

CV

ROLF G. BENNHAGEN

MD/M.B., Ch.B., PhD

PERSONALIA:

Name: Rolf Bennhagen

Adress: Harneskgränden 6, S-226 49 Lund, Sweden

Born in Malmö, Sweden, citizenship: Swedish

Tel. +46-709 900 259

E-mail: rolfbennhagen@gmail.com

Civil status: Living with Susanne Abrahamsen. Three grown-up children.



In summary: 30 years in paediatric cardiology (preceded by 5 years in paediatrics), of which 20 years at tertiary, surgical centres. Core fellow in paediatric cardiology in Melbourne. Fellow in interventional paediatric cardiology in Toronto. PhD in paediatric cardiology. Graduate in Sports Medicine. Special interest: hemodynamics and physical performance. Owner of Heart&Sports Medicine Clinic Scandinavia (with portable echocardiographic equipment).

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OVERVIEW:

Education: Medical education and research education at The Medical Faculty, Lund University Hospital, Sweden, 1972-2007
Consultant in Paediatric Cardiology (since 1990) and specialist doctor in Paediatrics (since 1987)
Core fellow in paediatric cardiology, Melbourne, Australia (1995-96)
Specialty Fellow in interventional paediatric cardiology, Toronto, Canada (2000-2001)
PhD in paediatric cardiology, Lund University (2006)
Sports Medicine for team doctors, 30 university points, Umeå University (2017-18)

Positions: 1983–1987: Registrar and senior registrar, Dept of Paediatrics, Lund University Hospital, Sweden

1988-2007: Registrar and (from 1990) consultant, Division of Paediatric Cardiology, Dept of Paediatrics, Lund University Hospital, Lund

2007-2008: Consultant, Dept of Paediatric Cardiology, The National Hospital (Rigshospitalet), Copenhagen, Denmark. Function as post doc after dissertation

2008-2011: Consultant paediatric cardiologist, Malmö University Hospital, Sweden and Aalesund Hospital, Norway
Part-time private practice in paediatric cardiology and in paediatrics.

2012-2014: Consultant paediatric cardiologist, Aalesund Hospital, Norway.

2014-2018: Senior paediatric cardiologist, Skaraborgs Hospital, Sweden

2018 Consultant in paediatric cardiology, Ryhov Hospital, Jönköping, Sweden

POSITIONS, IN DETAIL

Senior paediatric cardiologist, Ryhov Hospital, Jönköping, Sweden	10 SEPT 2018 – 10 DEC 2018
Senior paediatric cardiologist, Skaraborgs Hospital, 2018 Sweden	28 FEBR 2014 – 3 SEPT
Consultant in paediatric cardiology, Aalesund Hospital, Norway.	9 JAN 2012-28 FEBR 2014
Consultant in general medicine, paediatric cardiology and paediatrics in private practice (Dedicare AB, Medifact A/S Norway, Medifact A/S Sweden, HMC Svedala AB, Region Skåne, International Children´s Heart Foundation, Rolf Bennhagen AB, Aalesund Hospital, Norway)	1 JULY 2008 -- 15 DEC 2011
Consultant in paediatric cardiology, Malmö University Hospital, Sweden (parttime)	1 SEPT 2009-19 APR 2010
Consultant in paediatrics, Ystad General Hospital Paediatric cardiology consultant,	30 OCT 2008 – 19 APR 2010
Division of Cardiology, Department of Paediatrics, Rigshospitalet, Copenhagen University Hospital, Denmark	1 AUG 2007-- 30 JUN 2008
* Paediatric cardiology consultant, Division of Cardiology, Department of Paediatrics, Lund University Hospital, Sweden	<i>1990 – 16 July 2007</i>
Subspecialty Fellow in Interventional Cardiology Department of Cardiology, The Hospital for Sick Children Toronto, Ontario, Canada	1 JULY 2000 - - 30 JUNE 2001
Core fellow in Cardiology Royal Children´s Hospital,	7 APR 1995-12 APR 1996

Melbourne, Victoria, Australia

Senior registrar in neonatology, Lund 13.9 1990-22.8 1993,
1.1-29.5.1994,23.8-21.11
1993

