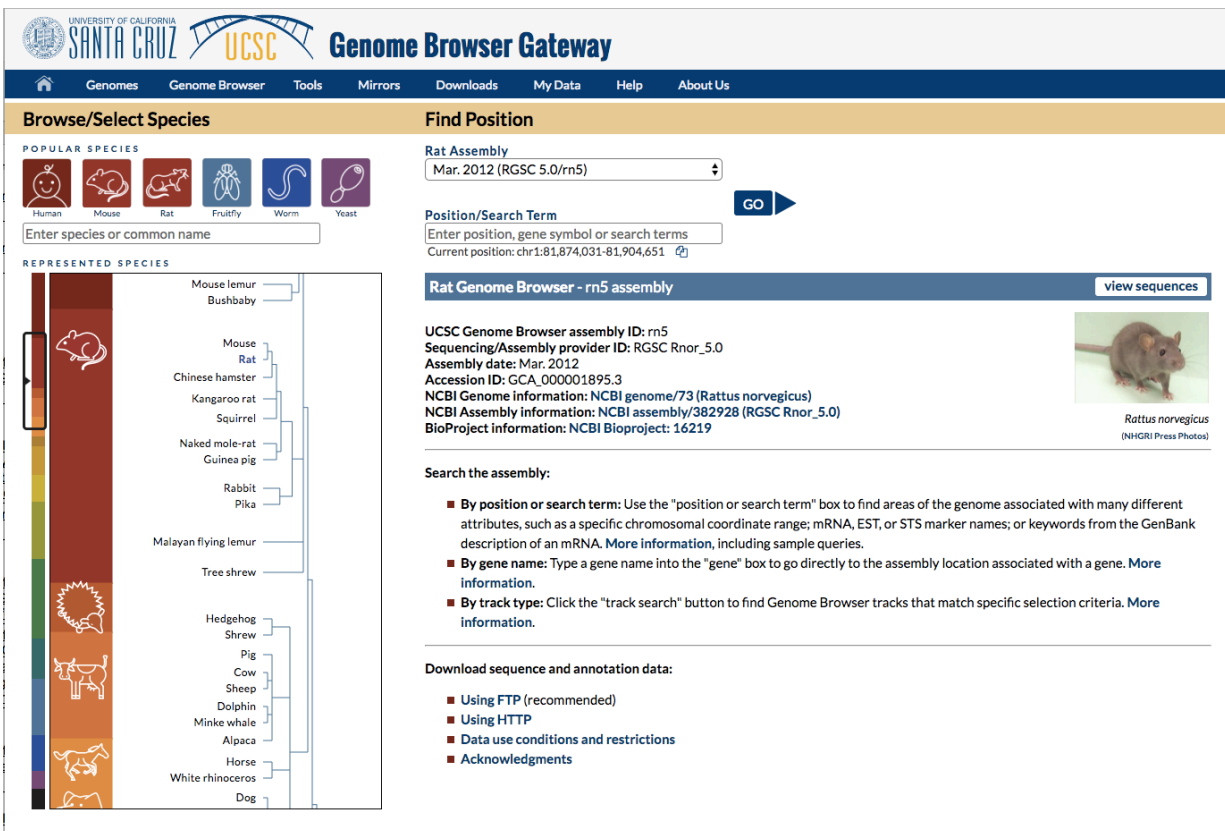


# New Genome Browser product gives freedom to easily collaborate in the cloud

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The screenshot displays the UCSC Genome Browser Gateway interface. At the top, the header includes the University of California Santa Cruz and UCSC logos, followed by the title 'Genome Browser Gateway'. Below this is a navigation bar with links: Home, Genomes, Genome Browser, Tools, Mirrors, Downloads, My Data, Help, and About Us.

The main content area is divided into two primary sections: 'Browse/Select Species' and 'Find Position'.

**Browse/Select Species:** This section features 'POPULAR SPECIES' with icons for Human, Mouse, Rat, Fruitfly, Worm, and Yeast. Below these is a search box labeled 'Enter species or common name'. Underneath is a 'REPRESENTED SPECIES' section showing a vertical color-coded bar and a list of species including Mouse lemur, Bushbaby, Mouse, Rat, Chinese hamster, Kangaroo rat, Squirrel, Naked mole-rat, Guinea pig, Rabbit, Pika, Malayan flying lemur, Tree shrew, Hedgehog, Shrew, Pig, Cow, Sheep, Dolphin, Minke whale, Alpaca, Horse, White rhinoceros, and Dog.

**Find Position:** This section includes a 'Rat Assembly' dropdown menu set to 'Mar. 2012 (RGSC 5.0/rn5)' and a 'GO' button. Below this is a 'Position/Search Term' input field with a 'GO' button. A 'Current position' is displayed as 'chr1:81,874,031-81,904,651'. A 'view sequences' button is located to the right of the assembly information.

**Rat Genome Browser - rn5 assembly:** This section provides detailed assembly information:
 

- UCSC Genome Browser assembly ID: rn5
- Sequencing/Assembly provider ID: RGSC Rnor\_5.0
- Assembly date: Mar. 2012
- Accession ID: GCA\_000001895.3
- NCBI Genome Information: NCBI genome/73 (Rattus norvegicus)
- NCBI Assembly Information: NCBI assembly/382928 (RGSC Rnor\_5.0)
- BioProject Information: NCBI Bioproject: 16219

 An image of a rat is shown with the caption 'Rattus norvegicus (NHGRI Press Photos)'.

**Search the assembly:** This section lists three search methods:
 

- By position or search term:** Use the "position or search term" box to find areas of the genome associated with many different attributes, such as a specific chromosomal coordinate range; mRNA, EST, or STS marker names; or keywords from the GenBank description of an mRNA. [More information](#), including sample queries.
- By gene name:** Type a gene name into the "gene" box to go directly to the assembly location associated with a gene. [More information](#).
- By track type:** Click the "track search" button to find Genome Browser tracks that match specific selection criteria. [More information](#).

**Download sequence and annotation data:** This section lists four options:
 

- Using FTP (recommended)
- Using HTTP
- Data use conditions and restrictions
- Acknowledgments

Just launched! Genome Browser in the Cloud (GBiC) introduces more freedom to collaborate, plus faster Genome Browser installations. Credit: UC Santa Cruz Genomics Institute

Until now, genomics research groups working with sensitive medical

data were largely limited to using local Genome Browser installations to maintain confidentiality, complicating data-sharing among collaborators. Today, the Genome Browser group of the UC Santa Cruz Genomics Institute announced they have changed that by launching a new product, Genome Browser in the Cloud (GBiC). GBiC introduces new freedom to collaborate by allowing rapid Browser installation, in any UNIX-based cloud.

Users provide the cloud instance, then install the Genome Browser image and grant access to whomever needs it. GBiC functions the same and is as secure as the public version of the Genome Browser, Genome Browser in a Box (GBiB), or a Genome Browser mirror site. Another GBiC innovation is significantly reduced installation time as compared to earlier Genome Browser versions.

"We are very pleased with how this product facilitates remote collaboration—for example, between a hospital physician, an off-site lab technician and a third-party genomic researcher," said Genome Browser author and Principal Investigator Jim Kent. "Thanks to the efforts of GBiC Engineer Max Haeussler, users also benefit from significantly faster installation time," Kent continued. "What historically took at least a week, now typically is less than an hour," he said.

While the GBiC is intended specifically for cloud-based installations, its functionality is versatile. For most purposes, the GBiC essentially replaces the manual installation process for mirroring the UCSC Genome Browser in multiple environments (cloud servers, dedicated servers, or even a laptop).

Provided by University of California - Santa Cruz

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