



Guzik, T. J. et al. (2018) What matters in Cardiovascular Research? Scientific discovery driving clinical delivery. *Cardiovascular Research*, 114(12), pp. 1565-1568.

There may be differences between this version and the published version. You are advised to consult the publisher's version if you wish to cite from it.

<http://eprints.gla.ac.uk/169739/>

Deposited on: 26 September 2018

Enlighten – Research publications by members of the University of Glasgow_
<http://eprints.gla.ac.uk>

Title: What matters in *Cardiovascular Research*? Scientific discovery driving clinical delivery

Authors: Tomasz J Guzik^{1,2}, Charalambos Antoniades³; Andrew H Baker⁴; David G. Harrison^{5,6}; Christopher M Loughrey¹; Pasquale Maffia^{1,7,8}, Elizabeth Murphy⁹, Stuart A Nicklin¹, Karlheinz Peter¹⁰, Jeremy Pearson¹¹, Barbara Casadei¹² on behalf of the *Cardiovascular Research* Editorial Team

1 Institute of Cardiovascular and Medical Sciences, University of Glasgow, Glasgow, UK

2 Department of Internal and Agricultural Medicine, Jagiellonian University Collegium Medicum, Krakow, Poland

3 Division of Cardiovascular Medicine, University of Oxford, Oxford, UK

4 Centre for Cardiovascular Sciences, Queen's Medical Research Institute, Edinburgh, UK

5 Department of Molecular Physiology and Biophysics, Vanderbilt University, Nashville, TN, USA

6 Division of Clinical Pharmacology, Department of Medicine, Vanderbilt University Medical Centre, Nashville, TN, USA

7 Institute of Infection, Immunity & Inflammation, University of Glasgow, Glasgow, UK

8 Department of Pharmacy, University of Naples Federico II, Naples, Italy

9 Systems Biology Centre, NHLBI, NIH, Bethesda, MD, USA

10 Baker Heart and Diabetes Institute, Melbourne, Australia

11 British Heart Foundation, Greater London House, London, UK

12 Division of Cardiovascular Medicine, Radcliffe Department of Medicine, University of Oxford, John Radcliffe Hospital, UK

Corresponding author:

Professor Tomasz Guzik, MD PhD

Glasgow Cardiovascular Research Centre

126 University Place

Glasgow, G12 8TA

United Kingdom

tomasz.guzik@glasgow.ac.uk

(+44)141 330 7590

1. Our Editorial vision for *Cardiovascular Research*

Cardiovascular Research, which recently celebrated its 50-year anniversary of service to the cardiovascular community, strives to be recognized as the *number one* journal for basic and translational cardiovascular research (1). Our major goal is to foster productive interactions between basic and clinical cardiovascular scientists worldwide. This mission is based on the Journal's motto: "**scientific discovery drives clinical delivery**".

We strive to publish original and innovative basic, translational, and clinical research that enhances the understanding of disease mechanisms and identifies or validates new therapeutic targets. We welcome and encourage submissions from across the globe, recognizing the worldwide growth in excellent cardiovascular research. We provide rapid, detailed and professional assessment of manuscripts with an emphasis on originality; mechanistic insight; impact; methodological robustness; translational potential and reproducibility (Figure 1A).

Cardiovascular Research is the European Society of Cardiology's (ESC) flagship journal for basic and translational cardiovascular research. As such, we aim to establish strong partnerships with the ESC Working Groups and Councils (2-8) and with researchers at the forefront of the cardiovascular field. We foster a supportive environment for investigators and bring our readers the most relevant discoveries. To this end, we also aim to actively promote and support young investigators through our close partnerships with the ESC *Scientists of Tomorrow* (9).

Our aspiration is to be truly interdisciplinary. To this end, our Deputy and Associate Editors and Editorial Board members represent all major cardiovascular sub-specialities. *Cardiovascular Research* should not be considered a "cardiomyocyte journal" or a "Vascular Journal", but one that welcomes all relevant science. Expanding the Journal's global presence is a key aim of the new Editorial team. We have actively sought the involvement of scientific world-leaders from over 20 different countries within Europe and beyond, including Asia, Australia, Canada and the United States.

The Editorial team is honoured to represent the Journal at major international conferences, including the main ESC Congress and Frontiers in Cardiovascular Biology (FCVB) (10). We also welcome the opportunity to interact with international researchers and potential authors at meetings such as the Oriental Conference of Cardiology, International Society of Heart Research, European and International Vascular Biology Societies, European Society for Microcirculation and the American Heart Association (AHA) meetings.

