

## **Elective in Department of Biochemistry**

**Hamdard Institute of Medical Sciences and Research and**

**Associated HAHC Hospital, New Delhi**

<b>S.no</b>	<b>Name of elective</b>	<b>Animal Cell culture basics and its application in research and development</b>
<b>1.</b>	<b>Block</b>	<b>I</b>
<b>2.</b>	<b>Department/Area</b>	<b>Biochemistry</b>
<b>3.</b>	<b>Name of mentor/supervisor</b>	<b>Dr Kailash Chandra, Assistant Professor, Biochemistry, HIMSR.</b>
<b>4.</b>	<b>Co-supervisor</b>	<b>Ms Babita Singhal Tutor, Biochemistry, HIMSR</b>
<b>5.</b>	<b>Number of students intake</b>	<b>2-3</b>
<b>6.</b>	<b>Method of selection (if applicable)</b>	<b>Interview/ as per the policy of HIMSR</b>
<b>7.</b>	<b>Objectives</b>	<ul style="list-style-type: none"><li>• Overview of cell culture laboratory, equipment, and applications</li><li>• Aseptic techniques and good cell culture practice (GCCP)</li><li>• Demonstration of different cell types, equipment used in cell culture laboratory and their application in research</li><li>• Preparation of media and sterility testing</li><li>• Hands on training in animal cell culture techniques, passaging and maintenance of cell lines</li><li>• Cryopreservation (freezing and thawing of cell lines)</li><li>• Subculturing, determination of confluency, cell counting, and viability testing</li></ul>
<b>8.</b>	<b>Expected outcomes</b>	<ul style="list-style-type: none"><li>• Successfully maintain cultures of animal cells and established cell lines with good viability, minimal contamination and appropriate documentation.</li></ul>

		<ul style="list-style-type: none"> <li>• Student will be trained for the relevant to cell culture, including preparation and evaluation of media, cryopreservation and recovery, and assessment of cell growth/health.</li> <li>• Students will be trained in various equipment used in cell culture and biomedical research.</li> <li>• Recognize and troubleshoot problems common to routine cell culture.</li> </ul>
9.	Assessment	Feedback/viva voice
10.	Log book	A google form for the day to day activity will be filled by students and the record for the same will be maintained in excel.

*Babita*

**Ms Babita Singhal**  
Tutor, Biochemistry, HIMSR  
(Co-supervisor)

*Kailash Chandra*  
6-2-2023

**Dr Kailash Chandra,**  
Assistant Professor, Biochemistry, HIMSR  
(Supervisor)

**Forwarded and Recommended by**

*Alpana Saxena*  
9-2-2023  
**HOD, Biochemistry**

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