

# MBSS\_PrepareProjectFile.sh

## Aim

MBSS\_PrepareProjectFile.sh prepares a set of MaBoSS run, according to different modifications of a generic model (mutations, parameter sensitivity, etc.)

## How to run the script

MBSS\_PrepareProjectFile.sh is a shell script that uses a perl library, MBSS\_PrepareProjectFile.pm and two python3 scripts: MBSS\_PrepareProjectFileTrajectoryFig.py and MBSS\_PrepareProjectFilePieChart.py. Launching MBSS\_PrepareProjectFile.sh is done with the following command:

```
MBSS_PrepareProjectFile.sh File.pmbss
```

MBSS\_PrepareProjectFile.sh must be accessible by command line, as MaBoSS. MBSS\_PrepareProjectFile.pm, MBSS\_PrepareProjectFileTrajectoryFig.py and MBSS\_PrepareProjectFilePieChart.py must be accessible within an environment variable.

The file “File.pmbss” contains the following fields

- MABOSS = Executable\_name;
- BND= bnd\_file.bnd;
- CFG= cfg\_file.cfg;

The file File.pmbss can contain the optional fields:

- INIT\_COND=[Previous\_model.bnd,Previous\_model\_probtraj.csv,#line\_number];

From a previous run of MaBoSS that uses the file “Previous\_model.bnd” and produces a trajectory file “Previous\_model\_probtraj.csv”, PrepMultiSim uses the line “#line\_number” of this trajectory file as an initial condition in the .cfg file(s) in the project folder.

- MUT= First\_node Second\_Node ...;
- COMB\_MUT=#number\_of\_possible\_combined\_mutation;
- VAR\_SENS=[\$External\_variable1,Suffix\_to\_add] [\$External\_variable2,Suffix\_to\_add] ...;
- COMB\_VAR\_SENS=#number\_of\_possible\_combined\_variable\_sensitivity;
- TRAJ\_TABLE=yes;
- STAT\_TABLE=[yes,#probability\_threshold];

## Outputs

According to the file “File.pmbss”, a project folder “File” is created, which contains all necessary inputs and a shell script “File.sh”. Launching this shell script runs (multiple) MaBoSS and creates output tables and figures (if specified).