Registrar in paediatric cardiology, Lund 1.1 1988-12.9 1990

Registrar and senior registrar in paediatrics, 1.1 1983–31.12 1987
Dept of Paediatrics, Lund University Hospital

Internship, Simrishamn (Sweden) 1.2 1981-4.12 1982

Internship, Lund 1.8 1980-31.1 1981

Physician/SIDA (Swedish Aid to Developing
Countries), Amazonian Hospital, Peru,
Latin America 15.2-18.7 1979

House Physician, Infectious Diseases, Helsingborg (S) 5.6–31.10,1978

House Physician, Anaesthesia, Lund. 13.9–26.12,1976

House Physician, Anaesthesia, Vänersborg (S). 23.6–12.9 1976

EDUCATION AND QUALIFICATIONS

Sports Medicine for team doctors, Sept 2017 -
30 university points June 2018

Institute of Sports Medicine,
Umea University, Sweden

Invited International Speaker, Al-Ain University,
and University Hospital, UAE, Conference 'Critical
Decisions in Pediatrics', 3 presentations 24-26 Febr. 2012

Honorary observer, paediatric cardiology, 4-9 July 2011
Great Ormond Street Hospital for Children, London
Ref. Dr. Michael Burch

Honorary observer, paediatric cardiology, 11-16 Oct. 2010
Evelina Children's Hospital, Guy's and St Thomas'
Foundation, London, UK. Ref. Prof. S.Qureshi.

Authorisation as specialist in paediatrics in Norway	25.5 2010
Eligible as a Specialist in Paediatric Cardiology in the British specialist register. Approved by the Specialist Training Authority of the Medical Royal Colleges(<u>STA</u>). GMC ref. number 4383978	30.6 1999
Authorisation as physician in Norway	27.10 1998
Included in the British specialist register under Paediatrics	3.4 1997
Certificate of Full Registration as a Medical Practitioner in Great Britain Previous GMC Reg. no. 4383978	20.2 1997
Danish autorisation as specialist physician	20.3 1995
Danish authorisation as physician	4.1 1995
Qualified in Paediatric & Adolescent Cardiology	12.9 1990
Qualified Specialist in Paediatrics	19.1 1987
Qualified Physician	9.12 1982
The University Medical Degree, Lund University	9.1 1979

SPECIAL RESPONSIBILITY AND INTERESTS:

Cardiac assessments in complex congenital and acquired heart disease. Hemodynamics.
Sports medicine (physical performance).

SCIENTIFIC PUBLICATIONS

Thesis: Cardiac muscle injury in children and experimental animals. Reflections in ECG, especially high-resolution electrocardiography. Dissertation, Lund University
31 March 2006

Peer Reviewed articles

Gilljam T, Higgins T, Bennhagen R. First two decades of pediatric heart transplantation in Sweden – outcome of listing and post-transplant results. *Acta Paediatr* 2011;100(11): 1442-7

Gilbert CL, Gnanapragasam J, Bennhagen RG. Novel use of decellularized extracellular matrix graft for creation of trileaflet pulmonary valve conduit in a patient undergoing Ross procedure. *World J for Pediatr and Congen Surg* 2011;2(3):495-501

Bucín D, Johansson S, Malm T, Jögi P, Johansson J, Lindberg LO, Olsson A-K, Gelberg J, Harling S, Bennhagen R, Kurkus J, Otto G. Heart transplantation across the antibodies against HLA and AB0. *Transplant Int* 2006 Mar; 19(3):239-44

Bennhagen RG, Sörnmo LS, Pahlm O, Pesonen E. Serial signal-averaged ECG in children after cardiac transplantation. Editorial in *Pediatr Transplant* 2005;9(6):773-9

Sun Z-h, Happonen J-M, Bennhagen RG, Sairanen H, Pesonen E, Toivonen L, Jokinen E. Increased QT dispersion and loss of sinus rhythm as risk factors for late sudden death after Mustard or Senning procedures for transposition of the great arteries. *Am J Cardiol* 2004;Jul 1;94(1):138-41

Bennhagen RG, Sörnmo L, Pahlm O, Pesonen E. Signal-averaged electrocardiography in normal newborn infants. *Pediatr Cardiol* 2004;25(5):451-458

