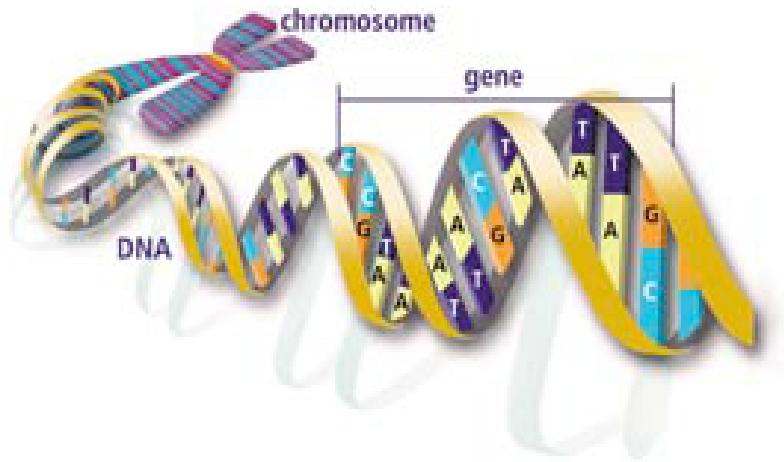
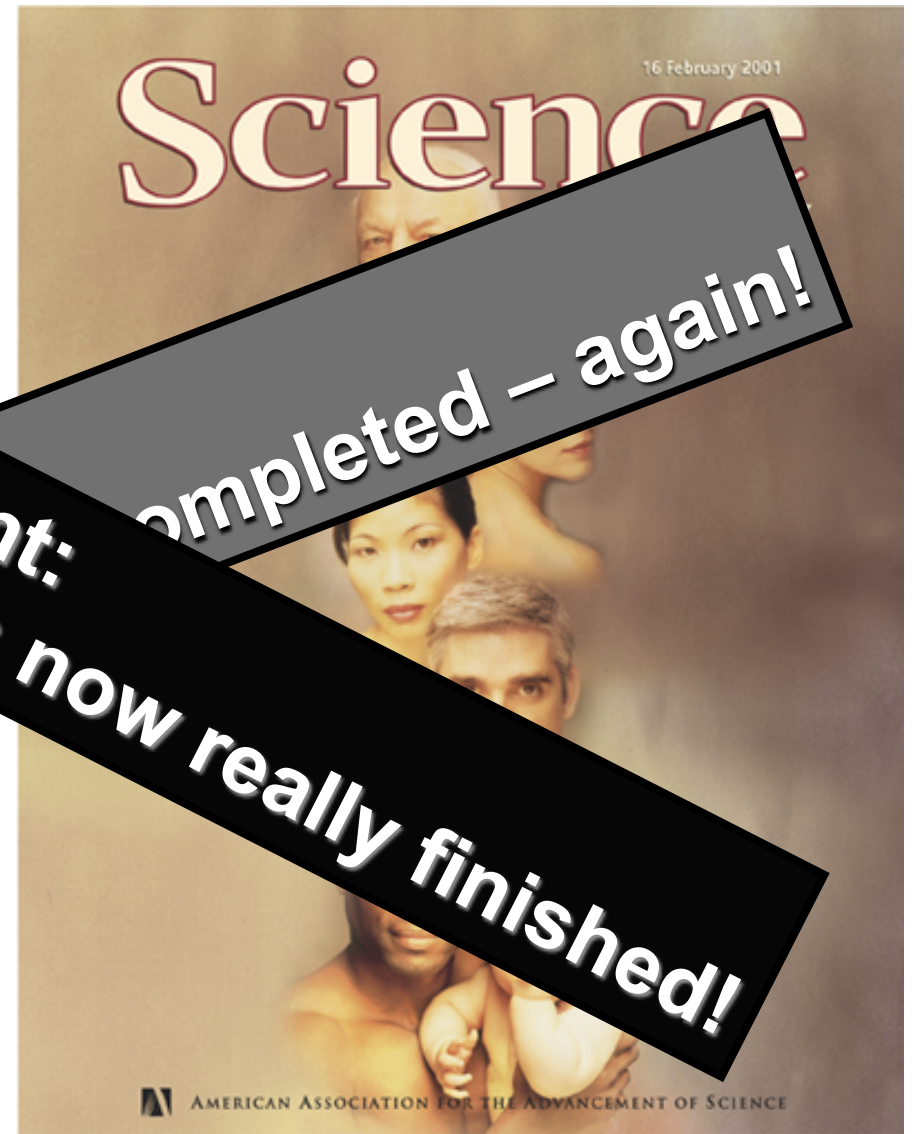
