

openheart Accelerating progress in cardiology: embracing open science

Pascal Meier  1,2

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Open science is not only compelling but also essential for the advancement of cardiology. Open science encompasses open-access publishing, data sharing and open source. It embodies a set of practices aiming for greater transparency and collaboration in research (figure 1). It is pivotal for driving innovation, ensuring research integrity and democratising access to scientific knowledge. The societal impact of open science extends beyond the scientific community, reaching also patients at the heart of our research. Open access to research findings is empowering patients to make informed decisions about their care.

Open science enhances research in multiple ways: importantly, it augments reach. For instance, open-access publishing has been linked to higher citation rates, often receiving more media coverage and more downloads, all contributing to increased visibility and a wider reach and impact of the research.¹ Open science can enhance the quality of research through rigorous prepublication and postpublication peer review and open discussion.² The COVID-19 pandemic has underscored the benefits of these open science principles: accelerating research efforts, avoiding 'research waste' and improving transparency and credibility.³

This study of Cobey *et al* reports on a survey exploring open science practices among international cardiology researchers sheds light on crucial insights.⁴ While there is a general awareness of open science, there exists a notable gap especially in training and implementation. This gap underscores the urgent need for structured educational resources and institutional support to empower the adoption of open science practices in cardiology research.

The survey serves as a foundational step towards understanding the current landscape of open science in cardiology. Moving forward, it is crucial to continue promoting open science practices, providing the

necessary support and resources and recognising the substantial benefits they offer. As we embrace open science, we pave the way for a more collaborative, transparent and impactful future in cardiovascular research. Defining and reducing barriers for open science, including improved training, is essential as also stated by the recent UNESCO recommendations and should be a collaborative approach involving funders, research institutions and journals to create a supportive environment.⁵

Open Heart is committed to playing a role in this endeavour by fostering a culture of openness and collaboration within the cardiology community. At *Open Heart*, we strongly encourage that data underlying a research paper be made publicly available, and all research articles must contain a 'data availability statement'.

Embracing open science is imperative for the future of cardiovascular medicine. I urge our readers, cardiologists and cardiovascular researchers to embrace open science practices and to advocate for their adoption in our field, for example, by publishing your research open access in order to make it publicly available, by

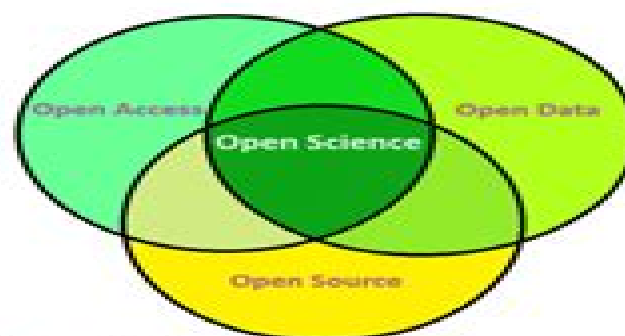


Figure 1 The main components of open science.



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¹Cardiology, Fribourg Hospitals, Fribourg, Switzerland

²Cardiology, Royal Brompton Hospital, London, UK

Correspondence to:
Dr Pascal Meier;
pascalmeier74@gmail.com

Progress In Cardiology 5 1

Albert A Gayle



Progress In Cardiology 5 1:

Progress in quantitative coronary arteriography Johan H. C. Reiber, P.W. Serruys, 2012-12-06 This is the fifth volume in this series on quantitative coronary arteriography QCA published over the last nine years Research and applications in this exciting field are covered in a total of 26 chapters by world renowned experts This book is subdivided into a total of 6 parts each emphasizing the latest progress in these respective fields In Part One a comprehensive overview is given of the current knowledge and research in endothelial function which is of eminent importance for the further understanding of the pathophysiology of coronary artery disease in patients Fortunately the use of QCA tools is not limited anymore to leading research institutes over the last several years these tools have been installed in many cardiology centers world wide To understand the current possibilities limitations and future expectations of QCA several relevant topics are presented in Part Two First of all the questions about why and how QCA systems should be validated both at the development site and at the application sites and whether data from different vendors and core laboratories can be pooled are discussed As the X ray cardiovascular world steadily moves into the digital imaging era differences and similarities between the conventional cinefilm and the modern digital approaches are presented Currently the widespread use of digital imaging is still hindered by the lack of proper archival and exchange media Requirements and possible solutions for this problem are handled in this section as well

