HOLTORF MEDICAL GROUP, INC.
CENTER FOR HORMONE IMBALANCE, HYPOTHYROIDISM AND FATIGUE
23456 Hawthorne Blvd. Suite160, Torrance, CA 90505 Tel: 310-375-2705 Fax: 310-375-2701

Ribonuclease-L (RNase-L) is one of the key proteins induced in response to a viral infection. Once activated, the RNase-L destroys viral RNA (stopping the infectious process) and at the same time triggers the removal of the infected cell by inducing programmed cell death (apoptosis). Normally this enzyme is "turned off" after the infection has resolved, but with continual stimulation from chronic infections, there can be an induction of an abnormal RNase-L that no longer appropriately "turns off", resulting in destruction the body's own RNA.

Normal RNase-L protein has a molecular weight (MW) of 80 kDa and is activated by binding a small effector molecule known as 2-5A. In the immune cells of chronic fatigue syndrome patients, RNase-L is cleaved by the action of human leukocyte elastase. Once cleaved, the lower molecular weight (LMW) species of RNase-L lack the regulatory functions to control them, and as a result, the cellular RNA is cleaved at an abnormally accelerated rate, hindering cellular function and accounting for many of the typical symptoms of chronic fatigue syndrome. This abnormal RNase-L can be tested at Redlabs USA (no affiliation).