

CURRICULUM VITAE

Person

Name Univ.-Prof. Dr. med. Günter **Breithardt**
geboren 19. Januar 1944 in Haan/Rheinland

Nationalität deutsch

wohnhaft Von-Esmarch-Straße 117, 48149 Münster

Kurzdarstellung des wissenschaftlichen Werdegangs

1962 - 1968 Studium der Medizin an den Universitäten Tübingen, Wien und Düsseldorf

1968 Ärztliche Prüfung (Staatsexamen)

1969 Dissertation an der Universität Düsseldorf (Pathologisches Institut, Prof. Meessen)

1970 - 1971 Wissenschaftlicher Assistent am Pathologischen Institut der Universität Düsseldorf

1971 Stabsarzt am Institut für Wehrmedizin und Hygiene, Koblenz

1971 - 1977 Wissenschaftlicher Assistent an der Medizinischen Klinik und Poliklinik der Universität Düsseldorf

1976 Anerkennung als Facharzt für Innere Medizin

1977 Erteilung der Gebietsbezeichnung „Kardiologie“

1978 Habilitation mit der Arbeit „Klinisch-elektrophysiologische Untersuchung der Sinusknotenfunktion“

seit 1978 Oberarzt an der Medizinischen Klinik und Poliklinik B (Kardiologie, Pneumologie, Angiologie) der Universität Düsseldorf

1982 Ernennung zum Professor (C3 auf Zeit), Universität Düsseldorf

1984 Berufung zum Professor (C3 auf Lebenszeit), Universität Düsseldorf

1988 Ernennung zum Professor (C4 auf Lebenszeit) sowie zum Direktor der Medizinischen Klinik und Poliklinik C (Kardiologie und Angiologie) der Westfälischen Wilhelms-Universität Münster

Preise, Auszeichnungen und Stipendien

1979 Verleihung des Edens-Preises 1978 der Johann A. Wülfing-Stiftung für die Arbeit „Klinisch-elektrophysiologische Untersuchungen der Sinusknotenfunktion“

1988 Verleihung des Preises der Arthur-Weber-Stiftung (vergeben von der dt. Gesellschaft für Herz-Kreislauf-Forschung) für die elektrophysiologische Forschung über die Rhythmusstörungen des Herzens

Ausgewählte Funktionen in wissenschaftlichen Gesellschaften

seit 1986	Mitglied im Nucleus der Working Group on Arrhythmias der European Society of Cardiology (ESC)
seit 1988	Fellow of the ESC
seit 1988	Korrespondierendes Mitglied der Arzneimittelkommission der Deutschen Ärzteschaft
seit 1990	Mitglied im Board der ESC
1991 - 1994	Councillor-in-charge der Working Groups der ESC
seit 1991	Fellow des American College of Cardiology
1992	Mitglied der "Sicilian Gambit" Task Force der ESC und des Basic Science Council der American Heart Association zur Neuklassifizierung der Antiarrhythmika
1993	Chairman of the Starting Committee of the European Registry for Implantable Defibrillators (EURID)
1991 - 1994	Vorsitzender der Working Group on Arrhythmias der ESC
1995	Mitglied der International Society for Holter and Noninvasive Electrocardiography
1995	Gründungsmitglied und Mitglied des Vorstands des Zentrums für Interdisziplinäre klinische Forschung (IZKF) Münster
1996 - 1998	Präsident der ESC
1997 - 1998	European Representative im Executive Board der International Society and Federation of Cardiology (ISFC), jetzt World Heart Foundation (WHF)
1998	Mitglied des Scientific Advisory Board, Kerckhoff Institut für experimentelle Kardiologie der Max-Planck-Gesellschaft
1998	Mitglied des Scientific Advisory Board der Leducq Foundation, Paris
1999 - 2001	Stellvertretender Vorsitzender des Medizintechnischen Ausschusses des Gesundheitsforschungsrates des BMBF
1999 - 2001	Präsident der Deutschen Gesellschaft für Kardiologie – Herz- und Kreislaufforschung
seit 2000	Sprecher des Sonderforschungsbereiches 556 „Herzinsuffizienz und Arrhythmien – von den molekularen Grundlagen zur Klinik“ an der Westfälischen Wilhelms-Universität Münster

