strbase.nist.gov

National Institute of Standards and Technology
U.S. Department of Commerce

STRBase: A web based resource for STR information

Register | Log in

STRBase 2.0

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Search

Commonly Used Auto STRs

Other Auto STRs

X-Chromosome STRs

Y-Chromosome STRs

Commonly Used Auto STRs

CSF1PO
D10S1248
D12S391
D13S317
D16S539
D18S51
D19S433
D1S1656
D21S11
D22S1045
D2S1338
D2S441
D3S1358
D5S818
D6S1043
D7S820
D8S1179
FGA
Penta D
Penta E
SE33
TH01
TPOX
VWA

Other Auto STRs

X-Chromosome STRs

Y-Chromosome STRs

Introduction

The web-based Short Tandem Repeat Database (STRBase – https://strbase.nist.gov) was developed in 1997 and released to the public in July of that year. The original goal of the site was to bring together information about STR systems to support the human identity community.

Usage - The STRBase site has evolved into a place where analysts in forensics labs verify allele information, technical leaders can find and download training information, and researchers and methods developers can search for various kinds of STR-related information. Over the years many institutions and researchers have contributed information to this resource, which continues to this day.

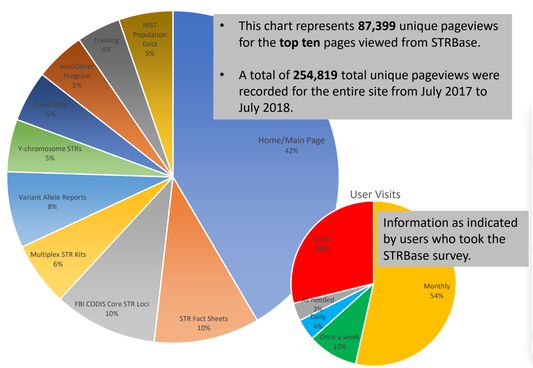
Goal - Since its inception, the design of the site has been relatively constant with minimal changes made to the underlying IT architecture. A redesign of the web-based tool is currently underway to make enhancements to the user interface. The goal is to maintain information in an accessible format while allowing the new site to be more easily sustained.

Future - STRBase 2.0 is currently under development and will soon be available to the public for beta testing. User feedback is greatly appreciated and will be incorporated into the development of STRBase 2.0.

Behind the Scenes

- STRBase is currently an organized collection of several hundred separate html pages serving thousands of static files.
- The existing format makes maintaining and updating the site complicated.
- A MySQL database has been developed and information from the original STRBase has been migrated over.
- A new site that utilizes and supports the database is in the process of being implemented: **STRBase 2.0**.

Top Ten STRBase Pages by Unique Pageviews



- This chart represents **87,399** unique pageviews for the **top ten** pages viewed from STRBase.
- A total of **254,819** total unique pageviews were recorded for the entire site from July 2017 to July 2018.

Information as indicated by users who took the STRBase survey.

Purpose

The process of updating the Classic website started with a simple overhaul of the original site. This included adding navigation and making the site visually uniform (New Classic see below). Google analytics was also incorporated into the updated site allowing for an understanding of what pages were being utilized by the user. The pie chart in the lower left is the top 10 pages identified by views in the last year. These pages represent a variety of starting points when exploring STRBase. In early 2017, a survey was made available on the site to obtain user information and feedback about the site. This information assisted us in the design focus of STRBase 2.0.

- Improved navigation and the ability to quickly find information.
- Registration and login capabilities.
- An automated submission process for variant and tri-alleles.
- The ability to search, sort, and download information for variant and tri-alleles.
- Updating and removing out of date information to help focus the site on what users are accessing.

Some of the updated and new features are described to the left with images of the new site. Including an image of the main page in the lower right.

Updates

Navigation

The site has been reorganized to simplify the navigation.

- Information about individual STRs have been brought together in a common interface.
- Users can now quickly access locus information through the left menu on the site (expanded example to the left).
- The search box can be used to find information about key words, full and partial loci names (example below).

Search Results: Penta

Search string: Penta

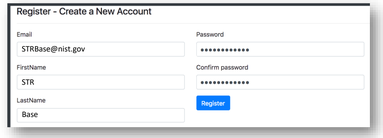
Loci Matches:

Locus	Genome	Chromosome	Publication	STRSeq BioProject
Penta D	GRCh38	21		PRJNA380576
Penta E	GRCh38	15		PRJNA380571

New Features

Register/Login - optional

- Users will not be required to register or login to use the site
- However, a user has the option of registering and will receive update notifications as the site continues to add information.
- Additionally, registered users may request the ability to submit allele information to the site through a submission portal.
- This will simplify the submission process for contributors and streamline the process on the back end.



Submitting Data

A submission form will be available to users who request the ability to upload variant and tri-allelic information. The form will be easy for the user to provide the needed information to build the record (example to the right). Once submitted it will be reviewed and then made publicly available in the tables on the STRBase site.

