









BIODATA INNOVATION CENTRE



88JFESEING













DNA and big data

Millions of genomes being researched...

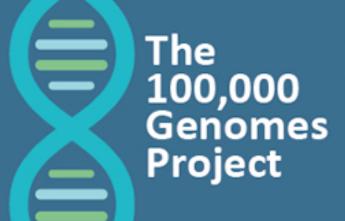
When might people donate their genomic data?...





ExAC Browser (Beta)







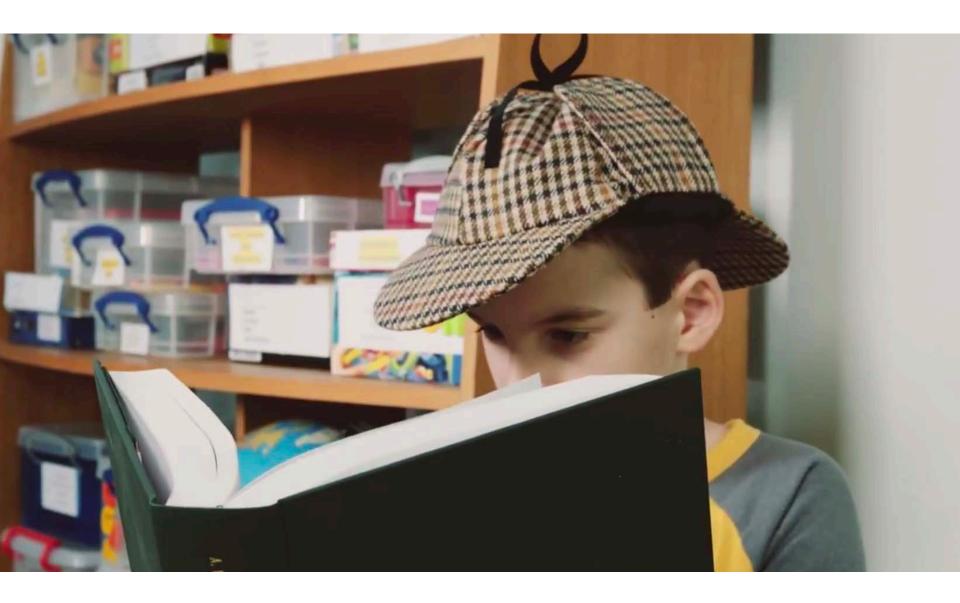
What are the benefits of donating data?

"By <u>aggregating</u> and analyzing large amounts of data, it may be possible to discover patterns that would otherwise remain obscure....this wealth of integrated genomic data and clinical information could reveal the genetic bases of cancer, inherited disease, infectious diseases, and drug responses."



What are the risks of donating data?

