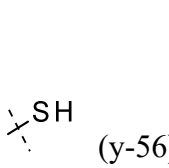
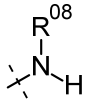
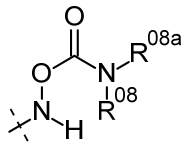
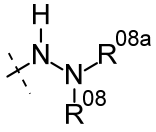
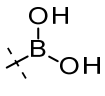
4. The method of any one of items 1 to 3, wherein the polymerization occurs via suspension polymerization.

5. The method of any one of items 1 to 4, wherein the method comprises the steps of:
   (a) mixing a solution A with a solution B to form an emulsion, wherein solution A comprises a first functionalized HA that is modified with one or more -FG_1 and a second functionalized HA that is modified with one or more -FG_2, wherein -FG_1 and -FG_2 are functional group moieties that are different from each other and wherein -FG_1 on the first functionalized HA reacts with -FG_2 on the second functionalized HA to form a plurality of crosslinks which results in the formation of hydrogel HA microspheres;
   (b) optionally, adding a pH-adjusting agent to the emulsion of step (a);
   (c) collecting the obtained hydrogel HA microspheres of step (b);
   (d) optionally, size fractionating the obtained hydrogel HA microspheres of step (c) to obtain microspheres with a particular particle size distribution;
   (e) optionally, washing the microspheres obtained in step (c) or (d);
   (f) optionally, incubating the hydrogel HA microspheres of step (c), (d) or (e) in a buffering agent of a pH ranging from about 8 to about 12;
   (g) optionally, incubating the hydrogel HA microspheres of step (c), (d), (e) or (f) with a reducing agent;
   (h) optionally, washing the microspheres obtained in step (f) or (g); and
   (i) optionally, collecting the hydrogel HA microspheres of step (d), (e), (f), (g) or (h).

6. The method of any one of items 1 to 5, wherein -FG_1 is independently selected from the group consisting of:


(y-56),

(y-1),

(y-6),

(y-39),

(y-44) and

(y-49);