



General Information

Module Title *Introduction into basic methods of cell biology & molecular biology*

Tutor Name(s) *Grit Kasper*

Location where module takes place *Julius Wolff Institut, Charité
Campus Virchow Klinikum
Forschungshaus, Forum 4
meeting in the entrance hall
10 to 13 August, 09:00 to 17:00*

Suitable for the tracks	<input type="checkbox"/>	<i>Biology/Biochemistry Track</i>		
	<input checked="" type="checkbox"/>	<i>Chemistry/Physics/Engineering Track</i>		
	<input type="checkbox"/>	<i>Clinical Scientist</i>		
Type	<i>Practical;</i>	Level	<i>beginner</i>	
Days	<i>4</i>	Max. Participants	<i>4</i>	

Objectives this module

To give an overview about the theoretical and practical basics in cellular and molecular biology. The course will be divided into a lectural part in the morning, in which the theoretical background will be explained and a practical part in the afternoon, where certain methods will be performed in the lab.

Which course materials, software, or instruments do students use in this module?

The first two days will be subjected to cell biology. There will be a general introduction into cell biology as well as how to handle cells in the lab. Students will learn how to culture cells, how to differentiate mesenchymal stem cells into the osteogenic, adipogenic and chondrogenic lineage. They will also use different detection methods (e.g. fluorescence stainings, Alizarin Red) to detect differentiated cells. The third day will cover protein chemistry, again with a first theoretical introduction and a subsequent practical part with protein content determination and a SDS page run. The fourth day will cover RNA/DNA analysis. After the lecture, students will learn how to isolate RNA and to visualize it on an agarose gel.



What are the prerequisites for taking this subject?

Interest to learn more about cells, proteins & Co.
