IN VITRO PROTON BEAM TIME REQUEST *Please email completed form to ProtonResearch@cchmc.org.*	***Date Approved:*** ***Project ID:*** *To be completed by Proton Staff*

1. EXPERIMENT INFORMATION

1a. Form Submission Date:	1b. Principal Investigator:	1c. Project Contact (Name and Phone Number):
1d. Project Title:		
1e. Assigned Project ID: *From Approved Project Application*	1f. Requested Beam Time (e.g., 1 hour):	1g. Preferred Irradiation Date(s):

The proton research team requests that users provide advance notice of any intended publication or sharing of proton data including grant applications, posters, oral presentations, or manuscript submissions.

2. EXPERIMENT OBJECTIVES

2a. Briefly summarize the overall objective of the project and indicate whether anything has changed since the project application was approved.

2b. Describe the goal of this experiment and indicate how it relates to the objective of the larger project.

2c. Provide a full list of measurements required (e.g., cell survival, RNA, protein assays, etc.).

2d. Define the endpoint of the experiment.

3. MODEL INFORMATION

3a. Cell line name	
3b. Special requirements for cell maintenance (e.g., hypoxic environment)	
3c. Independent variable (e.g., transfections, drug exposure, etc.)	
3d. Cell manipulation to be performed at Liberty PTC (e.g., plating)	

4. RADIATION TREATMENT SETUP

4a. Type of plate or container to be irradiated (e.g., 6-well, T25, etc.) ***Note: all wells on the same plate will be irradiated the same.***	
4b. Beam particle/preferred delivery platform	
4c. Transmission or Bragg peak treatment *Note: FLASH can only be done transmission*	
4d. Does the experiment include a high dose rate (FLASH) group?	

5. EXPERIMENTAL SETUP

Groups	**# Of Plates/Flasks**	**Treatment (e.g., dose, dose rate, fractionation, etc.)**
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

6. EXPERIMENTAL PROTOCOL

Date	Procedure (e.g., plating, treatment, data collection, etc.)
Day	
Day	
Day	
Day	
Day	
Day	
Day	
Day	

7. REQUIRED BEAM TIME ESTIMATION

7a. Use the guaranteed minimum productivity rates below, rounding up to the nearest hour, to estimate the required beam time.

2 plates of 8 Gy per 30 minutes
3 plates of 6 Gy per 30 minutes
4 plates of 5 Gy per 30 minutes
5 plates of 4 Gy per 30 minutes
10 plates of 2 Gy per 30 minutes
20 plates of 1 Gy per 30 minutes

Note: The max dimension for cell plates is 14 x 10 cm. If you need a bigger dimension, please contact us.

Note: An experiment with a combination of FLASH and conventional irradiations in the same day takes longer due to the needed time to make adjustments to deliver different types of irradiations.

Dose = Proton physical dose
Photon equivalent dose (Assuming RBE 1.1) = Proton physical dose *1.1

8. OTHER NOTES

8a. Do you intend to use the cell incubator at Liberty for an extended period of time? ◯ Yes ◯ No

8b. If there is any additional information you want to share or anything you want to elaborate on, please use this space.

8b. Please attach on a separate page any piece of data you want our team to review in regard to your request.