

## CURRICULUM VITAE

**MARCO METRA, M.D.**

### **I. Personal**

Citizenship status	Italian
Birthdate	September 13th, 1957
Birthplace	Parma, Italy
Marital status	Married, 3 children
Mailing address	Cardiology The Department of Medical and Surgical Specialties, Radiological Sciences, and Public Health c/o Cardiologia. Spedali Civili P.zza Spedali Civili 1 25123 Brescia
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## II. Current positions

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Full Professor in Cardiology at the Department of Medical and Surgical specialties, Radiological sciences and Public Health of the University of Brescia since December 2015

Director of the Institute of Cardiology of the Civil Hospital and University of Brescia since November 2012

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Editor-in-Chief of the European Journal of Heart Failure, official journal of the Heart failure Association of the European Society of Cardiology, impact factor, 6.968

Senior consulting Editor of the European Heart Journal, official journal of the European Society of Cardiology, impact factor 20.213

Executive Editor of the Journal of Cardiovascular Medicine, official journal of the Italian Federation of Cardiology, impact factor 1.658

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Co-chairman with Prof. John Teerlink, MD, University of San Francisco, CA, of RELAX-AHF-2, A Multicenter, Randomized, Double-blind, Placebo-controlled Phase III Study to Evaluate the Efficacy, Safety and Tolerability of Serelaxin When Added to Standard Therapy in Acute Heart Failure Patients, a trial aimed to assess the effects of serelaxin on 180 days mortality and in-hospital episodes of worsening heart failure in 6600 patients with acute heart failure. <https://clinicaltrials.gov/ct2/show/NCT01870778?term=serelaxin&rank=11>

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Author of more than 600 articles in PubMed included peer reviewed scientific journals, in addition to 272 book chapters, invited articles and congress abstracts

H index, calculated by google scholar, 87.

Total number of citations, based on google scholar, of 67 904

Ranked n. 42, position n. 93 in the H-index based Top Italian Scientists score for biomedical sciences

[http://www.topitalianscientists.org/Top\\_italian\\_scientists\\_VIA-Academy.aspx](http://www.topitalianscientists.org/Top_italian_scientists_VIA-Academy.aspx)

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Professor of cardiovascular disease for the School of Medicine, the School of detetics and the course Science and technology for population health and wealth of the University of Brescia

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Director of the postgraduate school of cardiology of the University of Brescia since 2012

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## **Education**

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1990 Fellowship in Internal Medicine, University of Parma

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1985 Fellowship in Cardiology, University of Parma

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1981 Degree in Medicine, University of Parma

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## **III. Training**

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1985 Research associate, Committee on Clinical Pharmacology, University of Chicago (Director, Leon I. Goldberg)

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1982 – 1985 Fellow, Institute of Cardiology, University of Brescia

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1978 – 1981 Internship, Institute of Cardiology, University of Parma

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## **IV. Academic Appointments**

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Since 1 Dec 2015 Full professor of Cardiology; University of Brescia

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1 Nov 2001 – 1 Dec 2015 Associate Professor of Cardiology; University of Brescia

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June 1986 – October 2001 Researcher, Institute of Cardiology; University of Brescia

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## **V. Hospital Appointments**

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1 November 2012 to now Head, Cardiology Institute of the Spedali Civili and University of Brescia

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2003 to 31 October 2012 Director, Unit for Teaching Activities and Applied Science, Department of Cardiology and Cardiothoracic Surgery, Spedali Civili di Brescia

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June 24<sup>th</sup> – Nov 21<sup>st</sup>, 2004 Temporary Director of the Cardiology Institute of the Hospital of Brescia.

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Since 1986 Staff physician, Institute of Cardiology; University of Brescia

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## VI. Teaching activities

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1990-	Professor of Clinical cardiology; Postgraduate school of cardiology. University of Brescia	
1990-	Professor of Cardiovascular Pathophysiology; Postgraduate school of cardiology. University of Brescia	
2001-	Professor of Cardiology; Faculty of Dentistry. University of Brescia	
2000-	Professor of Cardiology; Faculty of Medicine of the University of Brescia	
1997-	Professor of Cardiac rehabilitation. School of Physical Therapy. University of Brescia	
1999- 2000	Professor of Cardiovascular Pathophysiology; Faculty of Medicine of the University of Brescia	
1996-99	1996-99	Professor of angiology; Faculty of Medicine of the University of Brescia

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## VII. Grants

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2010-2014	Project BIOSTAT-CHF funded by the European Community FP7 Program. Chairman: Adriaan A. Voors, University of Groningen Medical Center. Principal investigator for Italy and leader for the protocol. 880,000 euros for the years 2010-14	
2014	SMART-ECG project financed by EULO (Ente Universitario Lombardia Orientale), principal investigator for the Cardiology unit, 21.250 euros for the year 2014	
2011-14	MEDIA project funded by the European Community	
1991- 20011	Grants from the Italian National Research Council	
1986	Grant of the Italian Ministry of Education for research in foreign countries.	