CHROM	POS	REF	ALT	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11
1	152062767	G	Α	GIA	GIA	GIG	GIA	GIG	AIG	GIG	GIG	GIG	GIG	GIG
1	152062808	A	G	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA
1	152062953	G	A	GIG	GIG	GIG	GIG	GIG	GIG	GIG	GIG	GIG	GIG	GIG
1	152062990	С	T	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC
1	152063059	С	T	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC
1	152063068	Ī	C	TIT	TIT	TIT	TIT	TIT	TIT	TIT	TIT	TIT	TIT	TIT
1	152063139	C	T	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC
1	152063153	C	T	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC
1 -	152063166	C	T	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC
1	152063177	C	T	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC
1	152063190	G	T	GIG	GIG	GIG	GIG	GIG	GIG	GIG	GIG	GIG	GIG	GIG
1	152063217	Α	T	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA
1	152063235	C	Α	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC
1	152063260	Α	C	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA
1	152063263	C	Α	CIC	CIC	CIC	CIC	CIC	CIA	CIC	CIC	CIC	CIC	CIC
1	152063279	Α	C	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA
1	152063300	C	A	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC
1	152063310	C	T	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC
1	152063311	G	C	GIG	GIG	GIG	GIG	GIG	GIG	GIG	GIG	GIG	GIG	GIG
1	152063397	G	T	GIG	GIG	GIG	GIG	GIG	GIG	GIG	GIG	GIG	GIG	GIG
1	152063442	T	G	TIT	TIT	TIT	TIT	TIT	TIT	TIT	TIT	TIT	TIT	TIT
1	152063495	C	Α	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC
1	152063515	С	A	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC
1	152063526	A	C	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA
1	152063551	С	* T	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC
1	152063748	A	G	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA
1	152063757	T	C	TIT	TIT	TIT	TIT	TIT	TIT	TIT	TIT	TIT	TIT	TIT
1	152063792	G	Α	GIG	GIG	GIG	GIG	GIG	GIG	GIG	GIG	GIG	GIG	GIG
1	152063815	C	A	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC
1	152063904	T	C	TIT	TIT	TIT	TIT	TIT	TIT	TIT	TIT	TIT	TIT	TIT
1	152063976	C	T	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC	CIC
1	152064096	A	G	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA
1	152064099	G	A	GIG	GIG	AIG	GIG	GIA	GIA	GIG	GIG	GIG	GIG	GIG
1	152064127	A	T	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA
1	152064186	G	A	GIG	GIG	GIG	GIG	GIG	GIG	GIG	GIG	GIG	GIG	GIG
<u>1</u>	152064199	Ť	A	TIT	TIT	TIT	TIT	TIT	TIT	TIT	TIT	TIT	TIT	TIT
1	152064238	Ť	C	TIT	TIT	TIT	TIT	TIT	TIT	TIT	TIT	TIT	TIT	TIT
<u>-</u>	152064240	Ť	Č	TIT	TIT	TIT	TIT	TIT	TIT	TIT	TIT	TIT	TIT	TIT
1	152064285	G	č	GIG	GIG	GIG	GIG	GIG	GIG	GIG	GIG	GIG	GIG	GIG
1	152064333	A	Ğ	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA	AIA
	13200 1333		,	AIA	/\\/\		ALA	AllA	ALA	Alla	ALLA		A.1.A.	ALA.



What are genomic databases being used for?



Exploring attitudes...

How we described this to the public

Data Access by Others









- Welcome
- Online footprint
- o Data access by others
- o Access by medical doctors
- Access by non-profit researchers
- o Access by for-profit researchers
- Perceived harms
- o Expectations of information
- o Trust
- Socio-demographic questions
- Submit your response

Welcome











Preliminary results!!!



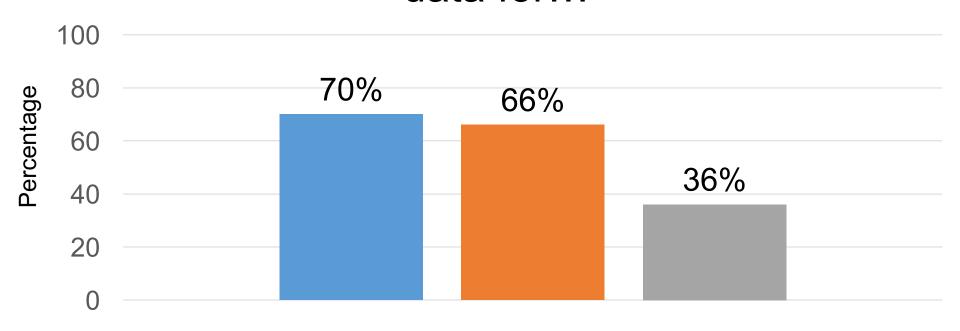




Q: Would you donate your data?

Connected to genomics world (through work or being a patient or research participant)

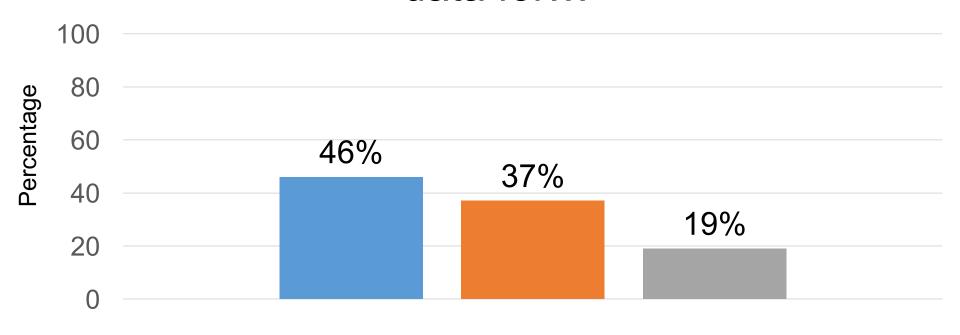
"Yes, I'd donate my DNA and medical data for..."