2. Scope of submissions – strengths and opportunities

We are delighted to see an increase in the Journal's Impact Factor, now standing at **6.29**, the highest ever. We are optimistic that this will increase substantially in the next several years. Submissions to the Journal have increased such that we expect to handle approximately 1400 papers in 2018. We take this opportunity to thank all the authors who have submitted manuscripts to us. *Cardiovascular Research* will continue to focus on its traditional areas of strength, whilst branching out into previously under-represented fields (Figure 1B). The Journal will place a renewed focus on the translational application of basic science discovery to ensure *Cardiovascular Research* stays relevant in an increasingly cross-disciplinary field. The Editors recognise that the translation of basic research is the ultimate goal, but we realize that this translation often takes many years. We therefore also seek to publish promising basic discoveries that have yet to reach the stage of translation.

3. Maximising the visibility and impact of your research

Cardiovascular Research will make every effort to ensure that each published manuscript receives maximum exposure. In addition to the Journal's global readership (over 2 million downloads per year and over 22,000 total citations in 2017), through our close working relationship with the ESC and Oxford University Press (OUP) we can offer several highly effective platforms for maximising the visibility and impact of your research. Papers published in the Journal benefit from social media promotion through the OUP and ESC twitter (80,000 followers and counting). Articles of broad scientific interest can be highlighted in an Oxford University Press blog (OUPblog) in medicine (11) or through worldwide press releases (12). These receive wide mainstream media attention and attract high Altmetric scores. In addition, papers of high impact for the cardiovascular field can be included within the MyESC newsletter, reaching over 70,000 subscribers.

Articles published with the Journal are placed in Advanced Access on our website within two weeks of acceptance and can be accessed via the [ESC Journals App](#). Within each issue, selected "Editor's Choice" articles are made freely accessible. Every year, *Cardiovascular Research Onlife* will publish a list of the 20 most read articles published in the Journal. This service will acknowledge the outstanding contribution of our authors but also provide to our readership an overview of the hot topics in cardiovascular research. Another vehicle for recognising the contribution of our authors will be the newly formed "Best Cardiovascular Research Paper Prize" that will be awarded for the first time at the ESC Congress in 2018.

4. Unique features in *Cardiovascular Research*

Cardiovascular Research authors and readers will notice several changes when viewing our new table of contents. To increase the manuscripts' visibility and dissemination, the Editorial Office now requests a graphical abstract from authors to feature in the online table of contents. Subsections are now present in the table of contents to highlight the expanded portfolio of topics published in the Journal. Finally, to diversify the Journal's content and enrich the experience of our readers, the Editorial team are excited to introduce new article types.

4.1. Science in Practice: Methods and Scientific Guidelines

The Journal is known for its focus on scientific rigor and robust methodology; to promote this further, the Editorial team will invite a committee of experts to produce *Methodological Protocols* and *Guidelines for Basic and Translational Scientific Research*. This is also in response to a strong feeling amongst the cardiovascular research community that such guidelines are needed. These will be prepared together with the ESC Council for Basic Cardiovascular Sciences. Furthermore, the Editorial Team actively appeals to Working Groups to consider *Cardiovascular Research* as the place to disseminate position statements related to newly developed research techniques. From all investigators, *Cardiovascular Research* will continue to consider manuscripts that describe new methodologies and research tools that have the potential to greatly influence their respective field, generate novel ideas, and find broad application to cardiovascular science and beyond.

4.2. Research Letters and Fast-track Communications

"Research Letters" are a new manuscript category of the Journal, created to meet the need for rapid dissemination of novel findings with high translational potential. A further new manuscript category, "Fast-track Communications", will offer a slightly longer format for rapid publication of high scientific priority findings. We will rely on our Fast Track Reviewers and Editorial Board Members to help in ensuring a particularly rapid peer-review process. The guidelines for preparing a

Research Letter or Fast-track Communication are given in the updated online [Instructions for Authors](#).

4.3 Clinical and Translational Research

The new Editorial Team is extending the scope of *Cardiovascular Research* to include high-quality mechanistic studies in humans. We will launch a designated "Clinical/Translational Cardiovascular Research Section" within the Journal where the Editorial Team will actively seek high quality studies that are either well-designed clinical studies with mechanistic insights or genuinely bench-to-bedside studies using mixed clinical and basic science approaches. This section is being developed in close collaboration with *European Heart Journal* and other Journals of the ESC family. We strongly encourage submissions of epidemiological or genetic studies that identify new targets or biomarkers that may warrant further mechanistic interrogation by basic research. Mendelian Randomization studies are also welcome.