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## VIII. Scientific Societies Memberships

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Fellow of the Heart Failure Association of the European Society of Cardiology

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Fellow of the European Society of Cardiology

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Member of the Heart Failure Society of America

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Member of the American Heart Association Council on Circulation

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Member of the Italian Society of Cardiology

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#### **IX. Commitments in Scientific Societies**

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2015-2020 *Ex-officio* member of the Board of the Heart Failure Association (HFA) of the European Society of Cardiology (ESC) as Editor-in-Chief of the European Journal of Heart Failure

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2012-14 and  
2010-12 Elected counsellor of the Executive Committee of the Italian Society of Cardiology

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2008-10 and  
2010-12 Member of the Congress Program Committee (CPC) of the European Society of Cardiology

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2016 Scientific Reviewer for The European Research Area Network on Cardiovascular Diseases (ERA-CVD) 1st Joint Transnational Call on Heart Failure Research (JTC2016, <http://www.era-cvd.eu/256.php>)

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2006-8 President of the Study Group on Heart Failure of the Italian Society of Cardiology

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2006-8 President of the Lombardia section of the Italian Society of Cardiology

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2006 Scientific reviewer for the Italian Medicines Agency (AIFA: Agenzia Italiana del Farmaco) for active pharmacovigilance studies and investigations on the appropriateness of drug utilization

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2004-06 Member of the Committee for Practice Guidelines of the European Society of Cardiology

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2004-06 Secretary of the Heart Failure Association of the European Society of Cardiology

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2001-2007 Nucleus member of the Heart Failure Association (former Working Group on Heart Failure) of the European Society of Cardiology

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1992-2000 Secretary of the Lombardia section of the Italian Society of Cardiology

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**X. Principal Investigator and Steering Committee services in major multicenter trials**

Acronym	Name	Role
2017 -	A Double-blind, Randomized, Placebo-controlled, Multicenter Study to Assess the Efficacy and Safety of Omecamtiv Mecarbil on Mortality and Morbidity in Subjects With Chronic Heart Failure With Reduced Ejection Fraction (GALACTIC-HF Trial), sponsors Amgen, Servier	Membro dell'Executive Committee
2017 -	Peripheral Ultrafiltration for the RELief from Congestion in Heart Failure (PURE-HF), sponsor Fresenius	Membro dell'Executive Committee
2017 -	Assessment of Ferric carboxymaltose to Improve morbidity and Mortality in iron-deficient patients hospitalised for Acute Heart Failure (AFFIRM-AHF), sponsor Vifor Inc.	Membro dell'Executive Committee
RELAX-AHF-2.	A multicenter, randomized, double-blind, placebo controlled phase III study to evaluate the efficacy, safety and tolerability of Serelaxin when added to standard therapy in acute heart failure patients.	Co-chairman with John Teerlink, University of San Francisco
RELAX-AHF..	The RELAXin in Acute Heart Failure	Co-chairman
ARTS-2.	Mineralocorticoid Receptor Antagonist Tolerability Study.	Chairman of the Data Monitoring Committee, DMC
EDIFY	Effect of ivabradine versus placebo on cardiac function, exercise capacity, and neuroendocrine activation in patients with Chronic Heart Failure with Preserved left ventricular Ejection Fraction	Member of the Steering Committee
COSMIC-HF	Chronic Oral Treatment with Omecamtiv Mecarbil to Increase Contractility in Heart Failure	Member of the Steering Committee
ATOMIC-AHF	Acute Treatment with Omecamtiv Mecarbil to Increase Contractility in Acute Heart Failure	Member of the Steering Committee
CHART-1.	Congestive Heart failure Cardiopoietic Regenerative Therapy trial.	Member of the Steering Committee
ARTS	Mineralocorticoid Receptor Antagonist	Member of the Data

