**PROFESSOR ANDREW B. TOBIN**

Institute of Molecular, Cell and Systems Biology, College of Medical, Veterinary and Life Sciences, University of Glasgow, Glasgow, Scotland, G12 8QQ

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**CURRENT POSITION:**

* Professor of Molecular Pharmacology, University of Glasgow (September 2016 - present)

**PREVIOUS POSITIONS:**

* Programme Leader at the MRC Toxicology Unit (2012-August 2016)
* Director of the Leicester Drug Discovery and Diagnostic Centre (2012 – August 2016)
* Professor of Cell Biology University of Leicester (2008 – 2016)
* Wellcome Trust Senior Research Fellow (1996-2011)
* Research Fellow on a Wellcome Trust Programme Grant at the University of Leicester with Professor Steve Nahorski. (1991-1996)
* Postdoctoral Fellow in the Department of Molecular Oncology, Bristol Myers-

Squibb Institute for Medical Research, Princeton, U.S.A. with Dr. Mariano Barbacid. (1989-1991).

**EDUCATION:**

* University of Oxford. Worcester College. (1985-1988).

D.Phil in neuropharmacology/biochemistry.

* University of London, Queen Mary College. (1981-1984).

BSc Biochemistry. 1st Class honours.

**CURENT LEADERSHIP POSITION**

My position at the University of Glasgow is to lead the newly established Centre for Translational Pharmacology aimed at defining the molecular rules of drug efficacy with particular focus on G protein coupled receptor based drug therapies and novel mechanisms of targeting protein kinases. The Centre will draw together academics and industrial partners and be focused on establishing rational design strategies for the development of drugs for the treatment of neurological, inflammatory and metabolic disease as well as third world diseases such as malaria.

**PREVIOUS LEADERSHIP POSITIONS**

**Director of the Leicester Drug Discovery and Diagnostics Centre (2012-2016)**

The Leicester Drug Discovery and Diagnostics Centrewas established as a strategic vehicle by which to progress the basic biomedical and clinical research performed within the College of Medicine Biological Sciences and Psychology, to novel drugs and therapies for the treatment of human disease. I led a core staff and managed a budget provided by the University and obtained through external sources. The success of the Centre during my tenure was evident by three consecutive MRC confidence in concept awards, two full scale drug discovery programmes initiated with industrial partners (one with GSK) and a cancer diagnostics programme established in partnership with CRUK and MRCT.

**Acting Director of Research for the College (2012)**

This was a high level strategic role developing and delivering the College research strategy and securing large strategic infrastructure awards. In this role I sat on all of the College senior management committees including the College Management Board and chaired the College Research Committee. In addition, I sat on the University Research Committee. This position provided an opportunity to experience strategic planning at a whole institute level.

**Deputy Director of Research for the College (2010-2012)**

This position was essentially as described above. I sat on all the senior College management committees as well as the University Research Committee. During this time I took a strategic lead on Leicester’s role in the M5-initative of research-intensive universities (which includes the University of Birmingham).

**Director of the Centre for Biotechnology Services (2009-2012)**

In 2009 I coalesced the core research facilities within the College into one centre under clear line management and budget responsibility. Previously the core services were spread throughout the Departments in the College with no clear organisational structure. Following the re-organisation and establishment of the Centre for Core Biotechnology Services (CBS) I held line management responsibility for over 20 research staff and oversight over the core research facilities that included; advanced imaging, proteomics, DNA sequencing, electron microscopy, transgenic services as well as the mechanical and electrical workshop.

**Co-Lead for the Molecular and Cellular Biosciences Theme (2009-2012)**

The College of Medicine Biological Sciences and Psychology at Leicester is divided into Research Themes designed to establish a co-ordinated research strategy across the College, establish a framework for mentorship and research support, and to provide a collaborative environment that would facilitate cross fertilisation of ideas, techniques and technologies. Together with the Head of Biochemistry we established and led the Molecular and Cellular Biosciences Theme, which was one of the biggest Research Themes with a membership of over 100 academic staff.

