# PROJECT

<table>
<thead>
<tr>
<th><strong>Title</strong></th>
<th>In utero cell therapy for congenital diseases</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acronym</strong></td>
<td></td>
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<tr>
<td><strong>Project type</strong></td>
<td>Large-scale integrating collaborative project</td>
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<tr>
<td><strong>Status</strong></td>
<td>Planned for submission</td>
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<tr>
<td><strong>Call references</strong></td>
<td>FP7 Call 3</td>
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</tbody>
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## Priorities’ Main Research Areas
- in utero stem cells transplantation for therapy of congenital disorders before birth

## Work programme Topic
(according to each priority work programme)

## Project description
The recent advances in prenatal screening and molecular-based diagnostics for genetic, congenital disorders, are giving to scientists and clinical doctors the extraordinary opportunity of foetal intervention, today greater than ever before.

In utero stem cells transplantation (IUSCT) is a procedure that presents potential advantages over postnatal stem cells transplantation (SCT) related to the immunological status of the foetus and to the possibility to potentially prevent clinical manifestation that can start at this stage of development.

Our Europe-wide group includes some of the main experts in in utero transplantation with experience in animal models and in clinical application too.

The aim of our project is to define the best protocol for in utero cell therapy for congenital disorders like SCID, Osteogenesis Imperfecta and Lysosomal Disorders. In particular we believe that Mesenchymal Stem Cells (MSCs) can be valuable tools for in utero cell and gene therapy for congenital disorders.

In this prospective, we are ready to:
- perform further studies on Mesenchymal Stem Cells isolation, culture and expansion;
- to evaluate their therapeutical capacity in animal models of congenital disorders;
- to establish the best protocol for in utero transplantation for application in humans.

## Keywords
- mesenchymal stem cells
- cell therapy
- in utero stem cell transplantation

## Partners already involved
The consortium has the highest level scientific representatives from Sweden, UK, Italy, France, Switzerland, The Netherlands, Israel, Australia and Austria.

## Project budget (for the running projects)

<table>
<thead>
<tr>
<th>Role</th>
<th>Budget reserved for SMEs</th>
</tr>
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<tbody>
<tr>
<td>technology development, research, training, dissemination, demonstration, other</td>
<td>nc</td>
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</tbody>
</table>

## Research topics

- HEALTH- 2009-1.4-1: Cell therapy for tissue and organs. FP7-HEALTH- 2009-single-stage.

## Profile of SME sought

<p>| Country /region | new Member Countries |</p>
<table>
<thead>
<tr>
<th>Start of partnership</th>
<th>mid-term</th>
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</thead>
<tbody>
<tr>
<td><strong>Expertise required</strong></td>
<td>We wish to complete the project consortium with one or two new Member Country partners, of which at least one should be an SME having expertise and interests in this research field.</td>
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</tbody>
</table>
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