Bennhagen RG, Benson LN. Silent and audible persistent ductus arteriosus. An Angiographic Study. *Pediatr Cardiol* 2003 Jan-Feb;24(1):27-30

Bennhagen RG, Holje G, Laurin S, Pesonen E. Coil embolization of a neonatal pulmonary arteriovenous malformation. *Pediatr Cardiol* 2002;Mar-Apr;23(2):235-8

Bennhagen RG, McLaughlin P, Benson LN. Contemporary Management of Children with Atrial Septal Defects. *Am J Cardiovasc Drugs* 2001;1(6):445-454

Bennhagen RG, Sörnmo L, Pesonen E, Wohlfart B. High frequency components in ECG from guinea-pig Langendorff preparations. *Clin Physiol* 2001;Sep;21(5):576-83

Malm T, Holmkvist C, Olsson CG, Johansson J, Sandström S, Bennhagen R, Jögi P. Thrombolysis of an occluded modified Blalock-Taussig shunt in a neonate three days after surgery. *Ann Thorac Surg* 1998; 65:1453-5

Bennhagen RG, Weintraub RG, Lundström N-R, Svenningsen NW. Hypoxic-ischaemic encephalopathy (HIE) is associated with regional changes in cerebral blood flow and alterations in cardiovascular function. *Biol Neonate* 1998; 73: 275-286

Bennhagen RG, Menahem S. Holt-Oram Syndrome and multiple ventricular septal defects - an association suggesting a possible genetic marker? *Cardiology in the Young* 1998; 8: 128-130

Bennhagen R, Holmberg L. Protein C activity and antigen in premature and fullterm newborn infants. *Acta Paediatr Scand* 78: 34-39, 1989.

Also published in *Pediatrics Digest* 1989; 6: 17-18

Malm J, Bennhagen R, Holmberg L, Dahlbäck B. Plasma concentrations of C4b-binding protein and vitamin K-dependent protein S in term and preterm infants: low levels of protein S-C4b-protein complexes. *Brit J Haemat* 1988, 68: 445-449

Bennhagen R, Svenningsen N.W, Bekassy A. Changing pattern of neonatal meningitis in Sweden. *Scand J Infect Dis* 1987, 19: 587-593

Book Chapters

Bennhagen RG, McLaughlin P, Benson LN. CardioSeal and Starflex Devices in transcatheter Closure of Atrial Septal Defects. *In: Rao PS (ed.): Catheter-based devices. For the treatment of non-coronary cardiovascular disease in adults and children. Lippincott Williams & Wilkins* 2003:61-69

Abstracts, posters

Higgins T, Bennhagen R, Wähländer H, Gilljam T. First 20 years of paediatric heart transplantation in Sweden: Comprehensive outcome after listing for transplantation and post-transplant results 1989-2009. AEPC 2011.

Wähländer H, Bennhagen RG, Gilljam T, Higgins T. Outcomes of listing for paediatric heart transplantation in Sweden – A complete 21 years national follow-up. *Accepted* International Pediatric Transplant Association, Montréal 2011

Gilljam T, Bennhagen R. Long-term follow up after listing for pediatric heart transplantation in Sweden 1989-2007. Abstract Joint Meeting in Fetal and Paediatric Cardiology and Paediatric Cardiac Surgery, Royal Brompton Hospital-The Queen Silvia Children's Hospital, 14-15 June 2007, Gothenburg, Sweden

Gilljam T, Bennhagen R, Holmgren D, Harling S. Follow-up of all Swedish children listed for heart transplantation 1989-2004. Abstract WPCCS 2005

Bennhagen RG, Malm T, Bucin D, Harling S, Lindberg L, Kornhall B, Ekmehag B, Westrin P, Wettrell G, Johansson S. ABO Incompatible Heart Transplantation Followed by Antigen-Specific Immunoabsorption. Abstract WPCCS 2005

Bennhagen RG, Sörnmo S, Pahlm O, Pesonen E. New Approach with Signal-Averaging ECG, a Complement to Endomyocardial Biopsy in Follow-Up after Cardiac Transplantation. Abstract WPCCS 2005