- Mitglied des Wissenschaftlichen Ausschusses und des Kuratoriums des Max-Delbrück-Zentrums Berlin
- seit 2003 Sprecher des bundesweiten Kompetenznetzes Vorhofflimmern
- 2004 – 2006 Stellvertretender Vorsitzender des Nationalen Registers für angeborene Herzfehler e.V.
- seit 4/2005 Stellvertr. Mitglied der Ethikkommission der Ärztekammer Westfalen-Lippe und der Medizinischen Fakultät der Westfälischen-Wilhelms-Universität Münster
- 2005-2008 Mitglied des Executive Board des Council of Clinical Cardiology der World Heart Federation (WHF)
- 2007 – 2009 Vorsitzender des Nationalen Registers für angeborene Herzfehler e.V.

Früheres oder aktuelles Mitglied im Editorial Board des Journal of Cardiovascular Pharmacology, Clinical Progress in Pacing and Electrophysiology, European Heart Journal, New Trends in Arrhythmias, Zeitschrift für Kardiologie, Journal of Cardiovascular Electrophysiology, NASPETAPES, ACCEL

Ehrenmitglied der französischen, norwegischen, polnischen und slowakischen Gesellschaften für Kardiologie

Korrespondierendes Mitglied der portugiesischen, spanischen und chilenischen Gesellschaften für Kardiologie

Originalarbeiten (Auswahl von bis zu 10 relevanten Arbeiten)

- Wichter T, Schäfers M, Rhodes CG, Borggrefe M, Lerch H, Lammertsma AA, Hermansen F, Schober O, Breithardt G, Camici PG. Abnormalities of cardiac sympathetic innervation in arrhythmogenic right ventricular cardiomyopathy : quantitative assessment of presynaptic norepinephrine reuptake and postsynaptic beta-adrenergic receptor density with positron emission tomography. *Circulation* 2000;101:1552-8.
- Levkau B, Garton KJ, Ferri N, Kloke K, Nofer JR, Baba HA, Raines EW, Breithardt G. xIAP induces cell-cycle arrest and activates nuclear factor-kappaB : new survival pathways disabled by caspase-mediated cleavage during apoptosis of human endothelial cells. *Circ Res* 2001;88:282-90.
- Schwartz PJ, Priori SG, Spazzolini C, Moss AJ, Vincent GM, Napolitano C, Denjoy I, Guicheney P, Breithardt G, Keating MT, Towbin JA, Beggs AH, Brink P, Wilde AA, Toivonen L, Zareba W, Robinson JL, Timothy KW, Corfield V, Wattanasirichaigoon D, Corbett C, Haverkamp W, Schulze-Bahr E, Lehmann MH, Schwartz K, Coumel P, Bloise R. Genotype-phenotype correlation in the long-QT syndrome: gene-specific triggers for life-threatening arrhythmias. *Circulation* 2001;103:89-95.
- Wedekind H, Smits JP, Schulze-Bahr E, Arnold R, Veldkamp MW, Bajanowski T, Borggrefe M, Brinkmann B, Warnecke I, Funke H, Bhuiyan ZA, Wilde AA, Breithardt G, Haverkamp W. De novo mutation in the SCN5A gene associated with early onset of sudden infant death. *Circulation* 2001;104:1158-64.
- Eckardt L, Kirchhof P, Schulze-Bahr E, Rolf S, Ribbing M, Loh P, Bruns H, Witte A, Milberg P, Borggrefe M, Breithardt G, Wichter T, Haverkamp W. Electrophysiologic investigation in Brugada syndrome. Yield of programmed ventricular stimulation at two ventricular sites with up to three premature beats. *Eur Heart J* 2002;23:1394.
- Kirchhof P, Eckardt L, Loh P, Weber K, Fischer RJ, Seidl KH, Böcker D, Breithardt G, Haverkamp W, Borggrefe M. Anterior-posterior versus anterior-lateral electrode positions for external cardioversion of atrial fibrillation: a randomised trial. *Lancet* 2002;360:1275-9.
- Wichter T, Matheja P, Eckardt L, Kies P, Schäfers K, Schulze-Bahr E, Haverkamp W, Borggrefe M, Schober O, Breithardt G, Schäfers M. Cardiac autonomic dysfunction in Brugada syndrome. *Circulation* 2002;105:702-6.

