

Abstract

The application of web-based medical research networks in doing multicentre clinical trials entails – among other things – the traceable as well as transparent management of biosamples which are taken and used in this context.

The aim of this thesis was to enhance a web-based medical research network – which had already been under way and is now partly finished – by devising a component whose function is the virtual management of biosamples as stipulated above. In order to achieve this a 4-tier web application given by the web-based medical research network, which consisted of an Apache web server, a ZOPE web application server and a PostgreSQL database server had to be used.

The extension of this prerequisite by means of a second XML-RPC-based path of communication made the implementation of a context menu and modal dialogs as well as additional security features possible. The integration into the present system was carried out in all tiers of the web application.

Thus, the basis for an easy as well as straightforward handling of biosample procedures in the context of clinical studies was created. Moreover, this is the precondition for the reduction of the administrative effort and for the quicker realisation of more qualitative results in the field of clinical research. Easy configurability, extensibility, user-friendliness, and, last but not least, performance were in the centre of interest.

keywords: web-based medical research network, clinical trial, virtual biosample databank, tracking, traceability, web-technology