

**PHILIP ANDREW MACCARTHY**

**BSc MB ChB (Hons) PhD MRCP**

**CURRICULUM VITAE**

## **PERSONAL DETAILS**

**Name:** Philip Andrew MacCarthy

**Work:** Department of Cardiology  
King's College Hospital  
Denmark Hill  
London SE5 9RS

**Nationality:** British

**Date of Birth:** 12 August 1967

**Marital Status:** Married with 2 children

**CCST:** Obtained on 31/10/02 (Cardiology and GIM)

**GMC Number:** 3489990 (Specialist Register)

**MDU Number:** 251541J

**BMA Number:** 7331556

## QUALIFICATIONS

1985	<b>'A' Levels</b> Physics A Mathematics A ('S' Level 2) Chemistry A ('S' Level 1)
1988	<b>BSc in Anatomy , with First Class Honours</b> University of Bristol
1991	<b>MB ChB, with Honours</b> University of Bristol Distinction in Medicine Distinction in Obstetrics and Gynaecology Distinction in Pathology and Microbiology Distinction in Anatomy
1994	<b>MRCP (UK)</b>
2000	<b>PhD</b> University of Wales College of Medicine

## PRIZES / SCHOLARSHIPS / AWARDS

2002	<b>King's College Hospital Commendation</b>
2002	<b>British Heart Foundation Advanced Training Scholarship</b>
2002	<b>British Cardiac Society Travelling Fellowship</b>
2002	<b>Wellcome Trust Travel Award</b>
2000	<b>Finalist - British Cardiac Society Young Research Workers Prize</b>
1996	<b>MRC Clinical Training Fellowship</b>
1991	<b>Sanders Scholarship</b> (for performance in clinical Final MB ChB)
1990	<b>McLaghlan Scholarship</b> (for performance in written Final MB ChB)
1990	<b>David Rayner Prize in Obstetrics</b> (highest exam result in the year )
1989	<b>Southmead Hospital Prize</b> (highest exam result in the year)
1988	<b>Mary Edith Evans Prize in Anatomy</b> (highest exam result in the year)
1987	<b>Undergraduate Scholarship</b> (for performance in 2nd MB ChB)

## **EDUCATION**

1978-1985 Hampstead Comprehensive School, London.  
1985-1991 Bristol University Medical School.

## **PRESENT APPOINTMENT**

01.06.03- **Consultant Interventional Cardiologist**  
King's College Hospital, London

**Honorary Senior Lecturer in Cardiology**  
Guy's, King's and St Thomas' School of Medicine, London

## **PAST APPOINTMENTS**

01.10.00-31.05.03 **Specialist Registrar in Cardiology**  
King's College Hospital, London  
(Dr DE Jewitt, Dr PJ Richardson, Prof AM Shah, Dr MR Thomas,  
Dr RJ Wainwright)

01.07.02-31.12.02 **Interventional Cardiology Fellow**  
**BHF Advanced Training Scholarship**  
OLV Cardiovascular Centre, Aalst, Belgium  
(Dr B de Bruyne, Dr W Wijns, Dr G Heyndrickx)

01.01.00-30.09.00 **Specialist Registrar in Cardiology/General Medicine**  
Royal Gwent Hospital, Newport (Dr J Davies, Dr S Ikram)

01.11.99-31.12.99 **Specialist Registrar in Cardiology**  
Morrison Hospital, Swansea  
(Dr M Anderson, Dr MW Ramsey, Dr P Thomas)

01.11.96-31.10.99 **MRC Clinical Training Fellow**  
University of Wales College of Medicine (Prof AM Shah)

01.11.94-31.10.96 **Registrar in Cardiology**  
University Hospital of Wales, Cardiff  
(Prof RJ Hall, Dr WJ Penny, Dr MB Buchalter, Dr M Stephens)

01.08.94-31.10.94 **Registrar in General Medicine (Locum)**  
John Radcliffe Hospital, Oxford  
(Prof D Grahame-Smith)

01.08.92-31.07.94 **Oxford Medical SHO Rotation**  
John Radcliffe Hospital, Radcliffe Infirmary, Churchill Hospital

01.02.92-31.07.92 **House Surgeon**  
General Surgery/Orthopaedics, Southmead Hospital, Bristol

01.08.91-31.01.92

**House Physician**

Professorial Department of Medicine, Bristol Royal Infirmary

**INTERVENTIONAL CARDIOLOGY EXPERIENCE**

I completed my initial 18 months of coronary interventional training at King's College Hospital where I had exposure to a broad range of interventional techniques in all lesion subsets. I gained particular experience of the interventional management of acute coronary syndromes, rotational atherectomy and brachytherapy with Dr Martyn Thomas and complex angioplasty/stenting with Dr Ray Wainwright. I was responsible for supervision/training of junior cardiology trainees in the Catheter Laboratory and for 'trouble-shooting' if practical problems arose.

