Quadir group is involved in discovering new routes to sustainable nanotechnology for biomedical applications. The part of our REU project involves integration of ideas for colloid chemistry, supramolecular chemistry, and biology. By inspiring innovative thinking, we will encourage students to participate in laboratory-based projects in colloid and surface science and learn how to apply these ideas in solving biological problems. Using polyols of sucrose soyate (1), we have established a green and sustainable route to fabricate nanoparticles, termed as or ‘soysomes’. The REU student in our lab will be involved four specific activities: (a) identifying the phase behavior of soysomes (b) evaluating encapsulation of drug molecules inside soysomes, and (c) observing assembly and packing behavior of the soysomes under microscope, and (d) understanding how mammalian cells interact with soysomes.