

<b>Name of the Lecture</b>	Cell sources for Tissue Engineering
<b>Level of the Lecture</b>	Graduate
<b>Length of the Lecture</b>	<b>25 minutes</b>
<b>Type of the Lecture</b>	Online
<b>Lecturer</b>	Ayşe Ceren Calıkoglu Koyuncu
<b>Lecturer Email</b>	<a href="mailto:aysecerenkoyuncu@gmail.com">aysecerenkoyuncu@gmail.com</a>
<b>Aim of the Lecture</b>	Cells that are utilized in general tissue engineering applications will be discussed in terms of source (e.g. bone marrow, umbilical cord blood, etc.), donor (e.g. allogeneic, autogenic and xenogenic), potency (e.g. stem cells, somatic cells, etc.), and engineered tissue type (e.g. cartilage, bone, etc).
<b>Content of the lecture</b>	<ul style="list-style-type: none"> <li>• Allogenic, autogenic, and xenogenic sources of cells</li> <li>• Stem cells from various sources such as bone marrow, dental pulp, adipose tissues, umbilical cord, etc.</li> <li>• Classification of stem cells with respect to their source and potency, such as mesenchymal and hematopoietic stem cells</li> <li>• Basic methodology of adult stem cell isolation and characterization</li> <li>• Differentiation of stem cells regarding the engineered tissue</li> </ul>
<b>Recommended Sources</b>	<ul style="list-style-type: none"> <li>• Reis, R. L. (2019). Encyclopedia of tissue engineering and regenerative medicine. Academic Press.</li> <li>• Stem Cell Biology and Regenerative Medicine-Springer Book Series</li> </ul>
<b>Language of the lecture</b>	English
<b>Learning Outputs</b>	<p>Students will be familiar with the subjects related to allogenic, autogenic, and xenogenic cell sources for tissue engineering</p> <p>Students will distinguish different stem cells with respect to their origin of tissue and potency</p> <p>Students will learn the basics of adult stem cell isolation from mammalian tissues and the characterization techniques</p> <p>Students will acquire knowledge about which protocols to follow to differentiate stem cells for different tissue engineering applications</p>