### RECENT KEY INVITATIONS TO SPEAK AT INTERNATIONAL SCIENCE MEETINGS (2013-present)

* 9th International Conference on Inhibitors of Protein Kinases. Targeting the CLK-family of protein kinases in malarial. Warsaw, Poland. September 2017.
* XVth International Symposium on Cholinergic Mechanisms. Rational design strategies for muscarinic ligands in neurodegeneration. Marseille. France October 2016.
* Keystone Meeting: G Protein-Coupled Receptors: Structural Signalling and Drug Discovery. Colorado, USA. Feb 2016.
* Hawaiian GPCR workshop. Memory and learning in prion neurodegeneration. Big Island, Hawaii, USA. December 2015.
* French Pharmacology Society Meeting. GPCRs, from physiology to drugs. Rescuing memory loss in neurodegeneration. Toulouse, France 2015.
* IUBMB-SBBq Meeting on Host-Pathogen Signaling. Drugging the malaria kinome. Iguaçu Foz, Brazil. August 2015.
* 2nd GPCR Targeted Screening Conference. Chemical genetics applied to defining the role of GPCRs. Berlin, Germany. May 2015.
* Protein kinases of parasitic protozoa. Chemical genetic approaches to dissecting the malaria kinome. Haifa, Israel. March 2015.
* Argentinian Society of Parasitology Meeting. Targeting the malarial kinome. Mar Del Plata, Argentina. November 2014.
* 8th International Conference on Inhibitors of Protein Kinases (IPK2014). Role of PfPKG in maintaining the malaria parasite. Warsaw, Poland. September 2014.
* GPCR Interactive Workshop (GLISTEN). Dissecting the in vivo role of GPCRs. Leiden. Holland August 2014.
* Keystone Meeting: G Protein-Coupled Receptors: Structural Dynamics and Functional Implications. Utah USA. April 2014.
* Anglo-Swedish Medicinal Chemistry Meeting. Targeting malaria protein kinases. Sweden June 2013:
* Experimental Biology Meeting, Boston USA (GPCR symposium) April 2013.
* Invited speaker at the ASCEPT meeting. Molecular Pharmacology of G protein coupled receptors. In Sydney Australia. December 2-5th 2012.
* 7th International meeting of Molecular Pharmacology of GPCRs. Melbourne Australia. December 2012.
* Biochemical Society Hot Topics Symposium. Signalling mechanisms in malaria. November 2012.
* GPCR Allosteric modulators – Drugs on target. Boston November 2012
* Protein kinase meeting – Drugs on target. Boston. November 2012
* Canadian Great Lakes GPCR Symposium. October 2012.
* 10th Annual GPCRs in Drug Discovery. Berlin 2012.
* Keystone GPCR: Molecular mechanisms and novel functional insights. Canada. Feb 2012.
* GPCR workshop. Maui, Hawaii. Dec 2011
* Malaria protein kinases – EPFL Switzerland. 2010
* MALSIG meeting – Rome, Italy. 2010
* Gordon Conference – Phosphorylation and G-protein networks. Bideford. New England, USA. June 2009.
* Speaker at the BPS – Cell signalling symposium. Leicester. April 2009.
* Speaker at the ASPET Musracrinic receptor symposium. San Diego. Feb. 2008.
* Speaker at the GPCR symposium at the Biosciences meeting. Glasgow. July 2007.
* Invited speaker at the ASCEPT meeting. Molecular pharmacology of G protein coupled receptors. Held in Melbourne Australia. December 3rd 2005.
* Plenary speaker at the GPCR Forum as part of the ASCEPT meeting in Melbourne Austalia December 22nd 2005
* 3rd Annual European Conference on G-protein coupled receptors in drug discovery. April 2005.
* Speaker at 7th International conference of anti-cancer research (IP6-Symposium). Corfu Greece, October 2004.
* Speaker at the Keystone symposium on G-protein-coupled receptors: Evolving concept and drug discovery. Taos USA. Feb 2004.
* Invited Symposium Speaker at the Biochemical Society meeting held at Essex University in July 2003.
* Invited AstraZeneca speaker. Montreal. April 2003.
* Invited speaker at the ASCEPT meeting. Molecular pharmacology of G protein coupled receptors. Held in Melbourne Australia. November 23rd 2002.
* Invited Speaker at the Inaugural James Black Conference held in Cambridge
* July 22-25, 2002. Title “The whole truth:GPCR phosphorylation in the dock”.
* Invited Symposium Speaker at the G-protein coupled receptor symposium at the British Pharmacology Meeting held in Bristol in September 2001.
* Invited Speaker at the ASPET COLLOQUIUM - 2001 G Protein Coupled Receptors held in Orlando.
* Symposium entitled: Receptor regulation: Mechanisms and functional consequences held at the British Pharmacological Society meeting at Leicester, April 1996.
* Seminar in receipt of the Otto Loewi New Investigator Award. Presented at the 6th Symposium of muscarinic Receptor Subtypes, Florida. November 1994.

