A patient-derived explant culture of human prostate cancer to test drug efficacy

Created on: 06-02-2020 - Last modified on: 07-02-2020

SCOPE OF THE METHOD

<table>
<thead>
<tr>
<th>The Method relates to</th>
<th>Human health</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Method is situated in</td>
<td>Basic Research, Translational - Applied 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>Human derived cells / tissues / organs</td>
</tr>
<tr>
<td>Specify the type of cells/tissues/organs</td>
<td>Human prostate cancer tissue</td>
</tr>
</tbody>
</table>

DESCRIPTION

Method keywords
- Explant
- human
- Patient-derived

Scientific area keywords
- prostate
- cancer
- drug testing

Method description
Patient-derived explants of prostate cancer provide an *ex vivo* model that retains the architecture and microenvironment of the native tissue. It enables the evaluation of drug responses on individual patient’s tumors *ex vivo* without passaging in animals. It is compatible with all molecular analysis methods. See in the references "A patient-derived explant (PDE) model of hormone-dependent cancer."

**Lab equipment**

CO2-incubator ;
Laminar flow ;
Cell culture room.

**Method status**

History of use
Published in peer reviewed journal

**PROS, CONS & FUTURE POTENTIAL**

**Advantages**

Patient-derived ;
* Ex vivo ;
No animals involved ;
Retains original tissue architecture and tumor microenvironment ;
Economic ;
Reasonable throughput.

**Challenges**

Long-term culture is challenging ;
Limited around of material.

**REFERENCES, ASSOCIATED DOCUMENTS AND OTHER INFORMATION**

**References**
