

Timeline

- 1975 Obtained B.Sc. in Biochemistry from Victoria University.
- 1980 Employed by the Wellington Cancer and Medical Research Institute on a Temporary Employment Programme to work with Dr Paul Davis, a Research Fellow with Professor Bill Stehbens, Director of the Institute and Professor of Pathology at the Wellington Clinical School of Medicine, University of Otago - the Malaghan Institute's first Director.
- 2014 Left Malaghan Institute, December.

Frequent citations to December 2014

- 1993 Archives Biochem Biophys paper on the mechanism of reduction of the tetrazolium dye, MTT, cited 848 times.
- 1996 The biochemical and cellular basis of cell proliferation assays the use tetrazolium salts. Biochemica, 364 times.
- 2000 Superoxide produced by activated neutrophils efficiently reduces the tetrazolium salt, WST-1 to produce a soluble formazan: a simple colorimetric assay for measuring respiratory burst activation and for screening anti-inflammatory agents. J Immunol Methods, cited 226 times.
- 2005 Tetrazolium dyes as tools in cell biology: new insights into their cellular reduction. Biotechnology Annual Review, cited 547 times.

Areas of Expertise

An Tan excelled in cell culture, in clonal assays of stem cells and haemopoietic progenitor cells, and in the spleen colony assay of Till and McCulloch. He was involved with a number of different projects over the years and became an expert in microplate cell growth assays that involved reduction of tetrazolium dyes.

Bibliography

- Tan S**, Baty JW, Dong L-F, Bezawork-Geleta A, Endaya B, Goodwin J, Bajzikova M, Kovarova J, Peterka M, Yan B, Alizadeh Pesdar E, Sobol M, Filimonenko A, Stuart S, Vondrusova M, Kluckova K, Sachaphibulkij K, Rohlena R, Hozak F, Truska J, Eccles D, Haupt L, Griffiths L, Neuzil J and Berridge MV. Mitochondrial Genome Acquisition Restores Respiratory Function and Tumorigenic Potential of Cancer Cells without Mitochondrial DNA. *Cell Metabolism* **21**: 81-94 (2015).
- Tan AS**, Baty JW, Berridge MV. The role of mitochondrial electron transport in tumorigenesis and metastasis. *BBA General Subjects* 1840: 1454-1463 (2014).
- Meyer K, Singh AJ, **Tan AS**, Cameron A, Leahy DC, O'Sullivan D, Joshi P, La Flamme AC, Northcote PT, Berridge MV, Miller JH. Mitochondrial genome-knockout cells demonstrate a dual mechanism of action for the electron transport Complex I inhibitor mycothiazole. *Marine Drugs* **10**: 900-917 (2012).

- Berridge MV, Herst PM and **Tan AS**. Metabolic flexibility and cell hierarchy in cancer. *Mitochondrion* 10: 584-588 (2010). *27 citations to Dec 2014*
- Tan AS**, Berridge MV. Evidence for NAD(P)H:quinone (NQO1)-mediated redox cycling via plasma membrane electron transport (PMET): a sensitive cellular assay for NQO1. *Free Radical Biology and Medicine* 48: 421-429 (2010). *Corrigendum: 48: 978 (2010).* *14 citations to Dec 2014*
- Tan AS**, Berridge MV. Effects of mitochondrial gene deletion on tumorigenicity of metastatic melanoma: reassessing the Warburg effect. *Rejuvenation Research* 13: 139-141 (2010).
- Tan AS**, Berridge MV. Differential effects of redox-cycling and arylating quinones on trans-plasma membrane electron transport. *BioFactors* 34: 1-8 (2009).
- Berridge MV, Herst PM and **Tan AS**. Tetrazolium dyes as tools in cell biology: new insights into their cellular reduction. *Biotechnology Annual Review* 11: 127-152 (2005). *547 citations to Dec 2014*
- Scarlett D-J, Herst P, **Tan A**, Prata C and Berridge M. Mitochondrial gene-knockout (ρ^0) cells: a versatile model for exploring the secrets of trans-plasma membrane electron transport. *Biofactors*, 20: 213-220 (2004) *28 citations to Dec 2014*
- Tan AS**, Berridge MV. Distinct trans-plasma membrane redox pathways reduce cell-impermeable dyes in HeLa cells. *Redox Report*, **9**: 302-306 (2004). *16 citations to Dec 2014*
- Tan AS**, Berridge MV. Superoxide produced by activated neutrophils efficiently reduces the tetrazolium salt, WST-1 to produce a soluble formazan: a simple colorimetric assay for measuring respiratory burst activation and for screening anti-inflammatory agents. *J Immunol Methods*, 238: 59-68 (2000). *226 citations to Dec 2014*
- Berridge MV, **Tan AS**. High-capacity redox control at the plasma membrane of mammalian cells: trans-plasma membrane, cell surface and serum NADH-oxidases. *Forum Review Article. Antioxidants and Redox Signaling* 2: 231-242 (2000). *66 citations to Dec 2014*
- Berridge MV, **Tan AS**. Cell surface NAD(P)H-oxidase: relationship to trans-plasma membrane NADH-oxidoreductase and a potential source of circulating NADH-oxidase. *Antioxidants and Redox Signaling* 2: 277-288 (2000). *37 citations to Dec 2014*
- Berridge MV, **Tan AS**. Trans-plasma membrane electron transport: a cellular assay for NADH and NADPH-oxidase based on extracellular, superoxide-mediated reduction of the sulfonated tetrazolium salt WST-1. *Protoplasma* 205: 74-82 (1998) *56 citations to Dec 2014*
- Tan AS**, Ahmed N, Berridge MV. Acute regulation of glucose transport after activation of human peripheral blood neutrophils by phorbol myristate acetate, fMLP, and granulocyte-macrophage colony-stimulating factor. *Blood* 91: 649-655 (1998). *66 citations to Dec 2014*
- McCoy KD, Ahmed N, **Tan AS**, Berridge MV. The hemopoietic growth factor, interleukin-3, promotes glucose transport by increasing the specific activity and maintaining the affinity for glucose of plasma membrane glucose transporters *J Biol Chem*, 272: 17276-17282 (1997). *29 citations to Dec 2014*
- Berridge MV, **Tan AS**, McCoy KD, Kansara M, Rudert F. CD95 (Fas/Apo-1)-induced apoptosis results in loss of glucose transporter function. *J. Immunol.* 156: 4092-4099 (1996). *52 citations to Dec 2014*

