**Supplementary information**

**Therapeutic potential of Dental pulp stem cell secretome for Alzheimer’s disease treatment: an in vitro study.**

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* **Supplementary Table 1. Donor information for used dental pulp derived mesenchymal stem cells.**
* **Supplementary Table 2. Donor information for used bone marrow-derived mesenchymal stem cells.**
* **Supplementary Table 3. Donor information for used Adipose-derived mesenchymal stem cells.**
* **Supplementary figure legends :**

**Fig. S1. DPSC secretome treatment preserves morphology and improves viability of SH-SY5Y cells exposed to Aβ1-42.** Full size pictures shown of SH-SY5Y cells exposed to Aβ1-42 only, Aβ1-42 and DPSC secretome or non-exposed as control.

**Fig. S2. DPSC secretome stimulates the endogenous survival factor Bcl-2 and decreases the apoptotic regulator Bax.** Full length scans of western blot membranes treated with an anti-Bax, anti-Bcl2 or anti-actin antibody.

**Fig. S3. DPSC secretome contains higher concentration of Neprilysin/CD10.** Full-length scans of western blot membranes treated with anti-NEP antibody.

**Fig. S4. DPSC secretome degrade Aβ1-42 protein in vitro.** Full-length scans of western blot membranes treated with an anti-Aβ antibody.

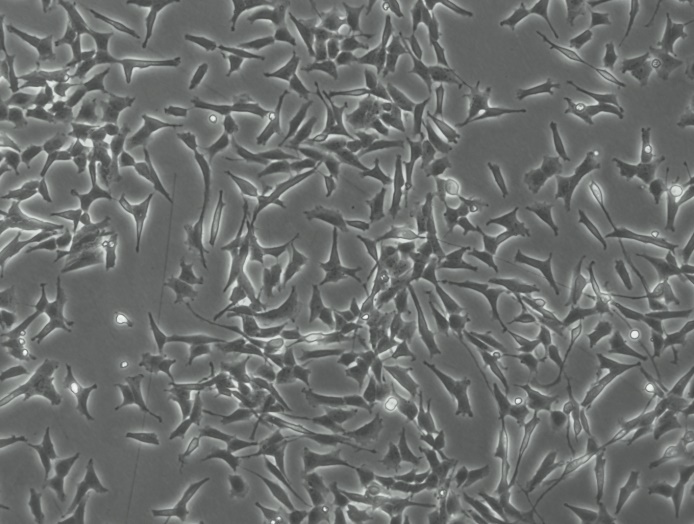
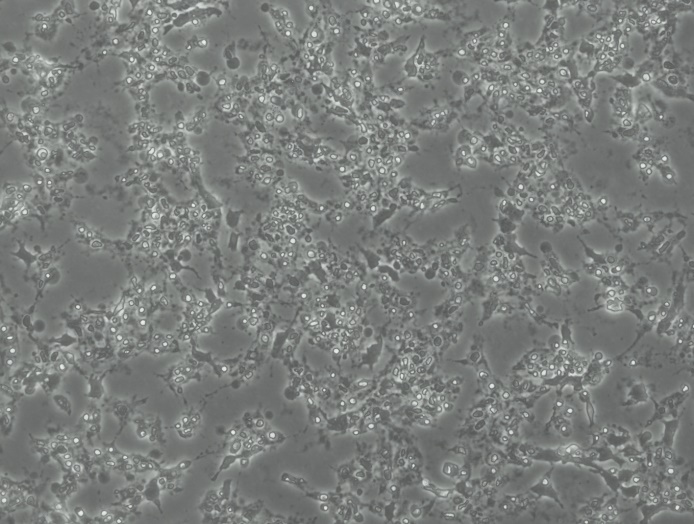
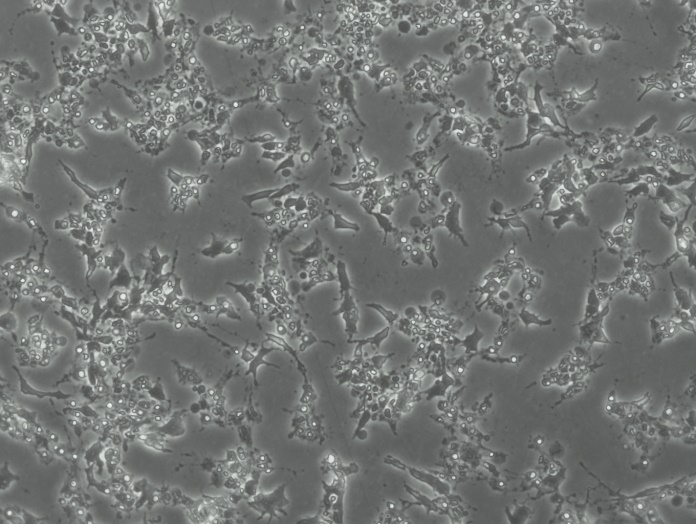
