(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
6 November 2003 (06.11.2003)

PCT

(10) International Publication Number
WO 2003/090686 A3

(51) International Patent Classification[7]: A61K 39/00, 39/385

(21) International Application Number: PCT/US2003/012802

(22) International Filing Date: 25 April 2003 (25.04.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/131,961 25 April 2002 (25.04.2002) US
10/322,312 16 December 2002 (16.12.2002) US

(71) Applicant *(for all designated States except US)*: **UNIVERSITY OF CONNECTICUT HEALTH CENTER** [US/US]; 263 Farmington Avenue, Farmington, CT 06030-5355 (US).

(72) Inventor; and
(75) Inventor/Applicant *(for US only)*: **SRIVASTAVA, Pramod, K.** [IN/US]; 70 Pheasant Run, Avon, CT 06001 (US).

(74) Agents: **ANTLER, Adriane, M.** et al.; Jones Day, 222 East 41st Street, New York, NY 10017 (US).

(81) Designated States *(national)*: AU, CA, CN, IL, IN, JP, KP, KR, NO, RU, SG, US.

(84) Designated States *(regional)*: European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR).

Published:
— *with international search report*

(88) Date of publication of the international search report:
2 March 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2003/090686 A3

(54) Title: USING HEAT SHOCK PROTEINS TO IMPROVE THE THERAPEUTIC BENEFIT OF A NON-VACCINE TREATMENT MODALITY

(57) Abstract: The present invention relates to methods of improving a treatment outcome comprising administering a heat shock protein (HSP) preparation or an α-2-macro globulin (α2M) preparation with a non-vaccine treatment modality. In particular, an HSP preparation or an α2M preparation is administered in conjunction with a non-vaccine treatment modality for the treatment of cancer or infectious diseases. In the practice of the invention, a preparation comprising HSPs such as but not limited to, hsp70, hsp90 and gp96 alone or in combination with each other, noncovalently or covalently bound to antigenic molecules or α2M, noncovalently or covalently bound to antigenic molecules is administered in conjunction with a non-vaccine treatment modality.