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of SP. SP induced changes in MIF, cyclooxygenase-2, nerve growth factor, c-fos and edema were decreased by intraluminal anti-MIF.

SP increased MIF amounts in the bladder lumen. Sequestering luminal MIF with an antiMIF antibody decreased SP induced inflammatory changes in the bladder and prostate, suggesting that MIF is involved in acute pelvic visceral neurogenic inflammation. These data indicate that MIF released from the bladder sustains or amplifies SP induced inflammation, a possibility that agrees with known MIF proinflammatory functions. These data continue to support our hypothesis that MIF is a new target for intervention in pelvic viscera inflammation. These results are discussed in further detail in Meyer-Siegler et al. (*Journal of Urology* 172:1507-1509, 2005), which has been incorporated herein by reference.

Although certain presently preferred embodiments of the invention have been specifically described herein, it will be apparent to those skilled in the art to which the invention pertains that variations and modifications of the various embodiments shown and described herein may be made without departing from the spirit and scope of the invention. Accordingly, it is intended that the invention be limited only to the extent required by the appended claims and the applicable rules of law.

What is claimed is:

1. A method for detecting or diagnosing interstitial cystitis in an individual comprising:
 - determining levels of macrophage migration inhibitory factor (MIF) in a urine sample from the individual and in a bladder sample from the individual by immunoassay;
 - comparing the level of MIF in the urine sample from the individual with a level of MIF in a control urine sample

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and comparing the level of MIF in the bladder sample from the individual with a level of MIF in a control bladder sample; and

detecting or diagnosing interstitial cystitis in the individual if an increase of MIF level in the urine sample from the individual and a decrease of MIF level in the bladder sample from the individual as compared to the control samples is detected.

2. The method of claim 1, wherein the immunoassay is ELISA.
3. The method of claim 1, wherein the immunoassay is an immunoblot.
4. The method of claim 1, wherein the determining step comprises:
 - contacting the urine sample from the individual with an antibody that specifically binds the macrophage MIF;
 - contacting the bladder sample from the individual with an antibody that specifically binds the macrophage MIF; and
 - detecting the presence of binding between the macrophage MIF and the antibody in the urine sample and the bladder sample.
5. The method of claim 4, wherein the antibody is selected from the group consisting of monoclonal antibodies and polyclonal antibodies.
6. The method of claim 4, wherein the antibody is labeled.
7. The method of claim 6, wherein the label is selected from the group consisting of biotin, fluorescent molecules, radioactive molecules, chromogenic substrates, chemiluminescent labels, and enzymes.
8. The method of claim 1, further comprising the step of comparing the levels of MIF in the urine of the individual to the MIF levels of patients having bladder inflammation.

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