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## EJP-CONCERT

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# D9.123 – Completion of PBI/TBI

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### **Abstract**

Work performed within Task 1.2 was focused on the partial- and total-body Irradiation of mouse groups of the SEPARATE program. This work has been completed. Transfer of experimental material to project partners is near to completion and ahead of schedule. This will facilitate the timely implementation of subsequent tasks.

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## Task 1.2 - Completion of PBI/TBI

A total of 200 mice were irradiated. Irradiation was carried out at postnatal day 80 with 0.1 or 2Gy of x-rays, with individual lead parallelepipeds used to protect the anterior two-thirds of the body, with the hindmost part directly exposed to radiation (Fig 1). A duplicate experiment with no shielding in place was performed for comparison between the effects of total-body irradiation (TBI) and partial-body irradiation (PBI). Irradiation was delivered with a Gilardoni CHF 320 G X-ray generator operated at 60, 100, 250 kVp, 15 mA, with HVL = 1.6 mm Cu (additional filtration of 2.0 mm Al and 0.5 mm Cu). At the appropriate times after irradiation (i.e., 15 days or 6 months) animals were sacrificed by perfusion, washing out the blood and running physiological saline through the vascular system. The brain hippocampus and cortex, and the heart and liver were collected and samples were snap frozen in liquid nitrogen and stored at -80°C for distribution to partners for WP2 and WP3 tasks. Fig. 2 summarizes the irradiation/sacrifice scheme and the plan for distribution of experimental material. Shipment of samples from the 6-months group to partners is in course, while shipment of the 15-days group samples has been completed.

Additional groups of mice were irradiated for exosome characterisation (WP3). Eight mice were whole-body irradiated with 2 Gy, and 8 mice were partial-body irradiated with the same dose. Seven mice were left unirradiated as controls. Bone marrow was also collected from unirradiated mice for co-culture experiments. Shipment of samples to OBU has been completed

In conclusion, work under Task 1.2 of the SEPARATE project is actually ahead of schedule, because not only irradiation of mouse groups has been successfully completed at 12 months since project start, but shipment of experimental material to all partners is also near to completion.