Progress in Experimental Tumor Research F. Homburger, 1968

Progress in Biomedicine

, 2008-10 *Recent Progress in Failing Heart Syndrome* Shigetake Sasayama, Hiroyuki Suga, 2012-12-06 Heart failure is a syndrome caused by a heart dysfunction that leads to insufficient blood in the peripheral tissues for their metabolic demands This syndrome still remains an obscure clinical entity and even its definition is disputed It has become increasingly apparent that heart failure may relate not only to cardiac dysfunction but also to other physiological alterations involved in the maintenance of circulatory homeostasis In 1988 the Japanese Circulation Society organized a three year project for research on heart failure The research group consisted of ten investigators all relatively young but well recognized internationally for their research accomplishments This book represents a compilation of the achievements by this group during the past three years which have led to new insights into the pathophysiologic mechanisms of heart failure and diagnosis evaluation and treatment of this syndrome Contents include research into the cellular biology of congestive heart failure and a framework of pressure volume relationships enabling assessment of ventricular contraction energetics or coupling of ventricular properties and arterial load This conceptual framework is of vital significance particularly when we consider the failing heart as an energy depleted state An understanding of the neuroendocrine responses to explain the pathophysiology of congestive heart failure is perhaps the most important advance and has led to new developments in therapy This book also includes an analysis of mechanical factors including both regional and global ventricular functions and this is related to the understanding of the pathophysiology of congestive heart failure

Progress in Digital Angiocardiography P.H. Heintzen, J.H.

Bürsch,2012-12-06 According to Schopenhauer problems are usually passing through three stages in the first stage they are ignored or just smiled at in the second stage they are fought and in the third stage they are considered to be self evident just taken for granted Whereas digital subtraction angiography DSA has obviously reached stage three of that scale i e routine use in radiology digital angiocardiology in particular imaging the heart and coronary circulation is still on its way to the final goal the filmless heart catheterization laboratory for all invasive and interventional procedures A few pioneers have already completely abandoned the conventional cine coronary and angiocardigraphic technique others as we do still combine both digital and conventional methods in clinical routine but most cardiologists up till now stay sceptically aside We hope that at least some of the articles published in this volume may convince more and more cardiologists that digital imaging procedures are the method of choice in particular if quantitative assessment of the anatomical or functional status of the cardiovascular system is required pre and post operations or pre and post interventions Such a critical control of all therapeutic procedures be it by surgical catheter or medical interventions is indeed an urgent and widely under estimated or neglected requirement

Practice and Progress in Cardiac Pacing and Electrophysiology Ali Oto,2012-12-06 Developments in the electrical treatment of arrhythmias have been so fast over the last few years that access to available state of the art knowledge has become a major challenge The proceedings of scientific meetings are therefore most helpful in this regard This volume provides highlights of many of the recent and most important technological advances and concepts in cardiac electrotherapy written by the most prominent figures in the field for the internists clinical cardiologists and cardiologists who are practising in arrhythmias and antiarrhythmic therapy The book is divided into five parts each focusing on an exciting group of topics Part One is a highlight of some of the hit points in arrhythmology Part Two is a quick reference to the current concepts in non invasive electrocardiology Part Three cardiac pacing is enhanced by the introductory chapter of S Furman which gives the state of the art in electrical cardiac stimulation for 1995 This part also reviews the technical advances new perspectives in the indications of cardiac pacing as well as the management of complications Radiofrequency ablation as a challenging antiarrhythmic therapeutic strategy is thoroughly reviewed and the hottest topics are highlighted in Part Four Part Five is dedicated to implantable cardioverter defibrillators with several exciting topics including driving with implantable devices

Cardiology Current Topics and Progress Marcel Eliakim, Henry N. Neufeld,1970 *Progress in Neurological Surgery* H. Krakenbühl, P. E. Maspe, W. H. Sweet,1968-11-30 Progress in Biomedicine ,2008-10