I then undertook an Interventional Fellowship at the OLV Cardiovascular Center in Aalst, Belgium, from July to December 2002, under the supervision of Drs William Wijns, Bernard de Bruyne and Guy Heyndrickx. This gave me the opportunity to acquire a comprehensive understanding of applied coronary physiology and expertise in its assessment, for both clinical and research purposes. I have been trained in the use of the intracoronary pressure wire for the measurement of both fractional flow reserve and thermodilution coronary flow reserve. I have also gained experience of the Doppler flow wire, IVUS, coronary pressure waveform analysis and methergine stimulation. The JCHMT/SAC approved this post for training in cardiology.

Whilst in Aalst, I continued and refined my interventional training in what is a high volume European Centre. I gained particular experience of elective, complex intervention and participated in several 'live case demonstrations' for the Guidant educational courses in Brussels. I returned to King's College Hospital as the senior interventional trainee to consolidate my interventional experience. I was appointed as Consultant Interventional Cardiologist at King's College Hospital on 22<sup>nd</sup> April 2003.

To date, I have undertaken **~800 PTCA/stent procedures** as an independent operator. These cases include:

- 1) Bifurcation lesions (including use of the Guidant 'Frontier' bifurcation stent)
- 2) Saphenous vein grafts
- 3) FFR-guided, multi-vessel intervention
- 4) Primary and 'Rescue' PCI in acute MI
- 5) Chronic total occlusions

I have also had experience of the following techniques:-

- 1) Brachytherapy using the Novoste and Gallileo systems
- 2) Rotational atherectomy
- 3) Distal protection devices (including the Percusurge and Emboshield)
- 4) Intravascular ultrasound (CIVUS and Jo-Med)
- 5) Thrombectomy devices (Export catheter and Excisor)
- 6) The Angioseal femoral closure device

**GENERAL CARDIOLOGY EXPERIENCE**

During my registrar post at the University Hospital of Wales I supervised a house officer and an SHO. Whilst on-call (1 in 5) I assessed all admissions to CCU, received ward and DGH

referrals and provided the temporary pacing and echo service for the hospital. I undertook 2 catheter lists per week and gained a wide experience of all aspects of adult cardiology. I did two cardiology outpatient clinics per week, including more specialised clinics such as a chest pain clinic (one per week) and an adult congenital heart disease clinic (one per fortnight whilst working for Prof. Roger Hall).

Throughout my 3 year research period I continued my clinical training by participating in the on-call rota (1 in 10; at senior SpR level), doing one catheter list and outpatient clinic per week. I was also involved in catheter laboratory-based research during which I developed skills such as LV pressure-volume analysis, quantitative coronary angiography and use of the Doppler flow-wire.

I resumed full-time clinical training at Morriston Hospital, Swansea, a tertiary referral cardiac centre, and then at the Royal Gwent Hospital. The latter is a 1400 bed DGH with on-site permanent pacing, coronary angiography and trans-oesophageal echocardiography facilities. During this time I received all cardiology in-patient referrals, arranged patient transfers to the local tertiary centre and oversaw the CCU and the temporary pacing service.

At King's College Hospital, as the senior interventional trainee I spent four days per week in the Catheter Laboratory. I was responsible for the listing of all elective cases, writing the daily catheter list, reporting the catheter procedures and co-ordinating in-patient transfers. I was also responsible for supervising and co-ordinating the junior medical staff (3 SpRs and 3 SHOs). I had clinical responsibility for patients on the CCU (2 ward rounds/day) and oversaw patient management on the non-acute wards. I saw in-patient referrals from other specialties within the hospital and I did one cardiology clinic per week.

### Practical

<i>Catheter Procedures</i>	I have undertaken as an independent operator:- >3000 Catheter procedures, <i>including</i> :- 212 Graft angiograms 122 Aortograms 182 Right heart catheterisations 28 RV endomyocardial biopsies I have undertaken ~100 diagnostic angiograms via the radial approach. My fellowship in Aalst, Belgium provided a broad experience of haemodynamic assessment in the catheter laboratory, including dobutamine challenge in low-gradient, low output aortic stenosis and LV pressure-volume analysis.
<i>Echocardiography</i>	I have performed/reported in excess of 1000 transthoracic studies. Whilst on call I provide the emergency echo service for the hospital. I am competent in transoesophageal echocardiography. I have also had exposure to stress echocardiography and doppler myocardial imaging.
<i>Permanent pacing</i>	365 Permanent pacing systems inserted (188 dual chamber systems, 36 VDD systems)
<i>Electrophysiology</i>	Regular interpretation/reporting of Holter monitors 12 Electrophysiological studies (second operator) 5 VT stimulation studies