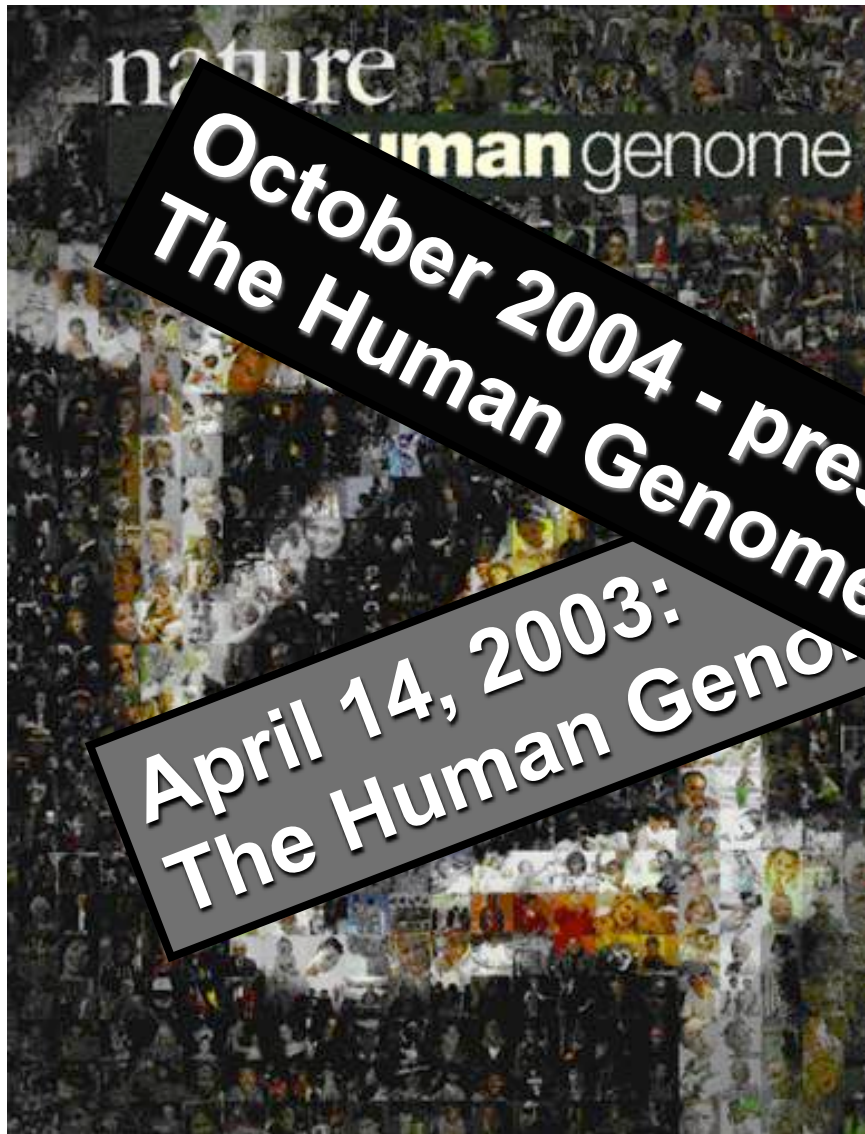


