

### Aims

- (a) a pre-transplant test to tell how likely a patient is to be affected by GvHD following allo-HSCT.
- (b) A test following allo HSCT to identify at the earliest opportunity that a patient may have acute GvHD.
- (c) A test following allo-HSCT to identify whether a patient may have or is likely to get chronic GvHD.
- (d) Testing whether any of the specific markers identified for GvHD also apply to Rheumatoid Arthritis.
- (e) Establishing different ways of doing the test e.g. lab based or surgery / clinic based tests.

### Contributors

Leading edge analytical, technical and biotechnology companies with new methods of identifying diagnostics and potential therapeutics.

Network of HSCT patients who consent to provide samples for research (blood, serum, skin, urine, DNA)

Leading edge scientific researchers at top European universities or medical facilities

### StemDiagnostics

The project provides a structured approach for a range of different research activities combining leading edge researchers who can access documented clinical samples from HSCT patients with technology and biopharmaceutical companies seeking to provide solutions through the use of genomics, proteomics and protein biochemistry. Companies who are developing diagnostic hardware such as immunoassays and biochips are working in the project to apply their technology to the identified markers and take the tests to a workable level.

### Outcomes

New pre-transplant tests to assess the risk of contracting GvHD

New post-transplant tests to catch the onset of GvHD earlier.

Assessing a new discovery in leukaemia diagnosis and treatment and considering its impact on GvHD patients.

Converting the outcomes into an assay and into a protein biochip for ease and speed and comparing these two solutions

Using genomics to help develop a 'prognostic indicator' able to give some indication of likelihood of a particular patient being in a high risk group for GvHD.

Using Proteomics to get an early identification of the onset of acute GvHD and its response to certain treatments. Also using this technique to get an early identification of chronic GvHD and comparing the results with results from rheumatoid arthritis.

Assessing whether the antibodies developed by Miltimmune are able to activate T-cells in leukaemia patients. This could lead to the development of an early diagnostic and possible cancer treatment. This will also be applied to GvHD and rheumatoid arthritis.

Trialling the Orla Technologies protein biochip using synthesised samples and then using Apotech's antibodies. Comparing this technology with ELISA immunoassay.