NanoDiaRA
Particles, Molecules & Cells · Diagnosis in-vitro & in-vivo · Rheumatoid Arthritis & Osteoarthritis

Electronic Sample Book for Collaborative Projects

SEVENTH FRAMEWORK PROGRAMME

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Research in collaborative projects is related to intensive exchange between partners. The EU-funded project NanoDiaRA (Development of novel nanotechnology based diagnostic systems for Rheumatoid Arthritis and Osteoarthritis) combines activities in nanotechnology with application in health areas like Rheumatoid Arthritis and Osteoarthritis and by this materials technology, nanotechnology, molecular biology and clinical investigations. It was an indispensable requirement to document all research and exchange activities between partners and to supervise the success of the work.
To achieve that, we developed a browser-based tool which allows a user-friendly documentation and the exchange of data and samples. It can be used to monitor the activities of a project, to track samples and to harmonize protocols.

Sample and data exchange in NanoDiaRA (excerpt)


University Hospital Geneva (CH)


Uni Nijmegen (NE)


Paracelsus-Universität, Salzburg (AUS)


Merck Serono, Geneva/ Darmstadt (CH, D)


Merck Chimie SAS – Estapor (FR)

Animal samples

MRI pictures


EPFL Lausanne (CH)

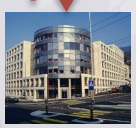

Uni Fribourg (CH)


Uni Lund (SE)


Uni Tartu (EST)


Charité Berlin (D)


CSEM Alpnach (CH)


Arrayon Biotechnology, Neuchâtel (CH)


AnaMar AB, Lund (SE)

Particles

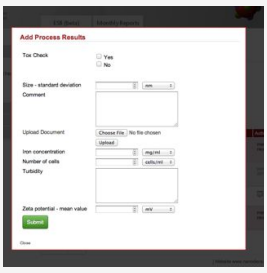
Biomarkers and human fluids

The Electronic Sample Book ESB is an electronic tool enabling the documentation and exchange of methods, sample descriptions and processes in any kind of collaborative project. The browser-based tool has been developed for projects having partners at different destinations with different expertise. It is independent of the nature of the project – whether it is dedicated to scientific research, translational development, industrial development or production. For people interested in testing this system, a demo version with a set of test data is available at http://ndr.quickest.de/. User names and passwords are distributed on request.

The data produced within projects is stored in a structured manner by defining samples as the basic unit of research. Technically, each sample is represented by a database record. Such a sample record can reflect different Types, e.g. materials like specimen or cell cultures, but also documents like files, images or videos. Each sample record consists of different fields depending on its type. Types, their properties and associated PROCESSES for measuring and producing such a sample can be defined by the institutions involved, and the project administrator is able to add new properties and processes during the course of the project.
In our project, nanoparticles, MRI pictures, biological samples etc. can be created as records, and all necessary information useful for the partners are made available by the users who fill in the defined information regarding a specific sample. As the users chose the storable information for their specific samples, it is possible to create types for basically everything that can be developed and exchanged within a project. Also, one type can be integrated into another (e.g. an MRI picture of an animal, or a blood sample containing particles), whereby all properties of the merged samples are still traceable.
Possessed records can be sent to other groups. To track shipment of a sample, the record's state is changed to "on its way" and the addressed group is notified about the sample to arrive. If not received within a user-defined time-span, the tool sends automatic warning notifications that a sample may be lost.
The Electronic Sample Book allows to monitor scientific actions and their results, to harmonize process protocols and to secure that no sample gets lost. Logging every data submission of logged-in users guarantees that each step is monitored.

Samples in own possession appear in the user group's stock, containing information about their history, properties and applied processes

Samples are described by properties which are pre-defined and managed by the project partners themselves and/or the project's adminstrator.



Each process protocol used in a project can be downloaded by the project partners.

For more information and test access, please contact alessandra.hool@matsearch.ch