Step-by-step installation on MAC

The installation was tested under MAC OS X (10.5.x, Intel CPU)

Installation of NEXT-RNAi

NEXT-RNAi can be downloaded here and just needs to be unpacked.

```
tar -xvzf NEXT-RNAi_v1.31.tar.gz
```

Installation of Bowtie

Bowtie can be downloaded from the Bowtie webpage. Depending on the CPU Bowtie is available for 64bit computers (bowtie-x.x.x-macos-10.5-x86_64.zip) or 32bit computers (bowtie-x.x.x-macos-10.5-i386.zip).
Bowtie just needs unpacking. NEXT-RNAi requires the bowtie script, and the bowtie-build script for building custom Bowtie libraries / indices.

```
unzip bowtie-x.x.x-macos-10.5-x.zip
```

Installation of primer3

Primer3 can be downloaded from the Primer3 release page. It is recommended to use version 1.1.4 (file primer3-1.1.4-OSX.tar.gz). Version 1.1.1 was found with a bug in the output and the latest versions are still in alpha/beta testing.
Primer3 just needs unpacking. NEXT-RNAi requires the primer3_core script located in the unpacked *src* folder.

```
tar -xvzf primer3-1.1.4-OSX.tar.gz
```

Installation of mdust

Mdust can be downloaded via this link.
Unpack the file. In the folder created open *fastafile.c* and delete the third line *#include <malloc.h>* (*malloc.h* is not needed under Mac OS X, but leads to an error with *make*). Finally type *make* (ignore warnings) which creates the mdust script required by NEXT-RNAi (compilation requires prior installation of Apple Developer Tools / Xcode).

```
tar -xvzf mdust.tar.gz
cd mdust
emacs fastafile.c (delete line #include <malloc.h>)
make
```

Installation of Blat

Download the blat suite available for Intel Macs or Power PCs.
Unpack the blat suite. NEXT-RNAi requires the blat script for alignments with flat-file FASTA databases or gfServer, gfClient and faToTwoBit scripts for alignments using a blat server.

```
unzip blatSuite.34.zip
```

Installation of BLAST

Download latest BLAST executables (blast-2.2.x-universal-macosx.tar.gz) from NCBI here.
Unpack the file. NEXT-RNAi requires the blastall script, and the formatdb script for building a BLAST index (both located in the *bin* folder).

```
tar -xvzf blast-2.2.x-universal-macosx.tar.gz
```

Installation of Vienna RNA Package

Download the latest Vienna RNA Package (ViennaRNA-x.x.x.tar.gz) here.
Unpack the file. In the created folder run *./configure*, *make* and *sudo make install* to make the package (requires prior installation of Apple Developer Tools / Xcode). NEXT-RNAi requires the RNAfold.pl perl script located in the *Perl* folder.

```
tar -xvzf ViennaRNA-x.x.x.tar.gz
cd ViennaRNA-x.x.x
./configure
make
sudo make install
```