

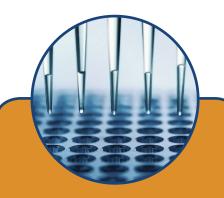
# TrueAllele® Technology

Computer interpretation of DNA evidence

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### SERVICES

**DNA** interpretation of crime evidence

**Case report** for TrueAllele results

**Trial preparation** with DNA science

**Expert testimony** by qualified scientists

## CASES

burglary • cold case • homicide • post-conviction serial crime • sexual assault • weapons crime

## FREE SCREENING

Cybergenetics offers a free TrueAllele screening of DNA case data. Contact info@cybgen.com.

## **Lab Services**

Crime scene evidence can produce complex DNA data. Effective interpretation of DNA data helps to find the guilty and free the innocent. However, some methods discard vital DNA data. Criminal justice is hindered when information is unused.

#### **TrueAllele**

TrueAllele computing uses all the data, all the time. It is scientifically validated on mixture data.

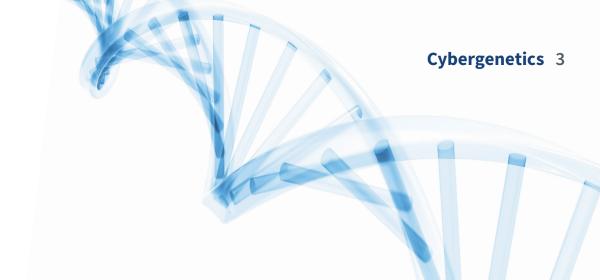
TrueAllele Casework produces reliable answers on previously unsolvable DNA evidence. It enhances crime lab efforts through robust software with no contributor limits.

#### **Benefits**

- ✓ **Accurate.** Dozens of scientific validation studies demonstrate that TrueAllele results are reliable.
- ✓ **Fast.** Cybergenetics typically delivers results within a few weeks. Expedited results may be available.
- ✓ **Informative.** TrueAllele's robust statistical analysis can produce match statistics when other methods cannot.
- ✓ **Objective.** Computer automation eliminates human bias. The TrueAllele computer infers information without referring to a suspect.
- ✓ **Productive.** Mixed DNA samples (from 2 or more people) and low template DNA are regularly solved by TrueAllele.

#### **Experience**

Cybergenetics provides services to laboratories, defense, police, prosecution and innocence groups. TrueAllele results appear in hundreds of case reports and dozens of trials. Our experts testify in state, federal, military and foreign courts.



# FAQs

#### **Types of DNA Samples**

#### Can laboratories use TrueAllele® technology?

Government laboratories can purchase their own TrueAllele systems. See Products, on pages 4-5.

# The lab reported the DNA was "inconclusive" or that there was "insufficient genetic information." Can TrueAllele technology help?

Yes. The computer has found information when other methods did not. TrueAllele computing resolves items with multiple contributors, partial profile and degraded DNA.

#### The suspect(s) and victim are related. Can TrueAllele technology help?

Yes. TrueAllele computing has unmixed father-daughter, brother-brother and other family DNA data into individual profiles.

#### Does Cybergenetics only work for prosecutors and investigators?

No. Cybergenetics analyzes case data for defenders and innocence groups, as well as prosecutors and investigators. Also, Cybergenetics partners with academics, advocates and labs.

#### **Submitting a Case**

#### Are the physical evidence items needed for TrueAllele processing?

No. The computer uses the DNA data, which crime labs develop from biological evidence items. Only the electronic data file is needed for TrueAllele processing.

#### How do I send a case for a free TrueAllele screening?

Contact Cybergenetics. For detailed instructions, visit www.cybgen.com/support/sending\_data.shtml.

## MORE INFORMATION

Find out more at www.cybgen.com.

- Browse case examples
- Read scientific papers
- Subscribe to email updates
- Take TrueAllele courses
- Watch DNA presentations



### **Three Solutions**

#### 1. CASEWORK

TrueAllele Casework is an efficient and objective system. It is validated on mixtures of 2 to 10 contributors. It deconvolutes paternity problems and family DNA mixtures.

## 2. DATABASE

TrueAllele Database facilitates evidence-to-evidence and evidence-to-person comparisons. Search and match within or across cases, locally or nationally.

## 3. REFERENCE

TrueAllele Reference automates the processing of known samples. It quickly and economically reduces backlogs of single-source DNA.

## **Lab Products**

Technology enhances human capability. Robots help laboratories develop high-quality data, and TrueAllele® helps analysts fully interpret that data.

TrueAllele interpretation complements human expertise. Powerful computing provides accurate and objective match results for complex DNA evidence.

The TrueAllele probabilistic genotyping system uses algorithms to interpret all the DNA data. Using parallel processors, it works out the genotype solutions. Then it makes genotype comparisons. A visual interface explains the computer's "thinking" and results.

#### **Expansion**

TrueAllele Casework includes an internal database capability. Capacity can be added with expansion modules. The database can be scaled up to handle any number of samples. Users can also address reference backlogs with TrueAllele Reference.

#### **Benefits**

- ✓ **Accurate.** Seven peer-reviewed studies demonstrate reproducibility, specificity and sensitivity. Dozens of other validations show that TrueAllele produces reliable results on any DNA evidence.
- **Fast.** High-capacity central servers enable the simultaneously interpretation of many samples — with minimal human intervention.
- ✓ **Informative.** By using all the DNA data (no thresholds), the computer finds all the actionable information. TrueAllele can jointly analyze items and make evidence-to-evidence comparisons.
- **Objective.** The TrueAllele computer infers genotype(s) without referring to a reference. It can produce inclusionary and exclusionary match statistics, plus a false match probability (error rate).
- ✓ **Productive.** Mixed DNA samples and low template DNA are regularly solved by TrueAllele Casework. The computer interprets samples with any number of contributors, including family members.

#### **Integration**

Cybergenetics offers an integration and implementation plan that can have a lab up and running within months, including training and validation. TrueAllele is an out-of-the-box solution. With users around the world, Cybergenetics can help ensure that your transition to TrueAllele products is easy and worry free.

#### Setup

- ✓ Planning system setup and technology integration
- ✓ Training certification courses, plus manuals and tutorials
- √ Support quality control and technology monitoring
- ✓ Customization jurisdictional laws and guidelines
- ✓ Validation assisted or independent review

#### TRY IT

Cybergenetics offers a free TrueAllele® screening of DNA case data, explaining the initial results.

Also, scientists can test out the system remotely using TrueAllele Cloud.

For more information, call 412.683.3004 or email info@cybgen.com.

#### THE TRUEALLELE SYSTEM

VUIer™ and parallel processors interpret DNA data.



VUler™



**Parallel processors** 

The Visual User Interface for easy review (VUIer™) software walks the user through the process of acquiring the data, uploading data to a server, asking forensic questions, reviewing results and calculating match statistics.

