



**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
- X 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
- X 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.**

<b>Visit Length</b> (please indicate start and end dates if known):	Flexible
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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**

1. Biochemistry
2. Molecular biology
3. Bone proteins
4. Osteogenesis
5. Osteopontin
6. Bone Sialoprotein
7. Immune cell regulation
8. Signalling
9. Matrix degradation
10. Matrix Remodelling

**Brief description** (up to ½ page)

Research in this laboratory is focussed on the function of two bone proteins, osteopontin and bone sialoprotein in bone remodelling, cancer metastasis and regulation of immune cells. Studies on bone sialoprotein include its role in the metastasis of cancer cells to bone. The osteopontin has a broader impact in cancer-related activities as well as in inflammatory responses. Our interest is in elucidated the function of osteopontin, and a novel intracellular form of osteopontin that we have identified, in the chemotaxis, migration and cytokine expression of neutrophils and macrophages. Current studies involve identifying motifs in osteopontin that are responsible for its broad range of activities, not only in immune cell regulation but also in the differentiation of myofibroblasts and fibrotic responses. These studies are expected to identify potential therapeutic applications of osteopontin in inflammatory diseases, including arthritis.

**Key publications** (maximum 5 publications)

1. Alstergen, P., Zhu, B., Glogauer, M., Mak, T.W., Ellen, R.P. and **Sodek, J.** “*Polarization and Directed Migration of Murine Neutrophils is Dependent on Cell-surface Expression of CD44*”. *Cell Immunol.* 231:146-157, 2004.
2. **Sodek, J.**, Batista da Silva, AP., and Zohar, R. “*Osteopontin in Mucosal Inflammation*”. *Crit. Revs. Oral Biol. & Med., J Dent Res.* 85: 404-415, 2006.
3. Da Silva, A.P., Pollett, A., Rittling, S.R., Denhardt, D.T., **Sodek, J.** and Zohar, R. “*Exacerbated Tissue Destruction in DSS-induced Acute Colitis of OPN-null Mice is Associated with Down-regulation of TNF- $\alpha$  Expression and Non-programmed Cell Death*”, *J. Cell Physiol.*, 208: 629-639, 2006.
4. Lee, H., Overall, C.M., McCulloch, C.A. and **Sodek, J.** “*A Critical Role for MT1-MMP in Collagen Phagocytosis*”. *Mol. Biol. Cell.* 17: 4812-4826, 2006.
5. Koh, A., Paes Batista da Silva, A., Bansal, A. K., Bansal, M., Sun, C., Lee, H., Glogauer, M., **Sodek, J.** and Zohar, R. “*Role of Osteopontin in Neutrophil Function*”. *Immunology*, in press, June 2007.