

Virtual Physiology – Technical Specifications

System Requirements and Installation Information

Virtual Physiology - System Requirements

The Virtual Physiology labs are running via .exe files on all **Windows** platforms, from Win XP to Win 10, 32 and 64 bit, and on all Windows servers.

SimHeart and SimVessel can also be used on **Mac OS** via the .swf files using a Shockwave player.

To run the other programs (SimMuscle, SimNerv and SimNeuron) on other than Windows platforms a Windows emulator is required. Mac versions shall be deliverable, step by step, in within the first three to four month in 2021.

Windows:

In case that there are problems with the installation or when the programs are not running, please, first of all check whether you have got a valid license file and then make sure that the following components are installed:

a) **Windows Installer 3.1** (<http://www.microsoft.com/de-de/download/details.aspx?id=25>)

usually installed, except operating systems older than 2005

b) **.NET Framework 3.5 SP1** (<http://www.microsoft.com/de-de/download/details.aspx?id=25150>)

No download is needed for Windows 8 and higher versions but activation is eventually required.

Mac OS:

The SimHeart and SimVessel folders include **.swf files** also to run on **MacOS**. The Flash player is NOT required! Instead, you can use any suitable Shockwave player, e.g. the Elmedia Player which can be downloaded for free (<https://cdn.eltima.com/download/elmediaplayer.dmg>). After installation of the SWF player the SimHeart and SimVessel laboratories can be opened by right mouse click or double click on simHeart.swf or simVessel.swf in the corresponding program folders.

Virtual Physiology - Installation Information

(in the following, SimXxx stands for either SimMuscle, SimNerv, SimNeuron, SimHeart or SimVessel)

The programs can be downloaded as **.zip files** and, in case of tryout or purchased versions, also as **.msi files** for regular Windows installation.

Using **.msi files**, on first installation of a Virtual Physiology program a folder **ViPhy** will be created in which you will find the subfolders **SimXxx** of all installed Virtual Physiology programs (SimMuscle, SimHeart etc.). If you are just following the pre-settings of the short installation procedure the ViPhy folder will be located in your Windows folder "**Program Files**". Of course, you can select any other path.

Following the installation procedure without changes should lead to following arrangement of folders:

```
Program Files
=> ViPhy
    => SimMuscle
    => SimHeart
    => ....
```

After installation, icons of the installed programs that are directly linked to the executable files will appear on your desktop (if you didn't de-activate the corresponding button towards the end of the installation procedure).

When **.zip files** have been downloaded they can be unzipped to whatever place on your hard disk as you want to generate the corresponding folders SimXxx. In this case, desktop icons will not be generated. You may start the programs via the SimXXX.exe files in the SimXXX folders or generate your own desktop icons with link to the .exe files.

The programs can also be run in multi-user mode via a **server** on which they should preferably be installed by an IT expert – probably easiest by using the zip files.

License Files (.lic) - IMPORTANT

In any case you need to copy the license files (.lic) that you received as email attachment into the corresponding SimXxx program folders.

Please note: in case of SimHeart and SimVessel the license files **must** read SimHeart.lic or SimVessel.lic, respectively. Please rename in case that you received these license files with some extensions in the file name. Renaming of the license files for the other labs is not necessary.

Licensing: Our programs are only running when a license file is inserted. The encrypted text of the license file will appear in plain language in the virtual labs. In case of demo versions the license files are automatically generated and always include the statement "DEMO version – NOT licensed for teaching". When the programs have been purchased and in case of tryout versions we will send license files with the name of the institute, saying, for example, "SimHeart - licensed for the Institute of Physiology, University of Marburg, Germany". The idea is that university institutes won't use copies of the virtual labs in regular students' courses when it is clearly visible that the software is licensed for a different university. That's what we also expect in case of Demo versions when it is said „Demo version – NOT licensed for teaching“. This is our only but presumably quite effective bootleg protection apart from the fact that we anyhow trust our customers which are exclusively Universities and High Schools.

Contents of the SimXxx folders

(in the following, SimXxx stands for either SimMuscle, SimNerv, SimNeuron, SimHeart or SimVessel)

Each SimXxx folder should contain the executable program "SimXxx.exe" together with diverse subfolders and files, among them the Readme files in English and German.

The subfolder "**musics**" contains the sounds.

If there is a subfolder "**videos**" it contains preparation videos which, so far, still are the old videos in low resolution. They can be opened from the virtual labs via the corresponding "video" buttons. Preliminary versions of new preparation videos in high resolution can be found on the Virtual Physiology website (<http://www.virtual-physiology.com/Video>).

The subfolder "**files**" is used to store parameters settings of the virtual preparations, so far mainly of importance for SimNeuron (see SimNeuron Presettings Info).

The subfolders "**tutorials**" and "**protocols**" contain the manuals and protocol forms. In the demo versions they only appear in PDF format. In the licensed versions you will also find them as editable Word files so that you can modify the existing manuals and protocols adjusting them to your teaching goals. Of course, you can write your own versions in any format you wish and store these in the corresponding folders.

You have access to the tutorial and protocol forms directly from the laboratories with click on the tutorial and protocol buttons. These are linked to those documents with the names "SimXxxTutorial.yyy" or "SimXxxProtocol.yyy", respectively – i.e. to those files **without** an extension like _EN or _DE (denoting to English or German versions, respectively). With the initial setting, the English versions are opened. However, you can determine yourself by appropriate renaming which of the files shall be opened from the labs. In case that several of such files exist, e.g. in .docx as well as in .pdf, format, preference is given to the largest file which usually is the .doc file.

Please note: **SimHeart and SimVessel** are running via your browser. If [Google Chrome](#) is your standard browser, you cannot directly open the **tutorials and protocols** in Word format via the buttons in the labs. Recent versions of Google Chrome do no longer open Word files. Hence, you may change the links to the PDF files (see above) or open the Word files directly from your folders.

Service:

In case of any technical problems or questions, please contact our IT expert Aubin Tchaptchet (aubin.tchaptchet@googlemail.com, Fon +49 176 860 27175) and/or the coordinator of the Virtual Physiology project, Hans Braun (braun@uni-marburg.de, Fon +49 173 319 3028), also in case of didactic and scientific questions.

The Virtual Physiology labs are produced and licensed by

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