

Curriculum Vitae

Ruhparwar, Arjang Univ.-Professor, Dr. med.
March 22nd, 1968, in Fulda, Germany

University Education

1987–1994 Studies of Medicine, University of Cologne
1995 Doctorate Medicine, JLU
2012 Habilitation Cardiac Surgery, University of Heidelberg

Scientific Career

08/94 - 11/95: Intern, Division of Thoracic and Cardiovascular Surgery
(Prof. Dr. H.G. Borst), Hannover Medical School, Germany
05/95: Dissertation Exam, promotion to Dr. med.
12/95-12/04 Resident, Division of Thoracic and Cardiovascular Surgery, Hannover Medical School,
Germany (Prof. Dr. H.G. Borst, since 5/96 Prof. Dr. A. Haverich)
03/97 - 03/99 Research Fellow at "Herman B. Well's Center for Pediatric Research",
Lab of Loren J. Field, Indiana University, Indianapolis/ USA
05/2004 Board exam for Cardiac Surgery
10/01 – 09/06 Attending cardiac surgeon, **Head of Thoracic and Cardiovascular Intensive Care
Unit, Hannover Medical School**
2006 - 2014 Attending cardiac surgeon, University of Heidelberg, Germany (Prof. Dr. M. Karck)
03/2009 PhD degree, Hannover Medical School, Germany
2009-2013 **Head of the Transplantation and Mechanical Circulatory Support program,
University of Heidelberg**
2012 Professor of Cardiac Surgery
2015 Vice-Chairman of the Department of Cardiac Surgery, University of Heidelberg
2019 – 2023 **Chairman, Department of Thoracic and Cardiovascular Surgery,
University of Duisburg/Essen, Germany**
Since 2023 **Chairman, Department of Cardiothoracic, Transplantation, and Vascular
Surgery, Hannover Medical School, Germany**

Awards and Honors

1997-1999 Award of the German Heart Foundation "Deutsche Stiftung für Herzforschung" for
support of the project "Differentiation of embryonic stem cells into cells of the cardiac
pacemaking and conduction system"
2001 Outstanding Research Award in Pediatric Cardiology, American Heart Association: First
creation of a biological cardiac pacemaker using transplanted fetal cardiomyocytes in
a preclinical model.
2004 Braukmann-Wittenberg-Stiftung Award 2004: Project "Treatment of bradycardia using
gene therapy"
2007 Finalist of the "Vivien Thomas Young Investigator's Award", American Heart
Association: "Adenylate Cyclase VI transforms ventricular cardiomyocytes into
biological pacemaker cells" in a preclinical model
2012 Finalist of the Young Investigator Award of the North American Society of
Cardiovascular Imaging (NASCI) 11/2012: "Altered hemodynamic parameters derived
from computational fluid dynamics in patients with aortic Insufficiency after LVAD
Implant"
2014 Award "Best Article" of the European Organ Donation Congress 2014/European
Society of Organ Transplantation, for the paper "Outcome of Heart Transplantation in
Germany: Details to be considered beyond multivariate analysis to improve the quality
of organ allocation"

2014 Young Investigator Award for the paper "Extracorporeal Life Support with Selective Left Ventricular Decompression Improves Outcome after Cardiogenic Shock with Concomitant Lung Failure", Resuscitation Symposium, annual scientific sessions, American Heart Association

Citation Record

Total citations: 6940; h-index:43;(source: Google Scholar)

Top-10 selected Publications

1. **Ruhparwar A**, Osswald A, Kim H, Wakili R, Müller J, Pizanis N, Al-Rashid F, Hendgen-Cotta U, Rassaf T, Kim SJ. Implanted Carbon Nanotubes Harvest Electrical Energy from Heartbeat for Medical Implants. *Adv Mater*. Published online April 29, 2024. doi:10.1002/adma.202313688
2. Weymann, A., Foroughi, J., Vardanyan, R., Punjabi, P. P., Schmack, B., Aloko, S., Spinks, G. M., Wang, C. H., Arjomandi Rad, A., & **Ruhparwar, A.** (2023). Artificial Muscles and Soft Robotic Devices for Treatment of End-Stage Heart Failure. *Adv Mater*. 2023 May;35(19):e2207390. doi: 10.1002/adma.202207390
3. Kongahage D*, **Ruhparwar A***, Foroughi J. High performance artificial muscles to engineer a ventricular cardiac assist device and future perspectives of a cardiac sleeve. *Adv Mat Tech*; 2021;6 *equal contribution
4. **Ruhparwar A**, Zubarevich A, Osswald A, Raake PW, Kreusser MM, Grossekkettler L, Karck M, Schmack B. EPELLA 2.0-Minimally invasive biventricular groin-free full mechanical circulatory support with Impella 5.0/5.5 pump and ProtekDuo cannula as a bridge-to-bridge concept. A first-in-man method description. *J Card Surg*; 2020;35:195-199. doi:10.1111/jocs.14283
5. Seferovic P, Ruschitzka F, Metra M, Anker S, Filippatos G, Altenberger J, Adamopoulos S, Barac YD, Chioncel O, de Jonge N, Elliston J, Frigerio M, Goncalvesova E, Gotsman I, Grupper A, Hamdan R, Hammer Y, Hasin T, Hill L, Itzhaki Ben Zadok O, Abuhazira M, Lavee J, Mullens W, Nalbantgil S, Piepoli MF, Ponikowski P, Potena L, Ristic A, **Ruhparwar A**, Shaul A, Tops LF, Tsui S, Winnik S, Jaarsma T, Gustafsson F. Guidance on the management of left ventricular assist device (LVAD) supported patients for the non-LVAD specialist healthcare provider: executive summary. *Eur J Heart Fail*. 2021 Oct;23(10):1597-1609
6. Jang, Y., Kim, S. M., Kim, K. J., Sim, H. J., Kim, B. J., Park, J. W., Baughman, R. H., **Ruhparwar, A.**, & Kim, S. J. Self-Powered Coiled Carbon-Nanotube Yarn Sensor for Gastric Electronics. *ACS Sens*. 2019 Nov 22;4(11):2893-2899. doi: 10.1021/acssensors.9b01180
7. **Ruhparwar A**. Is there a role for "smart materials" in myocardial tissue engineering? *Tissue Eng Part A*; 2014;20:3085-3087. doi:10.1089/ten.TEA.2014.0540
8. **Ruhparwar A**, Piontek P, Ungerer M, Ghodsizad A, Partovi S, Foroughi J, Szabo G, Farag M, Karck M, Spinks GM, Kim SJ. Electrically Contractile Polymers Augment Right Ventricular Output in the Heart. *Artif Organs*; 2014;38:1034-1039. doi:10.1111/aor.12300
9. **Ruhparwar A**, Kallenbach K, Klein G, Bara C, Ghodsizad A, Sigg DC, Haverich A, Niehaus M. Adenylate Cyclase VI transforms ventricular cardiomyocytes into biological pacemaker cells. *Tissue Eng Part A*; 2010;16:1867-1872. doi:10.1089/ten.TEA.2009.0537
10. **Ruhparwar A**, Er F, Martin U, Radke K, Gruh I, Niehaus M, Karck M, Haverich A Hoppe UC. Enrichment of cardiac pacemaker-like cells: Neuregulin-1 and cyclic AMP increase I_f-current density in fetal cardiomyocytes. *Med Biol Eng Comput*; 2007;45:221-227. doi:10.1007/s11517-007-0164-3