**Fig. S5. DPSC secretome has neuroprotective ability against Aβ1-42 induced neurotoxicity.** Full size pictures of representative photos demonstrating the morphology of SH-SY5Y cells in different treatment groups; undifferentiated, non-exposed differentiated, differentiated exposed to Aβ1-42 and DPSC secretome and differentiated exposed to Aβ1-42 only.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Table S1. Donor information for used dental pulp derived mesenchymal stem cells.** | | | | |
| **ID** | #1 | #2 | #3 | #4 |
| **Sex** | Female | Female | Female | Female |
| **Age** | 22 | 25 | 23 | 21 |
| **Tooth** | Upper right third molar | Upper left third molar | Lower left third molar | Lower right third molar |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Table S2. Donor information for used bone marrow-derived mesenchymal stem cells.** | | | | |
| **ID** | #1 | #2 |  |  |
| **Bank name** | Health science research resources | Lonza Walkersville, Inc |  |  |
| **Cell name** | UE6E7-16 | PT-2501 |  |  |
| **Sex** | Female | Female |  |  |
| **Age** | 91 | 21-22 |  |  |
| **Site** | Posterior iliac crest of the pelvic bone | Posterior iliac crest of the pelvic bone |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Table S3. Donor information for used adipose-derived mesenchymal stem cells.** | | | | | | |
| **ID** | #1 | |  |  | |  |
| **Bank name** | Lonza Walkersvillen, Inc |  | | |  | |  |
| **Cell name** | PT-5006 | |  |  | |  |
| **Site** | lipoaspirates | |  |  | |  |