michael smith
laboratories



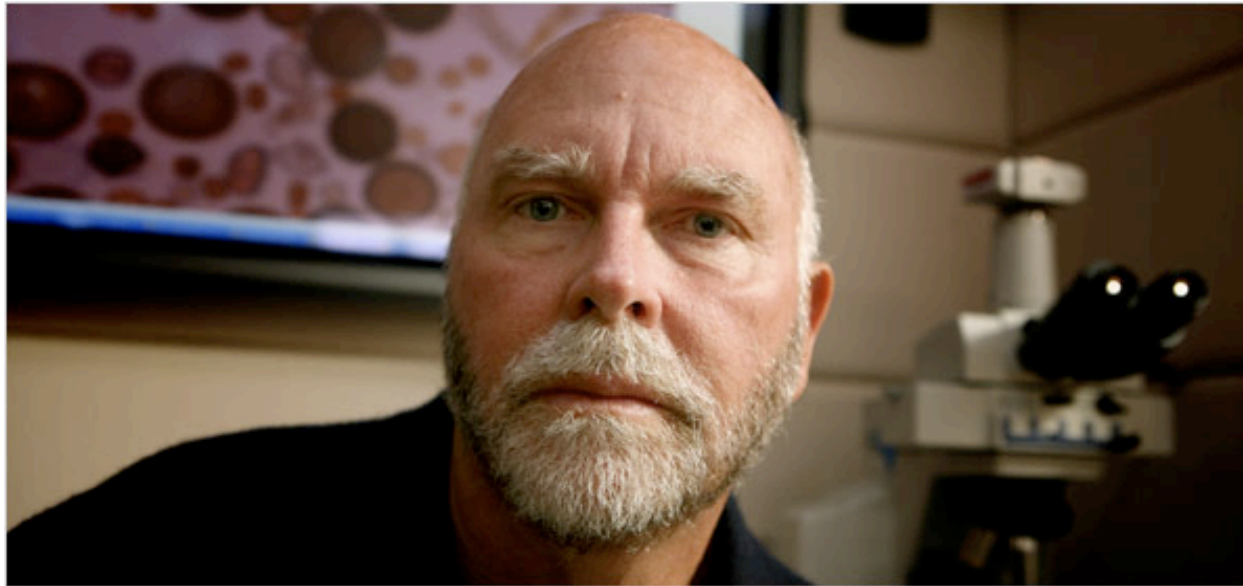
Bioinformatics
+
The Human Genome Project

The Human Genome Project



February 2001: Completion of the Draft Human Genome

In the Genome Race, the Sequel Is Personal



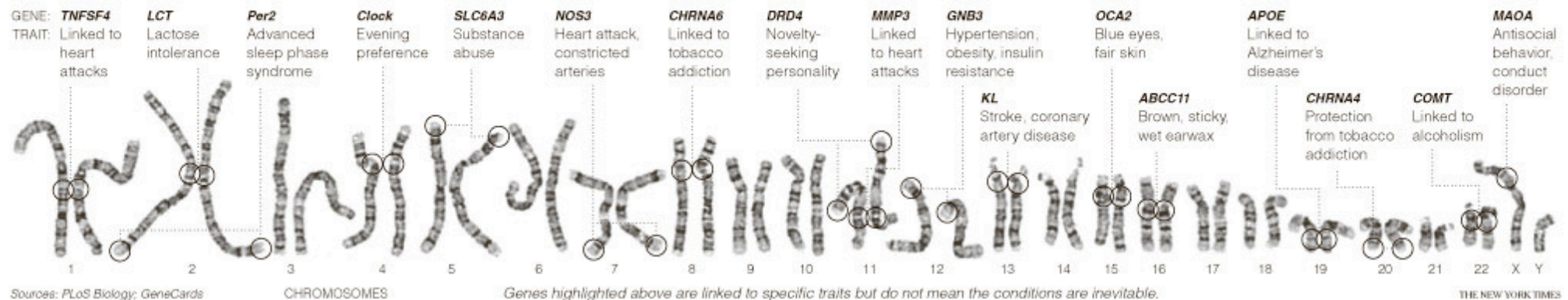
Thor Swift for The New York Times

A team led by J. Craig Venter, above, has finished the first mapping of a full, or diploid, genome, made up of DNA inherited from both parents. The genome is Dr. Venter's own.

The New York Times

September 3, 2007

DECODING HIMSELF A team led by J. Craig Venter, above, has finished the first mapping of a full, or diploid, genome, made up of DNA inherited from both parents. The genome is Dr. Venter's own.



