

How to set up and run Genetic Affairs AutoCluster

Go to <https://members.geneticaffairs.com/register> and create an account.

Set up websites:

- From the top navigation do *Websites & Profiles>Add New Website*
- Choose the appropriate testing company

in Carolyn Keene,

Add a new website account for the three major DNA testing companies 23andme, FamilyTreeDNA and AncestryDNA.

23andme

Upon clicking on the link underneath, a login page will be displayed that requires the login information (Username or email and password) of the 23andme account. Every entered 23andme account can hold several profiles.

[ADD 23ANDME ACCOUNT](#)

FamilyTreeDNA

Upon clicking on the link underneath, a login page will be displayed that requires the login information (Kit Number or GAP Username and password) of the FamilyTreeDNA account. Every entered FamilyTreeDNA account is linked to a single profile.

[ADD FAMILYTREEDNA ACCOUNT](#)

AncestryDNA

Upon clicking on the link underneath, a login page will be displayed that requires the login information (Username or email and password) of the AncestryDNA account. Every entered AncestryDNA account can hold several profiles.

[ADD ANCESTRYDNA ACCOUNT](#)

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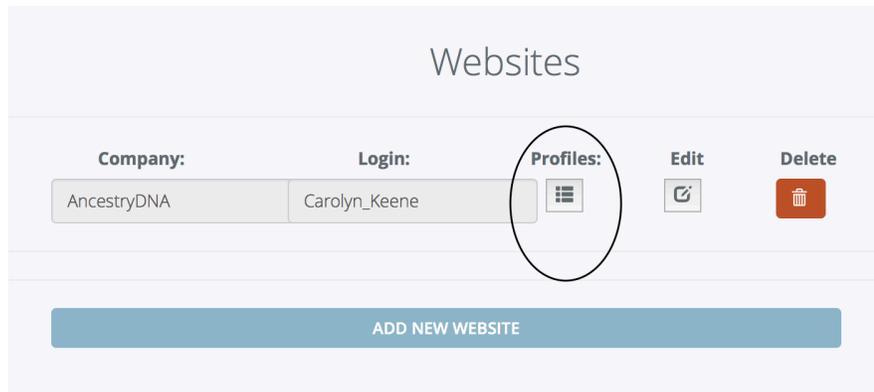
Enter your login and kit information

(Note: If you are not comfortable providing this information for AncestryDNA, you could create a new account with a different username and password, then share your DNA with this new account, and provide that login to Genetic Affairs. How? Create the new account by going to Ancestry's login screen, log into your regular account, for each kit, go to *Settings>DNA Ethnicity and Match Access>add a person*. Fill out the form (email address tends to work better than username) Keep the *Role* set to *Viewer*, then *Send Invitation*. Be sure to confirm the AncestryDNA email invitation for each kit you do this for.)

When the credentials are confirmed, click *Close*

Set up Profiles

From the Websites page, click the profiles icon



Verify that Genetic Affairs automatically pulled in all of the DNA kits associated with the login. You can delete the ones you don't want in the system.

To add new profiles to the AncestryDNA website definition, go to *Websites & Profiles* on top bar, under **Available websites**, click on *AncestryDNA - Username*. At the bottom of the subsequent page, click *Retrieve/Update New Profiles for this Website*. The new profiles should be pulled in. **The same steps are used for 23andMe.**

To add an FTNDA profile, from the *Websites & Profiles* tab on top bar, click *Add Website*, then *Add FamilyTreeDNA Account* and proceed with login info.

Profile settings control the match retrieval service of Genetic Affairs, see the Manual, p.10 for details. http://www.geneticaffairs.com/images/Manual_Genetic_Affairs.pdf

Run AutoCluster

On the profiles page, for the profile you want, click the AutoCluster Icon

Choose which of the three approaches you want to use and adjust the parameters as needed. click *Perform Analysis* and confirm.

Perform custom AutoCluster analysis for AncestryDNA and profile **RANDOLPH KAHLE**

Three approaches are available:

Approach **A**. Using cM thresholds

Approach **B**. Using predicted relationships.