**EDITED BOOK**

**Tobin A.B.** (1996). Editor of a book entitled. The phospholipase C pathway: Its regulation and desensitisation. Springer Press, New York.

**AWARDS AND HONORS**

* Elected Chairman of the Molecular Pharmacology Gordon Conference (to be held in 2021)
* IUPHAR muscarinic receptor subcommittee, 2016-present.
* Member of the Scottish Universities Life Sciences Alliance 2016-present.
* Royal Society Wolfson Research Merit Award Holder, 2016.
* MRC Molecular and Cellular Medicines Board (MCMB) member, appointed 2015.
* Expert Reviewer for the Wellcome Trust, appointed 2011.
* Honorary visiting professor in the Department of Pharmacology, University of Melbourne, Australia, 2006.
* Member of the molecules, genes and cells grant panel at the Wellcome Trust, (2004-2008).
* Otto Loewi New Investigator Award, 1994.

**JOURNAL EDITORAL BOARDS**

* Editorial Board Member for Frontiers in Pharmacology (2012-present)
* Editorial Board Member for the Journal of Biological Chemistry (2009-present)
* Member of Faculty 1000 – which provides expert reviews of the literature (2009-present)
* Editorial Board Member for the Biochemical Journal (1999-2003)

**GRANT PANEL MEMBERSHIP**

* MRC – Molecular and Cellular Medicines Board (MCMB). Appointed 2015
* Expert Reviewer for the Wellcome Trust. Appointed 2011
* Member of the molecules, genes and cells grant panel at the Wellcome Trust (2004-2008).

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#### CURRENT RESEARCH INCOME

**TITLE:** (MR/P019366/1) MICA Pharmacological, molecular and cellular mechanisms of muscarinic slowing (modification) of neurodegenerative disease. **FUNDER:** MRC. AMOUNT: £1.2M. **START-END:** 2016-2020. **ROLE:** Principle investigator.

**TITLE:** (201529/Z/16/Z) Wellcome Trust Collaborative Award: Collaborative network to define the molecular determinants of G protein coupled receptor clinical efficacy. **FUNDER:** The Wellcome Trust. **AMOUNT:** £4.2M (split between the University of Glasgow and Monash University). **START-END:** 2016- 2021. **ROLE:** Principle investigator with Arthur Christopoulos and Patrick Sexton (Monash University).

**TITLE:** (BB/L02781X/1) Using a Designer Receptor Exclusively Activated by Designer Drug to define the role of short chain fatty acids in metabolic disease and inflammation. **FUNDER:** BBSRC industrial partner award with Astra Zeneca as the industrial partner. **AMOUNT:** £703868. **START-END:** 2015- 2019.

**ROLE:** Principle investigator with professor Graeme Milligan (Glasgow University).

**TITLE:** (BB/K019856/1) GPR120: A G protein-coupled receptor with the potential to regulate insulin secretion and inflammation. **FUNDER:** BBSRC **AMOUNT:** £610289. **START-END:** 2013-2018. **ROLE:** Principle investigator with professor Graeme Milligan (Glasgow University).

**TITLE:** (BB/P00069X/1). Defining the functional roles of the enigmatic G protein-coupled receptor GPR35. **FUNDER:** BBSRC **AMOUNT:** £602844. **START-END:** 2016-2020. **ROLE:** Principle investigator with professor Graeme Milligan (Glasgow University).

