

H+ project

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$[h_+]^3$ *Who we are is but a stepping stone
to what we can become.*

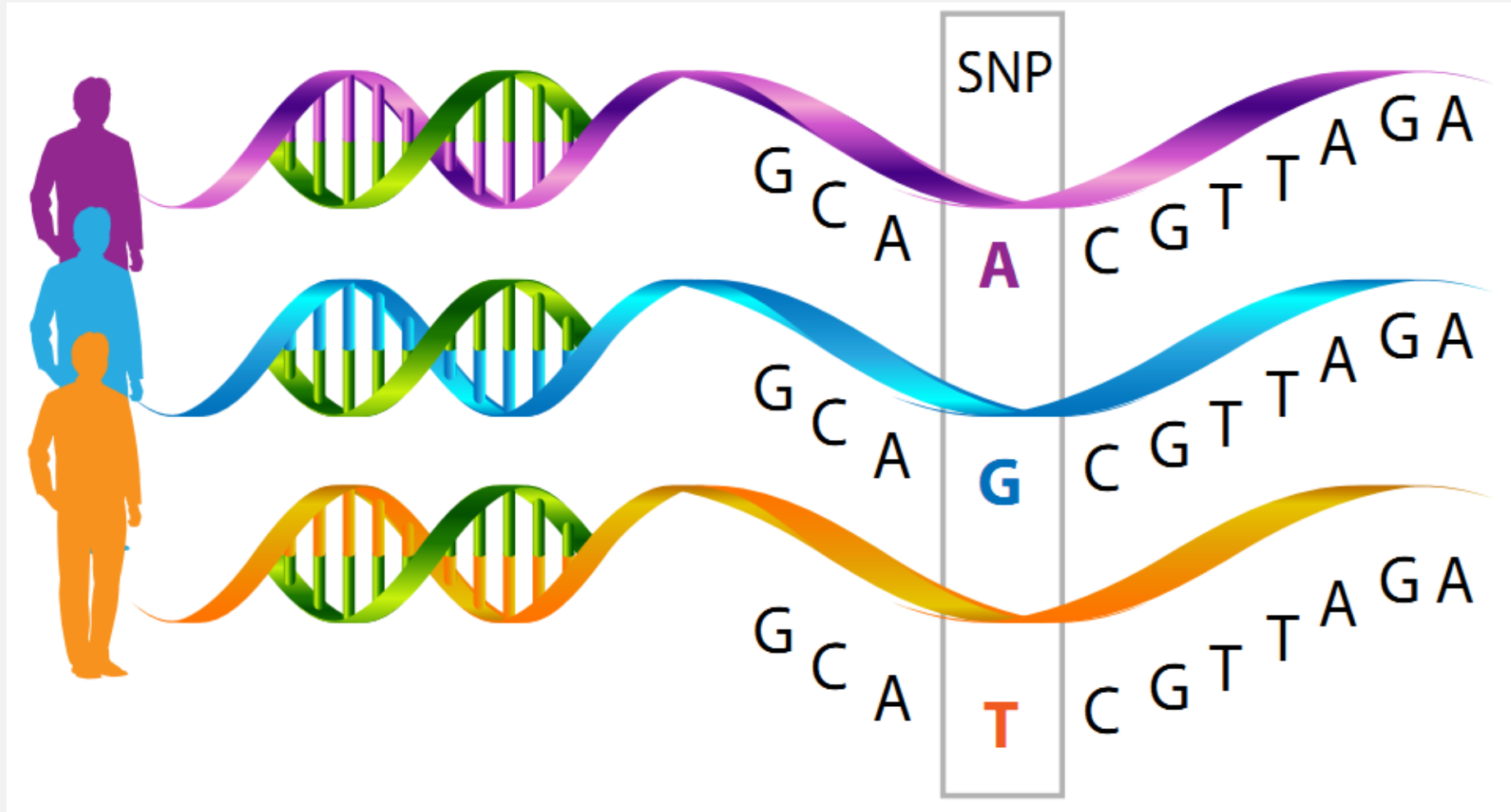
Input data

<https://github.com/msporny/dna>

A guy called Manu Sporny placed his results of SNP genotyping to GitHub



What is SNP?



Can we do anything with Manu Sporny's SNPs?

Probably not today.

