

## Supplementary Information (SI)

Figure S1. FT-IR spectra of (A) **Ben-IKVAV** and (B) **PFB-IKVAV** at a concentration of 5000  $\mu\text{M}$  in water.

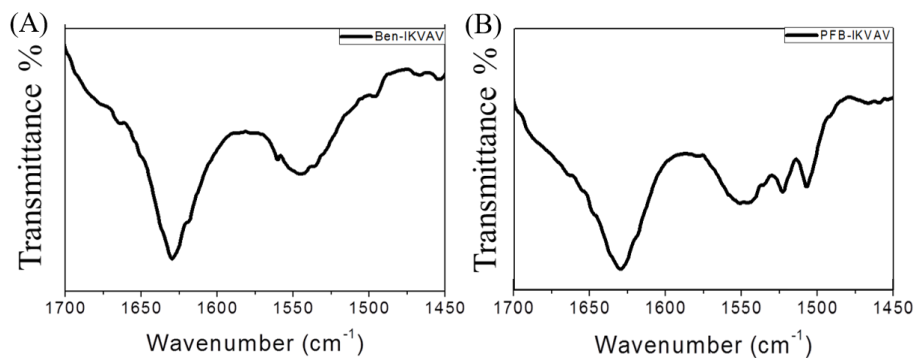


Figure S2. The optical microscope images of cell morphology of hMSCs cultured with basal medium (control), basal medium in the presence of **Ben-IKVAV**, and basal medium in the presence of **PFB-IKVAV** for 2 days and 7 days. (Scale bar: 50  $\mu\text{m}$ )

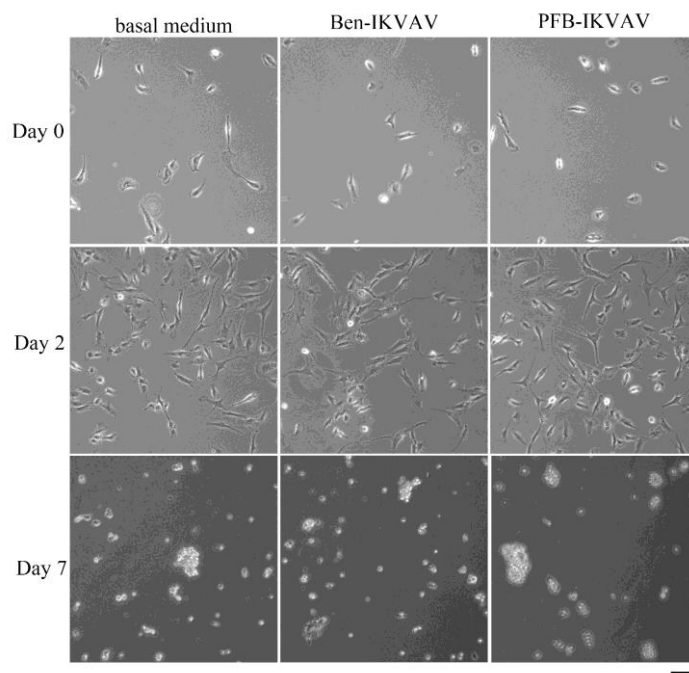


Figure S3.  $^1\text{H}$  NMR spectrum of **Ben-IKVAV** in  $\text{DMSO-}d_6$ .

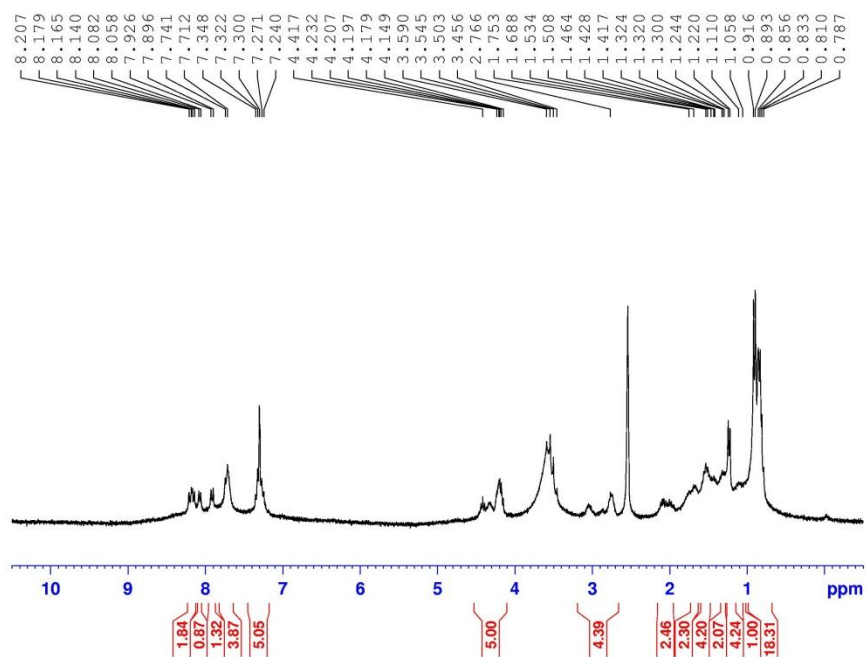


Figure S4. <sup>1</sup>H NMR spectrum of **PFB-IKVAV** in DMSO-*d*<sub>6</sub>.

