

Summary of experience with Bioholotomography (BHT) technology

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We have been interested to exploit the CID-device, which is based on the principles of Bioholotomography (BHT) for determining the mechanism of action of an immune modulator (MIS416) that we (ITL) have developed for the treatment of multiple sclerosis.

From laboratory and animal studies we have established the mechanism of the drug action that involves, in part, the induction of bone marrow activity and the release of bone marrow progenitor cells, in particular stem cells. This progenitor cell type is receiving increasing interest in relation to degenerative conditions.

Some interesting results

Multiple sclerosis

Innate immunotherapeutics is currently in Phase 1b human clinical trial with MIS416 for multiple sclerosis therapy but also has been treating patients under a compassionate release scheme in order to obtain pre-clinical data.

One patient, IV, undertook a BHT examination prior to receiving a therapeutic dose of MIS416 and at 3 and 6 days after dosing. The evaluator of the BHT data did not know anything of the mechanisms of action of MIS416. Pre-dosing evaluation identified characteristic hallmarks of a demyelinating disease.

At day 3 following administration of MIS416, the BHT examination revealed systemic activation of the whole body's metabolic processes, including bone marrow activity and the release of immature cells from the bone marrow, which had characteristics of precursor cells or stem cells. It appeared that the diseased areas of the body became particularly energetic.

By day 6 following MIS416 administration, the interpretation of the BHT data indicated a diminished immune activity, which is commensurate with the half-life of MIS416 in vivo.

Together these preliminary findings were in accordance with some of the predicted activities of MIS416.

Prostate cancer

Independently we have also been following some prostate cancer patients in a non-associated study. One patient had no detectable clinical disease at the time of CID examination and was also prostate antigen negative. However the CID results did reveal

that the neoplastic processes were still occurring and that there was in fact strong evidence for metastatic disease. These readings were taken in august 2009. Now in January 2011, this patient has revealed new clinical evidence of cancer reoccurrence with associated rise in blood prostate antigen levels.

Summary

The cases described above together with other correct diagnoses of several patients with and without cancer prove that the BHT-technology might be extremely useful for the evaluation of whole body state and its reaction to certain drugs/procedures.

As a scientist I am absolutely convinced that this technology should be investigated further for its sensitivity and ability to detect imbalances in health and disease related processes which occur prior to manifestation of disease. As an immunologist I am a firm believer that the earlier stages of disease are reversible, and that the immune system plays a major role in restoring balance.

BHT technique could be pivotal in gaining insights into the mechanism of new therapeutic modalities that are multi-modal and are designed to harness a range of biological processes that current technologies cannot qualify or quantify. Further, since we are moving into a systems biology era we need to embrace technologies that can in fact "read" how the system is performing and begin to evaluate what the outcome is when a plethora of individual mechanisms are simultaneously induced and how this relates to the health status of the whole organism.