# Installing DNA Master on a Mac

Because DNA Master runs only on Windows, in the past anyone with a Mac would need to install a copy of Windows on their Mac using virtualization software (VMWare, VirtualBox) in order to run DNA Master. Now, you can run DNA Master directly on a Mac using a program called WINE (Wine Is Not an Emulator) with minimal difficulty and loss of function. This removes the need to purchase a copy of Windows and to get a virtual Windows machine running. This document describes how to get DNA Master up and running on a Mac.

## Installing XQuartz

In order to run the WINE version of DNA Master on your Mac, you will need to have XQuartz installed. If your Mac is running OS X 10.6 or less, you should already have XQuartz installed. For newer versions of OS X, follow the instructions below.

1. Go to http://www.xquartz.org/
2. In the "Quick Download" section, click on the XQuartz .dmg file to download it.
3. Once the .dmg file has downloaded, double-click to open it, then double-click the XQuartz.pkg file to launch the installer.
4. Complete the installation by following the prompts/steps.

## Downloading the WINE-bottled DNA Master

Tammy Adair of Baylor University has graciously posted her WINE-bottled version of DNA Master. You can download it using the link below.

https://baylor.box.com/s/sct7ixend1d29cn5n7qjlbcfod98hyny

Once again, double-click the downloaded .dmg file to open it, then double-click the DNAMaster.pkg file to begin installation, and follow the instructions.

## Running DNA Master

Once your installation is complete, go to your Applications folder, find DNA Master, and double-click to launch it. It should behave very similarly to a "normal" Mac program.

## Additional Notes/Tips

- There are likely to be some pros and cons of using this approach instead of the more traditional approach of installing an entire copy of Windows on your Mac using a virtualization program. Using WINE, it's possible that DNA Master will run a bit more slowly, and some (more obscure) functions will not work. On the

other hand, since you won't be running an entire Windows OS, you'll likely use less memory, it'll be easier to move files around (see bullet point below), and you won't have to pay for a Windows license.

- Be careful in setting up the save preferences during your initial DNA Master preferences setup. The Wine program creates a "fake" windows C drive in order to properly run. The default DNA Master Archive save location is set to this "fake" C drive. We recommend having students create a DNA Master Archive folder on their Mac desktop (or other readily accessible location on their Mac). When setting preferences, be sure to set the save location to this folder. Otherwise, it's nearly impossible to locate files when working on the Mac.

- Some students occasionally have difficulty cutting and pasting from DNA Master onto websites such as BLAST, HHpred, etc. This can be fixed in one of two ways: on the X11 preferences menu, make sure that you set Pasteboard settings to "Enable syncing" and all sub-options are selected. If this doesn't help, restart X11 and DNA Master. I find that sometimes the system gets overwhelmed when copying/pasting a lot of text and will stop responding to the copy paste functions.

- If you have questions/problems implementing this approach, please consider posting on the SEA-PHAGES forum (link below) so that others may see the questions/solutions.
  http://seaphages.org/forums/forum/3/