Aburawi EH, Berg A, Pesonen E, Karlsson M, Bennhagen R, Jogi P, Hanseus K. Severe Coronary Ostial Stenosis after Arterial Switch Operation Detected by Doppler Echocardiography – A case report. Abstract WPCCS 2005

Bennhagen RG, Sörnmo LS, Pahlm O, Pesonen E. Signal-averaged ECG: Foregoer to endomyocardial biopsy in rejection diagnosis after cardiac transplantation? *Accepted Scand Cardiovasc J* 2005

Harling S, Wettrell G, Bennhagen RG, Johansson S, Bucin D, Kornhall B, Ekmehag B, Gellberg J. Lyckad hjärttransplantation trots antikroppar mot givarens HLA och ABO på 6-årig flicka - 1-årsuppföljning. Annual Meeting of the Swedish Medical Association 2004 (in Swedish)

Harling S, Bennhagen RG, Kornhall B, Wettrell G. Poster: Barn och ungdomar hjärttransplanterade i Lund 1993 till 2003. Annual Meeting of the Swedish Medical Association

2003 (in Swedish)

Bennhagen RG, Benson LN. Persisterande ductus arteriosus. 'Silent' och med blåsljud/Persistent ductus arteriosus. 'Silent' and with murmur. Presentation, Annual Meeting of the Swedish Medical Association 2001 (in Swedish)

Bennhagen RG, Pahlm O, Sörnmo O, Pesonen E. Högupplösande elektrokardiogram hos friska nyfödda barn/High-resolution electrocardiogram in healthy term infants. Presentation, Annual Meeting of the Swedish Medical Association 2001 (in Swedish)

Bennhagen RG, Trivedi K, Mikailian H, Benson LB. Stenting of coarctation of the aorta. Poster, The Fifth Pediatric Interventional Cardiac Symposium (PICS-V), May 22-25 2001, Toronto, Ontario, Canada

Bennhagen R, Johansson J, Laurin S, Pesonen E: Repeated coiling of pulmonary arterio-venous malformation(AVM) in a newborn girl with Hereditary Hemorrhagic Telangiectasi (HHT). Abstract, Annual Meeting of the Swedish Medical Association 1998 (in Swedish)

Bennhagen R, Jögi P, Lundström N-R. Intraoperative epicardial echocardiography in subvalvular aortic stenosis. Abstract and poster. Annual Meeting of the Swedish Medical Association 1992 (in Swedish)

NON-SCIENTIFIC PUBLICATION

C-assignment in literature science. Rolf Bennhagen: 'A more free man', an analysis of 'The Flies' by Jean-Paul Sartre, August 2014, Institution of Languages and Literature, Lund University (in Swedish)

Foreword by Rolf Bennhagen in 'Mathias får ett nytt hjärta', 'Mathias gets a new heart', Author Stefan Öqvist

LANGUAGE ABILITIES

1 Swedish, 2 English, 3 Danish, 4, Norwegian, 5 Spanish, 6 French, 7 German.

TEACHING EXPERIENCE

Lecturer in paediatric cardiology for doctors in Aalesund,

Norway and Skaraborg, Sweden.	2012 - 2018
Lecturer for nurses in paediatrics Dept of Health Science, Lund University	Jan 2012
Lecturer in paediatric cardiology for nurses in neonatology and intensive care, Lund	May 2007
Lecturer in paediatric echocardiography, Scandinavian course for medical practitioners Grand Hotel, Lund	Oct 1997
Tutor to college student, Maria Radu. Project " Medfödda hjärtfel. Diagnos och behandling"	1997
Lecturer in paediatrics at four university courses of medical students	1996-1997
Lecturer at further education courses for doctors in paediatric cardiology	17-21.4 1989, 14-18.5 1990, 12-16.10 1996
ADMINISTRATIVE EXPERIENCE	
Secretary in the National Association of Pediatric Cardiologists in Sweden	Nov 2004- -Apr 2007
Responsible for on-call economics for pediatric cardiologists in Lund	1997-2000
Responsible for planning the rota for First Call duty at the Dept of Paediatrics, Lund	1987-1989
COURSES	
Project leadership, Aalesund University College, Norway with exam	2013 11.3.2013

