
Prof. Dr. Dr. rer. nat. Miriam Margherita Cortese-Krott



born September 04th 1977 in Milan, Italy

Position Group leader and Head of the Cardiovascular Research Laboratory

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Academic studies and degrees

2016 Full Professorship (W2)

2014 Habilitation in Molecular Medicine, Faculty of Medicine, University of Düsseldorf, Germany

2007 Dr. rer. nat (PhD) with honors (Summa cum Laude)- Pharmacology, University of Düsseldorf , Germany

03/2002 Laurea (Italian Doctoral Degree) with honors (110/110 cum Laude) – Doctor in Biotechnology, Faculty of Pharmacy, University of Milan, Italy

1996 - 2001 Study of Pharmaceutical Biotechnology, Faculty of Pharmacy, University of Milan, Italy

Professional Career

Since 01.12.2016 Full Professorship (W2), Medical Faculty, Heinrich-Heine-University Duesseldorf “Experimentelle Herzinfarktforschung”

since 2014 Group Leader, DFG funding, Cardiovascular Research Laboratory, Department of Cardiology, Pulmonology and Angiology, Medical Faculty, Heinrich-Heine University of Düsseldorf

since 2012 Administrative Director of the Cardiovascular Research Laboratory, Department of Cardiology, Pulmonology and Angiology, Medical Faculty, Heinrich-Heine University of Düsseldorf

2012 - 2014 Principal Investigator (intramural funding), Cardiovascular Research Laboratory, Department of Cardiology, Pulmonology and Angiology, Medical Faculty, Heinrich-Heine University of Düsseldorf

2009 - 2012 Postdoctoral Researcher, Division of Cardiology, Pulmonology and Angiology, University of Düsseldorf (Prof. Dr. M. Kelm)

2008 - 2009 Postdoctoral Researcher, Division of Cardiology, Pulmonology and Angiology, RWTH Aachen University (Prof. Dr. M. Kelm)

2006 - 2008 Postdoctoral Researcher, Department of Plastic Surgery & Department of Vascular Surgery, RWTH Aachen University (Prof. C. Suschek, Prof. Dr. Jakobs)

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| 2002 - 2006 | Doctoral Student, (Dr. rer. nat.) Research group immunobiology, Medical Faculty, University of Düsseldorf |
| 2002 | Research Fellow, HSR, St. Raffaele Hospital, Milan |
| 2000 - 2002 | Doctoral student (laurea), Atherosclerosis Laboratory, Faculty of Pharmacy, University of Milan |

Editorial Boards

Antioxidants & Redox Signaling (reviewer editor)

Academic distinctions, honors and other activities

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| 02/2017 | Chair – Session “Canonical and Non-Canonical Signaling Through sGC Gordon Reserach Conference – Nitric Oxide, Ventura, CA |
| 05/2016 | Invited speaker to the Meeting of the Society of Nitric Oxide Biology and Chemistry |
| 11/2015 | Invited speaker to the Meeting of the Society for Redox Biology and medicine (SFRBM), Boston, USA |
| 03/2015 | Invited speaker to the international Meeting of the German Physiological Society, Magdeburg, Germany |
| 02/2015 | Poster award and “Hot topic speaker” at the Gordon Research Conference on “Nitric oxide” |
| 09/2012 | Young investigator award, Oxygen Club of California, FRRI-Meeting, London, UK |
| 11/2011 | Young investigator award ,Travel award, SFRBM-Meeting, Atlanta, GE |
| 11/2010 | Young investigator award, Society for free radical research international, SFRBM-Meeting, Orlando, FL |
| 01/2007 | Doctoral degree with honors (summa cum laude), the thesis was selected between the best four of the year 2006 of all doctoral thesis within the faculty of Life science, Heinrich-Heine University of Düsseldorf |
| 06/2006 | Young investigator award, German+French Nitric Oxide Societies |

Institutional responsibilities and commissions of trust

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| since 2015 | Scientific Advisory Board, Medical Faculty, Heinrich-Heine University, Düsseldorf, Germany |
| since 2013 | Member of the Doctoral Committee for Medical Students, Medical Faculty, Heinrich Heine University Düsseldorf, Germany |

Membership of scientific societies

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| 2015 | Member of the Physiological Society, Germany |
| since 2009 | Member of the Society for redox biology and medicine |
| 2010 - 2012 | Member of the Biochemical society, UK |