**Fig. S1**



**Aβ only**

**Aβ and DPSC secretome**

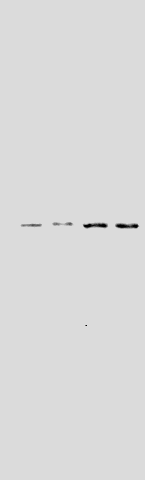
**Non-exposed (control)**

**200µm**

**200µm**

**200µm**

**Fig. S2**



MW(kDa)

25 -

20 -

37 -

50 -

75 -

100 -

150 -

250 -

15 -

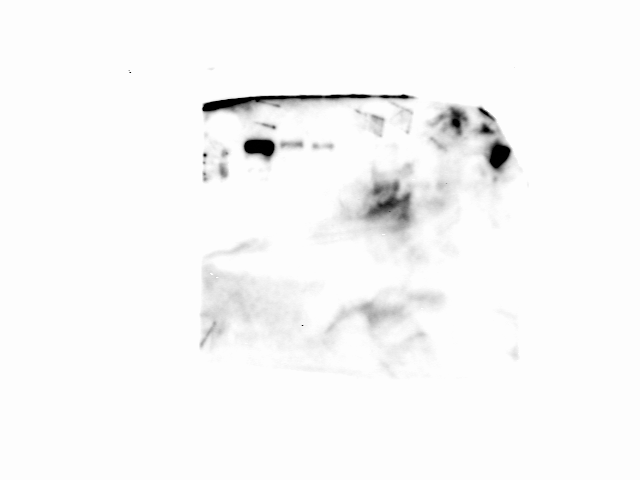
10 -

**Bcl-2**

**Bax**

**β-actin**

**Fig. S3**



**100 -**

**MW(kDa)**

**Neprilysin/CD10**

**Fig. S4**

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**MW(kDa)**

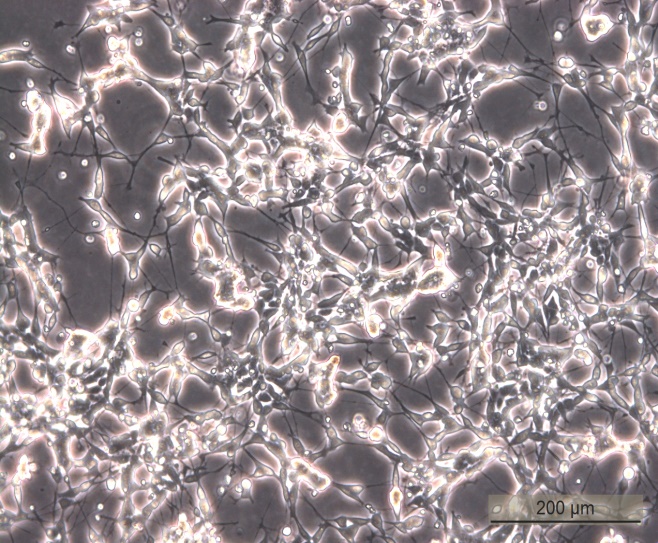
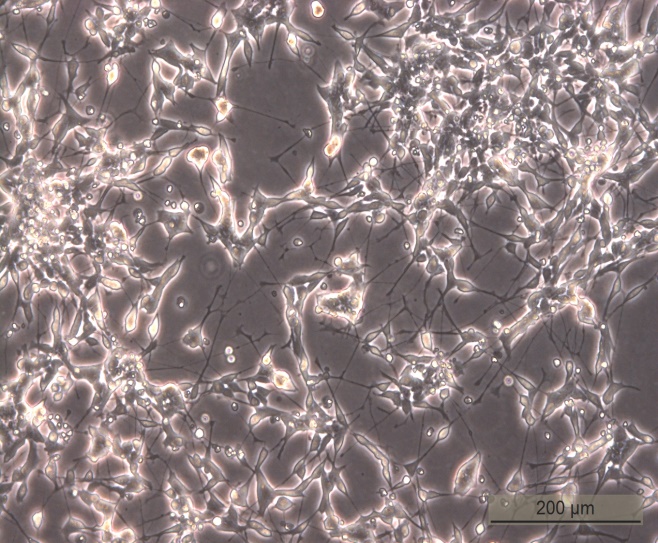
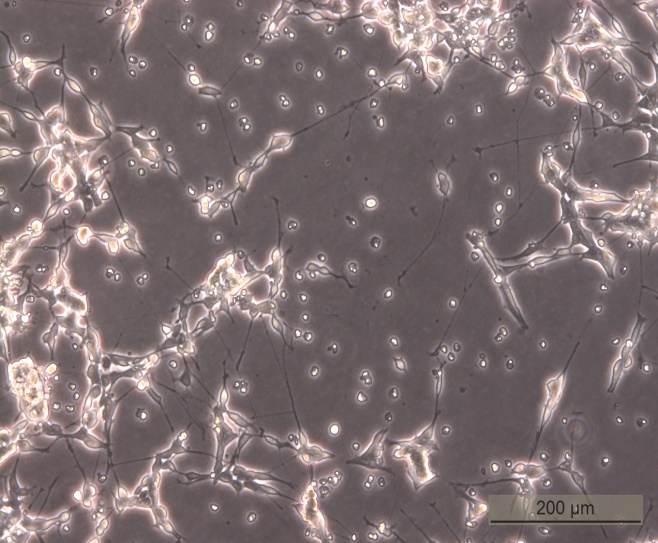
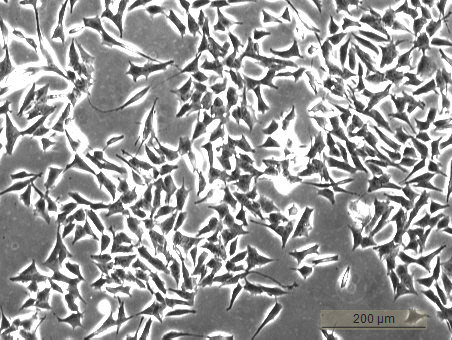
**10 kDa -**

**Fig. S5**

**Undifferentiated cells (-ve control)**

**Differentiated (Aβ+DPSC secretome)**

**Differentiated cells**



**Differentiated (Aβ only)**