

## Appendix C: Version History

### v3.2: December 1993

- Fixed a bug which caused the E.coli frequency table to be used for block searches instead of the SWISS-PROT table.
  - Adapted for BLOCKS Rel. 7 by adding the new Thompson-Higgins-Gibson weighting method.
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### v3.1: September 1993

- Converted to THINK C 6.0.
  - Added statistical analysis acc. to Eguchi & Seto, incl. Claverie's hat-smoothing algorithm.
  - Added support for GenBank format.
  - New option: database index files can be automatically re-opened on startup.
  - Updated amino acid frequency table for block searches (SWISS-PROT Rel. 26)
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### v3.0.1: July 1993

- Bug fix: long sequences in DNASTAR format are now handled correctly.
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### v3.0: July 1993

- PROSITE pattern searches are now five times faster.
- Automatic translations of nucleotide sequences.
- New fast block search mode.
- Added strength to block search results.

- Added mixed-case display of high-scoring regions in block search.
  - Index files now carry version number.
  - Corrected simultaneous active state of Search and Find command which could cause a crash.
  - Output file creator menu polished.
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#### v2.1: January 1993

- BLOCKS version 6 had some slight format change which broke MacPattern v2.0.x. This is corrected now.
  - Fixed a bug that affected blocks with a 'J' character in their sequences. Its only consequence was a marginally wrong score.
  - Windows with identical names are now handled correctly in Windows menu.
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#### v2.0.1: October 1992

- For sequences less than 60 residues the memory allocated for blocks matrices was not released properly which caused an "Out of memory" error message. This is fixed now.
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#### v2.0: September 1992

- Support for BLOCKS database and sequence searches using site-specific scoring matrices added.
- Statistical analysis options added (Maximal Segment Scores analysis).
- Internal data structures changed to extend the maximum number of database entries from 1,000 to 10,000.

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Fixed a rather silly bug. If the last position in a pattern was repeated more than once, eg L(2), then only the first sequence character matching this pattern position was displayed. For example, for a pattern such as A-D-L(2) a matching sequence of ADL was shown instead of ADLL. However, this bug did NOT affect the pattern matching algorithm as such. Matches were identified properly, and the matching position

indicated in the result was correct. Thus, it was in fact only a “cosmetic” although annoying problem.

- Database lists can display entry names or accession numbers.
- General Options dialog added.
- Holding down Shift key when a window is closed closes window without a prompt for saving changes. Holding down Option key will close all windows simultaneously.
- Internal format of preferences file changed.
- Memory partition size increased to 700 K.
- Added System 7 color icon suite support.
- Some changes to accomodate new maximal entry name length of 21.
- Manual revised.

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#### v1.6.2: March 1992

- Recompiled with Think C. 5.0.2. More speed improvements.
- A pattern database was not indexed properly if a sequence had been loaded from CD-ROM before. This bug was fixed.

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#### v1.6.1: March 1992

- A subtle change resulted in 20% improvement of speed for searches.

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#### v1.6: January 1992

- A bug was fixed which corrupted the result output when a sequence contained more than the maximum number of patterns.

- Set the 32-bit-clean MultiFinder bit.
  - A small problem with memory allocation fixed which caused heap fragmentation.
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v1.5: December 1991

- Added support for /SKIP-FLAG
  - Added Rotate item to Windows menu
  - Fixed bug which could cause memory fragmentation
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v1.4: August 1991

- Fixed a nasty bug which could cause a system crash but only turned up when loading a file >32,000 residues running System 7.
  - Removed a new “feature” of v1.3: If no pattern was found in a sequence the program wrote an appropriate message to the result file. This led to result files larger than one megabytes when the user tried to search a complete protein database for a specific pattern!
  - MacPattern is now System 7-friendly (i.e. it supports AppleEvents and Aliases and many of the other new features of System 7).
  - A couple of smaller changes, mostly related to the handling of the menu bar.
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v1.3: July 1991

- MacPattern is now fully MultiFinder-friendly. Searches can be performed in the background.
- Output format was changed. Output can now be sorted by patterns or by location along the sequence.
- Added “Options” menu. The output format and the creator of output files can now be selected from the “Options” menu.
- Settings are stored in Preferences file in System or Preferences folder.

- If results are too big to be displayed, MacPattern asks now for a file name before saving them to disk.
- “Select all/none” works for all text windows now.
- Temporary files are now stored in System folder or in Preferences folder (under System 7). This should make it easier to run MacPattern from a file server.
- Added small and color icons and balloon help.
- Under System 7, MacPattern can be started by dropping sequence or index files onto the MacPattern icon.
- “Edit” and “Pattern” menus rearranged.
- Several changes to user interface to be compliant with new System 7 guidelines.
- The creator signature of MacPattern was changed to MCpt to avoid conflict with existing application.
- User manual and help file re-written.

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#### v1.2.6: June 1991

- Fixed a serious bug which could cause a system crash when the sequence input file contained lines with more than 80 characters.
- A few cosmetic changes.

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#### v1.2.5: April 1991

- ALL searches can now be interrupted, even when the pattern was entered by keyboard.
- MacPattern now skips over entries with more than 30,000 residues instead of aborting the current run.
- Several bug fixes to Windows menu handling. Should work okay now with CD-ROM files and when files are saved under different names.
- Typed in patterns are now shown in the result window.

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v1.2.4: March 1991

- A bug was fixed which could cause MacPattern to crash under certain circumstances if the input sequence file contained non-ASCII characters.
- Searches can now be interrupted by pressing Cmd-period or ESCape. Although this slows the program down a bit, I think it was worth adding this feature.
- Added header and footer to print-out.

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v1.2.3: February 1991

- Find option is no longer available when no sequence is loaded (caused system crash).
- Changes to error messages.
- Fixed a bug which prevented windows from getting deactivated when a user switched to another program under MultiFinder.

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v1.2.2: January 1991

- Yet another bug fix. Release 6 of Prosite contained a pattern which was longer than I ever expected. Now pattern descriptions may be up to 512 characters length.

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v1.2.1: December 1990

- There was still a bug in the routine that reads PIR format. It's hopefully fixed now.

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v1.2: December 1990

- Bug fixed which gave wrong results when the PIR-formatted Swiss-Prot database on the EMBL CD-ROM was searched.
- Improved searching algorithm which speeds up searches for most patterns. The greatest improvements will be noticed on slow Macs (68000), or if the Swiss-Prot

database on the EMBL CD-ROM is searched.

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#### v1.1.3: November 1990

- Rebuild with Think C v4.0.
  - Fixed small bug which caused MacPattern to crash with some versions of TMON.
  - Entry names can now be up to 10 chars in all sequence formats.
  - The name of the currently processed entry is shown in progress bar.
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#### v1.1.2: November 1990

- Now reads sequences from EMBL CD-ROM.
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#### v1.1.1: October 1990

- Support for IG format.
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#### v1.1: August 1990

- Fixed bug in menu bar handling, which prevented Copy from being selected if the top window was a result window.
- Indexing software is now an integrated part of MacPattern.
- Improved MultiFinder compatibility.
- Changed subroutine that reads Pearson format. Can now read multiple sequences from one Pearson file.
- Added filter to make \*only\* .dat files accessible for indexing.
- Added 'Options...' dialog to 'Save as...' dialog.
- Some changes to dialogs and alerts to adhere closer to Apple's Human Interface Guidelines.

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v1.0: July 1990

- First release