

Platelet and growth factor concentrations in activated platelet-rich plasma: a comparison of seven commercial separation systems.

In 2014 an independent study looked at 7 different PRP systems and compared platelet concentrations, RBC concentrations, and WBC concentrations. The authors then measured GF concentrations after activation to see if the signal would be high enough to stimulate a cellular response. Two of these seven were gel-barrier systems. You can see based upon GF concentrations that MyCells (precursor to Tropocells®) produced a GF spike similar to the LR-PRP systems whereas Selphyl (the precursor to Cascade) did not. MyCells is so efficient that it can achieve the same concentration of GFs as those using 6x the amount of whole blood.

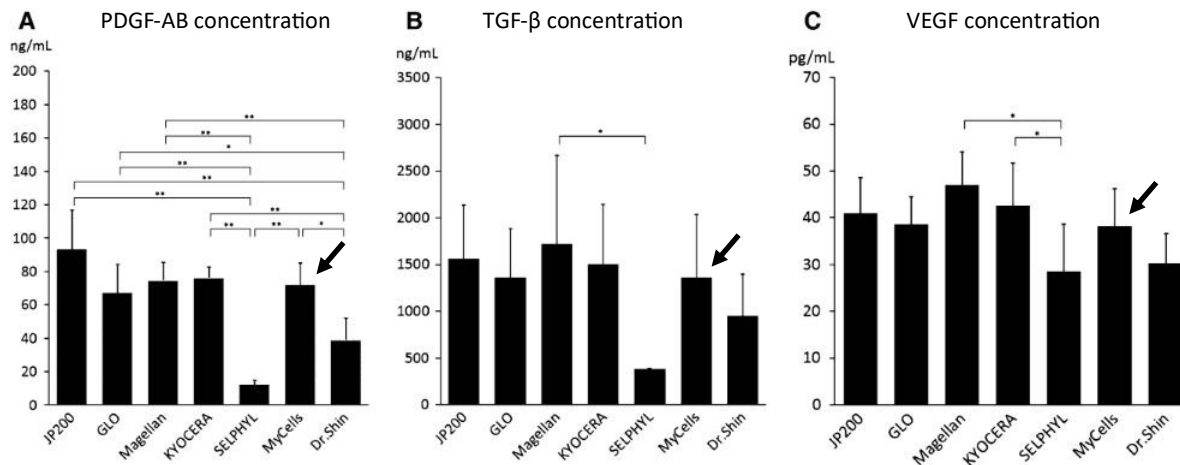


Fig. 2 **a** The platelet-derived growth factor-AB concentrations, **b** the transforming growth factor beta-1 concentrations, **c** the vascular endothelial growth factor concentrations of activated PRP with JP200, GLO PRP, Magellan Autologous Platelet Separator System,

KYOCERA Medical PRP Kit, SELPHYL, MyCells, and Dr. Shin's System THROMBO KIT. Data are presented as mean \pm SD (** $p < 0.01$; * $p < 0.05$)

Reference:

Platelet and growth factor concentrations in activated platelet-rich plasma: a comparison of seven commercial separation systems. Satoshi Kushida, Natsuko Kakudo, Naoki Morimoto, Tomoya Hara, Takeshi Ogawa, Toshihito Mitsui, Kenji Kusumoto. J Artif Organs. 2014 Jun; 17(2): 186–192. Published online 2014 Apr 20. doi: 10.1007/s10047-014-0761-5

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As expected, the gel-barrier systems were both effective at removing RBCs from PRP, but a large difference between them was that MyCells (the precursor to Tropocells®) had a much higher platelet concentration and WBC concentration than Selphyl (the precursor to Cascade). Clinically, MyCells won't have the RBCs to inhibit the healing response!

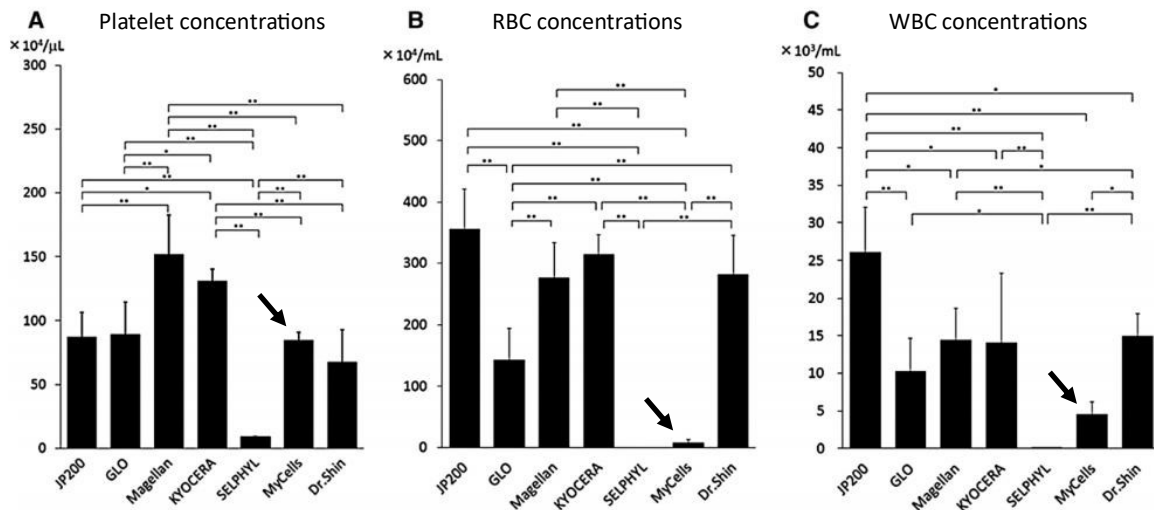


Fig. 1 a Platelet concentrations, b red blood cell concentrations, c white blood cell concentrations of PRP with JP200, GLO PRP, Magellan Autologous Platelet Separator System, KYOCERA Medical

PRP Kit, SELPHYL, MyCells, and Dr. Shin's System THROMBO KIT. Data are presented as mean ± SD (** $p < 0.01$; * $p < 0.05$)

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