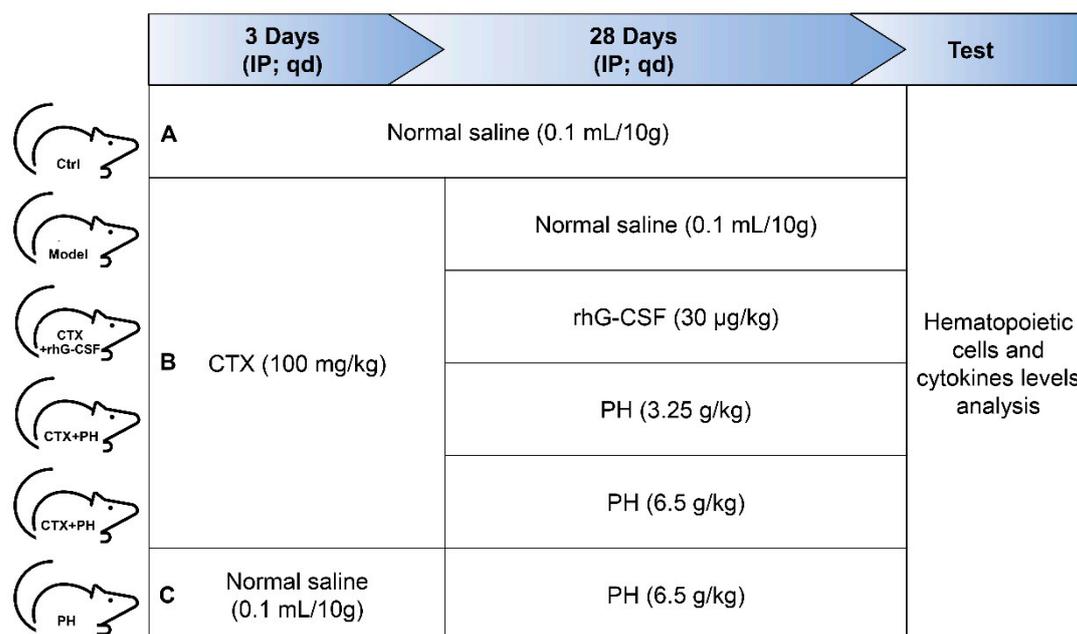


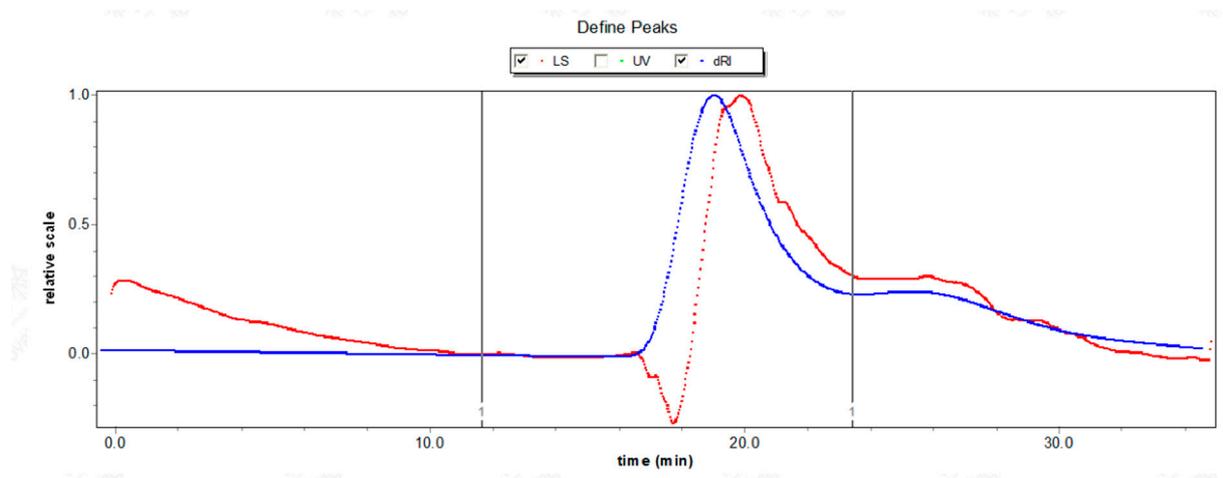
Article

# The Involvement of Macrophage Colony Stimulating Factor on Protein Hydrolysate Injection Mediated Hematopoietic Function Improvement

