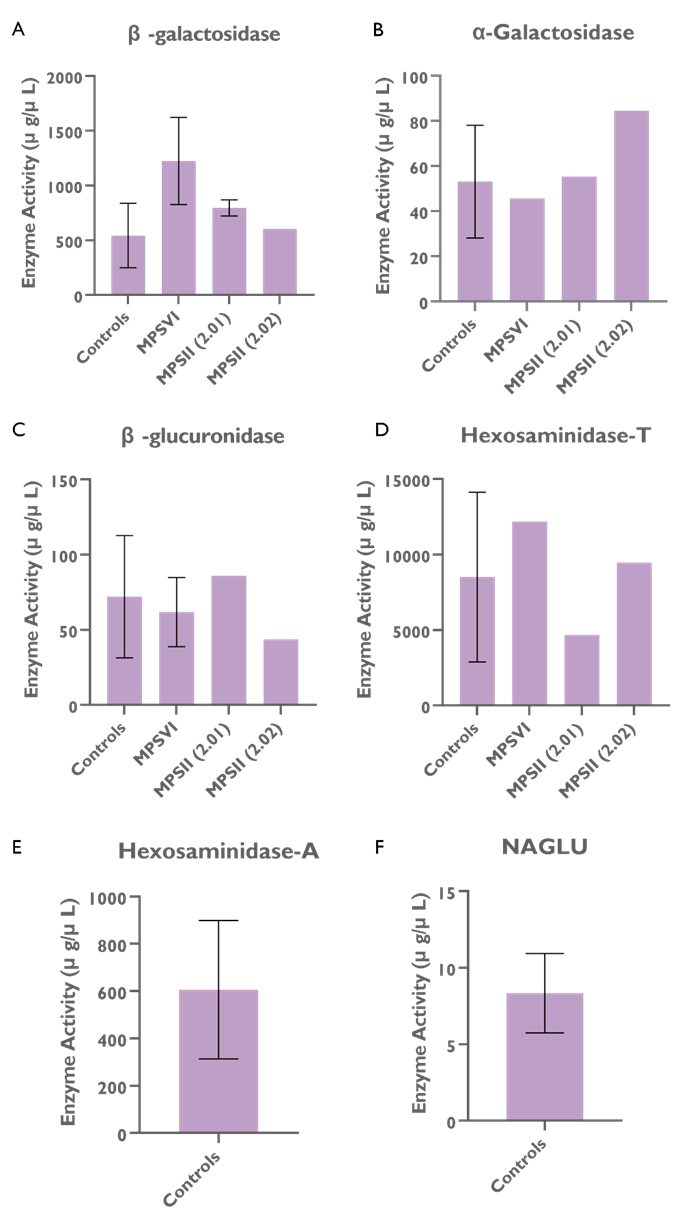
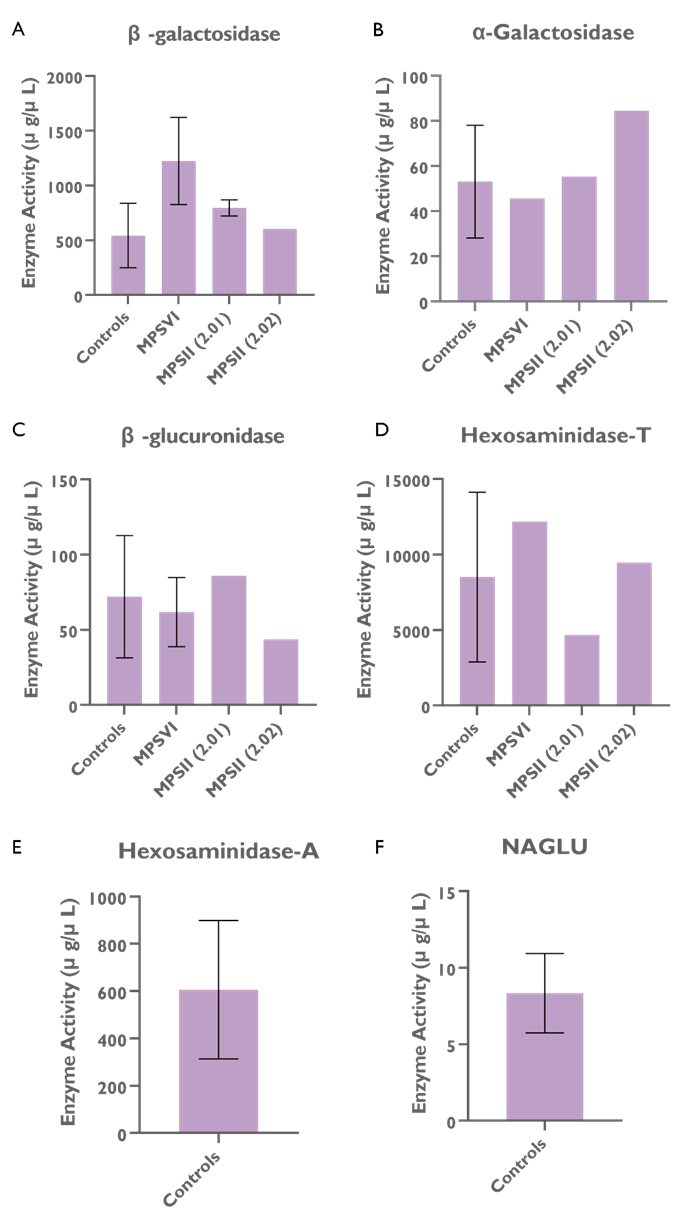
|  |  |  |  |
| --- | --- | --- | --- |
| **Marker** | **SHEDs  (2.01)** | **SHEDs (2.02)** | **iPSCs (INSAi002-A)** |
| CD45 | 5,42 | 4,95 | 7,26 |
| CD73 | 5,01 | 6,45 | 5,87 |
| CD90 | 3,96 | 3,69 | 1,73 |
| CD166 | 4,80 | 6,19 | -- |
| MHC I | 2,82 | 3,07 | -- |
| Sox-2 | 19,71 | 20,56 | 11,10 |
| Oct-3 | 12,92 | 12,60 | 8,02 |
| Nanog | 15,84 | 16,07 | 8,88 |
| CD117 | 11,49 | 12,46 | -- |
| CD34 | 15,65 | 18,49 | 12,93 |
| MHC II | 13,09 | 9,63 | 10,32 |

