# Stabilization of Histidine-tagged Green Fluorescent Proteins in Organic Environment Using Nitrilotriacetic acid-End-Functionalized Poly[(poly ethylene glycol) ethyl ether methacrylate]

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Non-covalent bioconjugation method was used to stabilize histidine-tagged green fluorescent protein ($His_6$-GFP). Well-defined nitrilotriacetic acid (NTA) end-functionalized Poly[poly ethylene glycol) ethyl ether methacrylate] was prepared using the initiator containing *tert*-butyl protected NTA moiety by atom transfer radical polymerization (ATRP). Well-defined NTA-p(PEGMA) was characterized using $^1H$ NMR and GPC. Using end-functionalized polymers, stabilization of $His_6$-GFP was attempted by forming micellar aggregates in solution. D-values for the stabilization of $His_6$-GFP were determined using photoluminescent spectroscopy. Micellar aggregates were analyzed using transmission electron microscopy (TEM) and dynamic light scattering (DLS).