4.4 Expedited handling of Manuscripts transferred from EHI

The Journal takes advantage of our strong relationship with the ESC family of journals, including the *European Heart Journal*, by providing expedited handling for authors who wish to transfer their basic or translational manuscripts to *Cardiovascular Research*. This has many benefits for the author including the potential to publish their work faster, without the need to reformat their submission and their work remaining within the highly prestigious ESC Journal family. For these manuscripts we typically rely on existing reviews and a detailed formal review and assessment from a *Cardiovascular Research* handling editor. In some circumstances, we will consider transfers from journals outside the ESC family.

4.5 Review articles and Spotlight Issues

Cardiovascular Research welcomes the submission of high quality review articles; the Editorial Team encourages potential authors to send a pre-submission enquiry and short table of content to the Editorial Office. The Editors expect that Review Articles will link basic findings to potential clinical application. We strongly encourage a systematic review to support the conclusions of Review Articles. We will also continue to commission state of the art Review Articles from key opinion leaders and publish Spotlight Issues on hot topics in cardiovascular research. Our recent Spotlight Issue on Smooth Muscle Cell Biology brought together authors from over ten countries with expertise ranging from epigenetics to cell plasticity (13). For commissioned Review Articles, we offer an excellent medical illustrations service to create figures that summarise the main messages of the article.

5. Cardiovascular Research Onlife

Supporting young investigators is a major goal of the ESC. As part of the ESC Journals family, *Cardiovascular Research* fully supports this mission. One way in which the Journal has done this is through its [Cardiovascular Research Onlife](#) platform launched in April 2017 in collaboration with the [ESC Scientists of Tomorrow](#) (14). This is a portion of journal that includes articles co-authored by young investigators and a more senior author. The Clinical Commentaries and Editor's Corner sections provide succinct, high quality summaries of recent practice-changing clinical trials and hot topics that have implications for clinical and basic investigation. In collaboration with the ESC Scientists of Tomorrow, the "Spotted by the Scientists of Tomorrow" feature highlights recent high impact non-cardiovascular studies that have implications for cardiovascular research (15). In addition, the ESC Scientists of Tomorrow participate in the "Scientists on the Spot" initiative, where the Journal records short video interviews with top cardiovascular Scientists about novel techniques

and hot topics in Cardiovascular Medicine. The Editor-in-Chief also records a set of interviews with iconic figures of Cardiovascular Sciences, in a new "Cardiovascular Research Colloquia" category. These short and often inspiring conversations are being presented as videos on our website and published in print within *Cardiovascular Research Onlife*.

6. Conclusion

In conclusion our aim is to build upon an excellent reputation for scientific rigor and quality, developing into a reliable and stimulating platform for the exchange of scientific knowledge attracting the highest impact cardiovascular publications. As one of the European Society of Cardiology's (ESC) most important assets, our ambition is to serve as a bridge between basic science and clinical research, while maintaining focus on high quality basic discovery.

Acknowledgements

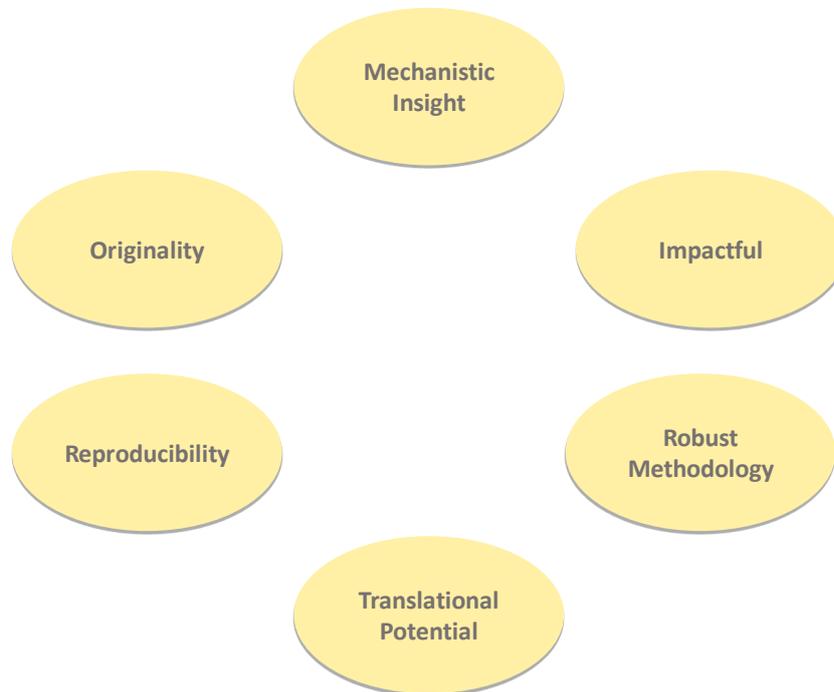
The authors wish to acknowledge the assistance of Heather Y. Small in the drafting and preparation of this manuscript.

