

## Basics of Familias 3

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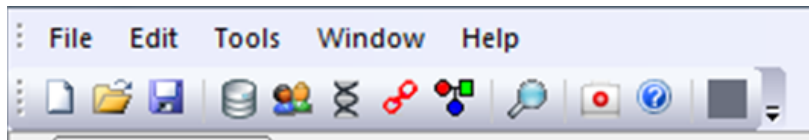
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# Familias: Documentation

- ▶ First versions, Mostad and Egeland.  
Windows version extended and maintained by Kling
- ▶ Download: <http://familias.no>
- ▶ Manual: <http://familias.no/english/manual/>
- ▶ Tutorial: <http://familias.name/Familias3Tutorial.pdf>
- ▶ Videos: <http://familias.name/VideosBook.pdf>
- ▶ **Above and more available from course page:**  
<http://familias.name/cyprus2017>

# Familias: Four basic steps



- 1 General DNA data. Database, i.e., allele frequencies etc.
- 2 Persons. Individuals needed to define hypotheses.
- 3 Case DNA data. Genotype data.
- 4 Pedigrees . Define hypotheses and do calculations.

## Step 1. General DNA data. D3S1358

**Edit Marker**

System name:

Name	Frequency
17	0.204
18	0.1394
Rest allele	0.6566

Buttons: Save, Close, Options, Mutation models, Edit, Remove

**Add allele**

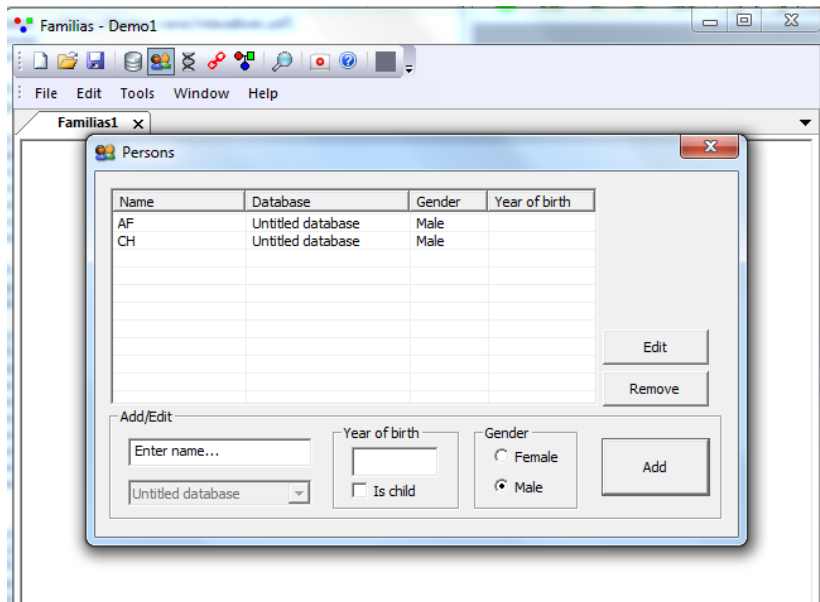
Name	Frequency	Add
<input type="text"/>	<input type="text"/>	

Background window: Name:   
Table:  

Marker	Number o...
D3s1358	3

Right panel: Marker/System (Add, Edit, Remove, Mutations), Database (Export, Import, Remove), Close