- Fabritz L, Kirchhof P, Franz MR, Nuyens D, Rossenbacker T, Ottenhof A, Haverkamp W, Breithardt G, Carmeliet E, Carmeliet P. Effect of pacing and mexiletine on dispersion of repolarisation and arrhythmias in hearts of SCN5A δ -KPQ (LQT3) mice. *Cardiovasc Res* 2003;57:1085-1093.
- Schulze-Bahr E, Neu A, Friederich P, Kaupp UB, Breithardt G, Pongs O, Isbrandt D. Pacemaker channel dysfunction in a patient with sinus node disease. *J Clin Invest* 2003;111:1537-45.
- Gerull B, Heuser A, Wichter T, Paul M, Basson CT, McDermott DA, Lerman BB, Markowitz SM, Ellinor PT, MacRae CA, Peters S, Grossmann KS, Michely B, Sasse-Klaassen, S, Birchmeier W, Dietz R, Breithardt G, Schulze-Bahr E, Thierfelder L. Mutations in the desmosomal arm repeat protein plakophilin-2 are common in arrhythmogenic right ventricular cardiomyopathy. *Nature Genetics*, 2004; 36:1162-4

Univ.-Prof. Dr. med. Dr. h.c. Günter Breithardt, born: Haan/Rhld., January 19th, 1944.

Since 1967 married with Dr. med. Lisbeth-Kristin Praesteng Breithardt, born Praesteng, Bodoë, Norway

Children: Dr. med. Ole-Alexander Breithardt and Dr. med. vet. Anne-Kristin Breithardt

Head of the Department of Cardiology and Angiology of the Hospital of the University of Münster, Albert-Schweitzer-Str. 33
and

Head of the Department of Molecular Cardiology at the Institute for Arteriosclerosis Research at the University of Münster, Domagkstr. 5,

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Medical education:

Since 1963, medical education at the Universities of Tübingen, Vienna and Düsseldorf.

1969 final examination ("Staatsexamen") at the University of Düsseldorf.

Medical Thesis ("Dr. med.", Dissertation): "Autohistoradiographic studies on the incorporation of H-3-leucine in the hypertrophied heart muscle after training".

Fellowships:

- 1970 to 1971 Institute for Pathology of the University of Düsseldorf
- As of October 1971 Department of Medicine of the University of Düsseldorf (Prof. Dr. F. Loogen)
- 1978 Medical Thesis for "Habilitation" (Privatdozent) on "Clinical-electrophysiological studies of sinus node function" (corresponding to Ph.D.).

Awards:

- Edens-Award of the University of Düsseldorf.
- Arthur-Weber-Award of the German Cardiac Society.

Appointments:

- February 1982 Appointment as Professor of Medicine at the University of Düsseldorf.
- January 1988 Appointment as Professor and Head of Internal Medicine (Cardiology and Angiology) of the Medical Hospital of the Westfälische Wilhelms-University in Münster (Germany, F.R.).
- In addition to the position as Head of Internal Medicine, appointment as Co-Director of the Institute of Arteriosclerosis Research at the Westfälische Wilhelms-University of Münster.