**Table S1:** Absolute ΔCt values obtained by qRT-PCR of several markers, including CD105, CD73, CD90 and CD166 (MSCs markers), Sox-2, OCT-3/4, and Nanog (pluripotency markers), CD117, CD34, MHC I and MHCII, in SHEDs from patients and controls, and also iPSCs derived from Fabry fibroblasts. Differences were calculated using GAPDH and β-actin as housekeeping genes.





**Figure S1**. Enzyme activity measurements for additional lysosomal enzymes not directly involved in MPS II pathology are not significantly different level between control and MPS SHEDs. (**a**) beta-galactosidase (GLB1, E.C. 3.2.1.23, the enzyme deficient in either GM1-gangliosidosis or MPS IVB); (b) alpha-galactosidase (GLA, E.C. 3.2.1.22, the enzyme deficient in Fabry Disease); (c) beta-glucuronidase (GUSB, E.C. 3.2.1.31, the enzyme deficient in MPS VII) and (d) total hexosaminidase [includes hexosaminidase A (HEXA, E.C. 3.2.1.52, the enzyme deficient in GM2-gangliosidosis)]. Values for a similar MPS VI cell line, which we have also established in house, are also included as controls.

**Figure S2**. Miniature versions of the flyers we have prepared to be distributed at the Portuguese hospitals/reference centres for LSD, drawing attention to our need for baby teeth. This call for volunteers was promoted under the designation “*A Fada dos Dentes 2020*” [Portuguese]/“The 2020s Tooth Fairy” [English]. Three different versions are available: in Portuguese, in Spanish and in French. For the Spanish and French versions, a slight adaptation was made to the project title to accommodate for cultural differences between the different target countries. Indeed, the folklore in those countries does not include a tooth fairy, as it does in Portugal or England, but a mouse: “*El Ratoncito Pérez*” [Spanish]/”*La Petite Souris*” [French]. Regardless of the language, all flyers included a brief summary of the project and its goals, major recommendations and frequently asked questions.