## Step 2. Persons



## Step 3. CASE DNA data

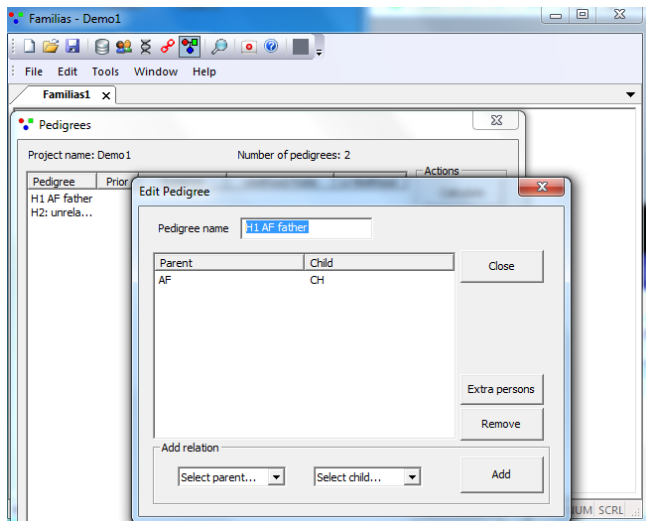
The screenshot shows the 'Familias - Demo1' application window. A dialog box titled 'Add/Edit DNA data' is open, displaying DNA data for a person named 'AF'. The dialog includes a table with columns for 'System name', 'Allele 1', and 'Allele 2'. The data shown is:

System name	Allele 1	Allele 2
D3s1358	17	18
TPOX	8	8

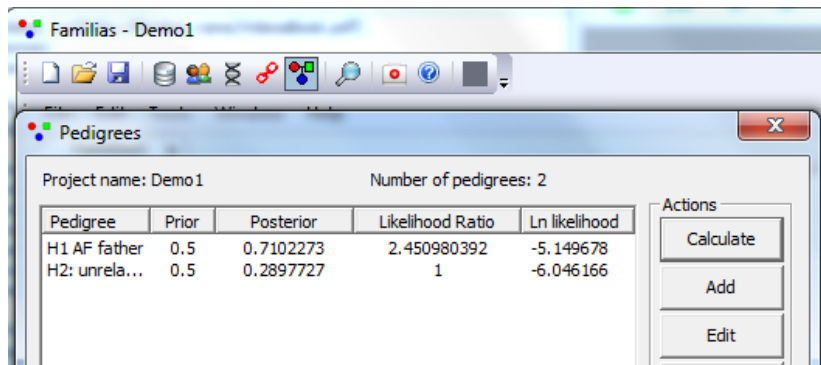
Below the table are buttons for 'Close', 'Edit', and 'Remove'. At the bottom of the dialog is an 'Add observation' section with three dropdown menus and an 'Add' button.

In the background, the main application window shows a sidebar with buttons: 'Edit DNA', 'Remove DNA', 'Compare DNA', 'Remove person', 'Import', and 'Export'. An arrow points to the 'Import' button, which is labeled 'GeneMapper CODIS'.

## Step 4. Pedigrees



## Output



The screenshot shows a software window titled "Familias - Demo1" with a toolbar containing icons for file operations, data management, and analysis. A sub-window titled "Pedigrees" is open, displaying the following information:

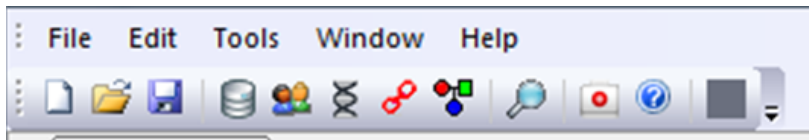
Project name: Demo1      Number of pedigrees: 2

Pedigree	Prior	Posterior	Likelihood Ratio	Ln likelihood
H1 AF father	0.5	0.7102273	2.450980392	-5.149678
H2: unrela...	0.5	0.2897727	1	-6.046166

On the right side of the "Pedigrees" window, there is an "Actions" panel with three buttons: "Calculate", "Add", and "Edit".



## Summary: Four basic steps



1 2 3 4

- 1 General DNA data.
- 2 Persons.
- 3 Case DNA data.
- 4 Pedigrees.

## Demo

System	Child	AF	LR	LR(mut*)
D3S1358	17/17	17/18	2.450	2.449
TPOX	8/8	8/8	1.805	1.804
<b>D6S474</b>	16/17	14/15	0.000	0.001

Table 1: Familias file: <http://familias.name/Demo3markers.fam>.

\*Stepwise unstationary mutation model with rate 0.001 and range 0.5 for all markers.