Matrix metalloproteinases (MMP) are the key enzymes in the pathogenesis of osteoarthritis and inflammatory arthritis. This study was performed on the rat common carotid artery model. This model has better accessibility and reliable injury assessment techniques in comparison to articular cartilage. This groundbreaking study shows that MMP inhibition resulted in a significant decrease in the cell proliferation and the remodeling of the extracellular matrix up to 2½ months after the MMP injection versus untreated control group and that these effects were associated with a marked reduction in MMP-2 activity. We strongly advocate testing of non hydroxamate type matrix metalloproteinase inhibitors in larger animals and in the clinical setting for degenerative joint and disc disease. Dr. Margolin's "out of the box" thinking, original study design and sharp indepth analysis are a new important step in restenosis, aortic aneurism and metastasis research as well in developing a disease modifying agent for degenerative disc and joint disease.

Leon Margolin M.D., Ph.D.

Dr. Margolin's research interests include MMP, tissue remodeling and it's relevance to degenerative joint and disc disease. He received numerous awards including Award of the American College of Physicians and AMA, Award of ASRA, Award of the Medical Society of Pennsylvania, Pfizer Award in Pain Management, Patients Choice Award (2008).

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Role of Matrix Metalloproteinases in Tissue Remodeling

relevance to pathogenesis of restenosis, aortic aneurism, joint and disc degeneration research

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