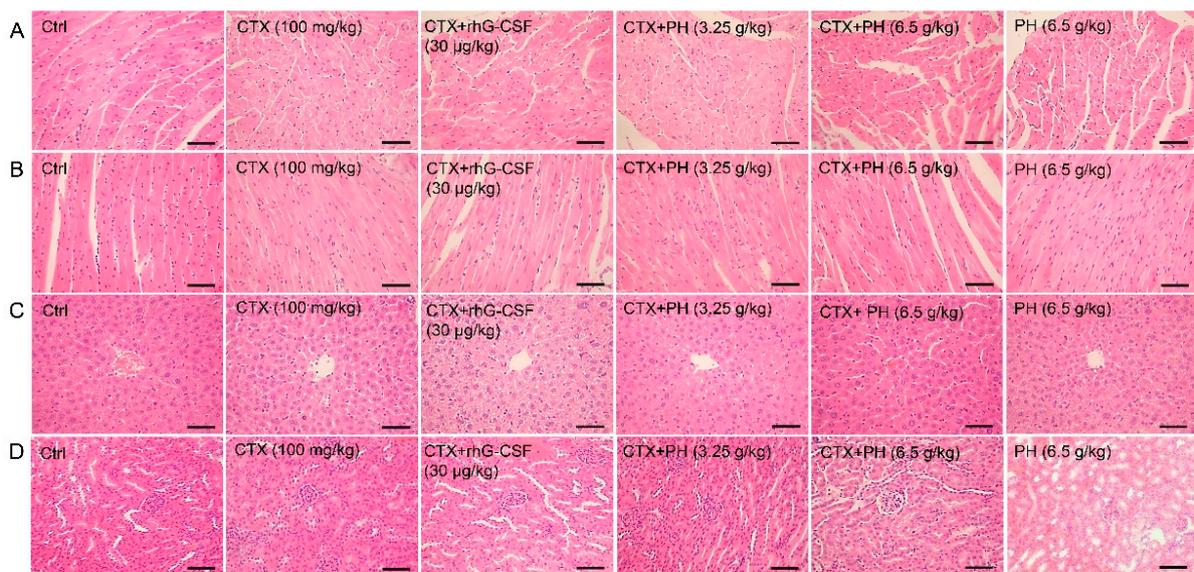
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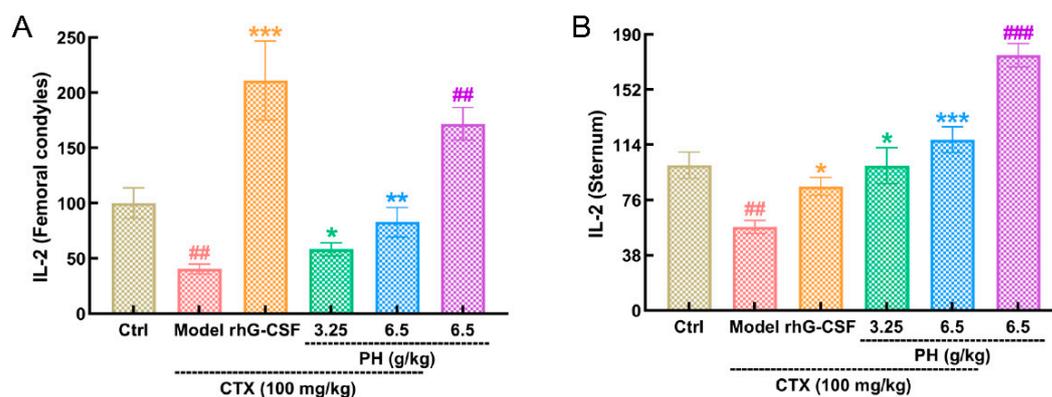
**Supplementary Figure S1** The animal experimental schemes flow charts. CTX, cyclophosphamide; Ctrl, control; Model, hematopoietic dysfunction model; NS, normal saline; rhG-CSF, recombinant human granulocyte colony-stimulating factor; PH, protein hydrolysate injection.



**Supplementary Figure S2** Define peaks of PH.



**Supplementary Figure S3** H&E staining was used to evaluate pathological alterations of (A) heart (cross section), (B) heart (longitudinal section), (C) liver and (D) kidney under a light-microscope digital camera (200 ×; scale bar, 100 µm) (n = 3 mice/group in triplicate). CTX, cyclophosphamide; Ctrl, control; Model, hematopoietic dysfunction model; rhG-CSF, recombinant human granulocyte colony-stimulating factor; PH, Protein hydrolysate injection.



