

Brief Curriculum Vitae - Professor Adrian C HERINGTON

CURRENT APPOINTMENT (2000-):

**Head, School of Life Sciences and
Professor of Biochemistry and Molecular Biology, Queensland University of Technology, Brisbane**

EDUCATION:

1969 BSc (Hons I), Monash University; 1973 PhD, Monash University

EXPERIENCE:

Appointments (last 12 years):

1990-1995 Director of Biochemistry, Dept Clinical Biochem, Royal Children's Hospital, Melb
1995-1997 Professor and Head of Biochemistry and Molecular Biology, School of Life Sciences, QUT
1996-2000 Director, Centre for Molecular Biotechnology, School of Life Sciences, QUT
1998-1999 Director of Research and Postgraduate Studies, Faculty of Science, QUT

CURRENT SOCIETY MEMBERSHIPS:

Active member of 7 national and international professional societies in the fields of endocrinology, biochemistry and growth factor research.

EDITORIAL BOARDS/EDITORSHIPS:

Current: Endocrinology, Growth Hormone & IGF Research, Biochem J (editorial advisor), Clin Biochemist Reviews
Past: Endocrinology (to 2001), Molec Cell Endocrinol (to 1997), Endocrine Journal (to 1996),
Growth Regulation (to 1998)

MANUSCRIPT AND GRANT REVIEWER:

Multiple international refereed journals and national/international grant funding agencies:
Multiple external PhD thesis reviews

AWARDS/RECENT PROFESSIONAL RESEARCH ACTIVITIES:

Awards: Senior Fulbright-Hays Fellowship 1972
Queen Elizabeth II Fellowship 1974
Somatomedin Club Invited Lecture (US Endocrine Soc) 1990
Lilly Growth Research Award (Australia) 1991
Eli Lilly Guest Lecturer, Lawson Wilkins Pediatric Endocrine Soc, New Orleans 1991
David Curnow Lectureship (Aust Assoc Clin Biochem) 1998
Alban Gee Award (with L Chopin, P Jeffery, RA Gardiner) Aust Urological Soc, 2002
External Examiner, Biotechnology Program, Asian Institute for Science, Medicine and Technology,
Penang, Malaysia, 2005-

Professional Activities:

NHMRC Regional Grants Interviewing Committee, 1989-1991, 1998
NHMRC Endocrinology/Reproduction Discipline Panel 1999, 2000, 2006
NHMRC Career Development Awards Panel/ Dora Lush Postgraduate Awards Panel 2002, 2003
ARC Special Research Centres Biological Panel, Site Visit team, 1999
Member, Qld Health and Medical Research Council, 2000-2004
Member, Medical Advisory Board, Sylvia and Charles Viertel Charitable Trust 2007-
Program Organizing Committee, Endocrine Society of Australia, 1995-1996
Deputy Chair, Management Committee, 15th International Biology Olympiad, Brisbane, July 2004
Multiple QUT/Faculty/School Executive, Research and Postgraduate Committees

Major Grant Support (1997-present)

Nat. Health & Med. Res. Council:

Project grants, 1997-1999, 1999-2001, 2001-2003, 2002-2004, 2004-2006 (+ 3 current submissions)

Equipment grants 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006 **Total** \$1,653,000

Aust. Res. Council Large 1997-1999 **Total** \$210,000

Queensland Cancer Fund: 2004-2005, 2005-2006, 2006-2007, 2007-2008 **Total** \$600,000

Foundation/Industry Grants: various incl Ramaciotti, Eli Lilly, Edward Dunlop Fdn **Total** \$117,000

RESEARCH TRACK RECORD

My primary research interests over the past 30 years, have been in the growth hormone/insulin-like growth factor fields, with a major emphasis on the expression, measurement, regulation and specific functional roles of all components of these important endocrine regulatory pathways. I have a significant international reputation for my work which includes the characterisation and regulation of the growth hormone receptor and IGF inhibitors, and the first description and characterisation of the soluble form of the GH receptor, the GH binding protein. The group's current emphasis is in the area of hormone-dependent cancers (eg prostate, breast) and key research projects currently underway include:

1. The roles of the recently described ADAMs family of proteases in the regulatory aspects of prostate cancer metastasis
2. The expression, regulation and function of a new GH secretagogue, ghrelin, and its receptor isoforms in normal and prostate/breast cancer tissues. This project, potentially, has both therapeutic and diagnostic/ prognostic value and is currently protected by a patent.
3. The cellular mechanisms underlying the pharmacokinetics and the anti-cancer actions of commonly used herbal medicines.

A. PUBLICATIONS

I have published 165 research papers/reviews in international peer-reviewed journals (some recent examples listed below). My group's work has been presented more than 230 times at national and international conferences.