	Tolerability Study	Monitoring Committee, DMC
SIMPLICITY.	Renal Denervation in Patients with Chronic Heart Failure and Renal Impairment	Member of the Steering Committee
ENGAGE AF-TIMI 48.	Effective aNticoaGulation with factor xA next GEneration in Atrial Fibrillation-Thrombolysis In Myocardial Infarction study 48.	Member of the Steering Committee
ASCEND-HF.	Double-Blind, Placebo-Controlled, Multicenter Acute Study of Clinical Effectiveness of Nesiritide in Subjects With Decompensated Heart Failure	Member of the Steering Committee, Principal Investigator for Italy
BALANCE.	Lixivaptan for the treatment of acutely decompensated heart failure with hyponatremia	Member of the End Point Committee
REACH-UP.	Placebo-Controlled Randomized Study of KW-3902 for Subjects Hospitalized With Worsening Renal Function and Heart Failure Requiring IV Therapy	Member of the Steering Committee. Principal Investigator for Europe
PROTECT-II.	A Study of the Selective A1 Adenosine Receptor Antagonist KW-3902 for Patients Hospitalized With Acute HF and Volume Overload to Assess Treatment Effect on Congestion and Renal Function	Member of the Executive Committee and Principal Investigator for Europe
SHIFT.	Systolic Heart failure treatment with the If inhibitor ivabradine Trial	Member of the Steering Committee
EVEREST.	Efficacy of Vasopressin Antagonism in Heart Failure Outcome Study With Tolvaptan.	Member of the Clinical Events Committee
VERITAS-2	Multicentre, double blind, randomized parallel group study to assess the efficacy, safety, and tolerability of tezosentan in patients with acute hearth failure	Member of the Steering Committee
My-026 ESSENTIAL	The Studies of Oral Enoximone Therapy in Advanced Heart Chronic Heart Failure.	Chairman
MCC-135/GO1	A phase II, double-blind, randomized, placebo-controlled, dose comparative study of the efficacy, tolerability and safety of MCC-135 in subjects with chronic heart failure.	Member of the Steering Committee.

	NYHA class II/III.	
COMET - MF 4455	Carvedilol or Metoprolol European Trial	Member of the Steering Committee
Carvedilol in heart failure	Carvedilol Worldwide Cardiovascular Advisory Board	Member of the Advisory Board
PRIME III	Perspective Randomised study of Ibopamine on Mortality and Efficacy.III	Member of the Steering Committee



## XI. Editorial Activities

### Editor-in Chief of the European Journal of Heart Failure for the years 2015-2018

<b>Journal</b>	<b>Impact factor</b>	<b>Role</b>
European Journal of Heart Failure	6.968	<b>Editor-in-Chief</b> since 2015. Formerly, Editorial board member,
European Heart Journal	20.213	Senior consulting Editor
JACC Heart Failure**	7.218	Editorial consultant
Clinical Research in Cardiology	4.324	Editorial board member
Heart Failure Reviews	3.611	Editorial board member
Journal of Cardiac Failure	3.259	Editorial board member
Cardiovascular drugs and therapy	3.189	Editorial board member
Journal of Cardiovascular Medicine	1.658	Executive Editor
Minerva cardioangiologica	0.752	Editorial board member
Current Heart Failure Reports		Editorial board member

#### **Guest Editor activity**

Heart Failure Reviews (impact factor in 2009, 5.865) Number 4, December 2009: Special issue on inotropic agents and vasodilators in acute decompensated heart failure. From treatment of hemodynamic derangement to clinical outcomes. Guest Editors Marco Metra and Dirk L. Brutsaert.

Heart Failure Reviews (impact factor in 2009, 5.865) scheduled in late 2011: Special issue on Cardio-renal syndrome. Guest Editors Marco Metra and Adriaan A. Voors.

European Journal of Heart Failure 2008 February; Highlights on acute heart failure. 10(2): 164-214.

