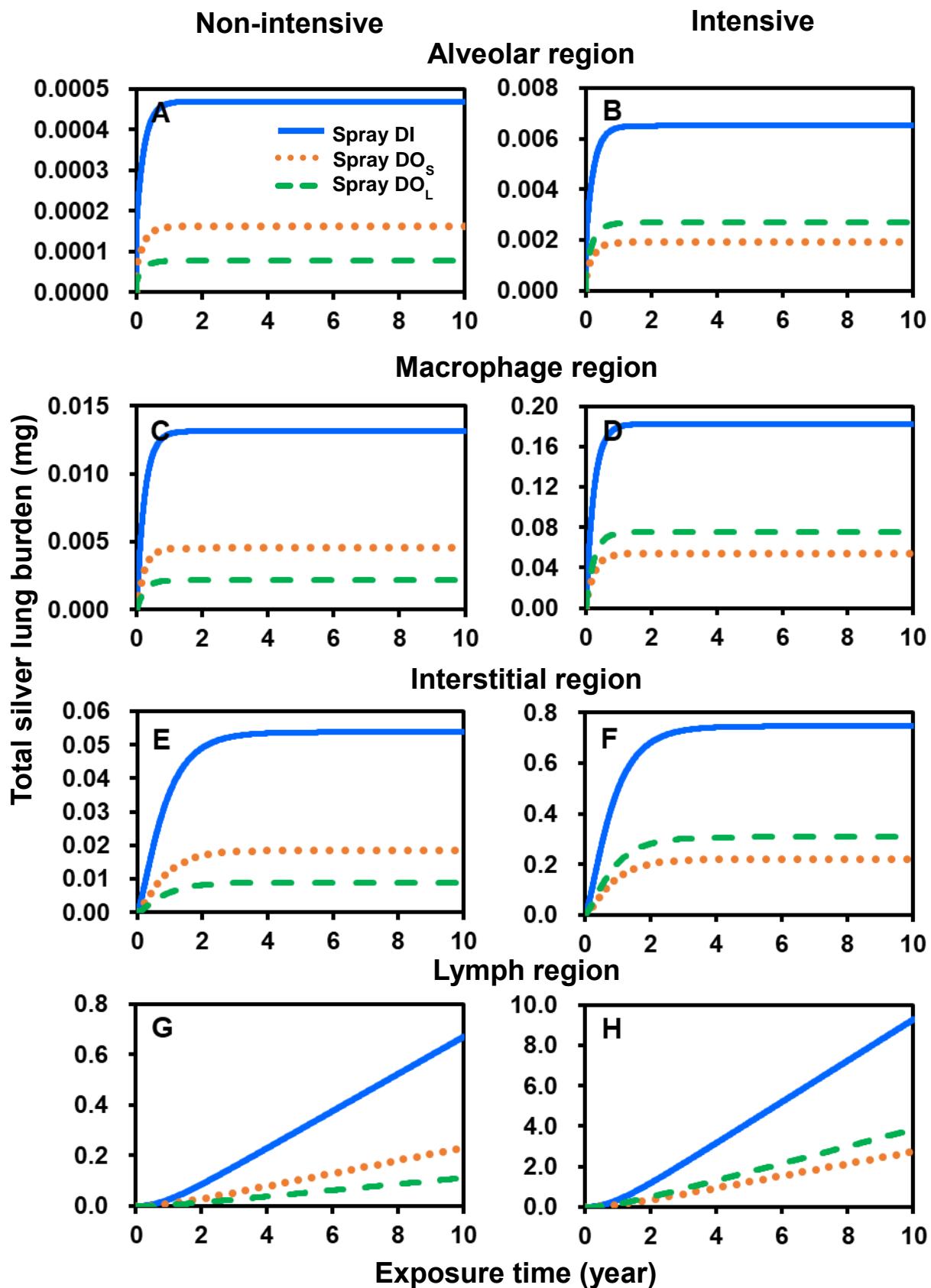
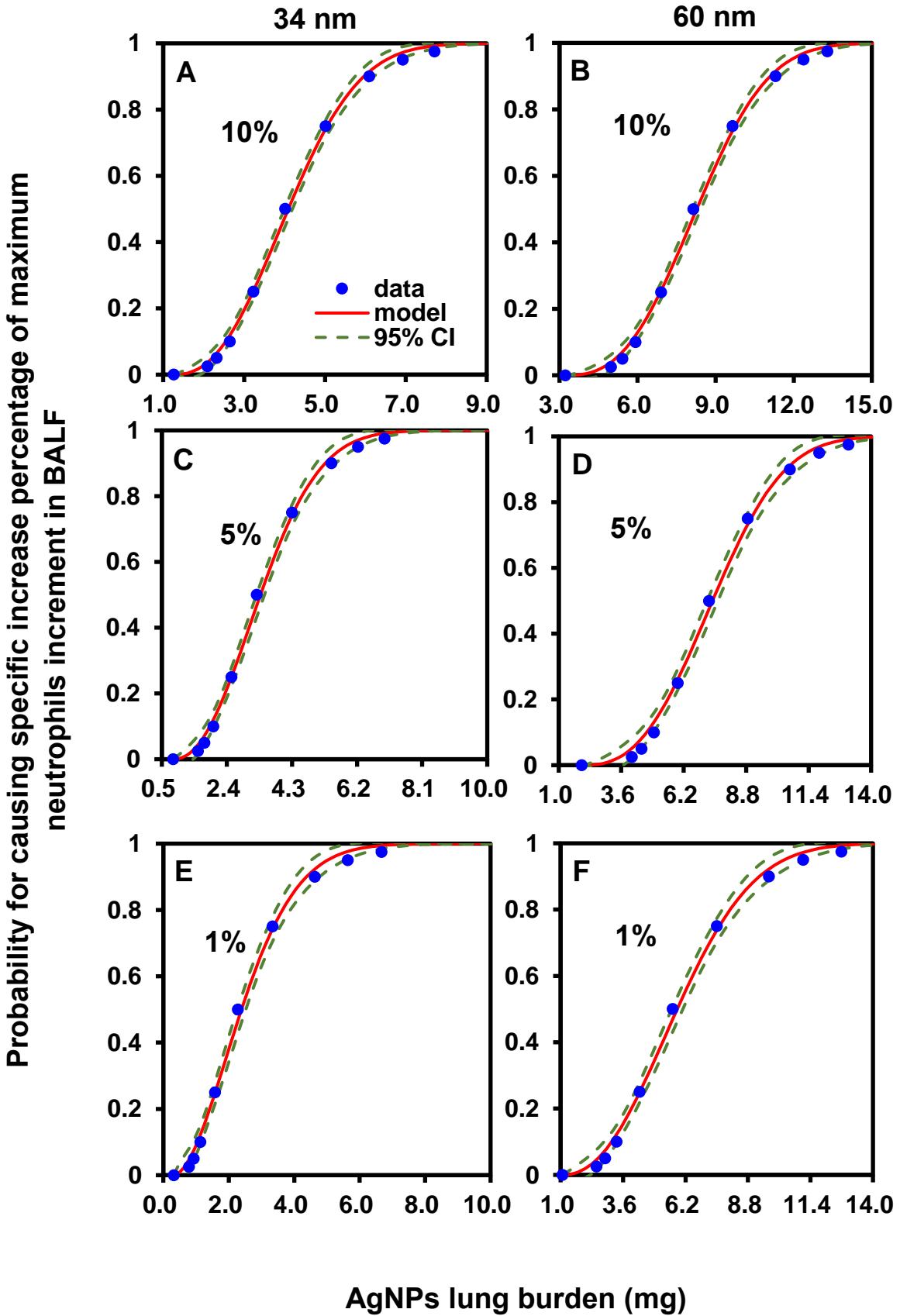


**Fig. S1.** Estimated size distributions (in the unit of size-dependent number concentration) of droplets in spray (A) DI, (B) DO<sub>S</sub>, and (C) DO<sub>L</sub>.



**Fig. S2.** Time-dependent silver depositions in regions of (A, B) alveolar, (C, D) macrophage, (E, F) interstitial, and (G, H) lymph nodes when exposed to three kinds of AgNPs-containing spray products in non-intensive or intensive application.



**Fig. S3.** Best fit of the Weibull threshold model to the cumulative distribution functions of 10, 5, and 1% maximum neutrophils increment in BALF of male Fischer rats posed by various concentrations of (A, C, E) 34 nm and (B, D, F) 60 nm AgNPs.