



Office of Technology Development
800 Huntington Avenue
Boston, Massachusetts 02115
www.idi.harvard.edu

IDI 98-002

MONOCYTE LOCOMOTION INHIBITORY FACTOR (MLIF)
– Peptide for anti-inflammation and Scarring

Application: Peptide therapeutic for treatment of inflammatory conditions including rheumatoid arthritis, lupus, Crohn's disease, psoriasis, tissue regeneration, prevention of allograft rejection, and prevention of scarring.

Inventor: Roberto R. Kretschmer, M.D.

Invention Summary:

The peptide MLIF was isolated from *Entamoeba histolytica* (amoeba) upon the observation that advanced stages of amoebic liver infection are characterized by a scarcity of inflammation. Based upon its natural origin, MLIF serves as an *evolutionary optimization* anti-inflammatory allowing its producer to successfully invade human organs without significant host immune response or causing the expected liver abscesses. This is based upon observations that amoebic infected hepatic abscesses regenerate perfectly without the expected scarring. The method of actions is believed to be inhibition of the mobility of human monocytes.

Through systemic, local injection or topical administration, MLIF could treat a host of inflammatory disorders characterized by the migration of monocytes. These include rheumatoid arthritis, lupus, psoriasis, rejection of allografts following organ transplantation. Given the significant need and value of scarring treatments, MLIF could be rapidly developed as a topical anti-scarring agent meeting the increasing and diverse needs of this market space.

Publications:

Mol Biochem Parasitol 2001 Feb;112(2):201-9.

Parasite Immunol. 2003; **25**: 475-482

Mol Biochem Parasitol. 2008 Mar;158(1):46-51.

Parasitol Res. 2003 Jul;90(4):264-7

Arch Med Res. 2000 Jul-Aug;31(4 Suppl):S76-7.

Parasite Immunol. 2004 Aug-Sep;26(8-9):343-9.

Parasite Immunol. 2007 Dec;29(12):679-84.

Parasite Immunol. 1985; **7**: 527-543

Patent Status: US Issued Patent # 6,524,591; US Issued Patent # 7,078,044; US Issued Patent # 7,514,090
US Application # 10/861,123, Publication # 04-0259807
US Application # 12/040,253, Publication # US-2008-0167253-A1
PCT Publication # WO 00/00511

Availability: Exclusive worldwide license

Contact: Ryan Dietz, Director, Office of Technology Development
617-278-3463 dietz@idi.harvard.edu