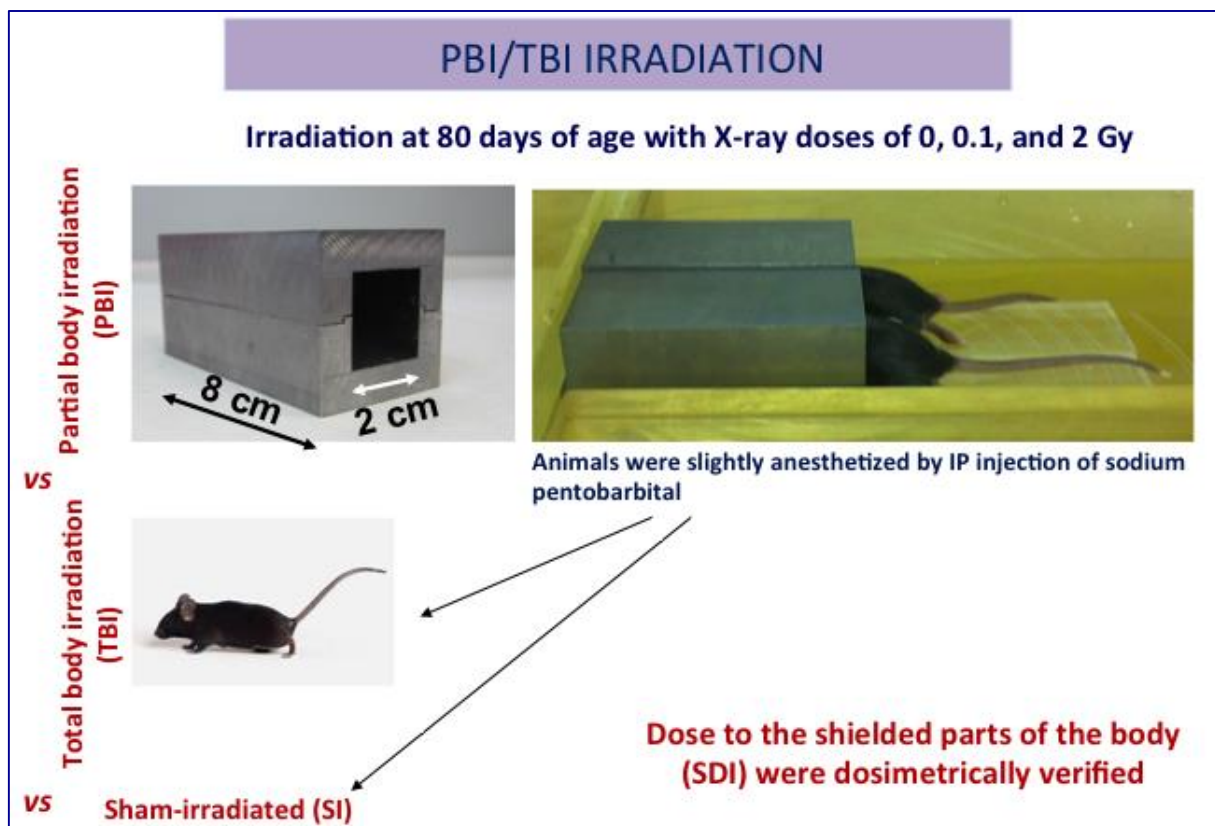
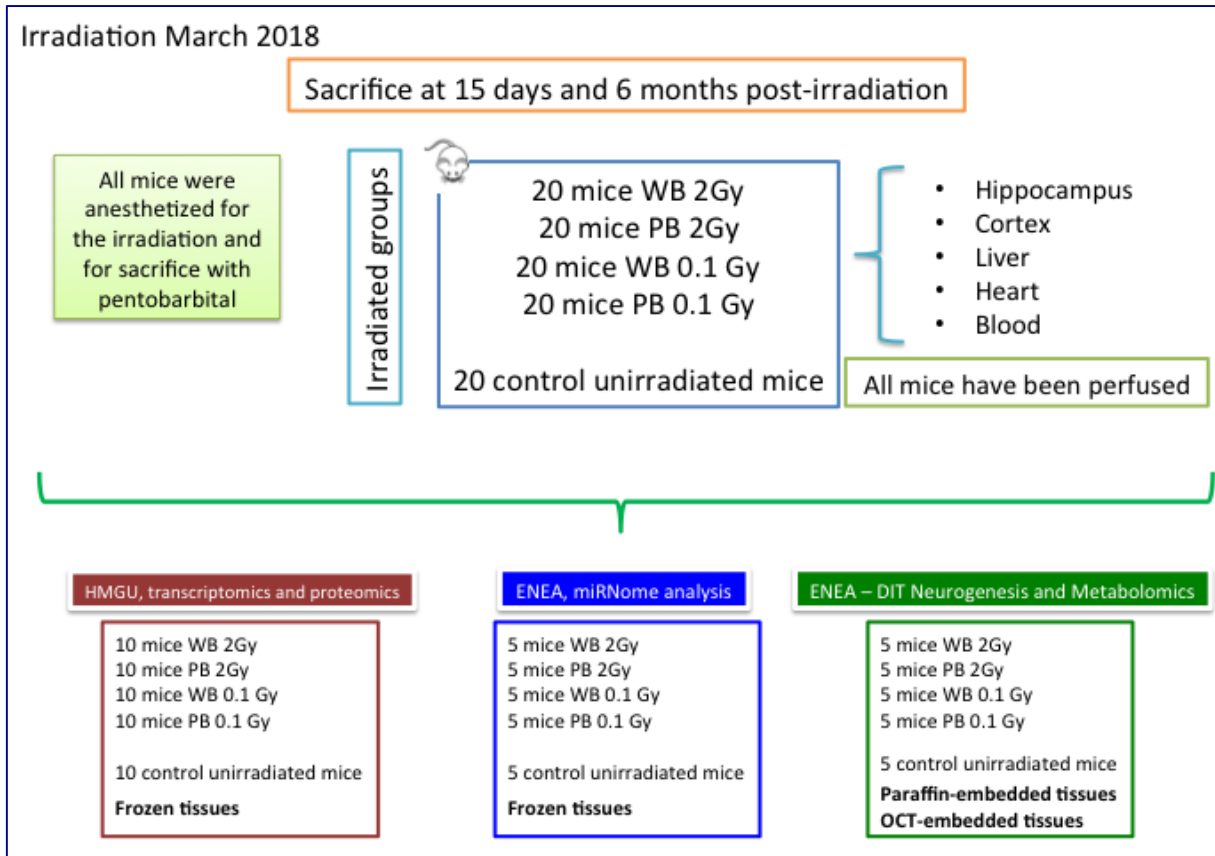


Fig. 1 – Irradiation modalities



**Fig. 2** – Summary of the irradiation groups and sample distribution