Isolation and cultivation of bone marrow-derived macrophages

Commonly used acronym: BMDM
Created on: 10-03-2020 - Last modified on: 10-03-2020

SCOPE OF THE METHOD

<table>
<thead>
<tr>
<th>The Method relates to</th>
<th>Animal health</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Method is situated in</td>
<td>Basic Research</td>
</tr>
<tr>
<td>Type of method</td>
<td>In vitro - Ex vivo</td>
</tr>
<tr>
<td>This method makes use of</td>
<td>Animal derived cells / tissues / organs</td>
</tr>
<tr>
<td>Species from which cells/tissues/organs are derived</td>
<td>Mouse</td>
</tr>
<tr>
<td>Type of cells/tissues/organs</td>
<td>Bone marrow-derived macrophages</td>
</tr>
</tbody>
</table>

DESCRIPTION

Method keywords
macrophages
bone marrow
isolation
macrophage polarization

Scientific area keywords
Immunology
immunomodulation
Immunometabolism
macrophage polarization

**Method description**

Mononuclear cells are flushed from the bone marrow using a 25G needle. After centrifugation, the cells are resuspended in 50mL pre-heated DMEM containing 20ng/ml M-CSF. The cells are cultured in 10cm petri dishes for 7 days. At days 2, 4 and 6, the medium is renewed after washing away non-adherent cells. On day 7, add 3mL enzyme-free dissociation buffer and suspend cells using a cell scraper. Transfer cells to a 15mL tube, centrifuge, count and seed for experiments.

**Lab equipment**

Flow cabinet;
Incubator;
Centrifuge.

**Method status**

Published in peer reviewed journal

**PROS, CONS & FUTURE POTENTIAL**

**Advantages**

Easy to use;
Reproducible.

**Future & Other applications**

Depending on the growth factors in the medium, different cell types can be cultured.

**REFERENCES, ASSOCIATED DOCUMENTS AND OTHER INFORMATION**

**References**


Associated documents

PARTNERS AND COLLABORATIONS

Organisation
Name of the organisation Ghent University
Department Internal Medicine and Pediatrics
Country Belgium
Geographical Area Flemish Region