Membership, appointments

- 1983 – 1986 Chairman of the Working Group "Arrhythmia" of the German Cardiac Society.
- Since 1985 Member of the Clinical Commission of the German Cardiac Society.
- Since 1986 Member of the Nucleus of the Working Group "Arrhythmias" of the European Society of Cardiology.
- Since 1988 Chairman of the "Joint Task Force Committee for Standardization of Recording of Low-amplitude Signals" between the European Society of Cardiology and the American Heart Association and the American College of Cardiology.
- 1988 Appointment as member of the Advisory Board of the German Cardiac Society.
- 1990 Appointment by the Board of E.S.C. as Chairman of the Research Committee of the European Society of Cardiology.
- 1990 Election by the General Assembly of the European Society of Cardiology as Member of the Board of E.S.C.
- 1990 Appointment by the Board of E.S.C. as Councillor in charge of the Working Groups.
- 1990-1996 Member of the Drug Commission of the German Medical Council.
- 1992 Appointment by the Board of E.S.C. as Secretary of the European Society of Cardiology.
- 1997 Scientific Member of the Working Group on Cardiac Pacing
- 1997-8 Member of the Executive Board of the International Society and Federation of Cardiology
- 1998 Founding member and Deputy Chairman of the Association for Clinical Cardiovascular Research
- 1998 Deputy Chairman of the Organisation for Clinical Cardiovascular Research (Verein für klinisch-kardiovaskuläre Forschung)
- 1999-2001 Co-chairman of the Committee for Medical Technology of the Health Research Council of the Federal Minister for Research and Technology (BMBF), Bonn
- 1999-2001 Consulting Editor, Dialogues in Cardiovascular Medicine
- 1999 Member of the Board of the Münster Transplant Center
- 1999-2003 Chairman of the Special Collaborative Research Programme of the Deutsche Forschungsgemeinschaft SFB 556 Heart Failure and Arrhythmias, from Molecular Basis to Clinical Management
- 2001-2005 Member of the Board of Trustees of the "Max-Delbrück-Centrum für Molekulare Medizin", Berlin
- 2003 – 2008 Chairman, National Network of Competence in Atrial Fibrillation; Scientific and Administrative Center at the University of Münster
- 2004-now Chairman of the Interdisciplinary Task Force for Adult and Congenital Heart Disease
- 2005-now Deputy member of the Ethics Committee of the Chamber of Physicians of Westfalen-Lippe and of the Medical Faculty of the University Münster
- 2005-2008 Member of the Executive Board of the Council of Clinical Cardiology of the World Heart Federation
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Appointments and Memberships

- 1985 Corresponding Member of the French Cardiac Society.

- 1988 Fellow of the European Society of Cardiology (FESC).
- 1990 Corresponding Member of the Portuguese Society of Cardiology.
- 1991 Fellow of the American College of Cardiology (F.A.C.C.).
- 1991 Corresponding Member of the Chilean Society of Cardiology and Cardiovascular Surgery.
- 1995 Corresponding Member of the Spanish Society of Cardiology.
- 1996 Honorary Member of the Slovak Society of Cardiology.
- 1998 Honorary Member of the Polish Cardiac Society
- 1999 Honorary Member of the French Society of Cardiology
- 2001 Honorary Member of the Norwegian Society of Cardiology
- 2002 Member of the European Academy of Science and Arts
- 2004 Member of the European Heart Rhythm Association (EHRA)
- 2006 Fellow of the Heart Rhythm Society (FHRS)

Special Positions

- 1986-1991 First chairman of the Executive Scientific Committee of the European Society of Cardiology (for the Annual Congresses).
- 1994-1996 President-Elect of the European Society of Cardiology.
- 1996-1998 President of the European Society of Cardiology.
- 1998-2000 Past-President of the European Society of Cardiology
- 1997-1999 President-Elect of the German Cardiac Society
- 1999-2001 President of the German Cardiac Society
- 2001-2003 Past-President of the German Cardiac Society

Areas of Scientific Interests

Cardiac Arrhythmias and Heart Failure: Clinical Epidemiology; Electrophysiology; Antiarrhythmic drugs; Non-pharmacological Therapy; Sudden Cardiac Death; Risk Stratification; Molecular Genetics of Arrhythmias and Heart Failure; Molecular Genetic Models; Multicenter Studies on Pharmacological and Electrical Therapy and Prophylaxis of Arrhythmias and Heart Failure.

