



General Information

Module Title	<i>Regeneration of the cardiovascular system: Research background and clinical options</i>
Tutor Name(s)	<i>C. Stamm</i>
Location where module takes place	<i>Deutsches Herzzentrum Berlin Charité Campus Virchow Klinikum Augustenburger Platz 1, 13353 Berlin Oststraße 1, 2 and Brunnenhof meeting at entrance lobby 7 to 8 September, 09:00 to 18:00</i>

Suitable for the tracks	<input checked="" type="checkbox"/> <i>Biology/Biochemistry Track</i>		
	<input checked="" type="checkbox"/> <i>Chemistry/Physics/Engineering Track</i>		
	<input checked="" type="checkbox"/> <i>Clinical Scientist</i>		
Type	<i>Lecture; Seminar</i>	Level	<i>beginner</i>
Days	<i>2</i>	Max. Participants	<i>8</i>

Objectives this module

Monday, 07.09.2008

<i>09.00</i>	<i>Participants meet at DHZB entrance lobby</i>	
<i>09.30</i>	<i>Introduction: What is heart disease, why do we need regenerative medicine</i>	
<i>10.30</i>	<i>How to diagnose heart disease – visit echo and MRI lab</i>	
<i>11.30</i>	<i>How can the cardiologist treat heart disease – visit cath lab</i>	
<i>12.30</i>	<i>Lunch break</i>	
<i>13.30</i>	<i>How heart surgery is done – visit OR</i>	
<i>15.00</i>	<i>Treatment of patients on the ICU – visit ICU</i>	
<i>16.00</i>	<i>Coffee break</i>	
<i>16.30</i>	<i>Heart transplantation and mechanical assist devices for heart failure –</i>	<i>visit transplant &</i>
<i>assist unit</i>		
<i>ca. 17.30</i>	<i>End</i>	

Tuesday, 08.09.2008

<i>09.00</i>	<i>Participants meet at DHZB entrance lobby</i>
<i>09.30</i>	<i>How to prepare stem cell products for cardiac cell therapy – visit clean room lab</i>
<i>11.00</i>	<i>Viable tissues for heart surgery – visit tissue engineering lab</i>
<i>12.30</i>	<i>Lunch break</i>
<i>13.30</i>	<i>Seminar: Intrinsic regeneration of the myocardium</i>
	<i>- Neovascularization</i>
	<i>- Myocyte mitosis vs. hypertrophy</i>
	<i>Experimental strategies for cell-based cardiac regeneration - library</i>
	<i>- Skeletal myoblasts</i>
	<i>- Embryonic stem cells</i>
	<i>- Bone marrow cells</i>
	<i>- Neonatal stem cells</i>
	<i>- Gene therapy</i>
<i>15.00</i>	<i>Coffee break</i>
<i>15.30</i>	<i>Clinical cell therapy for heart disease</i>
<i>ca. 17.00</i>	<i>End.</i>



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

Seminar, expert presentations, visit to procedure labs, operating rooms, patient bedside

What are the prerequisites for taking this subject?

Basic knowledge of stem cell biology, interest in clinical medicine and translational research. No specific medical knowledge required.