To carry the sequence of my genome in my pocket, I need:

(A) supercomputer

(B) my laptop (brand new)

(C) my home computer (Oops, it's old)

(D) DVD

(E) CD

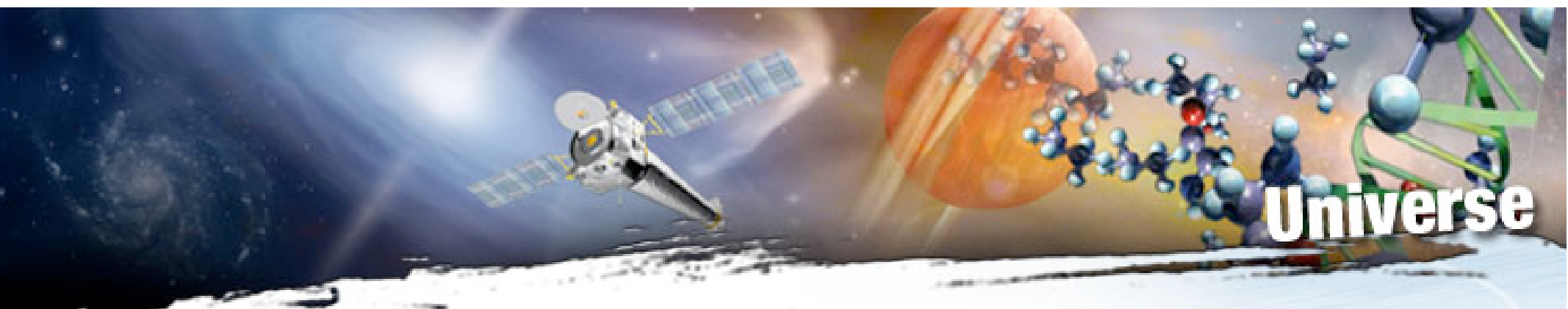
(F) floppy disk



If compressed, the 3GB
human genome
will also fit on a single CD

The Human Genome...By the Numbers

- **75-100 trillion...**Cells in the human body
- **3.1 billion...**Base pairs in each cell
- **2.4 million...**Base pairs in the largest human gene
- **28,000-35,000...**Genes in the human genome
- **46...**Chromosomes in each cell



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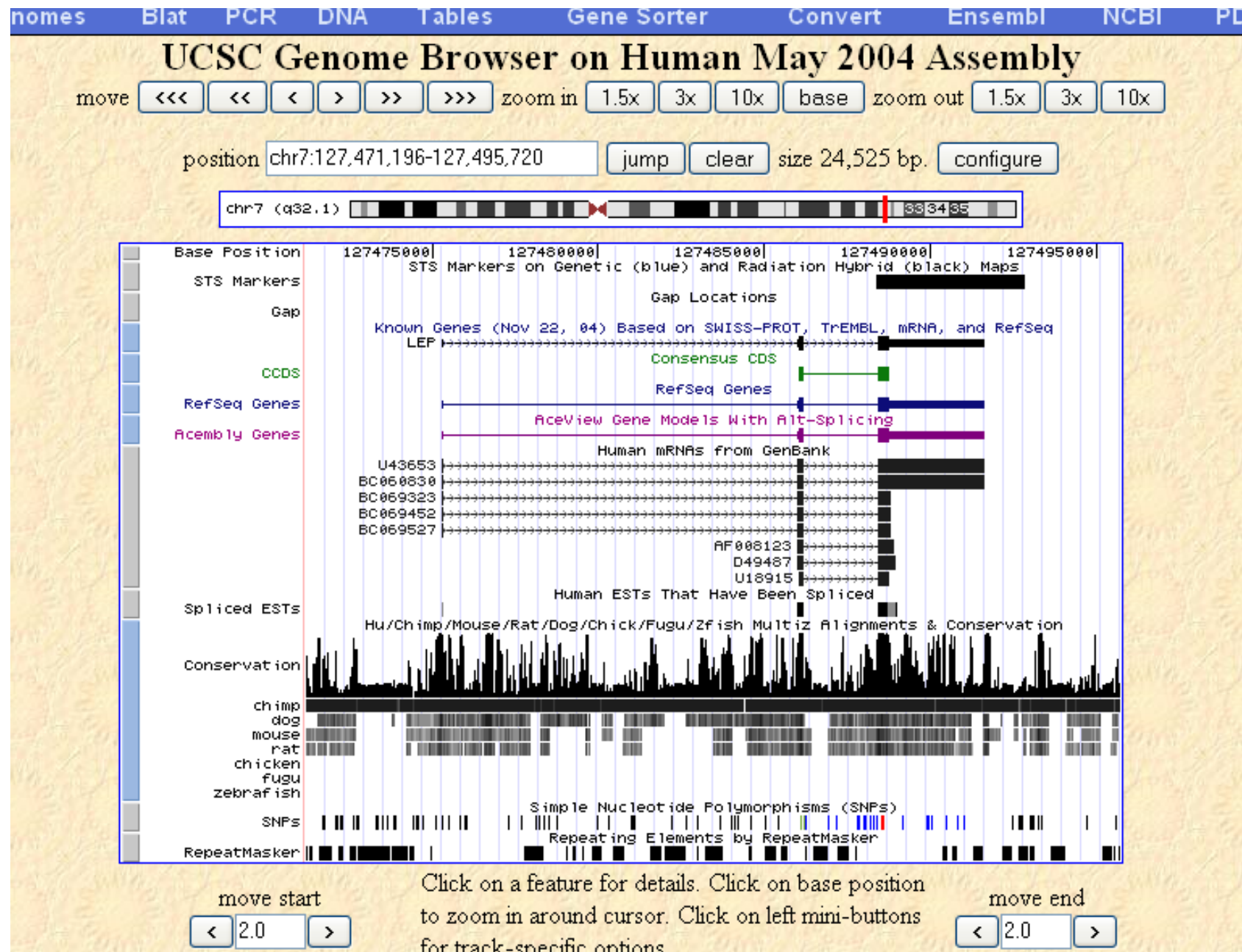
Results 1-10 of about 6,156 for **coffee** near **2185 E Mall, UBC, BC V6T** - [Modify search](#)

