Education

1973-1980	Studies of Geology and Paleontology at Westphalian Wilhelm University, Münster: Diploma Degree.
1978	Scholarship by DAAD (German Academic Exchange Service) for geological studies in central Spain for stratigraphic, sedimentological and photogeological investigations based on remote sensing data taken by LANDSAT 2.
1979-1987	Studies of Human Medicine at Westphalian Wilhelm University, Münster, and *Freie Universität Berlin*.
1987	State exams at *Freie Universität Berlin*: License to practise medicine.
1989	Doctoral degree with thesis on "The life and works of the Berlin physiologist, Nathan Zuntz (1847-1920) with particular reference to his importance for the early history of high-altitude physiology and aviation medicine".
1997	*Habilitation* (German post-doctoral lecturing qualification) with treatise on "The regulation of erythropoietin in man under extreme laboratory and field conditions".
2000	*Facharzt für Physiologie* (Qualification „Specialist in Physiology").

Record of Employment

1980-1982	Assistant at the Department of Geology, Westphalian Wilhelm University Münster, in the Planetology Research group „Earth-Moon System" (Director: L. Bischoff). Project: Photogeological studies on the faults in the lunar highland surface, sponsored by the German Research Council (DFG), Bonn.
1987-1992 1992-1997 1997-2004	Assistant, Assistant Lecturer, and Associate Professor at the Department of Physiology, *Freie Universität Berlin*, in the applied physiology research group (Head: K. Kirsch).
Since 2004	Full Professor (tenure track) at the Department of Physiology at Charité – Faculty of Medicine Berlin, Campus Benjamin Franklin. Research focus: Space medicine, blood physiology, cardiovascular physiology, renal physiology, comparative physiology in extreme environments.
2008-2014 01/15-07/16 Since 08/2016	Deputy Director, Acting Director, and Deputy Director of the Institute of Physiology at Charité – Faculty of Medicine Berlin.

Memberships and Additional Activities

1987	German Society for Aerospace Lilienthal – Oberth (*Deutsche Gesellschaft für Luft- und Raumfahrt Lilienthal-Oberth e. V.*)
1992	German Physiological Society *(Deutsche Physiologische Gesellschaft*).
2000	Speaker, Center for Space Medicine Berlin and Extreme Environments.
	Life Science Working Group (ESA).
2001	Exobiology Working Group (ESA).
2003	Chairman, Life Science Working Group (ESA).
	Research and Technology Office (NATO).
2004	German Council on Foreign Relations (*Deutsche Gesellschaft für Auswärtige Politik*).
2004-2009	Nathan-Zuntz-Professorship.
2004-2010	Scientific Committee at the Austrian Ministry of Defense (*Wissenschafts-kommission beim Bundesministerium für Landesverteidigung (BMLV*).
2005	NATO expert council „Man in Extreme Environments".
2007	Berlin Medicinal Society (*Berliner Medizinische Gesellschaft*).
2007-2013	Expert, GoSpace-Team on Industrial Research under Microgravity in Life Science.
2008	Chairman, Scientific Program Board of the German Aerospace Center (Programmausschuß "Forschung unter Weltraumbedingungen", DLR).
	Medical Advisory Board of the Military Medical Service of the German Federal Ministry of Defense (*Wissenschaftlicher Beirat für das Sanitäts- und Gesundheitswesen beim Bundesminister für Verteidigung - Wehrmedizinischer Beirat*).
	International Academy of Astronautics (IAA).
2009	European Space Sciences Committee (ESSC) in the European Science Foundation (ESF).
	Advisory Editor, European Journal of Applied Physiology.
2010	Authorization by the Medical Association Berlin (*Ärztekammer Berlin*) for the supervision of advanced training for consultants in physiology.
	Personal tutor at Charité for the German National Merit Foundation (*Vertrauensdozent der Studienstiftung des Deutschen Volkes*).
2012	"High-End Foreign Experts Recruitment Program" by the State Administration of Foreign Experts Affairs, China.
	Guest Professor at Northwestern Polytechnical University, Xi'an, China.
2013	Program Council, German Aerospace Center, (*Programmkommission, DLR*).
2015	Guest Professor at University Antofagasta, Chile, sponsored by the German Academic Exchange Service (DAAD).

(Co-) Organisation of Congresses and Meetings (selected)

2005	Organizer, 13th AKP Meeting 2005 (Working Group Applied and Clinical Physiology and Pathophysiology of the German Physiological Society), Berlin (Germany), November 26, 2005.
2006	Co-initiator, Sino-German Symposium on Space Life Sciences, Xi'an (China), April 17-22, 2006.
	Organizer, 3rd Germany-China Workshop on Microgravity and Space Life Sciences, Berlin (Germany), October 07-11, 2006.
2007	Meeting of NATO Expert Group RTG 132, Berlin (Germany), March 19-20, 2007.
	Co-organizer, 4th International Congress on Space Medicine and Biology, Berlin (Germany), October 24-26, 2007.
2009	Member of the Advisory Board, World Health Summit "The Evolution of Medicine", Berlin (Germany), October 14-18, 2009.
2010	Co-organizer, 5th International Congress on Medicine in Space and Extreme Environments (ICMS), Berlin (Germany), October 18-21, 2010.
2011	Co-organizer, 1st International Workshop on Safety in Extreme Mining "Space Technology for Safety of Human Work in Extreme Environments on Earth", Copiapó and Río Blanco/Portillo (Chile), May 2-6, 2011.
2011	Member of the International Advisory Board, 1st International :envihab Symposium, German Aerospace Center, Cologne (Germany), May 23-24, 2011.
2014	Co-initiator of the 6th International Congress on Medicine in Space and Extreme Environments (ICMS), Berlin (Germany), September 16-19, 2014.
2015	Chairman Scientific Committee, 6th Germany-China Workshop on Microgravity and Space Life Sciences, Hangzhou (China), September 26-28, 2015.