Tables

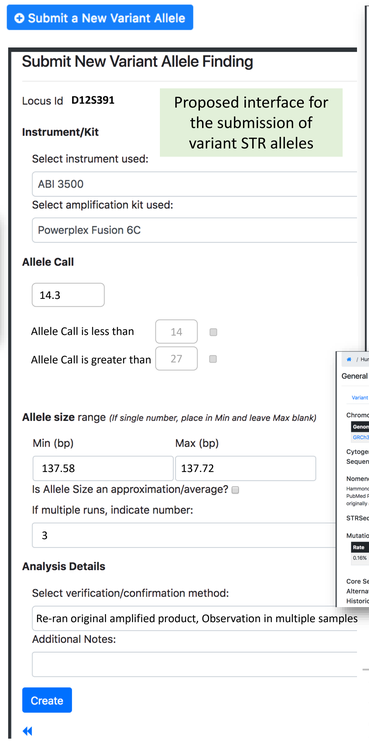
The variant and tri-alleles tables have been updated with:

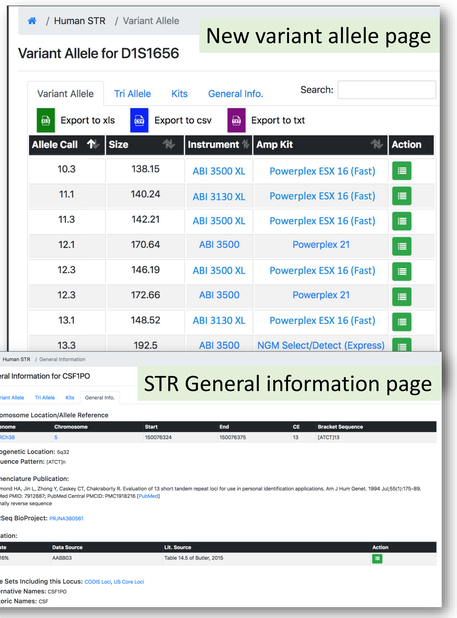
- Search table contents.
- Sort columns.
- Download data - export to excel, comma-separated values, or text file types.

The tables have been simplified to focus on key information but all information is still accessible (example upper right).

Content

Although some content will not be included in STRBase 2.0, the old site, **which will not be maintained or updated,** will be available for a period of time at strbase-archive.nist.gov while the transition to the new site is taking place. Additionally, after the old site is taken down the files that make up the classic site will be made available for download.



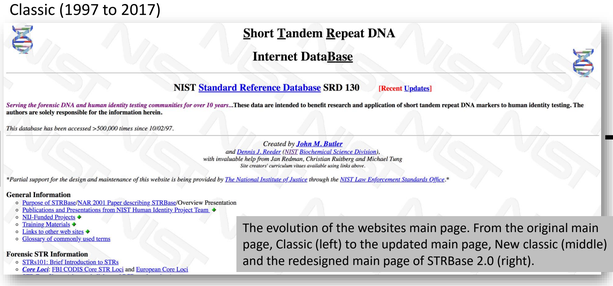


Continued development

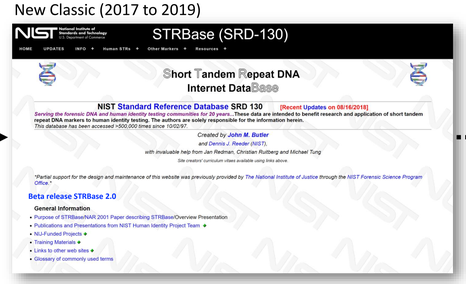
The next development phases of STRBase 2.0 will focus on: updating topic pages, streamlining access to publications/presentations, and creating new content pages for the human identification community.

Your ideas and feedback can be submitted to: strbase@nist.gov

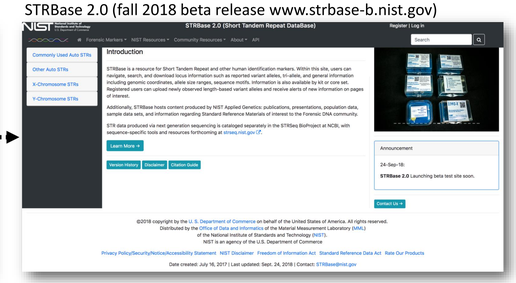
Classic (1997 to 2017)



New Classic (2017 to 2019)



STRBase 2.0 (fall 2018 beta release www.strbase-b.nist.gov)



The evolution of the websites main page. From the original main page, Classic (left) to the updated main page, New classic (middle) and the redesigned main page of STRBase 2.0 (right).

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APPLIED GENETICS

MATERIAL MEASUREMENT LABORATORY
Office of Data and Informatics

NIST FORENSIC SCIENCES

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Poster # 50 at:
29th ISHI, Phoenix, AZ
September 24-27, 2018