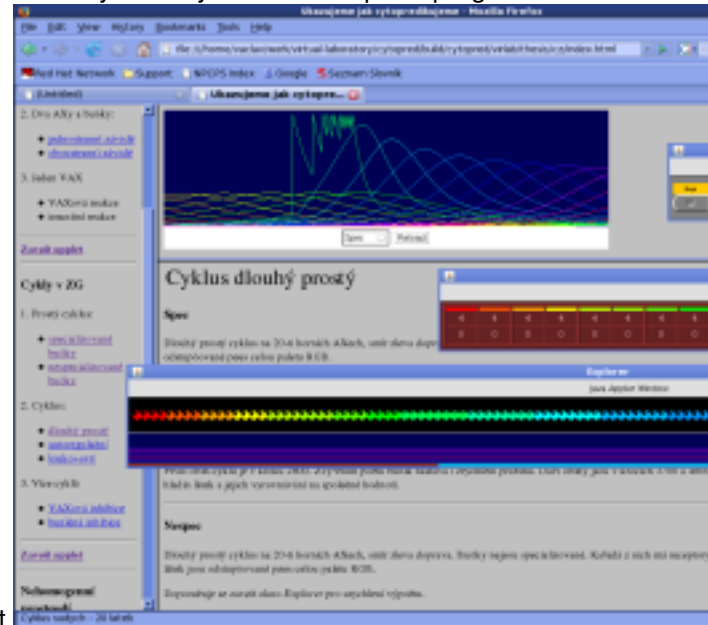


Virtual Laboratories

A Virtual Laboratory (VL) is place where you can do experiments - but only virtually. VL is a computer program



which simulates some DBC behavior and let you to interact with it.

The laboratory is a software primarily designed to allow experiments with a mathematical model of an eukaryotic cell known as [Digital Biological Cell \(DBC\)](#). The conducted in silico experiments can be used for several purposes:

1. Experimenting with models and their parameters
2. Proving and presenting results of the theories
3. Teaching how model works

Therefore the virtual laboratory brings fast and cheap method to seek a model, which corresponds to in vivo experiments. Once the model is found, the laboratory allows easy use of the model by medical or biological scientists, who are usually not interested in the mathematical background of the model. Further targeted experiments performed by the scientists can ultimately reduce in vivo experiments.

The current options of the laboratory allows to:

- Simulate different types of cells together
- Change the genetic information (production of the DBC)
- Alter the environment of the cells by injections of antidotes
- Set initial distribution of the cells

Please enter the [Vaclav Bartacek's Virtual Laboratory \(external link\)](#).

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