**TITLE:** PhD Studentship: Novel anti-malarials that target protein kinases. **FUNDER:** MRC Toxicology Unit/ MRC Unit the Gambia. AMOUNT: £95,000. START-END: 2015-2017. **ROLE:** PhD supervisor.

**TITLE:** PhD Studentship: (Chemo)genetic approaches to defining the signalling and physiological role of GPRCs. **FUNDER:** MRC. **AMOUNT:** £95,000. START-END: 2013-2017. **ROLE:** PhD supervisor.

# PREVIOUS RESEARCH INCOME

**TITLE:** PhD Studentship: Investigation of the neurotoxic mechanisms associated with the mGluR5 receptor. **FUNDER:** BBSRC CASE Studentship with Eli Lilly. **AMOUNT:** £85,000. **START-END:** 2011-2016.

MRC Confidence in Concept Award 2014-2015

£250,000

BBSRC-CASE studentship award with Heptares

2009-2013

(£90,000)

MRC Refurbishment Grant

2010-2013

(£500,000)

College PhD Studentship (joint with Chemistry)

2009-2012

(£85,000)

Wellcome Trust Project Grant (090313)

Awarded 2010-2012

The role of protein phosphorylation in the invasion of the human malarial parasite, *P. falciparum*, into red blood cells.

£500,000

Wellcome Trust Senior Research Fellowship (047600)

Awarded 2006-2011

Determination of the role of site specific GPCR phosphorylation in cellular responses.

£1,328,110

Australian NHMRC award (400134)

Awarded 2006-2009.

Allosteric regulation of G-protein coupled receptors.

Co-holder with Dr Christopoulos (PI), Dr Sexton (co-holder) and Dr Abagyan.

$A498,750.

British Heart Foundation project grant

Awarded 2006-2008

Co-holder with Dr John Mitcheson.

£148,188.

Wellcome trust Project grant. (077202).

Awarded December 2005- 2008.

Investigation of the regulation of casein kinase 2 (CK2) activity.

£163,556.

Wellcome Trust project grant (073480).

Awarded April 2004- 2008.

 Investigation of the mechanisms of the muscarinic receptor anti-apoptotic response in clonal cells and primary neuronal cell cultures.

£205,599.

Wellcome Trust Senior Research Fellowship in Biomedical Science (047600).

Oct 2001-Sept 2006.

Investigation of the signalling and physiological role played by agonist-mediated phosphorylation of Gq/11-coupled receptors.

£1,111,149.

British Heart Foundation project grant (PG/04/093/1715)

Awarded Nov 2004-Sept 2006

Kinase activation of NADPH oxidase in pre-eclampsia.

£176,000

(Co-grant holder with Dr. L. Ng)

Wellcome Trust Prize Studentship. (067855)

Oct 2002-Sept 2005.

the regulatory role played by phosphorylation of the M3-muscarinic receptor in the activation of signalling cascades.

£79,783

Studentship with AstraZeneca.

Oct-2002-Sept 2005

Investigation of protein:protein interactions using imaging techniques.

£90,000.

(Co-holder with Dr G. Willars)

Wellcome Trust Project Grant (059333)

Feb 2000-Jan 2003.

Identfication, cloning and characterisation of inositol polyphosphate-regulated protein kinases and their protein substrates.

£195,670.

Wellcome Trust Equipment Grant (061050)

(Jointly held with Prof: Nahorski and Standen and Dr: Dart and Willars

Awarded June 2000.

£176,092

Wellcome Trust Prize Studentship (050941).

Oct 1997-Sept 2000.

Role of receptor phosphorylation in the regulation of phospholipase C coupled receptors.

£77,383.

Wellcome Trust Project Grant (055205).

Feb 1999-Jan 2000.

Purification, cDNA cloning and characterisation of inositol polyphosphate regulated protein kinases and their protein substrates.

£49,271.

Industrial Collaboration with Phytotech Inc.

Sept 2001-August 2002.

Investigation of the mechanisms of down-regulation of the M2-muscarinic receptor.

£35,000.

Wellcome Trust Senior Research Fellowship in Biomedical Science (047600).

Oct 1996-Sept 2001.

Studies on the mechanism and functional consequences of phospholipase C-coupled receptor phosphorylation.

£576,440