



**Canadian Arthritis Network
International Partnership Initiative**

**International Research & Training Program
LABORATORY/CLINIC PROFILE**

Contact information of the principal investigator

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**Please indicate if you are member or affiliate of one or more of the following
International Partnership Initiative organizations:**

- AO Foundation – Biotechnology Advisory Board, Switzerland
- Arthritis Foundation, USA
- Arthritis Research Campaign, UK
- Canadian Arthritis Network, Canada
- Japan Society for the Promotion of Science, Japan
- Nuffield Foundation Oliver Bird Rheumatism Program, UK

International Research & Training Program Opportunity

**Please indicate which of the following international opportunities would be
available at your laboratory/clinic.**

- Training Elective Rotation
- Research Mini-sabbatical
- Industry Training Rotation



The International Research & Training Program will be available for trainee elective rotations and investigator mini-sabbaticals that commence on or before March 31, 2009. If you have any preferences regarding the dates when you can host an international trainee or investigator, please indicate this below.

Visit Length (please indicate start and end dates if known):	
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Please provide ten key words and a brief description of the research currently being conducted in your laboratory/clinic, including descriptions of any specialized equipment, methods or technologies employed at your facility.

10 key words

<ol style="list-style-type: none">1. Arthritis2. Inflammation3. Cartilage4. Cytokines5. Prostaglandins6. Chromatin7. Transcription8. PPARgamma9. Polymorphism10. Molecular Biology

Brief description (up to ½ page)

<p>Our group investigates the molecular mechanisms involved in the pathophysiology of arthritis. The goal of these studies is to develop new therapeutic strategies for the treatment of arthritis.</p> <p>Current laboratory projects include:</p> <ol style="list-style-type: none">1. Role of PPARγ in the regulation of inflammatory and catabolic responses in cartilage2. Expression and function of mPGES-1 in articular joint tissues3. Genetic studies in osteoarthritis

Key publications (maximum 5 publications)

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Afif H, Benderdour M, Mfuna-Endam L, Martel-Pelletier J, Pelletier JP, Duval N, Fahmi H. Peroxisome proliferator-activated receptor gamma1 expression is diminished in human



osteoarthritic cartilage and is downregulated by interleukin-1beta in articular chondrocytes. *Arthritis Res Ther.* 2007 ; 9(2) : R31

Cheng S, Afif H, Martel-Pelletier J, Benderdour M, Pelletier JP, Hila G, Haraoui P, Raynauld JP, Choquette D, Fahmi H. Association of polymorphisms in the peroxisome Proliferator-Activated Receptor-gamma gene and osteoarthritis of the knee. *Annals of the Rheumatic Diseases.* 2006 Oct;65(10):1394-7.

Li X, Afif H, , Cheng S Martel-Pelletier J, Pelletier J-P, Ranger P, Fahmi H. Expression and Regulation of Microsomal Prostaglandin E Synthase-1 in Human Osteoarthritic Cartilage and Chondrocytes. *J Rheumatol.* 2005 May ; 32 (5) : 887-95

Farrajota K, Cheng S, Martel-Pelletier J, Afif H, Pelletier JP, Li X, Ranger P, Fahmi H. Inhibition of IL-1-induced cyclooxygenase 2 expression in human synovial fibroblasts by 15-deoxy-Delta12,14-prostaglandin J2 through a histone deacetylase-independent mechanism. *Arthritis Rheum.* 2005 Jan;52(1):94-104.

Cheng S, Afif H, Martel-Pelletier J, Pelletier JP, Li X, Farrajota K, Lavigne M, Fahmi H. Activation of PPAR γ inhibits IL-1b-induced mPGES-1 expression in human synovial fibroblasts by interfering with Egr-1. *J Biol Chem.* 2004 ; 279 (21) : 22057-22065.