Categories: [Coffee Retail](#), [Coffee Houses](#)

- A** [Original Beanery The](#) - [more info »](#)
2706 Fairview Crescent, Vancouver, BC V6T 2B9
(604) 224-2326 - 0.7 km E
Category: [Coffee Houses](#)
- B** [Starbucks Coffee Co](#) - [more info »](#)
6190 Agronomy Road, Vancouver, BC V6T 1Z3
(604) 221-6434 - 0.4 km SE
- C** [Blue Chip Cookies](#) - [more info »](#)
6138 Sub Boulevard, Vancouver, BC V6T 2A5
(604) 822-6999 - 1.4 km NE
Category: [Coffee Houses](#)
- D** [Starbucks Coffee Co](#) - [more info »](#)
5761 Dalhousie Road, Vancouver, BC V6T 2H9
(604) 221-0200 - 0.5 km E
- E** [Salt Spring Coffee](#) - [more info »](#)
6308 Thunderbird Blvd, Vancouver, BC V6T 1Z4
(604) 221-6400 - 0.6 km S
- F** [Starbucks Coffee Co](#) - [more info »](#)
4580 10th Avenue West, Vancouver, BC V6R 2J1
(604) 222-1456 - 2.8 km E
- G** [European Crepe Cafe](#) - [more info »](#)
4544 West 10th Avenue, Vancouver, BC V6R 2J1
(604) 224-4340 - 2.8 km E

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Let's Look at the Human Genome...



Google

“Genome Browser”

Doing a Search

Human (*Homo sapiens*) Genome Browser Gateway

The UCSC Genome Browser was created by the [Genome Bioinformatics Group of UC Santa Cruz](#).
Software Copyright (c) The Regents of the University of California. All rights reserved.

clade	genome	assembly	position or search term	image width	
Vertebrate ▾	Human ▾	Mar. 2006 ▾	chrX:151,073,054–151,383,976	620	<input type="button" value="submit"/>

[Click here to reset](#) the browser user interface settings to their defaults.

About the Human Mar. 2006 (hg18) assembly [\(sequences\)](#)

The March 2006 human reference sequence (NCBI Build 36.1) was produced by the International Human Genome Sequencing Consortium.