Progress in Catheter Ablation Liong Bing Liem, Eugene Downar,2013-11-11 Catheter ablation is widely accepted as an effective and safe form of therapy for cardiac arrhythmia In many instances this curative procedure is considered as the first line of therapy if not the ultimate treatment of choice With the use of radiofrequency RF modality which has revolutionized the technology from a barotraumatic potentially injurious procedure using high voltage direct current DC shock to a safe and relatively painless one catheter ablation procedure now carries a very low risk and is extremely effective for certain types of

arrhythmia Its efficacy rate in curing supraventricular tachycardia involving an accessory pathway or dual atrioventricular nodal pathways has been near perfect and its application for certain types of atrial and ventricular arrhythmia have also been very satisfactory However conventional RF ablation has several well known limitations most notably is its ability to only produce relatively small point lesions rendering it effective only for an arrhythmia with a small and or a superficial target It was soon recognized that the technology would not likely to have significant utility in arrhythmia with a more widespread target such as atrial fibrillation or those which involve scarred and deep myocardial tissue such as ventricular tachycardia Indeed the application of conventional RF technology in these complex but common arrhythmia has yielded unsatisfactory results

Cumulated Index Medicus ,1976 Current Catalog National Library of Medicine (U.S.),1993 First multi year cumulation covers six years 1965 70 The Cardiovascular System Hussein Hassan Sabit,2025-06-30 The series Stem Cell Innovation in Health and is contributed by world renowned authors in the field Provides cutting edge research to understand stem cell functions used in disease and disorder treatments of the cardiovascular system Develops processes to bring stem cells from bench to bedside Includes up to date references on stem cell biology and function in common cardiovascular system diseases and disorders

Progress in Material Science and Engineering Igor V. Minin, Sergey Uchaikin, Alexander Rogachev, Oldřich Starý, 2021-04-05 This book presents recent developments and new directions in advanced control systems together with new theoretical findings industrial applications and case studies on complex engineering systems sensors materials science medicine non destructive testing and quality assurance With a breakthrough in technology the modern world is on the verge of new industrial revolution at the stage of digital transformation when innovations from various industries collaborate and change each other Innovations are the basis of the developed products and technologies They are used to create new developments and advances as well as improve the state of the art processes However the digital transformation both opens new opportunities and introduces additional risks The successful industrial modernization is characterized by the combination of stable manufacturing regulatory structure with the new technological approaches of the Fourth Industrial Revolution Developments and advances of School of Non Destructive Testing relate to technological trends in the areas of systems decision making and control in the fields of aerospace systems robotics and automation power systems and sensor networks

Current Bibliography of Epidemiology ,1971 Monthly with annual cumulations Comprehensive current index to periodical medical literature intended for use of practitioners investigators and other workers in community medicine who are concerned with the etiology prevention and control of disease Citations are derived from MEDLARS tapes for Index medicus of corresponding date Arrangement by 2 sections i e Selected subject headings and Diseases organisms vaccines No author index

Technical Abstract Bulletin ,1979 **Ferri's Clinical Advisor 2013,5 Books in 1, Expert Consult - Online and Print,1** Fred F. Ferri,2012-01-01 With the 2013 edition of Ferri's Clinical Advisor you can access current diagnostic and therapeutic information on more than 700 common medical

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Index Medicus, 2004 Vols for 1963 include as pt 2 of the Jan issue Medical subject headings

Handbook of Forensic Medicine Burkhard Madea, 2014-03-17 Forensic Medicine encompasses all areas in which medicine and law interact This book covers diverse aspects of forensic medicine including forensic pathology traumatology and violent death sudden and unexpected death clinical forensic medicine toxicology traffic medicine identification haemogenetics and medical law A knowledge of all these subdisciplines is necessary in order to solve routine as well as more unusual cases Taking a comprehensive approach the book moves beyond a focus on forensic pathology to include clinical forensic medicine and forensic toxicology All aspects of forensic medicine are covered to meet the specialist needs of daily casework Aspects of routine analysis and quality control are addressed in each chapter The book provides coverage of the latest developments in forensic molecular biology forensic toxicology molecular pathology and immunohistochemistry A must have reference for every specialist in the field this book is set to become the benchmark for the international forensic medical community

The 5-Minute ICU Consult Jose R. Yunen, Gyorgy Frendl, 2012-01-06 This new addition to the 5 Minute Clinical Consult Series covers all aspects of adult critical care Following the highly successful format of the series each entry consists of a two page spread covering basics such as definition and pathophysiology and progressing through diagnosis to medications and synopses of surgical interventions and complications Over 200 topics are covered Algorithms for common and complex diagnoses and treatment options are included in a special section

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