Course Title
Cultivated and Plant-Based Meat

Lecturer
Dr. Tom Ben-Arye, Siddharth Bhide and Dr. Michal Halpert

Semester
Winter

Course requirements
Biochemistry background. Scientific reading/writing in English.

Final grade components
60% final project 40% written assignments (2 assignments)

Course schedule

<table>
<thead>
<tr>
<th>Class no. / Date</th>
<th>Subject and Requirements (assignments, reading materials, tasks, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction to cultivated meat</td>
</tr>
<tr>
<td>2</td>
<td>Introduction to plant-based meat</td>
</tr>
<tr>
<td>3</td>
<td>Introduction to fermentation</td>
</tr>
<tr>
<td>4</td>
<td>Cells &amp; cell differentiation</td>
</tr>
<tr>
<td>5</td>
<td>Cell culture and measurement tools</td>
</tr>
<tr>
<td>6</td>
<td>Tissue engineering</td>
</tr>
<tr>
<td>7</td>
<td>Tissue engineering (con)</td>
</tr>
<tr>
<td>8</td>
<td>Meat composition and structure.</td>
</tr>
<tr>
<td>9</td>
<td>Raw materials in plant based meat and associated plant processing technologies</td>
</tr>
<tr>
<td>10</td>
<td>Development of plant-based meat products and associated texturization technologies</td>
</tr>
<tr>
<td>11</td>
<td>Plant based meat regulations, IP, value chain &amp; white space opportunity analyses</td>
</tr>
<tr>
<td>12</td>
<td>Invited lectures: (1) fermentation for meat alternatives. (2) Next generation plant processing technologies.</td>
</tr>
<tr>
<td>13</td>
<td>Invited lectures: (1) Alternative protein industry, entrepreneurship &amp; opportunities. (2) Plant cultivation for meat alternatives.</td>
</tr>
</tbody>
</table>

Required course reading

Optional course reading

* Day, L. Proteins from land plants—potential resources for human nutrition and food security. Trends Food
*Hadnadjev, Miroslav & Dapčević Hadnađev, Tamara & Pojić, Milica & Šarić, Bojana & Mišan, Aleksandra & Jovanov, Pavle & Sakač, Marijana. Progress in vegetable proteins isolation techniques: A review. Food and Feed Research. 44. 11-21. 10.5937/FFR1701011H. 2017

Comments
The course will be in English. Course grade is based on assignments written in pairs and an individual final project, which requires a short literature review and article summary in English.