Specialty Review in Pediatric Cardiology (DVD program), 33.75 AMA PRA Category 1 Credits, completed	29 Aug 2011
3D Echocardiography in Structural Heart Disease, Evelina Children´s Hospital, London, UK/Philips	3-4 Febr 2011
CPR for the asphyxiated newborn, C.E.P.S (Center For Education in Pediatric Simulator), Helsingborg (S)	6.5 2009
The Infant Flow™ System (CPAP), JakaMed	29.4 2009
Diabetes in practice, Novo Nordisk, Stockholm, Sweden	23-26.3 2009
International Workshop on Interventional Pediatric Cardiology, Milan, Italy	28-31.3 2007
Pacemaker treatment of children. Nordic workshop, Mölle, Sweden	5-6.5 2000
Basic education in pacing and DDD-technology, Vitatron	29.10 1997
Interventions in Congenital Heart Disease, European Society of Cardiology, Nice, France	16-18.10 1997
Communication and Leadership, a private management- training, Dale Carnegie®	Autumn 1997
Education to be a tutor in Problem Based Learning (PBL), Lund University	10.2&10.4 1997
Course in fetal echocardiography, Dept of Obstetrics and Gynecology, Malmö University Hospital, Malmö, Sweden	2-4.12 1996
Postgraduate course: Ultrasound in Vascular Disease, new trends in techniques and applications.	

Malmö, Sweden	25.12 1996
Computed Sonography Imaging and Doppler Techniques Workshop (Acuson). Surfers Paradise, Queensland, Australia	2-4.11 1995
Postgraduate course: Cardiology in the Young. Institute of Child Health & Royal Brompton, National Heart & Lung Institute, London	11-13.5 1994
Clinical Research Methodology, Professor Johannes Vang, WHO	3-7.5 1993
Postgraduate course: Cardiology in the Young. Institute of Child Health & Royal Brompton, National Heart & Lung Institute, London	22-24.3 1993
The First Karolinska Institute symposium on Peri- operative Echocardiography, Stockholm, Sweden (The first and only)	13-14.9 1992
Postgraduate course: Cardiology in the Young. Institute of Child Health & National Heart and Lung Institute, London.	23-25.3 1992
Postgraduate course: Heart Disease in Children, Anatomy and Diagnosis. National Heart Institute, London University	26-27.9 1991
Postgraduate course: Fetal Cardiology, Perinatal Car- diac Management. Malmö, Sweden.	28.8 1991
Postgraduate course: Introduction to the Ultrasound Doppler Technique. Ronneby Brunn, Sweden.	5-6 1988
University course in basic statistics (1 semester=20 university points)	10.2 1971

CONFERENCES

Familiar Hypercholesterolaemia, FH Sahlgrenska University Hospital, Sweden	10 Febr. 2016
International Conference and Exhibition on Pediatric Cardiology, Valencia, Spain (OMICS)	25-27 Aug 2015
9th International Conference on Ultrasound Biomedical Microscanning, Peebles, Scotland	28 Sept-1 Oct 2014
Cardiostim, EHRA Europace, Nice, France	18-21 June 2014
22nd International Parma Echo Meeting, from Fetus to Young Adult, Parma, Italy	19-21 June 2013
Regional research conference with presentation, NTNU/ Regional Hospital, Aalesund, Norway	4-5 June 2013
Invited International Speaker, 'Critical Care Decisions in Paediatrics', United Arab Emirates University, Al-Ain and Tawam hospitals, 3 presentations	24-25 Febr 2012
Joint Meeting in Fetal and Paediatric Cardiology and Paediatric Cardiac Surgery, Royal Brompton Hospital- The Queen Silvia Children's Hospital, Gothenburg, Sweden	14-15.6 2007
41st Annual Meeting of AEPC, Basel, Switzerland	24-27.5 2006
World Conference of Pediatric Cardiology and Pediatric Cardiac Surgery, Buenos Aires, Latin America incl. the PICS (Pediatric Interventional Cardiology Symposium)	16-22.9 2005

