



Validated Physiology for Medical Modeling and Simulation

Pulse is a high quality, comprehensive virtual human physiology simulator for medical education, research, and training. The engine models various patients through modular interconnected systems, and is equipped to dynamically apply any combination of chronic conditions, acute traumas, and treatments.

Features

Pulse has many innovative features and advantages that differentiate it from other physiology software.

Modeling:

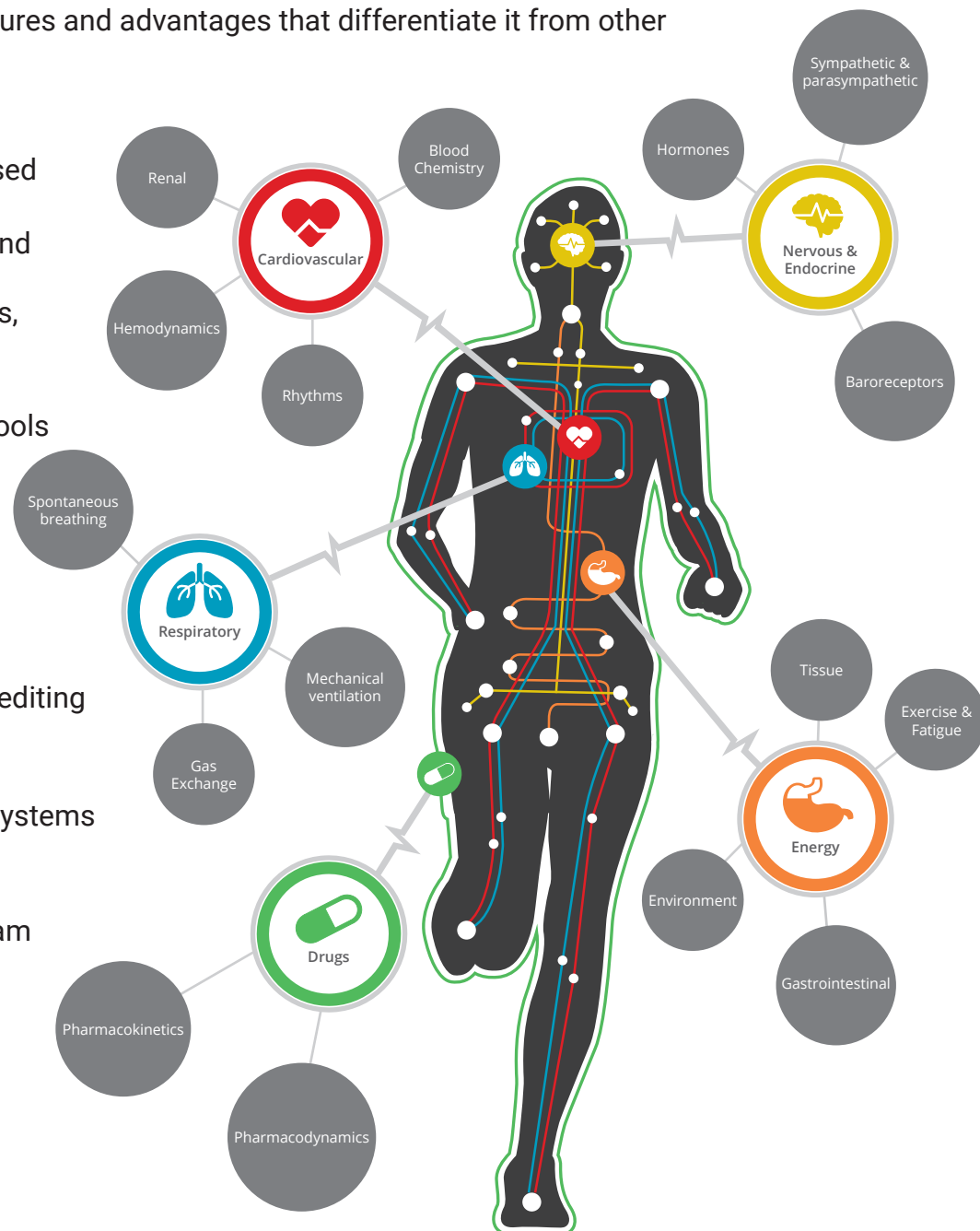
- ▶ Comprehensive physics-based models
- ▶ Mechanistic homeostasis and pathology
- ▶ Validated equipment models, including ventilator
- ▶ Well organized ontology
- ▶ Verification and validation tools
- ▶ Robust documentation
- ▶ Easily extendable

Software:

- ▶ Create custom proprietary applications
- ▶ Pulse Explorer for scenario editing
- ▶ User friendly interface
- ▶ Light-weight for real-time simulations on embedded systems

Support:

- ▶ Active expert integration team
- ▶ Clinical collaborators for scenario development
- ▶ Well supported and maintained code repository





Virtual Environments



Manikin-Based Simulations



Clinical Explorations



Applications and Tools

The engine can be used standalone or integrated with simulators, sensor interfaces, and models of all fidelities.



About Kitware

Our mission is to advance the frontiers of understanding by developing innovative open source software platforms and integrating them into research, processes, and products. We provide world-class support, training, and custom software development. By using a flexible, open source base product, the software can be readily adapted to meet your specific needs.

Join the Pulse community

External contributions to the codebase are welcome. We are actively pursuing collaboration partners, customers that require tailored solutions, and strategic partners. Contact us to discuss how we can help you leverage a high quality software process to enhance and improve your existing medical solutions.