■ Use by Medical Doctors
■ Use by Non-Profit
■ Use by For-Profit

Public

"Yes, I'd donate my DNA and medical data for..."



■ Use by Medical Doctors
■ Use by Non-Profit
■ Use by For-Profit

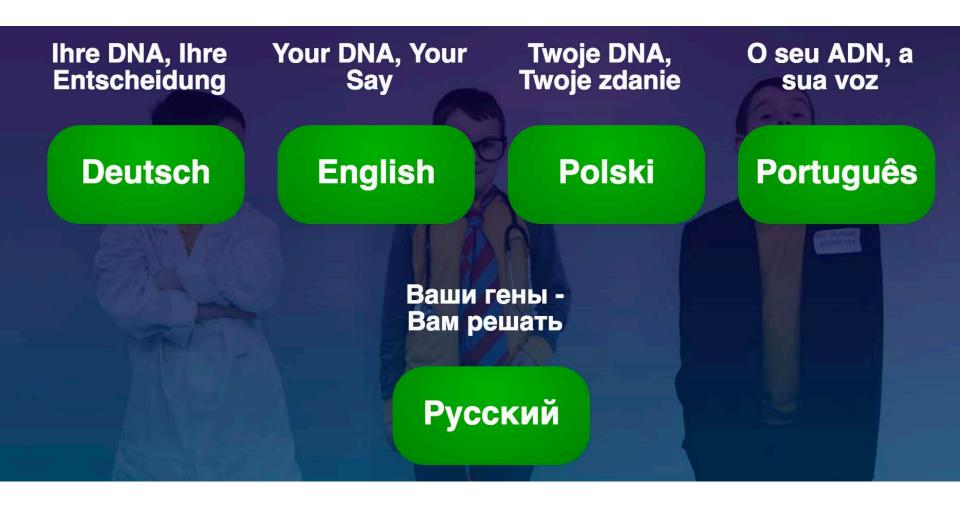
Concern about pharma making profits from free donation

Those who know about genomics are more likely to donate

Being Identified



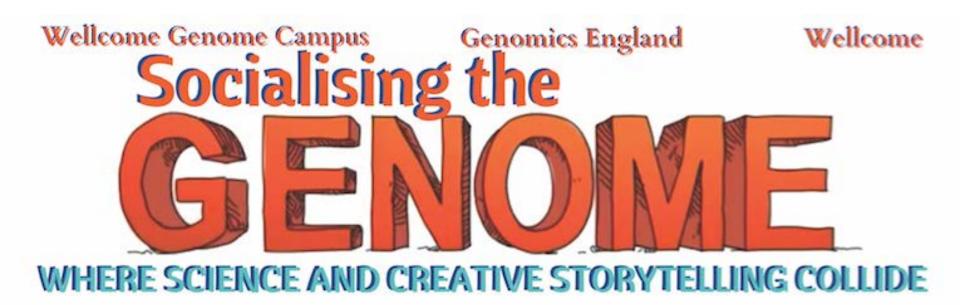




Arabic, Icelandic, Swedish, Italian, Mandarin, Urdu, Hindi, French... all on their way.....

There is an urgent need to raise consciousness

- What can genomics do for me?
- What can genomics do for medicine?
- How should it be used?
- What sort of society do I want to live in?



It couldn't have happened without.....



Global Alliance for Genomics and Health

Natasha Bonhomme

Bartha Knoppers

Adrian Thorogood

Erika Kleiderman

Peter Goodhand

Heidi Howard

Emilia Niemiec

Nadia Kovalevskaya

Participant Values Task Team



Wellcome Genome Campus

Julian Rayner

Julia Wilson

Sam Wynn

Steve Palmer

Don Powell

Lauren Farley

Jon Roberts

Wellcome Trust

Audrey Duncanson