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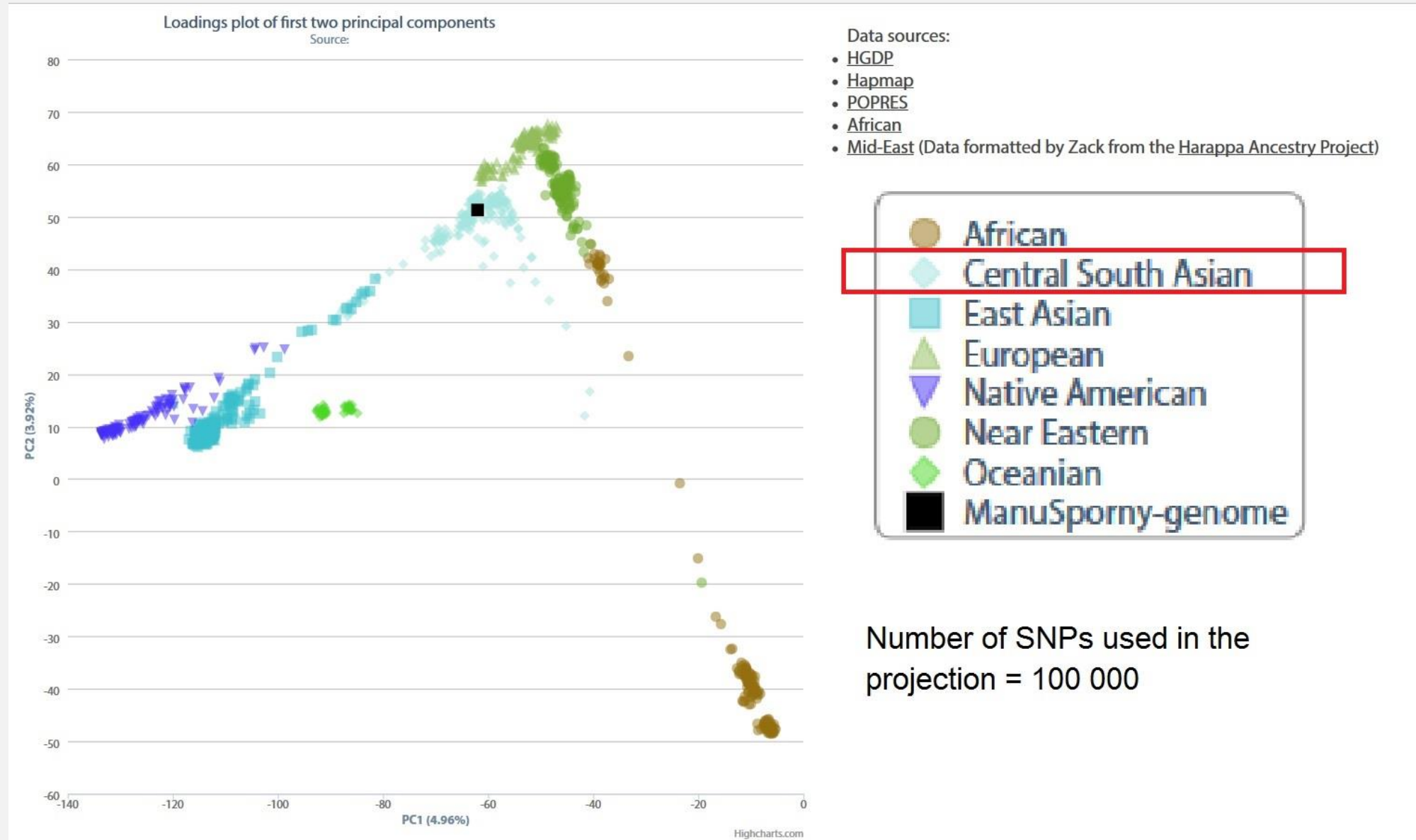
Probably not today.

**But let's imagine that we can edit
his genome now...**

Tools and Databases

- GENOtation
- Promethease
- SNPedia The logo for SNPedia, featuring the word "SNPedia" in a bold, sans-serif font. "SNP" is in red and "edia" is in black.
- GWAS The logo for GWAS Central, featuring a blue circular icon with white curved lines and the text "GWAS CENTRAL" in blue and red.
- NCBI The logo for NCBI, featuring a blue stylized wave or 'S' shape above the text "NCBI" in blue.

Ancestry of Manu Sporny



Bug fixing

According to Promethease report, Manu Sporny has 286 combinations of SNPs with (potentially) negative effect.

We've fixed some of them...

Disease	Associated SNP	Before	After
Age related macular degeneration	rs10490924	(T;T), 8.2x risk	(G;G), normal risk
Thyroid cancer	rs2145418	(G;T), 5.0x risk	(T;T), normal risk
Prostate cancer	rs6983267	(G;T), 1.3x risk	(T;T), normal risk
Obesity	rs1121980	(C;T), 1.67x risk	(C;C), normal risk
Developing rheumatoid arthritis	rs3738919	(C;C), 1.94x risk	(A;A), normal risk
Autism	rs4307059	(T;T), 1.42x risk	(C;C), normal risk

Phenotype prediction

Some of these statements seem to be true...

- Male (gs144 criteria)
- Darker skin color (rs885479(G;G))
- Most likely to be taller than average (rs1042725(C;T))
- Rh+ (rs590787(T;T))
- Straighter hair (rs499697(T;T), rs11803731(A;A)) **BUT**
curlier hair (rs3124314(C;C), rs6732426(C;C))



Thanks for the attention!