Arteriosclerosis: Clinical Epidemiology; Cardiac and Extracardiac Risk Factors for Coronary Interventions; Functional and molecular Imaging; Arteriosclerotic Plaques; Cell-cycle Regulation and Restenosis; Interventional Studies; Coronary Artery Disease and Kidney Function.

Membership in Scientific Societies

- German Cardiac Society
- German Society for Internal Medicine
- German Society for Internal Intensive Care
- American Electrophysiology Society
- European Society of Cardiology
- North American Society for Pacing and Electrophysiology (NASPE), now Heart Rhythm Society
- Society for Quality Management in Health Care
- International Society for Holter and Non-invasive Electrophysiology
- European Heart Rhythm Association
- European Atherosclerosis Society

Publications

In PubMed, 688 publications listed as of May 30, 2006. More than 10,000 citations.

Editorial Boards

Journal of Cardiovascular Pharmacology; Journal of Electrophysiology; European Heart Journal; New Trends in Arrhythmias; Zeitschrift für Kardiologie; PACE (Pacing and Clinical Electrophysiology); Journal of Cardiovascular Electrophysiology; Hellenic Journal of Cardiology; Cardiology in Review; "Intensiv"; NASPETAPES; Journal of Interventional Cardiac Electrophysiology; ACCEL; Herz; International Editorial Board Turkish Journal of Pacemakers and Electrophysiology; Hellenic Journal of Cardiology.

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Biographical summary for Günter Breithardt, M.D.

Dr. Breithardt, after graduating from the Universities of Tübingen, Germany, Vienna, Austria, and Düsseldorf, Germany, became full Professor of Medicine (Cardiology) in 1982 at the University of Düsseldorf, Germany where, besides his position as consultant, he was Director of the Electrophysiology Laboratories in the Department of Cardiology, Angiology, and Pneumology. He continued as full Professor of Medicine (Cardiology) at the University of Münster, Germany, where he became Head of the Department of Cardiology and Angiology as of 1988 until present. In 1991 until present, he also took the position of Director of the Department of Molecular Cardiology at the (Leibniz) Institute for Arteriosclerosis Research at the University of Münster.

He has been at the forefront of clinical electrophysiology from the early 1970-ies; he was among the leading investigators of sinus node function; he was one of the pioneers of signal-averaged electrocardiography; he developed a large programme for electrophysiologic mapping including intraoperative management of tachycardias where his group established one of the largest cohorts of patients undergoing surgery for ventricular tachycardia; he and his associates were the first world-wide to apply radio-frequency current for ablation of cardiac arrhythmias in patients in 1986. In 1984, his group was the first to implant ICDs in Germany shortly after the first few devices had been implanted in Paris, and they were the first to implant 3rd generation ICDs world-wide in October 1989.

Under his leadership at the University of Münster, a comprehensive research programme was initiated that specifically focused on arrhythmia and heart failure mechanisms and that encompassed molecular genetics and a variety of animal models ranging from mice to rabbits in-vivo and ex-vivo. They were among the early groups using clinical methods for phenotyping genetically-modified mice (“mouse clinic”) by establishing a programme for translational research that included in-vivo and ex-vivo electrophysiological studies, and imaging with ultrasound and small-animal PET. His group was involved in the consortium that identified the first gene mutations for Brugada syndrome, they described the first mutation responsible for sinus node disease, they identified plakophilin-2 as the most prevalent mutation underlying arrhythmogenic right ventricular cardiomyopathy.