## Reviewer activities

Journal
The New England Journal of Medicine
The Lancet
JAMA
Journal of the American College of Cardiology (JACC)
Circulation
European Heart Journal
JACC: Heart failure
Heart
Circulation Heart Failure
European Journal of Heart Failure
International Journal of Cardiology
American Heart Journal
Clinical Research in Cardiology
American Journal of Cardiology
Journal of Cardiac Failure (JCF)
Cardiovascular Drugs and Therapy
Journal of Cardiovascular Medicine

## **XII. Scientific Activities**

Main research areas            Functional assessment of the patients with heart failure  
Beta-blocker treatment of the patients with heart failure  
Assessment and medical treatment of acute heart failure

<b>Publications</b>	Original articles in PubMed	546
	Chapters in books and meetings reports	272
	Cites/ paper	35365
	Cites/ year	1179
	H Index	79

## SELECTION OF SCIENTIFIC PUBLICATIONS

(Ordered by the Impact Factor of the Journal)

1. O'Connor CM, Starling RC, Hernandez AF, Armstrong PW, Dickstein K, Hasselblad V, Heizer GM, Komajda M, Massie BM, McMurray JJ, Nieminen MS, Reist CJ, Rouleau JL, Swedberg K, Adams KF Jr, Anker SD, Atar D, Battler A, Botero R, Bohidar NR, Butler J, Clausell N, Corbalán R, Costanzo MR, Dahlstrom U, Deckelbaum LI, Diaz R, Dunlap ME, Ezekowitz JA, Feldman D, Felker GM, Fonarow GC, Gennevois D, Gottlieb SS, Hill JA, Hollander JE, Howlett JG, Hudson MP, Kociol RD, Krum H, Laucevicius A, Levy WC, Méndez GF, **Metra M**, Mittal S, Oh BH, Pereira NL, Ponikowski P, Wilson WH, Tanomsup S, Teerlink JR, Triposkiadis F, Troughton RW, Voors AA, Whellan DJ, Zannad F, Califf RM. Effect of nesiritide in patients with acute decompensated heart failure. *N Engl J Med*. 2011 Jul 7;365(1):32-43.
2. Massie BM, O'Connor CM, **Metra M**, Ponikowski P, Teerlink JR, Cotter G, Weatherley BD, Cleland JG, Givertz MM, Voors A, DeLucca P, Mansoor GA, Salerno CM, Bloomfield DM, Dittrich HC; PROTECT Investigators and Committees. Rolofylline, an adenosine A1-receptor antagonist, in acute heart failure. *N Engl J Med*. 2010;363:1419-28..
3. **Metra M**, Teerlink JR. Heart failure. *Lancet*. 2017 Apr 28. pii:S0140-6736(17)31071-1. doi: 10.1016/S0140-6736(17)31071-1. [Epub ahead of print] Review. PubMed PMID: 28460827.
4. Teerlink JR, Cotter G, Davison BA, Felker GM, Filippatos G, Greenberg BH, Ponikowski P, Unemori E, Voors AA, Adams KF Jr, Dorobantu MI, Grinfeld LR, Jondeau G, Marmor A, Masip J, Pang PS, Werdan K, Teichman SL, Trapani A, Bush CA, Saini R, Schumacher C, Severin TM, **Metra M**; for the RELAXin in Acute Heart Failure (RELAX-AHF) Investigators. Serelaxin, recombinant human relaxin-2, for treatment of acute heart failure (RELAX-AHF): a randomised, placebo-controlled trial. *Lancet*. 2013 Jan 5;381(9860):29-39. doi: 10.1016/S0140-6736(12)61855-8. Epub 2012 Nov 7.
5. Teerlink JR, **Metra M**, Felker GM, Ponikowski P, Voors AA, Weatherley BD, Marmor A, Katz A, Grzybowski J, Unemori E, Teichman SL, Cotter G. Relaxin for the treatment of patients with acute heart failure (Pre-RELAX-AHF): a multicentre, randomised, placebo-controlled, parallel-group, dose-finding phase IIb study. *Lancet*. 2009; 373:1429-39.
6. **Metra M**, Cotter G, Davison BA, Felker GM, Filippatos G, Greenberg BH, Ponikowski P, Unemori E, Voors AA, Adams KF Jr, Dorobantu MI, Grinfeld L, Jondeau G, Marmor A, Masip J, Pang PS, Werdan K, Prescott MF, Edwards C, Teichman SL, Trapani A, Bush CA, Saini R, Schumacher C, Severin T, Teerlink JR; RELAX-AHF Investigators. Effect of serelaxin on cardiac, renal, and hepatic biomarkers in the Relaxin in Acute Heart Failure (RELAX-AHF) development program: correlation with outcomes. *J Am Coll Cardiol*. 2013 Jan 15;61(2):196-206. doi:10.1016/j.jacc.2012.11.005. PubMed PMID: 23273292.