Blood group ABO incompatible allotransplantation, satellite meeting at 8th Congress of the International Xenotransplantation Society, Gothenburg, Sweden	10.9 2005
VII Svenska Kardiologiska Vårnämnden/XX Nordic Congress of Cardiology. Speaker	27-29.4 2005
25th anniversary meeting and scientific sessions, International Society for Heart and Lung Transplantation, Philadelphia, Pennsylvania, USA	6-9.4 2005
4th Scientific Symposium on Endothelin-Related Diseases, Seville, Spain	11-13.3 2005
Ventavis Launch Symposium, Madeira, Portugal	10-11.10 2003
The lung-selective therapy of Pulmonary Hypertension, Iloprost, Seville, Spain	25.10 2002
Iloprost-Symposium - Iloprost in the Intensive Care Medicine 2002, Berlin, Germany	6-7.9 2002
The Sixth Pediatric Interventional Cardiac Symposium (PICS-VI), Chicago, ILL., USA	2002
Controversies in the management of neonatal heart disease, Hamburg, Germany	7.7 2001
3rd World Congress in Pediatric Cardiology and Cardiac Surgery, Toronto, Ontario, Canada	27-31.5 2001
The Fifth Pediatric Interventional Cardiac Symposium (PICS-V), Toronto, Ontario, Canada	22-25.5 2001
The Fourth Pediatric Interventional Cardiac Symposium (PICS-IV), Chicago, ILL., USA	Sept 2000

2nd STAFF studies symposium, invited speaker Harz Mountain Conference, Germany	23-26.9 1999
International Society for Heart and Lung Transplantation, annual meeting and scientific sessions, Chicago, ILL., USA	22-25.4 1998
First International Conference on Ultrasound in Vascular Disease, Malmö, Sweden.	Oct 1997
1995 Cardiac Symposium, Royal Children's Hospital, Melbourne, Victoria, Australia	10.8 1995
Fetal Cardiac Symposium/International Perinatal Doppler Society, Paris, France	10-15.9 1989
Third International Conference on Fetal and Neonatal Physiological Measurements, Malmö	5-8.6 1988
The Joint Meeting, Paediatric Societies in Europe/ /European Society of Pediatric Infectious Diseases, Munich, Germany with presentation	14-18.10 1985
VARIA Membership, A.E.P.C., Association of European Paediatric Cardiologists	2000, 2006, 2007
Member of the Society for Heart and Lung Transplantation	1997, 2005
Visiting paediatric cardiologist The Transplantation unit, German Heart Institute, Berlin, Germany	14-15.1 2000
Radiation Protection Course, Lund University Hospital	Autumn 1998
Visiting paediatric cardiologist, Service de	14.4-9.5 1997

Cardiologie Pédiatrique, Hôpital Necker-
Enfants Malades, Paris, France.

COLLABORATION WITH SOCIETY (Third Duty)

Member of 'Svensk förening för fysisk aktivitet och idrottsmedicin'
(Swedish Association of Physical Activity and Sports Medicine) 2018

Member of 'Dansk Idrætsmedicinsk selskab'
(Danish Association of Sports Medicine) 2018

Paediatric cardiologist, medical mission to the Dominican Republic,
The International Children's Heart Foundation, Memphis,
TN, USA 5-19 Nov 2011

Paediatric Cardiologist, medical mission to Guayaquil, Ecuador,
International Children's Heart Foundation, Memphis, TN, USA 21-28 Aug 2010

Member of MSF, Doctors Without Borders, 2007-2014

Interview in Helsingborgs Dagblad, 14 Oct 2007

Interview in Metro article 4 May 2006

Interview in Aftonbladet, 17 Oct 2004

Acting and interviewed in 'Little Miracles', CBC Television and Slice Networks,
Canada, 2001. Distributed to many countries.

Interview in Medicinskt Forum, 2 March 1997

INTERESTS

Literature, studied literature science at Lund University. Water sports/sailing: the Inshore Yacht Master and The Offshore Yacht Master Diplomas 2010, scuba diving: Nordic Scuba Divers Certificate, two stars=CMAS ** 1975-12-09, Certified Scuba Diver NAUI 1998-05-08, Advanced scuba diver NAUI 1999-09-12. Running, physical training, golf and windsurfing. Music, singing and dance. Yoga.

Lund, Sweden 28 Dec 2018

Rolf Bennhagen