Sample position queries

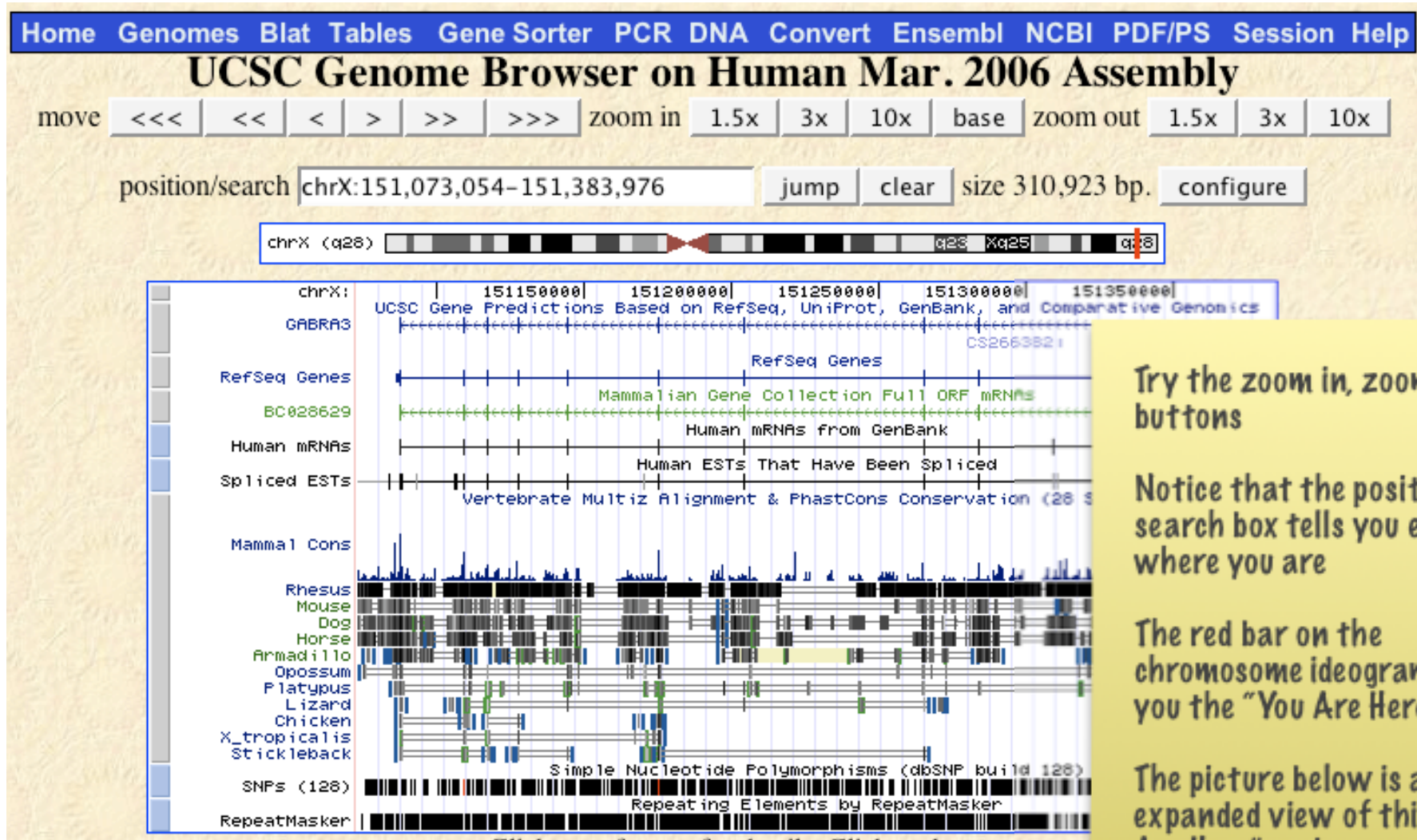
A genome position can be specified by the accession number of a sequenced genomic clone, an mRNA or EST or STS marker, or a cytological band, a chromosomal coordinate range, or keywords from the GenBank description of an mRNA. The following list shows examples of valid position queries for the human genome. See the [User's Guide](#) for more information.

Request:	Genome Browser Response:
chr7	Displays all of chromosome 7
20p13	Displays region for band p13 on chr 20
chr3:1-1000000	Displays first million bases of chr 3, counting from p arm telomere

enter a gene name, press the submit button to search.

check out the number of other genomes available

Moving Around



Try the zoom in, zoom out buttons

Notice that the position/search box tells you exactly where you are

The red bar on the chromosome ideogram gives you the "You Are Here"

The picture below is an expanded view of this "You Are Here" region

Websites visited:

- Google www.google.ca
- Google Maps <http://maps.google.ca>
- UCSC Human Genome Browser Gateway
- <http://genome.ucsc.edu/cgi-bin/hgGateway>
- (hint: use google to look up “Genome Browser”)