

Laboratory classes are an integral part of curriculum training the students' research skills. However, wide-use of laboratory classes in-person is limited by the increasing student numbers, inadequate equipment and place, and pandemic situation. Virtual simulation experiments overcome the difficulties in organizing the laboratory classes. They can be realistic, attractive, interactive, efficient, individualized and mobile. We aimed to develop the electrophysiological experiment based on virtual lab simulation for the students in Peking University Health Science Center. Collaborating with Chengdu Techman Corporation, we successfully developed the virtual experiment measuring cellular membrane potential. There are four main sections, including introduction and theory, experimental apparatus and procedures, data analysis and quiz. Finally, a summary report was generated. The students gave the positive feedback to this virtual electrophysiological experiment. Virtual simulation experiments are useful in developing the students' research skills.