<i>Nuclear cardiology</i>	I have performed and reported both adenosine and dobutamine MIBI scans. I have also attended the “Master Class in Nuclear Cardiology” training programme for SpR’s in Cardiology (Oct 1998)
<i>Other</i>	26 Pericardiocenteses / 2 Balloon Pericardiotomies 32 Intra-aortic balloon pumps

### **GENERAL MEDICAL EXPERIENCE**

My medical house physician and SHO posts provided experience of the major medical specialties. As an SHO/Registrar in Oxford I was usually "on-take" on a full shift, 1-in-3 rota, admitting ~25 patients in a 12 hour period. As registrar I was the most senior resident member of the admitting team in the John Radcliffe Hospital and supervised an SHO and two house officers.

As General Medical Registrar at the Royal Gwent Hospital I admitted 25-30 patients in a 12 hour period and worked a 1-in-6 rota. I supervised the in-patient management of 20 to 50 medical patients and did 3 General Medical/Cardiology outpatient clinics per week. This provided a wealth of experience of routine and emergency general medicine. I am fully competent in the techniques of lumbar puncture, pleural aspiration/biopsy, chest drain placement, abdominal paracentesis and rigid sigmoidoscopy.

More recently, I have undertaken ‘high intensity’ medicine at King’s College Hospital (01.04.01-30.06.02), doing a 1-in-7 acute general medical intake with Drs Edmonds and Thomas (Firm B), attending the post-take and weekly ward rounds and attending one general medical outpatient clinic per week. I obtained my GIM CCST on 31.10.02.

### **CONSULTANT EXPERIENCE**

Since my Consultant appointment in April 2003, I have undertaken the following projects:-

1. Established a ‘fast-track’ revascularisation pathway for patients from University Hospital of Lewisham
2. Established a dedicated ‘Valvular Heart Disease’ follow-up clinic
3. Assumed the role of ‘Cardiology Outpatients Champion’
4. Clinical lead for ‘Local Medical Induction’
5. Arranged the ‘King’s Cardiac Centre State-of-the-art Research and Therapeutics’ day on Dec 11<sup>th</sup> 2003
6. Established a database for all patients undergoing primary PCI at King’s and undertaken a 6 month audit of these patients
7. Established a monthly CCU meeting

### **COMMITTEES**

Member of the writing committee for the Joint ACC/AHA guidelines on ‘Physiological assessment of lesion severity in the Catheter Laboratory

International Editorial Board – *HEART*

Research and Development Committee, King’s College Hospital

## **TEACHING**

I enjoy teaching at all levels and since qualifying, I have regularly taught junior doctors, medical students, nurses and paramedical staff, both at formal teaching sessions and whilst on-call. Since entering higher specialist training in cardiology, I have taught the following:-

- 1) MRCP candidates on MRCP courses (Llandough Hospital) and informally at King's
- 2) Medical students (lectures and bedside teaching)
- 3) Cardiology nurses, on the "Critical Care" and "Cardiac Care" Certificate and Diploma level courses (University of Wales College of Medicine)
- 4) Cardiology technicians on the BTEC qualification course
- 5) Paramedics on the South Glamorgan certification course
- 6) Junior doctors from other specialties within King's College Hospital (PACES teaching)

I have arranged and taught on Calman training days for cardiology SpRs at King's. I have also examined 3<sup>rd</sup> year final OSCE exams.

## **MEMBERSHIP OF LEARNED SOCIETIES**

Member, British Cardiac Society

Member, British Cardiovascular Intervention Society

Collegiate Member, Royal College of Physicians of London

Member, British Society of Cardiovascular Research / International Society of Heart Research

## **MANAGEMENT/ADMINISTRATION**

As the senior interventional trainee at King's I had a broad range of management and administrative duties. I was responsible for listing of all elective patients attending for a procedure. I also wrote the daily catheter lists and oversaw the day-to-day running of the catheter laboratory. This involved close liaison with senior medical and nursing colleagues. I reported all the angiograms/interventional procedures on 4 days per week and liaised with GPs to maintain good communication after patient discharge. I also ensured that there was an adequate number of trainees present in the catheter laboratory to perform procedures on the list. In collaboration with the bed manager, I co-ordinated in-patient hospital transfers and arranged their procedures. I attended and contributed to the monthly Care Group meetings and chaired the monthly journal club for the junior staff.

Administrative duties in previous posts include responsibility for the permanent pacing service at the Royal Gwent Hospital where I received all referrals for pacing, arranged admissions and theatre lists, performed all permanent pacing procedures and wrote the appropriate post-procedural reports. I also supervised temporary pacing by other SpRs.