In 1985/86, he was co-founder of the Collaborative Research Programme (Sonderforschungsbereich) of the Deutsche Forschungsgemeinschaft on “Complications of Coronary Artery Disease” including sudden cardiac death, he was founder and chairman of the Sonderforschungsbereich “Heart Failure and Arrhythmias” (SFB 565) at the University of Münster; he was co-founder of the Interdisciplinary Center for Clinical Research (IZKF) of the University of Münster; he is co-chairman of the Multicenter Registry on Coronary Artery Disease and Renal Failure; he was one of the initiators and has been the chairman of the National Network of Competence on Atrial Fibrillation which unites clinical epidemiologists and clinician scientists with basic researchers in a multicenter environment. He was co-founder of the German Working Group on Arrhythmias; he was chairman of the Working Group on Arrhythmias of the European Society of Cardiology; he has been sitting on a number of review boards for renowned institutions like the Max-Delbrück-Center in Berlin, being now member of its Board of Trustees, the Max-Planck-Institute for Cardiovascular Research in Bad Nauheim, ICIN and CARIM in the Netherlands, and for the British Heart Foundation. He has been a member of the Scientific Advisory Board of the Leducq-Foundation

since its beginning. He is member of the European Academy of Science and Arts. Between 1986 and 2000, he was initially ex-officio member of the Board of the European Society of Cardiology as its first Scientific Programme Chair, and later served in various positions on the same Board including as President of the ESC from 1996 to 1998. He was the first chairman of the ESC Research Committee, and he established what is now called the ESC Practice Guideline Committee as its first chairman. He was European member on the Executive Board of the World Heart Federation from 1987 to 1988. He also served in various committees of the German Cardiac Society, including having been its President from 1999 to 2001. In this society, among others, he presently chairs the Interdisciplinary Task Force on Adult Congenital Heart Disease, and the Inter-Society Group on Heart and Kidney Interaction. He is corresponding or honorary member of many national societies of cardiology from Europe and South America (Chile). He received the Edens-Award of the University of Düsseldorf, and the prestigious Arthur-Weber-Award of the German Cardiac Society. In 2006, he received an honorary doctor degree (Dr. honoris causa) of the University of Coimbra, Portugal, the second oldest university in Europe.

His present main interest as a clinician scientist is in the field of genetic background of rare cardiac arrhythmic diseases and their clinical presentation, as well as arrhythmias, heart failure and sudden cardiac death.

Relationship with AHA:

He has been attending all AHA Annual Conferences since more than 30 years. He served as chairman for the ESC/AHA/ACC Task Force for Standards for Analysis of Ventricular Late Potentials Using High-Resolution or Signal-Averaged Electrocardiography published in *Circulation*, *European Heart Journal* and *JACC*; during his term as President-Elect, President, and Past-President of the ESC, he was member of the Joint Leadership Group between AHA, ACC, and ESC. As first chairman of the ESC Programme Committee for the annual congresses as of 1988, he developed a working relationship with the equivalent programme committee chair of the AHA.

Animal experimental models with personal experience or by the research groups headed:

- Left ventricular hypertrophy model by swimming in rats (doctoral thesis).
- Clinical electrophysiological studies to understand mechanisms of arrhythmias, drug effects, impact of diseases.
- Canine studies on ischemia and anoxia with focus on glycolytic pathways and cAMP.
- Canine model for assessment of global coronary blood flow (argon method).
- Canine model for testing defibrillation characteristics.
- Canine model and isolated tissue model to develop radio-frequency current ablation.
- Canine ventricular tachycardia model with multi-site mapping.
- Isolated Langendorff-perfused heart models to study proarrhythmia of drugs in normal settings and in heart failure, role of mechanical factors.
- Genetic mouse models (plakoglobin; junction and triadin; Na/Ca exchanger; CREM-TG; LQTS 3 (Delta KPQ mice); A3 -adenosine receptor) for phenotyping (ultrasound, PET, in-vivo and ex-vivo electrophysiologic studies, telemetric ECG, interventional studies using exercise, studying drug effects on disease process).