Referee/Reviewer (journals selected)

Acta Physiologica
Aviation Space and Environmental Medicine
European Journal of Physiology
High Altitude Medicine
Journal of Applied Physiology
Journal of Experimental Zoology
Journal of Thermal Biology
Journal of Zoology
Physiological Measurement
Respiratory Physiology & Neurobiology
Scandinavian Journal of Medicine and Science in Sports
Sleep and Breathing

Co-/Principal Investigator (PI) in space physiology oriented missions

1990	ISEMSI'90: Autonomic Nervous System (Co-Investigator, PI: K. Kirsch).
1992	EXEMSI'92: Autonomic Nervous System (Co-Investigator, PI: K. Kirsch).
	MIR'92: Tissue Thickness (Co-Investigator, PI: K. Kirsch).
	MIR'92: Volume Regulating Hormones (Co-Investigator, PI: L. Röcker).
	D-2: Tissue Thickness (Co-Investigator, PI: K. Kirsch).
	D-2: Volume Regulating Hormones (Co-Investigator, PI: L. Röcker).
	ALTAIR: Tissue Thickness (Co-Investigator, PI: K. Kirsch).
1994	EUROMIR'94: CVP-Erythropoietin (PI).
	EUROMIR'94: Tissue Thickness (Co-Investigator, PI: K. Kirsch).
	ESA-CNES L-TBR'94: Erythropoietin (PI).
	HUBES'94: AutonomicNervous System (Co-Investigator, PI: K. Kirsch).
1997	MIR'97: Erythropoietin-Serum Transferrin Receptor (PI).
2000	Neurolab 2000: Psycho-Physiology (PI).
2003/2004	Berlin Bed Rest Study 2003/2004: Red blood cells (PI).
2005	Parabolic Flight Campaign 2005: Thermoregulation (PI).
2006	Parabolic Flight Campaign 2006: Thermoregulation (PI).
2007	Parabolic Flight Campaign 2007: Fluid Shift and Thermoregulation (PI).
2007/2008	Berlin Bed Rest Study 2007/2008: Thermoregulation, Red Blood Cells (PI).
2008	Parabolic Flight Campaign 2008: Thermoregulation and Cardiovascular Adaptation (PI).
	NASA Bed Rest Study 2008; Galveston, U.S.A.
2010-2011	Mars500 (PI); Moscow, Russia.
2012	Controlled Ecological Life Support Systems (CELSS): Circadian Rhythms (Co-Investigator); ACC Beijing, China.
2013-2017	Core temperature and circadian rhythms in humans during long term spaceflights: Circadian Rhythms (PI), DLR / ESA.
2016	HERA: Core temperature and circadian rhythms (PI), DLR / NASA.
	CELSS: Core temperature and circadian rhythms (PI); DLR / ACC, Shenzhen, China.

Grants

2007-2010	"Cardiovascular functions and thermoregulation under real and simulated micro-g conditions (FluidShift – ThermoLab)", DLR/ESA/NASA (PI).
2010-2016	"Core temperature and circadian rhythms in humans during long term spaceflights (Circadian Rhythms)", 2010-2016, DLR/ESA/NASA (PI).
2017-2019	"Circadian Rhythms and temperature regulation of humans under simulated and real mikro-g conditions (Circadian Rhythms Continued)" 2017-2019, DLR/ESA/NASA (PI).

Honors

2010	Life Sciences Book Award by the IAA for the monograph "Nathan Zuntz. His Life and Work in the Fields of High Altitude Physiology and Aviation Medicine. American Physiological Society, Elsevier 2009".
2015	Life Sciences Book Award by the IAA for the publication "Human Physiology in Extreme Environments". American Physiological Society, Elsevier 2015".

Most Recent Publications

Gambara G, Salanova M, Ciciliot S, Furlan S, Gutsmann M, Schiffl G, Ungethuem U, Volpe P, **Gunga HC**, Blottner D. Microgravity-induced transcriptome adaptation in mouse paraspinal longissimus dorsi muscle highlights insulin resistance-linked genes. Front Physiol. 2017 May 5; doi: 10.3389/fphys.2017.00279.

Clauss M, Nurutdinova I, Meloro C, **Gunga HC**, Jiang D, Koller J, Herkner B, Sander PM, Hellwich O. Reconstruction of body cavity volume in terrestrial tetrapods. J Anat. 2017 Feb; 230(2):325-36.

Gambara G, Salanova M, Ciciliot S, Furlan S, Gutsmann M, Schiffl G, Ungethuem U, Volpe P, **Gunga HC**, Blottner D. Gene expression profiling in slow-type calf soleus muscle of 30 days space-flown mice. PLoS One. 2017 Jan 11;12(1):e0169314.

Mendt S, Maggioni MA, Nordine M, Steinach M, Opatz O, Belavý D, Felsenberg D, Koch J, Shang P, **Gunga HC**, Stahn A. Circadian rhythms in bed rests: Monitoring core body temperature via heat-flux approach is superior to skin surface temperature. Chronobiol Int. 2017;34(5):666-76.

Coker RH, Weaver AN, Coker MS, Murphy CJ, **Gunga HC**, Steinach M. Metabolic responses to the Yukon Arctic Ultra: Longest and coldest in the world. Med Sci Sports Exerc. 2017 Feb;49(2):357-62.

Gunga HC, Weller von Ahlefeld V, Appell Coriolano HJ**,** Werner A**,** Hoffmann U. Cardio-vascular System, Red Blood Cells, and Oxygen Transport in Microgravity, Springer, 2016.