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Studies of Gulf War Veterans' Illnesses:

Title:	Tissue Factor and Gulf War-Associated Chronic Coagulopathies
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Title:	Gulf War-Associated Chronic Coagulopathies: Tissue Factor, Coagulation, & Immune System Activation
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In normal homeostasis the cell signaling, coagulation, and complement pathways are triggered by injury or infection. Cross-talk between these defense mechanisms drives the inflammatory process. The innate immune response to acute events is essential for human life. However, when chronically activated it may be a major contributing factor to degenerative diseases.

The long-term objectives of these projects are evidence-based protocols for diagnosing and treating Gulf War illness (GWI). The working hypothesis for this research is that chronic activations of homeostatic mechanisms drive the pathophysiology of GWI.

In the pilot study, funded by two consecutive VA research awards, biomarker abnormalities were observed in Gulf War Veterans with multiple symptoms. The biomarkers identified by this analysis are immune response mediators. Thus, chronic inflammation has been identified as a potential target for intervention.

The ongoing DoD-sponsored study is an effort to repeat and extend the pilot study observations.

The distinguishing feature of our work is evidence that chronic inflammation may be an underlying pathophysiologic process in GWI.