Approach **C**. Using both predicted relationships and cM thresholds.

If in doubt, choose Approach **A**.

Start AutoCluster analysis with
matches which share a max of

Stop AutoCluster analysis with
matches which share less than

Approach A

250 cM

50 cM

PERFORM ANALYSIS

Or:

Start AutoCluster analysis using
matches with relationship

Continue AutoCluster analysis using
all matches with relationship

Approach B

2nd Cousin

3rd Cousin

PERFORM ANALYSIS

Or:

Start AutoCluster analysis using
matches with relationship and share a
max of

Continue AutoCluster analysis using
all matches with relationship and stop
with these matches which share less
than

Approach C

2nd Cousin

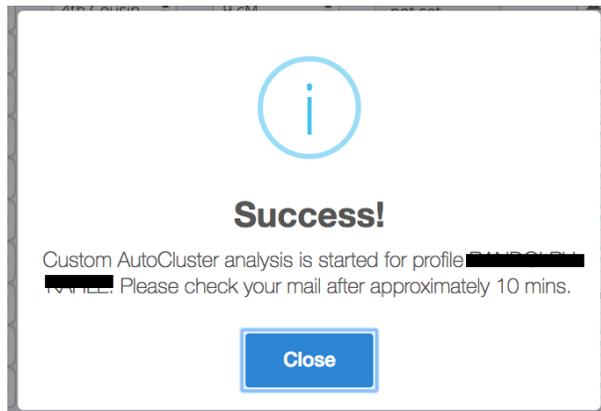
3rd Cousin

250 cM

50 cM

PERFORM ANALYSIS

You should see this, or a very similar, pop-up



- You will receive the chart by email in HTML format.

The email will also contain two .csv files, one will contain all of your matches from the test site and the other is the basis for the chart.

If the email does NOT have the HTML attachment, it is likely your parameter settings or your particular match list do not provide enough matches to build a chart. A message to this effect should be found in the body of the email message. If a match .csv is attached, you can use it to determine better AutoCluster parameters.

- Save the HTML file to your hard drive before opening it.

The files are named "AutoClust_ *company-name* _ *profile-name* _ *date*.html". If you run more than one in the same day, you'll want to rename them as you save.

Interpreting your AutoCluster chart

- AutoCluster merely organizes your shared matches into logical groups. It does not answer any genealogical questions on its own.
- AutoCluster charts will be as various and as colorful as our match lists are.
- AutoCluster charts may contain any number of clusters.
- By adjusting the parameters of your AutoCluster run, you can somewhat influence the number of clusters formed, but the underlying algorithm has the final say.
- There are no magic settings to force a chart to contain a certain number of clusters. (If you find them, please share!)
- The chart has ten colors available to it. Therefore, colors will be repeated in charts containing more than ten clusters.
- Each of the colored cells represents an intersection between two of your DNA matches, meaning, they both match you and each other.
- Each colored block or cluster represents a group of people who match you and most of the others in the cluster.
- Each cluster likely represents a branch or line of your family but no degree or characteristics of any relationship are inferred by the cluster's existence, color, size, or placement.
- There may be more than one cluster that represents any branch.
- There may be branches that are not represented in the chart at all.

- A cluster may contain one or more generations.
- The members of a cluster may share DNA, but do not necessarily share the same segment.
- The members of a cluster are likely related to one another in some way, but each cluster may represent more than one MRCA
 - This is because a cluster may contain cousins of differing degrees, say a 2C and a 3C. The 2C and you will share a 1GG MRCA couple but the 3C and you will share a 2GG MRCA couple.
- Each person in the chart can only be in one cluster.
- Gray colored cells may be present that are not part of any color-coded cluster. These are intersections of two cousins, where one of them is too closely related to you to belong to just one cluster. Each of these cousins are in separate color-coded clusters, the gray cell indicates that one of them also belongs in both of these clusters.
- Use the clusters to support previous research, as a road map to help with phasing, surname identification, and pedigree triangulation, and to discover unrealized connections and patterns between your matches.

We'd love to see what you do with AutoCluster. Post your chart and discoveries on your favorite genealogy Facebook page or blog about it.