- Berridge MV, **Tan AS**, McCoy KD, Wang R. The biochemical and cellular basis of cell proliferation assays the use tetrazolium salts. *Biochemica* 4: 15-20 (1996).
364 citations to Dec 2014
- Berridge MV, **Tan AS**. IL-3 facilitates glucose transport in a myeloid cell line by regulating the affinity of the glucose transporter for glucose: involvement of protein phosphorylation in transporter activation. *Biochem J*, 305: 843-851 (1995).
59 citations to Dec 2014
- Berridge MV, Horsfield JA, Tan AS. Evidence that cell survival is controlled by interleukin-3 independently of cell proliferation. *J Cell Physiol*, **163**: 466-476 (1995).
- Berridge MV, **Tan AS**, Hilton CJ. Cyclic adenosine monophosphate promotes cell survival and retards apoptosis in a factor-dependent bone marrow-derived cell line. *Exp Hematol* 21: 269-277 (1993).
40 citations to Dec 2014
- Berridge MV, **Tan AS**. Characterisation of the cellular reduction of 3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide (MTT): Subcellular localization, substrate dependence, and involvement of mitochondrial electron transport in MTT reduction. *Archives Biochem Biophys* 303: 474-482 (1993).
841 citations to Dec 2014
- Berridge MV, **Tan AS**. The protein kinase C inhibitor, Calphostin C, inhibits succinate-dependent mitochondrial reduction of MTT by a mechanism that does not involve protein kinase C. *Biochem Biophys Res Comm*, 185: 806-811 (1992).
11 citations to Dec 2014
- Storring PL, Gaines Das RE. The international standard for recombinant DNA- derived erythropoietin: collaborative study of four recombinant DNA-derived erythropoietins and two highly purified urinary erythropoietins. *J Endocrinol* **134**:459-484, (1992).
(Participants in this World Health Organisation sponsored collaborative study included MV Berridge, **AS Tan**, CJ Hilton, G McLean and G White). *66 citations to Dec 2014*
- Berridge MV, Hoffman-Fezer G, **Tan AS**, McCaffery PJA. Monoclonal antibodies that bind to hemopoietic stem cells. Characterisation and immunochemical localisation of cells expressing gp50-65. *Exp Hematol*, **17**:1086-1094 (1989).
- Fraser JK, **Tan AS**, Lin F-K, Berridge MV. Expression of specific high affinity binding sites for erythropoietin on rat and mouse megakaryocytes. *Exp Hematol*, **17**:10-16 (1989).
140 citations to Dec 2014
- McCaffery PJ, **Tan AS**, Berridge MV. Polymorphic glycoprotein-1 on mouse platelets: possible role of Pgp-1 and LFA-1 in antibody-dependent platelet cytotoxicity involving complement. *Blood*, **69**:211-218 (1987).
- Berridge MV, Ralph SJ, **Tan AS**. Cell-lineage antigens of the stem cell-megakaryocyte-platelet lineage are associated with the platelet IIb-IIIa glycoprotein complex. *Blood*, **66**:76-85 (1985).
59 citations to Dec 2014
- Berridge MV, Ralph SJ, **Tan AS**, Jeffery K. Changes in cell surface antigens during stem cell ontogeny. *Exp Hematol*, **12**:121-129 (1984).
- Ralph SJ, McCaffery PJA, **Tan AS**, Berridge MV. Binding of monoclonal antibodies which inhibit spleen colony formation of leukemic cell lines. *Cancer Research*, **44**:3825-3830 (1984).
- Berridge MV, Ralph SJ, Tan AS, Jeffery K. Changes in cell surface antigens during stem cell ontogeny. *Exp Hematol*, **12**:121-129 (1984).
- Ralph SJ, Tan AS, Berridge MV. Monoclonal antibodies detect subpopulations of bone marrow stem cells. *Stem Cells*, **2**:88-107 (1982).