I have attended the Management Development Course at King's College Hospital (May 2002).



## **AUDIT AND CLINICAL GOVERNANCE**

I have been responsible for the acquisition and presentation of data for the monthly departmental mortality and morbidity meetings, in which surgical and cardiological activity and complications are discussed. Annual mortality and morbidity and 30-day interventional data are also presented in this forum.

In previous posts I have completed and presented several clinical audit projects, including PTCA in acute myocardial infarction and temporary cardiac pacing. I have also performed and presented several anonymous casenote audits.

### **Quality**

As the senior trainee in the catheter laboratory I had responsibility for supervising more junior specialist registrars and provided cover for procedures, assisting colleagues to ensure that high standards are maintained, both in the catheter laboratory and on the wards.

### **Clinical Guidelines**

I have collaborated with the General Physicians at King's College Hospital to develop guidelines for cardiac investigation/treatment prior to major non-cardiac surgery. I have also previously been involved in the development of guidelines for the management of cardiological emergencies and the periprocedural management of patients undergoing permanent pacing.

### **Personal Development**

I regularly attend national and international meetings both to present original research and to further my cardiological and interventional education.

## **RESEARCH**

### **Basic Science Research and PhD thesis**

I completed an MRC Clinical Training Fellowship in 1999, from which I obtained a PhD (entitled 'Endothelial modulation of myocardial function in left ventricular hypertrophy and heart failure') under the supervision of Prof Ajay Shah, in the Department of Cardiology, University of Wales College of Medicine. My work described how endothelial dysfunction contributes to abnormalities of myocardial relaxation in pressure-overload LVH and examined the potential mechanisms underlying this phenomenon. This work was short-listed for the British Cardiac Society Young Research Workers Final and awarded 2<sup>nd</sup> Prize. Although my research interests are now more clinical, this period of basic science provided a sound training in research methodology.

### **Clinical Research**

During my Interventional Fellowship at the OLV Cardiovascular Center in Aalst, Belgium, I initiated a number of studies involving the use of the intracoronary pressure wire, including the assessment of FFR measurement in patients undergoing multivessel percutaneous intervention, validation of thermodilution CFR using a mathematical model and the use of FFR to assess myocardial viability. I intend to continue these studies in a collaborative way and have recently submitted a BHF project grant application for a study examining the use of the pressure wire to determine myocardial contractile recovery post-myocardial infarction.

At King's, I participate in catheter laboratory studies examining the role of the endothelium in the modulation of LV function, using acute intracoronary administration of endothelial agonists and conductance catheters to perform LV pressure-volume analysis. I have also conducted a retrospective analysis investigating the natural history of asymptomatic patients with severe in-stent restenosis.

I currently have a research fellow and have applied for a BHF Junior Research Fellowship on his behalf.

I have previously participated in a number of clinical, catheter laboratory-based projects, including studies examining:-

1. The role of endogenous endothelin on myocardial function in normal subjects and those with dilated cardiomyopathy. This study utilized LV micromanometer pressure recording and an intracoronary infusion of an endothelin antagonist (*published in Circulation*).
2. The role of endogenous endothelin on coronary vasomotor tone in patients with normal coronary arteries, using quantitative coronary angiography and the intracoronary Doppler flow-wire (*published in JACC*).
3. The endogenous release of bradykinin during coronary angioplasty in humans, with selective coronary sinus blood sampling (*published in Eur J Clin Invest*).
4. The role of nitric oxide in the force-frequency response in the normal human heart and in dilated cardiomyopathy (*published in Circulation*).
5. The role of nitric oxide in the Frank-Starling response in the normal human heart (left ventricular micromanometer pressure recording and IVC balloon occlusion).

I have participated in and presented a large prospective, randomised trial comparing myocardial preservation and neurological outcome after two different cardioplegic techniques.

My BSc project on the arterial supply of the pharynx (1988) involved both basic laboratory techniques and novel angiographic methods.

## **RESEARCH GRANTS**

- 'Endothelial modulation of myocardial function in left ventricular hypertrophy and heart failure' **MRC Clinical Training Fellowship**, University of Wales College of Medicine, November 1996-October 1999 (£90,100 over 3 years).
- 'The role of tumour necrosis factor- $\alpha$  in the transition of left ventricular hypertrophy to heart failure' **British Heart Foundation Junior Research Fellowship**, for Dr Nick Gall, - Joint supervision with Prof. Ajay Shah, Department of Cardiology, GKT School of Medicine, London. Awarded July 1999 (£94,838 over 2 years).
- **British Heart Foundation Advanced Training Scholarship**, Interventional Fellowship, OLV Cardiovascular Centre, Aalst, Belgium. July-December 2002 (£22,880).