Figure Legend

Figure 1: What we publish in Cardiovascular Research. Panel (A) delineates the main features we seek in manuscripts submitted to *Cardiovascular Research*. Panel (B) describes the areas of strength and potential for growth identified by the Editorial team; the Journal encourages submissions from these topics

Figure

A



B

Areas of strength

Cardiac disease and heart failure
Cardiac electrophysiology and arrhythmias
Cardioprotection
Right ventricle and pulmonary circulation
Vascular biology

Areas with growth potential for submissions

Big data and machine learning
Cardiovascular Immunology
Cardiovascular Immunology
Diabetes, obesity and metabolic syndrome
Diagnostics, imaging and novel technologies
Gene editing and DNA/RNA biology and therapy
Stem cell biology and gene therapy

References

1. Guzik TJ. Cardiovascular Research: new challenges and new horizons. *Cardiovasc Res.* 2018;114(1):1-2.
2. Hausenloy DJ, Garcia-Dorado D, Botker HE, Davidson SM, Downey J, Engel FB, et al. Novel targets and future strategies for acute cardioprotection: Position Paper of the European Society of Cardiology Working Group on Cellular Biology of the Heart. *Cardiovasc Res.* 2017;113(6):564-85.
3. Perrino C, Barabasi AL, Condorelli G, Davidson SM, De Windt L, Dimmeler S, et al. Epigenomic and transcriptomic approaches in the post-genomic era: path to novel targets for diagnosis and therapy of the ischaemic heart? Position Paper of the European Society of Cardiology Working Group on Cellular Biology of the Heart. *Cardiovasc Res.* 2017;113(7):725-36.
4. Caporali A, Back M, Daemen MJ, Hofer IE, Jones EA, Lutgens E, et al. Future directions for therapeutic strategies in post-ischaemic vascularization: a position paper from European Society of Cardiology Working group on Atherosclerosis and Vascular Biology. *Cardiovasc Res.* 2018.
5. Sluijter JPG, Davidson SM, Boulanger CM, Buzás EI, de Kleijn DPV, Engel FB, et al. Extracellular vesicles in diagnostics and therapy of the ischaemic heart: Position Paper from the Working Group on Cellular Biology of the Heart of the European Society of Cardiology. *Cardiovascular Research.* 2018;114(1):19-34.
6. Fiedler J, Baker AH, Dimmeler S, Heymans S, Mayr M, Thum T. Non-coding RNAs in vascular disease – from basic science to clinical applications: Scientific update from the Working Group of Myocardial Function of the European Society of Cardiology. *Cardiovascular Research.* 2018:cvy121-cvy.
7. Bondue A, Arbustini E, Bianco AM, Ciccarelli M, Dawson D, De Rosa M, et al. Complex Roads from Genotype to Phenotype in Dilated Cardiomyopathy: Scientific update from the Working Group of Myocardial Function of the European Society of Cardiology. *Cardiovasc Res.* 2018.
8. van der Velden J, Gabriele Tocchetti C, Varricchi G, Bianco A, Sequeira V, Hilfiker-Kleiner D, et al. Metabolic changes in hypertrophic cardiomyopathies: Scientific update from the Working Group of Myocardial Function of the European Society of Cardiology. *Cardiovasc Res.* 2018.
9. Small HY, Investigators FY. Recognizing young investigators at Frontiers in Cardiovascular Biology 2018. *Cardiovascular Research.* 2018;114(7):E53-E5.
10. Wojta J, Guzik T, Pearson JD. Pushing the frontiers of cardiovascular biology. *Cardiovasc Res.* 2018;114(3):e22.
11. Bruegmann T, Beiert T, Vogt CC, Schrickel JW, Sasse P. Optogenetic termination of atrial fibrillation in mice. *Cardiovasc Res.* 2018;114(5):713-23.
12. Carnevale L, D'Angelosante V, Landolfi A, Grillea G, Selvetella G, Storto M, et al. Brain MRI fiber-tracking reveals white matter alterations in hypertensive patients without damage at conventional neuroimaging. *Cardiovascular Research.* 2018:cvy104-cvy.
13. Bochaton-Piallat ML, Back M. Novel concepts for the role of smooth muscle cells in vascular disease: towards a new smooth muscle cell classification. *Cardiovasc Res.* 2018;114(4):477-80.
14. Antoniadou C, Small HY, Guzik T. The evolution of Cardiovascular Research Onlife: online and on demand. *Cardiovascular Research.* 2018;114(1):e9-e.
15. Sedej S. Ketone bodies to the rescue for an aging heart? *Cardiovasc Res.* 2018;114(1):e1-e2.