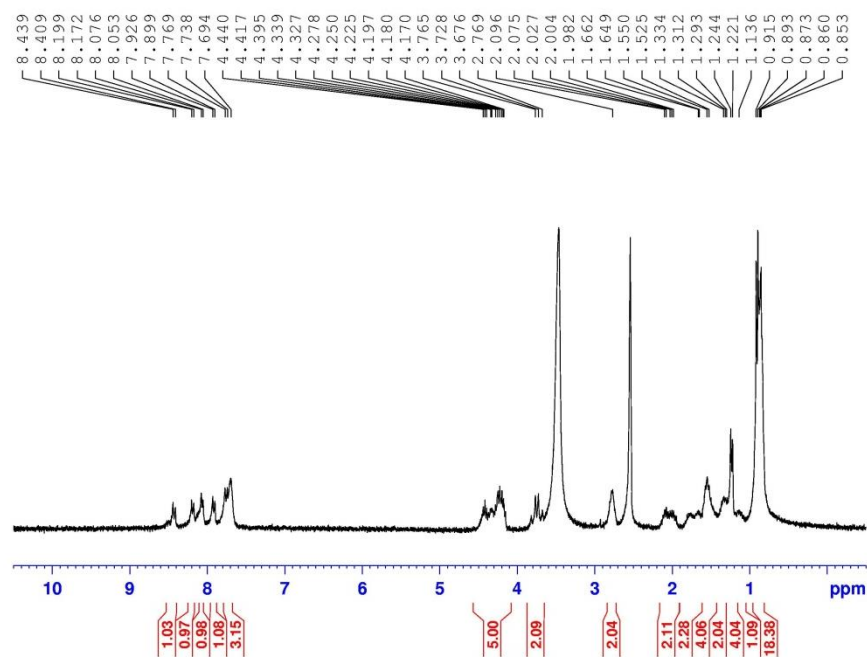


Figure S5. <sup>13</sup>C NMR spectrum of **Ben-IKVAV** in DMSO-*d*<sub>6</sub>.

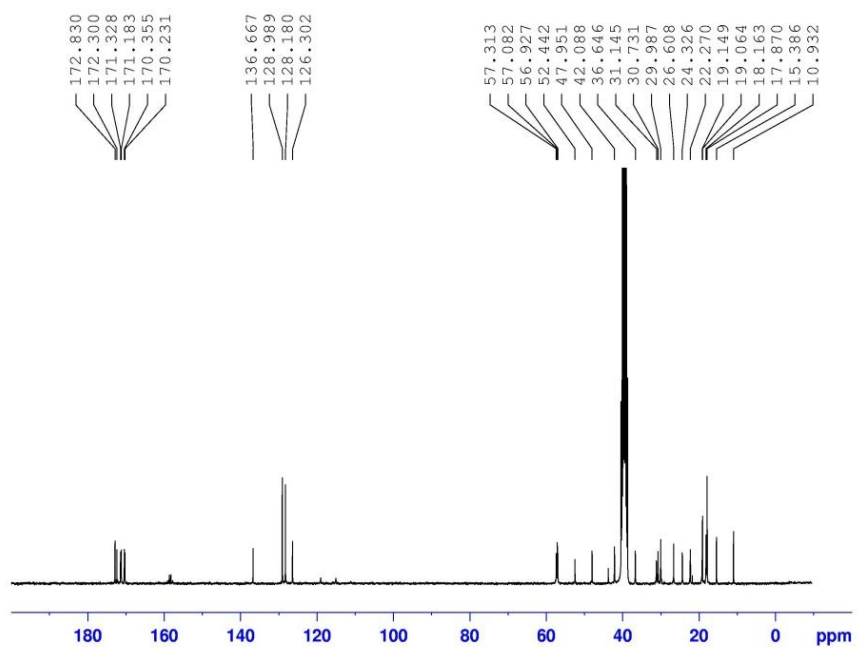


Figure S6. <sup>13</sup>C NMR spectrum of **PFB-IKVAV** in DMSO-*d*<sub>6</sub>.

