



## **\*Annual BTCure Meeting, in Prague, Sep 09-11, 2012**

*Short outline by Pia-Maria Blaas*

After the Kick off meeting in autumn 2011, BTCure consortium members met for their first Annual Scientific Meeting and Project Steering Board in Prague in September 2012.

More than 125 participants met to exchange information on first results, and to decide on future priorities, collaborations and work plans. Among the participants were principal investigators, key opinion leaders in RA, project assigned researchers and task coordinators, industry partners and experts, patient representatives, and members of an independent Ethics Board, being experts in the field of ethical medial issues.

### **BTCure`s first achievements at a glance**

BTCure has efficiently set up a Management team coordinating experts from academia and industry with diverse interest, coming from different hospitals, universities and pharmaceutical companies all over Europe. Through combined management efforts this complex project is already driven like a small company itself working towards the same goal: to better understand the complexity of the disease causing events on a molecular and cellular level, to contrast different RA models and patient subgroups. This is supposed to lead to new disease markers, an increased predictability of drugs and enable earlier and better disease diagnosis and prognosis.

The initiative has significantly advanced in its first one and a half years of existence, be it in its goal to improve R&D infrastructures in RA or in scientific driven projects.

Frist standardized protocols as for animal models or handling of patient material or immune cells are available already and are currently shared and validated within the consortium. Research databases have been set up to upload and compare research data.

Bioinformatics needs for data analysis and comparison have been identified and tools and solutions are currently implemented.

In addition, BTCure has set up and developed new diagnostic assays with the support of industry, including a large number of biomarkers. These assays will be validated of BTCure groups by using biobanked materials.

Moreover, the diagnostic potential identifying different disease causing immune cells in the blood of RA patients is exploited in collaboration with industry. Platforms for the imaging of cells-cell interactions of different kind of immune cells have been set up.

Roadmaps in form of inventories of available patient data and samples within this consortium and thereby within large parts of Europe have been successfully established.

First studies to investigate patient at risk for developing RA have been initiated. Some countries have identified samples of patients that have been collated before disease onset. This material will now be analyzed for differences in molecular and cellular level.

Ethical aspects are evaluated and e.g. common European guidelines for taking informed patient consents are currently designed, considering different national regulations, and aiming to meet patient, research and industry needs.

Interesting, first results on the role of adaptive immunity in disease development and the interplay of auto-immune cells migrating into affected tissues and interacting with disease causing resident cells and cells of the innate autoimmune system have been generated. Examples being, investigations of immune cell repertoires in RA, the role of autoantibody profiles in certain patient groups as patients as in pre- RA and early RA, and molecular switches involved in the regulation of immune cell differentiation. However, innate immune molecules and organ resident cells have also been further investigated, as effects of environmental cues on these cells. An expert group within BTCure is e.g. shedding more light on the pathogenic role of altered synovial fibroblasts (SF) in the joint, and the mechanisms regulating these cells.

From a scientific perspective BTCure is one of the IMI initiatives with the best publication record after such a short time of existence.