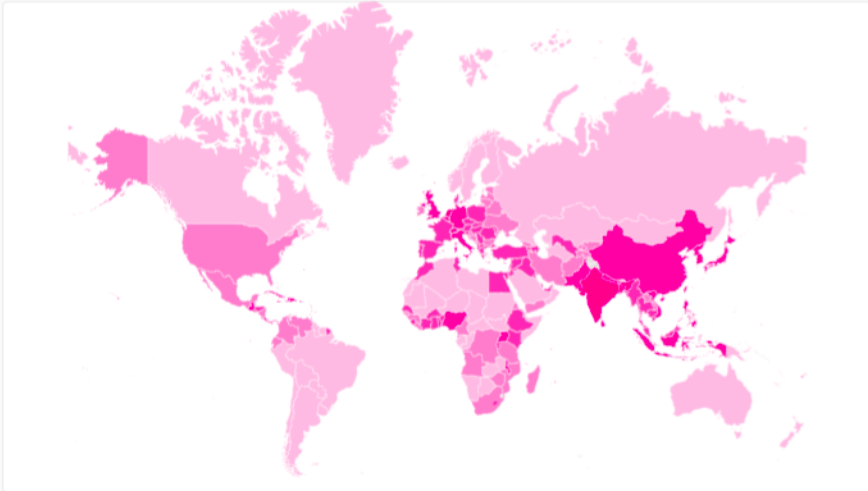
Discover where your genetic mutations originate from and the risk of developing diseases online

medicamina

localhost:55113/dash/home

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Your ancestry



Personal details

Name

Jake Spencer Walklate

Gender

M

Birthdate

26 Jun 1997

Blood type

O+

Height

5'5" [165cm]

Weight

132lb [60kg]

Genetic disease threat

Enter a search term

Condition	Risk
1p36 deletion syndrome	High

You

Edicts

Fitness

Appointment

Family

Psychology

Se

What is the benefit to doctors

- If you're a physician, you can log in using the app, search for your patient and pull up their record



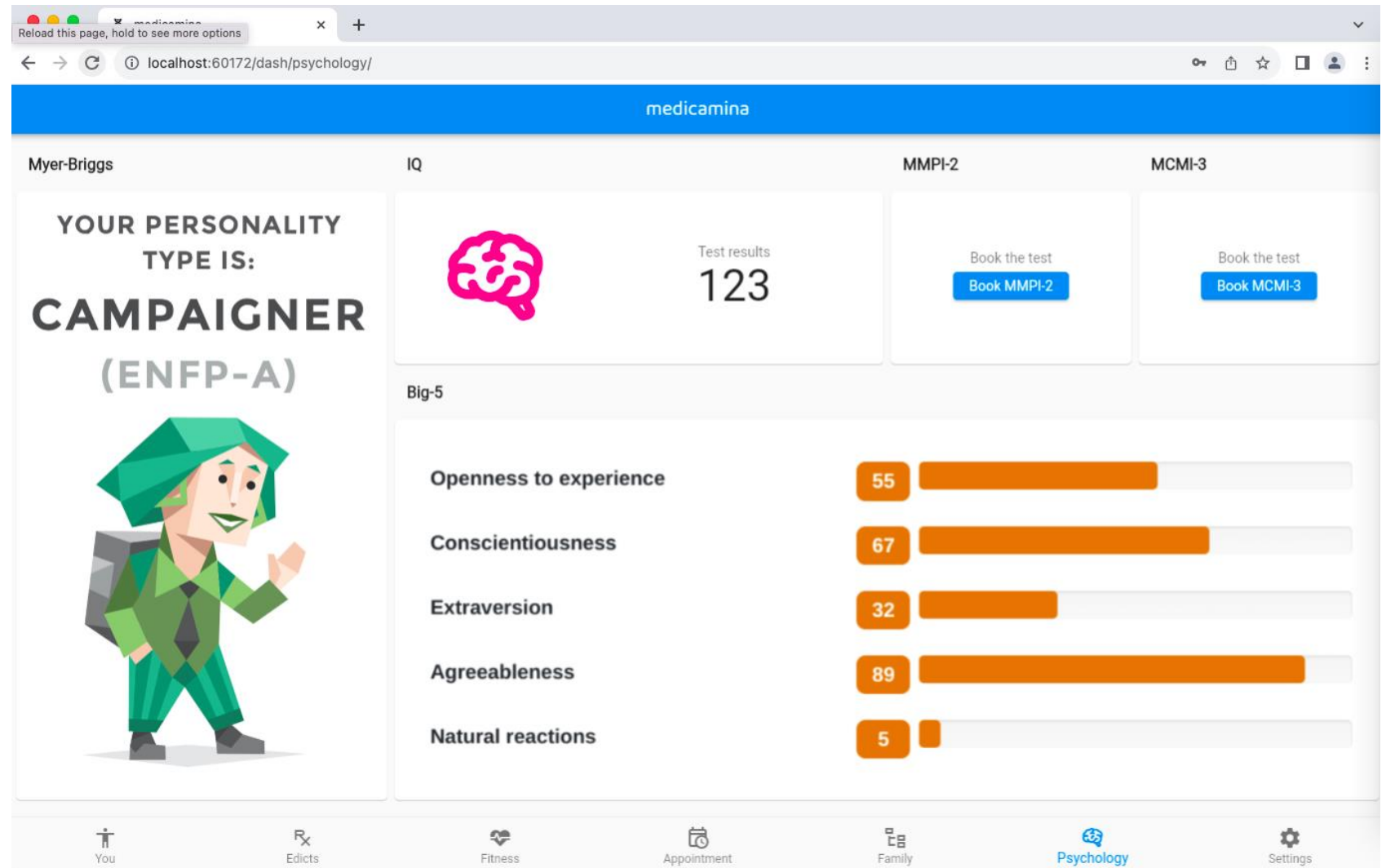
- Then when you prescribe a medication medicamina will give you immediate feedback using the patients genetic data to alert you to if they will have a predicted adverse drug reaction, in which case you can change the prescription or proceed at your own caution
- The prescription is then sent straight to the patients phone in the medicamina app or by escript sms