- ‘Endothelium-dependent regulation of myocardial function in patients with cardiac hypertrophy and failure.’ Principal Investigator, **British Heart Foundation Project Grant**, with Prof Ajay Shah and Dr MT Kearney, GKT School of Medicine. Awarded August 2002 (£108,000).
- ‘Exploring the effects of the metabolic syndrome on coronary microvascular function in patients with coronary artery disease’ **British Heart Foundation Junior Research Fellowship** for Dr Narbeh Melikian – submitted.

## **PEER REVIEW**

I have refereed manuscripts for several peer-reviewed journals, including the *European Heart Journal*, *Journal of Molecular and Cellular Cardiology*, *Cardiovascular Research*, *Heart* and *Intensive Care Medicine*. I have also reviewed grant applications for the UK Medical Research Council.

## **PUBLICATIONS**

### **Original Scientific Papers**

**MacCarthy PA**, Kearney MT, Nolan J, Lee AJ, Prescott RJ, Shah AM, Brooksby WP, Fox KAA. Prognosis in heart failure with preserved left ventricular systolic function: prospective cohort study. *British Medical Journal* 2003; 327: 78-79.

**MacCarthy PA**, Grieve D, Li JM, Dunster C, Kelly F, Shah AM. Impaired endothelium-dependent regulation of ventricular relaxation in cardiac hypertrophy: Role of reactive oxygen species and NADPH oxidase. *Circulation* 2001; 104: 2967-2974.

Cotton JM, Kearney MT, **MacCarthy PA**, Grocott-Mason RM, Richardson PJ, Shah AM. Effects of nitric oxide synthase inhibition on basal function and the force-frequency relationship in the normal and failing human heart in vivo. *Circulation* 2001; 104: 2318-2323.

**MacCarthy PA\***, Grieve D\*, Gall NP, Cave A, Shah AM. Divergent biological actions of coronary endothelial nitric oxide during progression of cardiac hypertrophy. *Hypertension* 2001; 38: 267-273. (\* Joint first author)

**MacCarthy PA**, Pegge NC, Prendergast BD, Shah AM, Groves PH. The physiological role of endogenous endothelin in the regulation of human coronary vasomotor tone. *Journal of the American College of Cardiology* 2001; 37: 137-143.

**MacCarthy PA**, Shah AM. Impaired endothelium-dependent regulation of ventricular relaxation in pressure-overload cardiac hypertrophy. *Circulation* 2000; 101: 1854-1860.

**MacCarthy PA**, Grocott-Mason R, Prendergast BD, Shah AM. Contrasting inotropic effect of endogenous endothelin in the normal and failing human heart: studies with an intracoronary ET<sub>A</sub> receptor antagonist. *Circulation* 2000; 101: 142-147.

**MacCarthy PA**, Prendergast BD, Williams J, Penny WJ, Shah AM. Myocardial bradykinin production during coronary balloon angioplasty in humans. *European Journal of Clinical Investigation* 1999; 29: 571-576.

Anning PB, Prendergast BD, **MacCarthy PA**, Shah AM, Buss DC, Lewis MJ. ATP is involved in the myocardial and vascular effects of exogenous bradykinin in the isolated ejecting guinea pig heart. *American Journal of Physiology* 1999; 277: H818-H825.

Musumeci F, Feccia M, **MacCarthy PA**, Ellis GR, Mammana L, Brinn F, Penny WJ. Prospective randomised trial of single clamp technique versus intermittent ischaemic arrest: myocardial and neurological outcome. *European Journal of Cardiothoracic Surgery* 1998; 13: 702-709.

Prendergast BD, **MacCarthy PA**, Wilson J, Shah AM. Nitric oxide enhances the inotropic response to  $\beta$ -adrenergic stimulation in the isolated guinea-pig heart. *Basic Research in Cardiology* 1998; 93: 276-284.

Mercer NSG, **MacCarthy PA**. The arterial basis of pharyngeal flaps. *Plastic & Reconstructive Surgery* 1995; 96(5): 1026-1037.

Mercer NSG, **MacCarthy PA**. The arterial supply of the palate: implications for closure of palatal clefts. *Plastic & Reconstructive Surgery* 1995; 96(5): 1038-1044.