Most important original publications

* Shared authorship

1. **Cortese-Krott MM**, Pullmann D, Feelisch M. Nitrosopersulfide (SSNO(-)) targets the Keap-1/Nrf2 redox system. *Pharmacol Res.* 2016 Sep 20;113(Pt A):490-499. doi: 10.1016/j.phrs.2016.09.022. [Epub ahead of print] PubMed PMID: 27663261.
IF 4.816; 5-Years-IF 4.391
2. Erkens R, Kramer CM, Lückstädt W, Panknin C, Krause L, Weidenbach M, Dirzka J, Krenz T, Mergia E, Suvorava T, Kelm M, **Cortese-Krott MM**. Left ventricular diastolic dysfunction in Nrf2 knock out mice is associated with cardiac hypertrophy, decreased expression of SERCA2a, and preserved endothelial function. *Free Radic Biol Med.* 2015 Dec;89:906-17. doi:10.1016/j.freeradbiomed.2015.10.409. PubMed PMID: 26475037.
IF 5.736; 5-Years-IF 5.969
3. **Cortese-Krott MM**, Kuhnle GG, Dyson A, Fernandez BO, Grman M, DuMond JF, Barrow MP, McLeod G, Nakagawa H, Ondrias K, Nagy P, King SB, Saavedra JE, Keefer LK, Singer M, Kelm M, Butler AR, Feelisch M. Key bioactive reaction products of the NO/H₂S interaction are S/N-hybrid species, polysulfids, and nitroxyl. *Proc Natl Acad Sci USA.* 2015 Aug 25;112:E4651-60. doi: 10.1073/pnas.1509277112. Epub 2015 Jul 29
IF 9.674; 5-Years-IF 10.563
4. **Cortese-Krott MM**, Kulakov L, Opländer C, Kolb-Bachhofen V, Kröncke KD, Suschek CV. Zinc regulates iNOS-derived nitric oxide formation in endothelial cells. *Redox Biol.* 2014 Jul 16;2:945-54. doi:10.1016/j.redox.2014.06.011.eCollection 2014.
IF 6.235; IF 5-Years-IF 6.235
5. **Cortese-Krott MM**, Fernandez BO, Santos JL, Mergia E, Grman M, Nagy P, Kelm M, Butler A, Feelisch M. Nitrosopersulfide (SSNO(-)) accounts for sustained NO bioactivity of S-nitrosothiols following reaction with sulfide. *Redox Biol.* 2014 Jan 11;2:234-44. doi: 10.1016/j.redox.2013.12.031.
IF 6.235; IF 5-Years-IF 6.235
6. Wood KC*, **Cortese-Krott MM***, Kovacic JC, Noguchi A, Liu VB, Wang X, Raghavachari N, Boehm M, Kato GJ, Kelm M, Gladwin MT. Circulating blood endothelial nitric oxide synthase contributes to the regulation of systemic blood pressure and nitrite homeostasis. *Arterioscler Thromb Vasc Biol.* 2013 Aug;33(8):1861-1871. Epub 2013 May 23.
IF 5.533; 5-Years-IF 6.430
7. **Cortese-Krott MM**, Rodriguez-Mateos A, Sansone R, Kuhnle GG, Thasian-Sivarajah S, Krenz T, Horn P, Krisp C, Wolters D, Heiß C, Kröncke KD, Hogg N, Feelisch M, Kelm M. Human red blood cells at work: identification and visualization of erythrocytic eNOS activity in health and disease. *Blood.* 2012 Nov 15;120(20):4229-37. doi: 10.1182/blood-2012-07-442277. Epub 2012 Sep 24.
IF 9.060; 5-Years-IF 9.338
8. Horn P*, **Cortese-Krott MM***, Amabile N, Hundsdörfer C, Kröncke KD, Kelm M, Heiss C. Circulating microparticles carry a functional endothelial nitric oxide synthase that is decreased in patients with endothelial dysfunction. *J Am Heart Assoc.* 2012 Dec 31;2(1):e003764. doi: 10.1161/JAHA.112.003764.
IF 5.117; 5-Years-IF 5.225
9. **Cortese-Krott MM**, Suschek CV, Wetzel W, Kröncke KD, Kolb-Bachofen V. Nitric oxide-mediated protection of endothelial cells from hydrogen peroxide is mediated by intracellular zinc and glutathione. *Am J Physiol Cell Physiol.* 2009 Apr;296(4):C811-20. doi: 10.1152/ajpcell.00643.2008. Epub 2009 Feb 4.
IF 3.780; 5-Years-IF 4.128
10. **Cortese MM**, Suschek CV, Wetzel W, Kröncke KD, Kolb-Bachofen V. Zinc protects endothelial cells from hydrogen peroxide via Nrf2-dependent stimulation of glutathione biosynthesis. *Free Radic Biol Med.* 2008 Jun 15;44(12):2002-12. doi: 10.1016/j.freeradbiomed.2008.02.013. Epub 2008 Mar 8.
IF 5.399; 5-Years-IF 5.632