**Supplementary Figure S4** Quantitative graph of the expression of IL-2 in the femoral condyle and sternum of mice with hematopoietic dysfunction. Histopathological observations of sternum and femoral condyles of mice with hematopoietic dysfunction. PH enhanced the expression levels of IL-2 in (A) femoral condyle and (B) sternum detected by immunohistochemical staining. Data are showed as the mean ± SD (n = 3 mice/group in triplicate) and determined via a one-way ANOVA test followed by a Tukey's post hoc test comparison. ##*p* < 0.01 and ###*p* < 0.001 vs. control group, \**p* < 0.05, \*\**p* < 0.01 and \*\*\**p* < 0.001 vs. model group. CTX, cyclophosphamide; Ctrl, control; Model, hematopoietic dysfunction model; rhG-CSF, recombinant human granulocyte colony-stimulating factor; PH, Protein hydrolysate injection; IL-2, interleukin 2.

**Supplementary Table 1** The effects of PH and rhG-CSF on body weight and organ indexes of CTX induced hematopoietic dysfunction mice.

Data are showed as the means  $\pm$  S.D. (n=15 mice/group). CTX, cyclophosphamide; Ctrl, control; Model, hematopoietic dysfunction model; rhG-CSF, recombinant human granulocyte colony-stimulating factor; PH, Protein hydrolysate injection.  $^{*}p < 0.01$  and  $^{***}p < 0.001$  vs. Ctrl group,  $^{*}p < 0.05$ ,  $^{**}p < 0.01$  and  $^{***}p < 0.001$  vs. Model group. CTX,

		CTX (100 mg/kg)					PH
		Ctrl	Model	rhG-CSF (30 $\mu$ g/kg)	PH (3.25 g/kg)	PH (6.5 g/kg)	PH (6.5 g/kg)
Body weight (g)	1 <sup>st</sup> day	22.9 $\pm$ 2.1	23.5 $\pm$ 2.1	23.5 $\pm$ 1.0	23.5 $\pm$ 1.4	23.7 $\pm$ 0.9	23.3 $\pm$ 0.9
	4 <sup>th</sup> day	24.3 $\pm$ 2.4	22.2 $\pm$ 1.5 <sup>##</sup>	23 $\pm$ 1.3	22.3 $\pm$ 1.4	22.5 $\pm$ 1.1	24.6 $\pm$ 0.9
	11 <sup>th</sup> day	25.7 $\pm$ 1.7	22.7 $\pm$ 1.6 <sup>###</sup>	21.5 $\pm$ 2.0	23.3 $\pm$ 1.6	23.4 $\pm$ 1.2	26.2 $\pm$ 1.0
	18 <sup>th</sup> day	26.0 $\pm$ 2.3	23.4 $\pm$ 1.6 <sup>##</sup>	24.5 $\pm$ 1.0	24.4 $\pm$ 1.4	24.5 $\pm$ 1.2	27.4 $\pm$ 1.0
	25 <sup>th</sup> day	26.8 $\pm$ 2.7	21.6 $\pm$ 1.7 <sup>###</sup>	23.7 $\pm$ 1.4 <sup>**</sup>	22.7 $\pm$ 1.3	23.3 $\pm$ 1.6 <sup>*</sup>	27.9 $\pm$ 1.2
	32 <sup>nd</sup> day	27.4 $\pm$ 1.9	20.7 $\pm$ 2.7 <sup>###</sup>	23.1 $\pm$ 1.4 <sup>**</sup>	23.6 $\pm$ 1.5 <sup>**</sup>	23.0 $\pm$ 1.4 <sup>**</sup>	28.5 $\pm$ 1.4
Organ index (%)	Liver index	48.9 $\pm$ 3.2	49.7 $\pm$ 3.0	52.0 $\pm$ 3.5	51.7 $\pm$ 2.9	51.9 $\pm$ 3.9	48.6 $\pm$ 3.8
	Kidney index	14.5 $\pm$ 0.9	13.6 $\pm$ 1.2	13.5 $\pm$ 0.7	12.0 $\pm$ 1.6	13.9 $\pm$ 1.6	14.0 $\pm$ 0.8
	Spleen index	3.5 $\pm$ 0.4	13.4 $\pm$ 0.8 <sup>###</sup>	12.2 $\pm$ 1.2	9.8 $\pm$ 1.5 <sup>***</sup>	10.1 $\pm$ 1.0 <sup>***</sup>	3.3 $\pm$ 0.2
	Thymus index	1.6 $\pm$ 0.2	0.5 $\pm$ 0.3 <sup>###</sup>	1.0 $\pm$ 0.5 <sup>**</sup>	0.8 $\pm$ 0.4 <sup>*</sup>	0.6 $\pm$ 0.3	1.4 $\pm$ 0.2

cyclophosphamide; Ctrl, control; Model, hematopoietic dysfunction model; rhG-CSF, recombinant human granulocyte colony-stimulating factor; PH, Protein hydrolysate injection.