#### Submitted/In preparation

**MacCarthy PA**, Berger A, Barbato E, Wijns W, Heyndrickx GR, De Bruyne B. Measurement of coronary flow reserve using the intracoronary pressure wire. *Submitted to Cath Cardiovasc Int*

Berger A, MacCarthy PA, [Siebert U](#), Carlier S, Wijns W, Heyndrickx G, Bartunek J, Vanermen H, De Bruyne B. [Relationship Between Pre-Operative Severity of the Native Coronary Artery Stenosis and Long-Term Patency of Arterial-Internal Mammary Artery Bypass Grafts: Relationship Between Pre-Operative Severity of the Native Coronary Artery Stenosis.](#) *Submitted to Circulation.*

#### Reviews

**MacCarthy PA**, Wijns W. Percutaneous coronary revascularisation-the current state of the art. *Journal of the Royal College of Physicians of Edinburgh* 2003; 33: 168-174.

**MacCarthy PA**, Shah AM. Oxidative stress and heart failure. *Coronary Artery Disease* 2003; 14: 109-113.

Shah AM, **MacCarthy PA**. Paracrine and autocrine effects of nitric oxide on myocardial function. *Pharmacology and Therapeutics* 2000; 86: 49-86.

**MacCarthy PA**, Shah AM. The role of nitric oxide in the regulation of myocardial relaxation and diastolic function. *Asia Pacific Heart Journal* 1998; 7(1): 29-37.

**MacCarthy PA**. Assessing and Counselling Trainees. *Journal of the Royal College of Physicians* 1995; 29(1): 53-56.

### Book Chapters

**MacCarthy PA**, Thomas MR. Brachytherapy. In 'The Year in Interventional Cardiology-2003' Banning AP, De Feyter P (eds). 2003. Clinical Publishing Services Ltd (in press).

De Bruyne B, **MacCarthy PA**, Pijls NHJ, Columbo A, Di Mario C. Complex lesions in the drug-eluting stent era: Diffuse disease, sequential stenoses and bifurcation. Guide stenting by IVUS and/or physiologic lesion assessment. In Textbook of Stenting. 2002. Stone G, Leon M (eds). In press.

Byrne J, **MacCarthy PA**. Coronary physiology. Lecture notes on cardiac anaesthesia and intensive care. J. Mackie (ed). 2003 (in press).

**MacCarthy PA**. Practical procedures in cardiology. *Medicine*. 2001 Cardiovascular V. 30; 7: 202-207. The Medicine Publishing Group. Hall RJ, Banning AP, Prendergast BD (ed). July 2002.

**MacCarthy PA**, Shah AM. The role of nitric oxide in cardiac ischaemia reperfusion. In Handbook of Experimental Pharmacology. 2000 Volume 143 Meyer B (ed). Springer-Verlag.

### Case Reports

**MacCarthy PA**, Berger A, De Bruyne B. Low gradient, low output aortic stenosis. *Heart* 2003; 89: 474.

**MacCarthy PA**, Worrall A, McCarthy G, Davies J. The use of transthoracic echocardiography to guide thrombolytic therapy during cardiac arrest due to massive pulmonary embolism. *Emergency Medicine Journal* 2002; 19: 178-179.

### Abstracts

Berger A, **MacCarthy PA**, Carlier S, Wijns W, Heyndrickx GR, De Bruyne B. Relationship between the pre-operative severity of the native coronary artery stenosis and the long-term patency of arterial bypass grafts. *Circulation* 2003 (in press).

**MacCarthy PA**, Berger A, Bartunek J, Barbato E, Wijns W, Heyndrickx GR, De Bruyne B. Measurement of coronary flow reserve with the intracoronary pressure wire. *European Heart Journal* 2003; 24 (abstr suppl): 265.

Berger A, **MacCarthy PA**, Carlier S, Wijns W, Heyndrickx GR, De Bruyne B. Relationship between the pre-operative severity of the native coronary artery stenosis and the long-term patency of arterial bypass grafts. *European Heart Journal* 2003; 24 (abstr suppl): 643.

Berger A, Botman C, **MacCarthy PA**, Wijns W, Heyndrickx GR, Pijls NHJ, De Bruyne B. Outcomes of multivessel patients with one vessel deferred on the basis of fractional flow reserve measurements. *European Heart Journal* 2003; 24 (abstr suppl): 425.

**MacCarthy PA**, Kearney MT, Nolan J, Lee AJ, Prescott RJ, Shah AM, Brooksby WP, Fox KAA. Clinical characteristics and prognosis of patients with chronic heart failure and preserved left ventricular systolic function. *Heart* 2003; 89 (suppl 1): A5.

Berger A, **MacCarthy PA**, Heyndrickx GR, Wijns W, De Bruyne B. Fractional flow reserve-guided deferral of intervention: long term outcome in multivessel revascularization. *Heart* 2003; 89 (suppl 1): A54.

