





*	M _n (kDa)	M _w (kDa)	PDI	dn/dc (mL/g)
Method I	15.3	20.5	1.33	N/A
Method II	16.3	19.2	1.18	0.114
Method III	23.9	N/A	N/A	N/A

*Method I: M_n and M_w are calibrated by polystyrene standards (500 kDa, 200 kDa, 100 kDa, 30 kDa, 10 kDa, and 5 kDa)

Method II: M_w is calculated by the measurement of dn/dc value of PaKG sample Method III: M_n based on calculation of degree of polymerization from ¹H NMR

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2 Figure S2: Molecular weight determination of the paKG polymer. Method I - Mn and

- 3 Mw are calculated using a calibration curve generated from polystyrene standards 500 KDa,
- 4 200KDa, 100 KDa, 30 KDa, 10 KDa and 5 kDa, obtained from Agilent). Method II: Mw is
- 5 calculated by determining the refractive index increment (dn/dc) using the refractive index
- 6 detector and the assumption of 100% recovery, then using the light scattering detector
- 7 response to determine an absolute molecular weight. **Method III:** Mn based on calculation of
- 8 degree of polymerization using integrations from the ¹H NMR spectrum.



Figure S3: Glutamate and Arginine pathways are significantly upregulated in DCs treated
with paKG MPs as compared to no treatment (n=3, avg ± SEM, * - p<0.05).





3 Figure S4: Representative images of analyses of DCs using flow cytometry analyses.



- 8 Figure S5: paKG microparticles do not modulate frequency of CD4 population in
- **allogenic MLR** (ns = not significant; n=6, avg ± SEM).



Figure S6: Supernatant of aKG particles was visualized under scanning electron microscope

3 at increasing magnification at multiple spots (representative images shown) to confirm that

4 no particles were left in the supernatant (n = 2).