A focus on mental health

Built in mental health reviews supervised by licensed psychologist with appointments found within the app

Mental health is often overlooked, and information from your counsellor, psychologist or psychiatrist often goes missing unless you specifically ask for freedom of information requests

Now with medicamina you can designate who you share your data with, putting you in control of your health records and always having it all in your hands



Use of the application is free!

Doctors and pharmacies foot the bill when they see a client, only if they see a client more than once in a month will they be billed, for the non-professional the application will be completely free

PERSONAL

An account for personal use

FREE

Forever

Build a family tree

Import genetic data

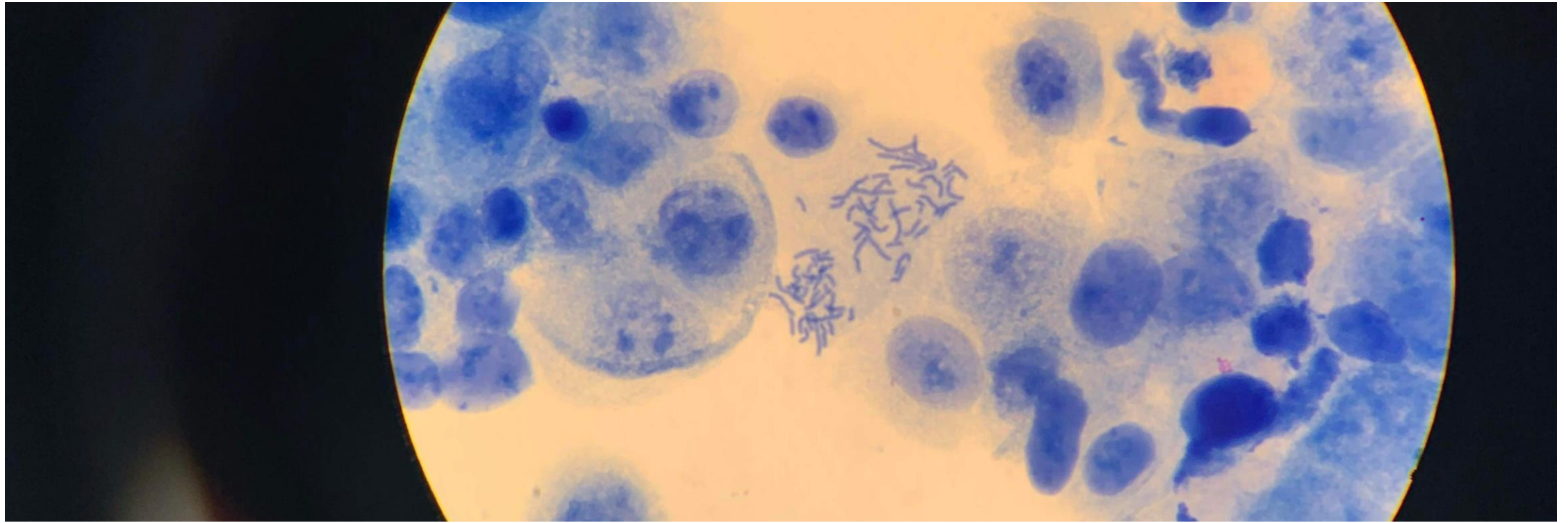
Discover diseases

Share information with your consultant

REGISTER

Summary

- We find allergies by using genetic data taken from DNA samples sent to people's houses, we get that information into the hands of the individual and give them informative results about their entire family history, we build out the family tree and get the whole families genetic data, we get this information into the hands of your family physician and this information follows you and is handed down to your children, you can then see a GP anywhere in the world and thanks to machine learning they can correctly prescribe you what you need as your medical information won't be kept in a filing cabinet on premise but instead will be in your hands and in your control and we open source all our algorithms and anonymous data



Any questions?

medicamina.us