**MacCarthy PA**, Kearney MT, Lee AJ, Fox KA, Prescott RJ, Shah AM, Eckberg DL, Brooksby WP, Nolan J. Characteristics and outcome in patients with chronic heart failure and preserved ejection fraction in the UK-HEART study. *Circulation* 2002; 106 (suppl II): II-679.

Platts D, Thomas M, **MacCarthy P**, Monaghan M. The impact of hand carried ultrasound devices (HCU) in the cardiac outpatient clinic upon the referral patterns to the echo department. *Heart* 2002; 88 (suppl IV): 33.

**MacCarthy PA**, Rance K, Cotton JM, Jewitt DE, Wainwright RJ, Thomas MR. Severe angiographic in-stent restenosis carries a good prognosis in the absence of symptoms. *Heart* 2002; 87 (suppl II): 39.

Grieve DJ, Gall NP, **MacCarthy PA**, Shah AM. Contrasting mechanisms underlie impaired NO-dependent control of ventricular relaxation in compensated and decompensated cardiac hypertrophy. *Circulation* 2001; 104 (suppl II): II-571.

Cotton JM, Kearney MT, **MacCarthy PA**, Grocott-Mason RM, Richardson PJ, Shah AM. Effect of nitric oxide synthase inhibition on the force-frequency relationship in the normal and failing human heart. *Circulation* 2000; 102 (suppl II): II-804.

Cotton JM, Kearney MT, **MacCarthy PA**, Grocott-Mason RM, Richardson PJ, Shah AM. Effect of nitric oxide synthase inhibition on the force-frequency relationship in the normal and failing human heart. *European Heart Journal* 2000; 21 (abstr suppl): 422.

**MacCarthy PA**, Lord R, Shah AM. Tumour necrosis factor- $\alpha$  is expressed in pressure-overload LVH. *Heart* 2000; 83 (suppl I): 40.

**MacCarthy PA**, Shah AM. Endothelial dysfunction secondary to increased oxidative stress adversely affects diastolic function in pressure-overload LVH. *Heart* 2000; 83 (suppl I): 14.

Greive D, **MacCarthy PA**, Shah AM. Divergent biological actions of nitric oxide during progression of cardiac hypertrophy. *Heart* 2000; 83 (suppl I): 6.

Cotton JM, Kearney MT, **MacCarthy PA**, Grocott-Mason RM, Shah AM. Effect of nitric oxide synthase inhibition on the force frequency relationship in the normal and failing human heart. *Heart* 2000; 83 (suppl I): 39.

**MacCarthy PA**, Pegge NC, Prendergast BD, Shah AM, Groves PH. The physiological role of endogenous endothelin in the regulation of human coronary vasomotor tone. *Circulation* 1999; 100 (suppl 1): I-346.

**MacCarthy PA**, Prendergast BD, Pegge NC, Shah AM, Groves PH. Endogenous endothelin contributes to the maintenance of coronary vasomotor tone in humans. *European Heart Journal* 1999; 20 (abstr suppl): 654.

**MacCarthy PA**, Shah AM. Endothelial dysfunction secondary to oxidative stress impairs LV relaxation in pressure-overload hypertrophy. *European Heart Journal* 1999; 20 (abstr suppl): 375.

Grocott-Mason RM, **MacCarthy PA**, Mullins N, Shah AM. Effect of inhibition of nitric oxide synthase on the myocardial force-frequency relationship in humans *in vivo*. *Circulation* 1998; 98 (suppl 1): I-761.

**MacCarthy PA**, Grocott-Mason RM, Prendergast BD, Mullins N, Shah AM. Contrasting inotropic effects of endogenous endothelin in the normal and failing human heart *in vivo*. *Circulation* 1998; 98 (suppl 1): I-718.

**MacCarthy PA**, Grocott-Mason RM, Prendergast BD, Mullins N, Shah AM. Endogenous endothelin has a contrasting inotropic effect in the normal and failing human heart. *European Heart Journal* 1998; 19 (suppl): P1072.

**MacCarthy PA**, Yang Z-K, Prendergast BD, Shah AM. An improved model of gradual pressure-overload hypertrophy and heart failure in the guinea pig. *Heart* 1998; 79 (suppl I): 62.

**MacCarthy PA**, Shah AM. LV relaxant effect of captopril is blunted in pressure-overload hypertrophy, due to endothelial dysfunction. *Heart* 1998; 79 (suppl I): 62.

**MacCarthy PA**, Grocott-Mason R, Prendergast BD, Mullins N, Shah AM. Contrasting inotropic effect of endogenous endothelin in the normal and failing human heart. *Heart* 1998; 79 (suppl I): 20.

**MacCarthy PA**, Penny WJ, Ellis G, Davies L, Feccia M, Musumeci F. Neurological outcome and myocardial preservation after two different cardioplegic techniques - a prospective randomised trial. *Heart* 1998; 79 (suppl I): 30.