I am co-inventor on one international patent application that has been granted in Australia, (and under examination in USA, Canada and Europe).

JEFFERY PL, CHOPIN LK & **HERINGTON AC**. The expression and action of ghrelin and the growth hormone secretagogue receptor in prostate cancer cell lines. *J Endocrinol* 172:R7-R11 2002

JEFFERY PL, **HERINGTON AC** & CHOPIN LK. The potential autocrine/paracrine roles of ghrelin and its receptor in hormone-dependent cancer. *Cytokine & Growth Factor Rev* 14: 113-122, 2003.

KRICKER JA, TOWNE C, FIRTH SM, **HERINGTON AC** & UPTON Z. Structural and functional evidence for the interaction of insulin-like growth factors (IGFs) and IGF binding proteins with vitronectin. *Endocrinology* 144: 2807-2815, 2003

MANZETTI S, McCULLOCH DM, **HERINGTON AC** & van der SPOEL D. Molecular dynamics of MMP-3, ADAM-9 and ADAM-10 in complex with hypothetical substrates: New implications for catalysis and substrate affinity. *J Comp Aided Molec Design* 17: 551-565, 2003.

McCULLOCH D, AKL P, SAMARATUNGA H, **HERINGTON AC** & ODORICO DM. Expression of ADAM-10 in prostate cancer and its regulation by dihydrotestosterone, insulin-like growth factor-I and epidermal growth factor in the prostate cancer cell model LNCaP. *Clin Cancer Res* 10: 314-323, 2004

GAYTAN F, BARREIRO ML, CAMINOS JE, CHOPIN LK, **HERINGTON AC**, MORALES C, PINILLA L, PANIAGUA R, NISTAL M, CASANUEVA FF, AGUILAR E, DIÉGUEZ C & TENA-SEMPERE M. Expression of ghrelin and its functional receptor, the type 1a GH-secretagogue receptor, in normal human testis and testicular tumors. *J Clin Endocrinol Metab* 89: 4000-4009, 2004

HERINGTON AC. Growth hormone binding proteins. In "Encyclopedia of Endocrine Diseases" (L. Martini, editor), Elsevier, vol 2 pp390-395, 2004

JEFFERY PL, DUNCAN R, JASKOLSKI R, HAMMOND D, **HERINGTON AC** & CHOPIN LK. The identification of an exon 4-deleted proghrelin variant that encodes a novel C-terminal peptide in the mouse. *Endocrinology* 146: 432-440, 2005

GAYTAN F, MORALES C, GAYTAN M, JEFFERY P, CHOPIN LK, **HERINGTON AC**, CASANUEVA FF, AGUILAR E, DIEGUEZ C & TENA-SEMPERE M. Expression of growth hormone secretagogue receptor type 1a, the functional ghrelin receptor, in human ovarian surface epithelium, mullerian duct derivatives and ovarian tumors. *J Clin Endocrinol Metab* 90: 1798-1804 2005

VEVERIS-LOWE TL, LAWRENCE MG., COLLARD RL., **HERINGTON AC**., NICOL DL. & CLEMENTS JA. Prostate-Specific Antigen (PSA) and Kallikrein 4 (hK4) expression is associated with the loss of E-cadherin and an epithelial-mesenchymal transition (EMT)-like effect in PC-3 prostate cancer cells. *Endocrine Related Cancer* 12: 617-625 2005

JEFFERY PL, MURRAY RE, YE H AH, McNAMARA JF, DUNCAN RP, STEIN S, **HERINGTON AC** & CHOPIN LK Expression and function of the ghrelin axis, including a novel proghrelin isoform, in human breast cancer tumours and cell lines. *Endocrine Related Cancer* 12: 839-850 2005

YE H A, JEFFERY PL, **HERINGTON AC** & CHOPIN LK. The role of ghrelin in prostate cancer cell proliferation: ghrelin activates mitogen-activated protein kinase (MAPK) pathways in LNCaP and PC3 prostate cancer cells and a novel preproghrelin isoform is highly expressed in prostate cancer. *Clin Cancer Research* 11: 8295-303, 2005

SHAFIEI F, **HERINGTON AC** & LOBIE PE. Mechanisms of signal transduction utilized by growth hormone. In "The Somatotrophic Axis In Brain Function" (F Nyberg, Editor) Elsevier pp39-49, 2006

JIN GAO, COLLARD RL, BUI L, **HERINGTON AC**, NICOL DL & CLEMENTS JA. Kallikrein 4 is localised to both tumour cells and osteoblasts in metastatic prostate cancer and is a potential mediator of cellular interactions between prostate cancer cells and osteoblasts in vitro. *Prostate* 67: 348-60 2007