

Supplemental Material

Christian A. Fernandez,¹ Colton Smith,¹ Seth E. Karol,^{1,2} Laura B. Ramsey,¹ Chengcheng Liu,¹ Ching-Hon Pui,² Sima Jeha,² William E. Evans,¹ Fred D. Finkelman,³ and Mary V. Relling¹

¹Department of Pharmaceutical Sciences, St. Jude Children's Research Hospital, 262 Danny Thomas Place, Memphis, TN 38105, USA; ²Department of Oncology, St. Jude Children's Research Hospital, 262 Danny Thomas Place, Memphis, TN 38105, USA; ³Department of Medicine, Cincinnati Veterans Affairs Medical Center; the Department of Internal Medicine, Division of Immunology, Allergy and Rheumatology, University of Cincinnati College of Medicine; and the Division of Immunobiology, Cincinnati Children's Hospital Medical Center, Cincinnati, OH 45267, USA.

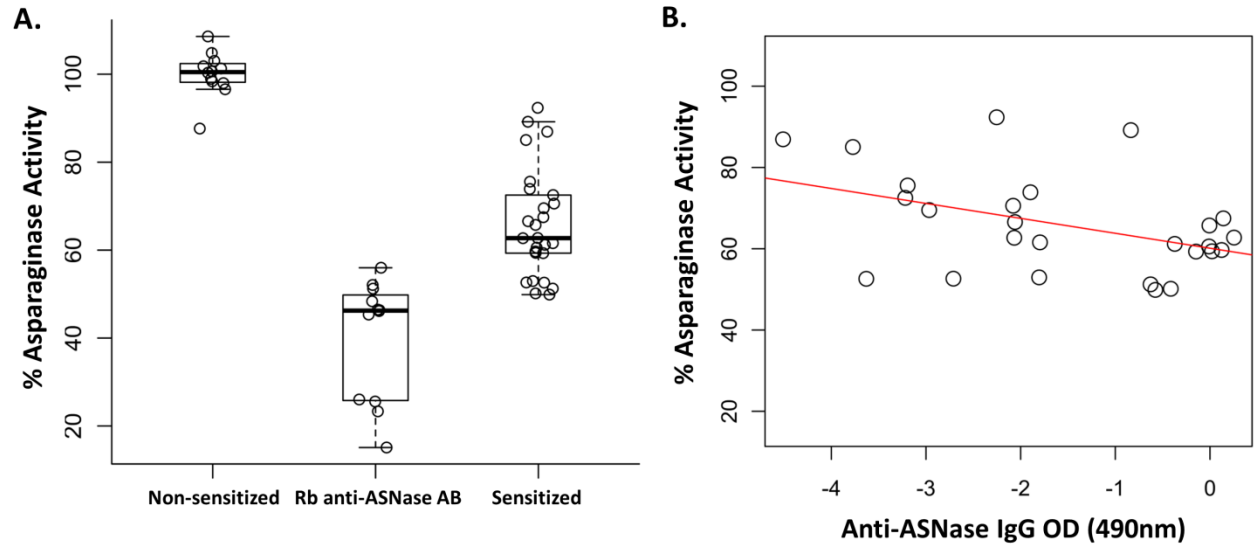
Number of supplemental figures: 2

Supplemental Figure Legends

Supplemental Figure 1. Anti-asparaginase IgG antibodies neutralize *ex vivo* asparaginase activity. Asparaginase was added to samples from non-sensitized mice, sensitized mice, or to samples from non-sensitized mice with added rabbit anti-asparaginase IgG antibodies (5 $\mu\text{g}/\mu\text{L}$) and tested for residual asparaginase activity. (A) Compared to non-sensitized mice, samples from sensitized mice neutralized > 30% of the *ex vivo* asparaginase activity. (B) The magnitude of asparaginase activity inhibition was correlated with antibody levels ($R^2 = 0.161$, $P = 0.04$), suggesting that enzyme activity neutralization is partly dependent on the antibody levels.

Supplemental Figure 2. Pretreatment with antihistamine, CV-6209, or dexamethasone has no influence on asparaginase activity in non-sensitized mice. Non-sensitized mice received no pretreatment or pretreatment with antihistamine (triprolidine and cimetidine), CV-6209, or dexamethasone. The pretreatment had no influence on the asparaginase activity measured *in vivo* ($P > 0.05$ for all).

Supplemental Figure 1.



Supplemental Figure 2.