**MacCarthy PA**, Yang Z-K, Prendergast BD, Shah AM. An improved model of pressure-overload hypertrophy in the guinea pig. *Journal of Molecular and Cellular Cardiology* 1998; 30: A22.

**MacCarthy PA**, Shah AM. Endothelial dysfunction blunts LV relaxant effect of captopril in pressure-overload hypertrophy. *Journal of Molecular and Cellular Cardiology* 1998; 30: A178.

Prendergast BD, **MacCarthy PA**, Shah AM. The positive inotropic response to  $\beta$ -adrenergic stimulation is augmented by nitric oxide in the isolated heart. *Journal of Molecular and Cellular Cardiology* 1997; 29 (5): A129.

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Bellamy M, Goodfellow J, Tweddel AC, Brownlee M, Gorman ST, Ellis G, **MacCarthy PA**, Lewis MJ, Henderson AH. Oral L-Arginine improves exercise tolerance and flow-related endothelial dysfunction in microvascular angina. *Circulation* 1996; 94 (8) suppl I: 425.

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### **INVITED ORAL PRESENTATIONS**

“Drug-eluting stents – the story so far” Educational lecture for Medtronic European Sales Team, London, March 2004.

“Restenosis with bare metal stents – what do we know from the registries and controlled trials?” Interventional Cardiology Education 2003, 3<sup>rd</sup> meeting of the Working Group of Invasive and Interventional Cardiology, Hellenic Cardiological Society, Metsovo, Greece, Dec 2003.

“A physiological approach to intervention” St Bartholomew’s Hospital Audit/training day, Sept 2003.

“Back to Andreas - FFR in multivessel and diffuse disease” Chairman, Euro-PCR, Paris, May 2003.

“Tailoring DES by coronary pressure measurements” Speaker, Euro-PCR, Paris, May 2003.

“Echocardiography in the catheterization laboratory” Chairman, Euro-PCR, Paris, May 2003.

“Brachytherapy in the age of drug-eluting stents” Invited lecture and Chair at the Inaugural annual meeting of the Romanian Society of Endovascular Therapy, Brasov, Romania, May 2003.

“Thermodilution coronary flow reserve and intracoronary temperature measurement” Pressure wire training course: Coronary physiology for the Cath Lab, Crewe, Feb 2003.

“Impaired endothelium-dependent control of ventricular relaxation in cardiac hypertrophy: role of NADPH oxidase-derived reactive oxygen species” presented to the Working Group on Myocardial Function, European Society of Cardiology, France, March 2001.

“Endothelial dysfunction secondary to increased ROS production impairs diastolic function in left ventricular hypertrophy” Molecular Signalling in Cardiovascular Biology Symposium, GKT School of Medicine Annual Research Day, May 2000.



“Influence of endogenous endothelin on LV function and coronary flow in the normal and failing human heart” presented to the Working Group on Myocardial Function, European Society of Cardiology, Switzerland, January 1999.

“The role of nitric oxide in the relaxation abnormalities of left ventricular hypertrophy” presented to the Working Group on Myocardial Function, European Society of Cardiology, Switzerland, January 1998.

### **COURSES ATTENDED**

Management Development Course for SpRs, King’s College Hospital (May 2002)

Advanced Life Support Course, King’s College Hospital (September 2001)

“Angioplasty Training Course” - Guidant, Brussels (June 2001)

“Transoesophageal Echocardiography” - St Georges Hospital, London (March 2000)

“Master Class in Nuclear Cardiology” - Dr Vivian, Royal Cornwall Hospital Trust (Oct 1998)

“Practical Medical Statistics” - University of Wales College of Medicine (Jan-March, 1998)

“Practical Genetic Engineering and Molecular Biology” - UCL (July 1996)

"Advanced Pacing Course" - Pacesetter, London (February 1996)

"Sheffield Basic Angioplasty Course" - Northern General Hospital, Sheffield (October 1995)

"Echocardiography II" - Hewlett Packard, London (March 1995)

"Cardiff Angioplasty Course" - Department of Cardiology, UHW, Cardiff (February 1995)

Advanced Cardiac Life Support course, John Radcliffe Hospital, Oxford (1994)

POPUMET ionising radiation course, Bristol Royal Infirmary (1991)

### **INTERESTS OUTSIDE MEDICINE**

My family (including a 3 year old girl and a very active 5 year old son!)

DIY

Golf

Football

### **REFEREES**

Dr Martyn Thomas,  
Consultant Cardiologist,  
Department of Cardiology,  
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Denmark Hill

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Department of Cardiology,  
Guy's, King's and St Thomas' School of Medicine,  
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