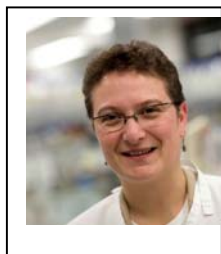


**Department of Chemistry & Biomolecular Sciences  
Seminar  
Semester 1 2008  
Macquarie University, Sydney, Australia**

**Thursday,  
12 Noon  
F7B Room 322**



**Your name: Associate Professor Maria Kavallaris**

Title: Head

Department: Pharmacoproteomics Program

Affiliation: Children's Cancer Institute Australia

***Cytoskeletal Proteins and Drug Resistance in Cancer***

### **Abstract**

This is the abstract section (8-10 lines).

Antimitotic drugs that target the tubulin/microtubule system are important in the treatment of a diverse range of cancers. Despite their success, drug resistance can be a major clinical problem. Differential proteomic analysis has identified key proteins involved in sensitivity and resistance to antimitotic agents. Validation and functional studies have led to the identification of novel mechanisms of drug resistance. Improved understanding of drug resistance will enable the development of targeted therapeutic approaches to treat drug refractory cancer.

### **About the Speaker**

As Program Head of the Pharmacoproteomics Program, Associate Professor Kavallaris holds a conjoint appointment with the Faculty of Medicine, University of New South Wales. She leads a group of researchers focused on identifying the mechanisms of action and resistance to anticancer drugs. Her program's research contributions include the identification of mechanisms of resistance to anticancer agents that target key proteins involved in cell division. A/Professor Kavallaris is a NHMRC RD Wright Research Fellow and her research contributions have been recognised by international and national awards and prizes. A/Professor Kavallaris has authored over 50 publications and has established important research collaborations in Australia, USA and France.

### **Five Recent Related Publications**

1. Don, S., Verrills, N.M., Liaw, T., Liu, M., Norris, M.D., Haber, M., **Kavallaris, M.** (2004). Neuronal-associated microtubule proteins class III  $\beta$ -tubulin and MAP2c in neuroblastoma: Role in resistance to microtubule-targeted drugs. *Mol Cancer Ther* 3 (9): 1137-1146.
2. Verrills, N.M., Liem, N.L., Liaw, T.Y.E., Hood, B, Lock, R.B., **Kavallaris, M.** (2006). Proteomic analysis reveals a novel role for the actin cytoskeleton in vincristine resistant childhood leukemia – an *in vivo* study. *Proteomics* 6: 1681-1694
3. Verrills, N.M., Po'uha, S.T., Liu, M.L.M., Liaw, T.Y.E., Larsen, M.R., Ivery, M.T., Marshall, G.M., Gunning, P.W., **Kavallaris, M.** (2006). Alterations in  $\beta$ -Actin and Tubulin-Targeted Drug Resistance in Childhood Leukemia. *J Natl Cancer Inst* 4;98(19):1363-74
4. Tommasi, S, Mangia, A, Lacalamita, R, Bellizzi, A, Fedele, V, Chiriatti, A, Thomssen, C, Kendzierski, N, Latorre, A, Lorusso, V, Schittulli, F, Zito, F, **Kavallaris, M**, Paradiso, A. (2007). Cytoskeleton and Paclitaxel sensitivity in Breast Cancer: The role of Beta-Tubulins. *Int J Cancer* 120 : 2078-85
5. Gan, PP, Pasquier, E, **Kavallaris, M.** (2007) Class III  $\beta$ -tubulin mediates sensitivity to chemotherapeutic drugs in non-small cell lung cancer. *Cancer Research* 67:(19) 9356 – 9363.

**To meet the speaker, please contact**

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