7. **Metra M**, Ponikowski P, Cotter G, Davison BA, Felker GM, Filippatos G, Greenberg BH, Hua TA, Severin T, Unemori E, Voors AA, Teerlink JR. Effects of serelaxin in subgroups of patients with acute heart failure: results from RELAX-AHF. *Eur Heart J*. 2013 Sep 2. [Epub ahead of print] PubMed PMID: 23999454.
8. McMurray JJ, Teerlink JR, Cotter G, Bourge RC, Cleland JG, Jondeau G, Krum H, **Metra M**, O'Connor CM, Parker JD, Torre-Amione G, van Veldhuisen DJ, Lewsey J, Frey A, Rainisio M, Kobrin I; VERITAS Investigators. Effects of tezosentan on symptoms and clinical outcomes in patients with acute heart failure: the VERITAS randomized controlled trials. *JAMA*. 2007; 298:2009-19.
9. **Metra M**, O'Connor CM, Davison BA, Cleland JG, Ponikowski P, Teerlink JR, Voors AA, Givertz MM, Mansoor GA, Bloomfield DM, Jia G, Delucca P, Massie B, Dittrich H, Cotter G. Early dyspnoea relief in acute heart failure: prevalence, association with mortality, and effect of rolofylline in the PROTECT Study. *Eur Heart J*. 2011 Jun; 32(12):1519-34.
10. Poole-Wilson PA, Swedberg K, Cleland JG, Di Lenarda A, Hanrath P, Komajda M, Lubsen J, Lutiger B, **Metra M**, Remme WJ, Torp-Pedersen C, Scherhag A, Skene A; Carvedilol Or Metoprolol European Trial Investigators. Comparison of carvedilol and metoprolol on clinical outcomes in patients with chronic heart failure in the Carvedilol Or Metoprolol European Trial (COMET) randomised controlled trial. *Lancet*. 2003;362:7-13.
11. **Metra M**, Torp-Pedersen C, Swedberg K, Cleland JG, Di Lenarda A, Komajda M, Remme WJ, Lutiger B, Scherhag A, Lukas MA, Charlesworth A, Poole-Wilson PA. Influence of heart rate, blood pressure, and beta-blocker dose on outcome and the differences in outcome between carvedilol and metoprolol tartrate in patients with chronic heart failure: results from the COMET trial. *Eur Heart J*. 2005;26:2259-68.
12. **Metra M**, Giubbini R, Nodari S, Boldi E, Modena MG, Dei Cas L. Differential effects of  $\beta$ -blockers in patients with heart failure. A prospective, double-blind comparison of the long-term effects of metoprolol versus carvedilol. *Circulation* 2000; 102: 546-551.
13. **Metra M**, Nodari S, D'Aloia A, Muneretto C, Robertson AD, Bristow MR, Dei Cas L. Beta-blocker therapy influences the hemodynamic response to inotropic agents in patients with heart failure: a randomized comparison of dobutamine and enoximone before and after chronic treatment with metoprolol or carvedilol. *J Am Coll Cardiol*. 2002;40:1248-58.
14. **Metra M**, Nardi M, Giubbini R, Dei Cas L. Effects of short- and long-term carvedilol administration on rest and exercise hemodynamic variables, exercise capacity and clinical conditions in patients with idiopathic dilated cardiomyopathy. *J Am Coll Cardiol*. 1994; 24:1678-87.
15. **Metra M**, Eichhorn E, Abraham WT, Linseman J, Böhm M, Corbalan R, Demets D, De Marco T, Elkayam U, Gerber M, Komajda M, Liu P, Mareev V, Perrone SV, Poole-Wilson P, Roecker E, Stewart J, Swedberg K, Tendera M, Wiens B, Bristow MR; for the ESSENTIAL Investigators. Effects of low-dose oral enoximone administration on mortality, morbidity, and exercise capacity in patients with advanced heart failure: the randomized, double-blind, placebo-controlled, parallel group ESSENTIAL trials. *Eur Heart J*. 2009; 30:3015-26.
16. **Metra M**, Faggiano P, D'Aloia A, Nodari S, Gualeni A, Raccagni D, Dei Cas L. Use of cardiopulmonary exercise testing with hemodynamic monitoring in the prognostic

assessment of ambulatory patients with chronic heart failure. *J Am Coll Cardiol.* 1999;  
33:943-50.

I authorize the use of my personal data according to D.Lgs. n° 196/2003

Marco Metra, MD

Brescia, 23 September 2017

A handwritten signature in black ink, appearing to read 'M. Metra', written in a cursive style.