HMM2

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The HMM2 plugin is a toolkit based on the Sean Eddy's HMMER2 package.

While working on this plugin we were guided by the following principles:

- Make the HMMER2 tools accessible to a wider user audience by providing graphical interface for all supported utilities for most of the platforms.
- Be compatible with the original HMMER2 package.
- Create the high-performance solution utilizing modern multi-core processors and SIMD instructions.

The current version of UGENE provides user interface for three HMM2 tools: HMM build, HMM calibrate and HMM search.

In the original program the corresponding commands are: "hmmbuild", "hmmcalibrate" and "hmmsearch".

To access these tools select the Tools HMMER2 tools submenu of the program main menu:



We highly recommend reading the original HMMER2 documentation to learn how to use utilities provided by the plugin.

SSE2 algorithm is implemented by Leonid Konyaev, Novosibirsk State University. Use of the SSE2 optimized version of the *HMM search* algorit hm with quad-core CPU gives >30x performance boost when compared with the original single-threaded algorithm (single sequence mode).

- Building HMM Model (HMM Build)
 Calibrating HMM Model (HMM Calibrate)
 Searching Sequence Using HMM Profile (HMM Search)