Personal Profile

Dr. Hanns-Georg Klein, M.D.

Business Address:	Lochhamer Str. 29, 82152 Martinsried
Birth Place and Date:	Frankfurt/Main, May 27th 1959

After finishing Medical School in Erlangen and Munich, Germany, Dr. Klein´s professional stations included postdoctoral fellowships at the Department of Physiology at the University of Munich and at the National Heart, Lung and Blood Institute (NHLBI) in Bethesda. His received his clinical training at the Medical Policlinic of the University of Munich and at the Department of Clinical Chemistry at the University Hospital Grosshadern.

After successfully passing the board examinations for Clinical Pathology and Human Genetics, Dr. Klein left the university and started his career as an entrepreneur. He founded MEDIGENOMIX GmbH, a genomic services company, which today is part of the Eurofins group. Shortly after, Dr. Klein founded the Center for Human Genetics and Laboratory Diagnostics in Martinsried and IMGM Laboratories GmbH, being the CEO of both companies to date. In a joint transaction in 2018, both companies have become part of the international Medicover group (Sweden). In 2019, Dr. Klein founded acmaios GmbH, an investment company for seed financing start-ups in biotech and digital health.

Dr. Klein is author of more than 130 scientific publications and book contributions and serves as a field editor for the Journal of Laboratory Medicine. He is also a member of several medical associations and teaches Clinical Chemistry at the University of Munich. In 2023 Dr. Klein was appointed chairman of the advisory board of the BioM Cluster Management GmbH, an initiative of the State Government of Bavaria to promote Biotech in Bavaria. From 2009 - 2019 Dr. Klein served as elected Board Member of the Association of German Human Geneticists (BVDH).

Curriculum Vitae Hanns-Georg Klein

Education:

Universities	1980-1985 Friedrich-Alexander-University, Erlangen
	1985-1986 Ludwig-Maximilians-University, München
License to Practice Medicine	1986
Thesis	1983-1986 IVF-Center at the University Hospital of Obstetrics and Gynecology, Erlangen, Prof. Dr. S. Trotnow „Fertility Rates of Preovulatoric Oocytes and its Relation to Preincubation Times in Rabbits“

Training:

Graduate Assistant	1982-1985 Institute of Anatomy, University of Erlangen *Chairman:* Prof. Dr. Dr. h.c. J.W. Rohen
Postdoctoral Fellow	1986-1989 Institute of Physiology, University of München *Chairman:* Prof. Dr. Dr. h.c. K. Thurau
Internship	1989-1990 Medizinische Poliklinik, Universität München *Direktor:* Prof. Dr. N. Zöllner
Postdoctoral Fellow	1990-1992 Molecular Disease Branch, National Heart, Lung, and Blood Institute, Bethesda, MD, U.S.A. *Chief:* Dr. H. Bryan Brewer Jr.
Visiting Associate	1992-1993 Molecular Disease Branch, National Heart, Lung, and Blood Institute, Bethesda, MD, U.S.A. *Chief:* Dr. H. Bryan Brewer Jr.
Research Assistant	1993-1998 Institute for Clinical Chemistry, University Hospital Großhadern, University of München *Director:* Prof. Dr. Dr. h.c. D. Seidel
Certificate of Completion of Training (CCT) in Laboratory Medicine	1997
Certificate of Completion of Training (CCT) in Medical Genetics	1998

Enterpreneurial and Charitable Activities:

Company Foundation	1997 MediGenomix, incorporated for molecular biology services genome reserach and technology. *The company was sold to EUROFINS AG in 2001.*
Company Foundation	1998 Laboratory for Medical Genetics Dr. Klein, now Center for Human Genetics and Laboratory Medicine Dr. Klein and Dr. Rost. *Dr. Rost is partner since 2005*

Company Foundation	2001 IMGM Laboratories, incorporated for development, services and distribution of laboratory analyses mbH
Company Foundation	2019 acmaios, incorporated for investments mbH
Charitable Trust	2009 INSOPA Foundation for the sponsorship of projects in the field of social pediatrics and rehabilitation
Chairs	Head oft he DGKL working group GENOMICS Chairman of the Advisory Board of BioM Cluster Management GmbH Board of Managing Directors (treasurer) of the BVDH (until 201

Memberships:

German Joint Society for Clinical Chemistry and Laboratory Medicine e.V. (DGKL)
German Professional Association Human Geneticists e. V. (BVDH)
German Society for Immunogenetics e.V. (DGI)
German Society of Human Genetics e.V. (GfH)

Other Activities:

Field editor for molecular genetics and cytogenetics, *Journal of Laboratory Medicine* (de Gruyter Publishers)

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Publications:

(1) **H.-G. Klein**, V. Schöneck, L.F.O. Obika, P. Odigie, P. Angchanpen, M. Marin-Grez. Effect of atrial natriuretic peptide on the release of rat renal kallikrein. *Miner. Electrolyte Metab.* 15:130-136, 1989.

(2) **H.-G. Klein**, D. Dimitrov, I. Atanasova, R.M. Hohenfellner, U. Schmausser, N. Natcheff, K. Thurau. Atrial natriuretic factor (ANF) infusion following acute renal ischemia in anesthetized dogs. *Renal Physiol. Biochem.* 15:73-82, 1992.

(3) **H.-G. Klein**, P. Lohse, P.H. Pritchard, D. Bojanovski, H. Schmidt, H.B. Brewer Jr. Two different allelic mutations in the lecithin-cholesterol acyltransferase (LCAT) gene associated with the Fish Eye Syndrome. Lecithin-cholesterol acyltransferase (Thr_{123}->Ile) and lecithin-cholesterol acyltransferase (Thr_{347}->Met). *J. Clin. Invest.* 89:499-506, 1992.

(4) **H.-G. Klein**, P. Lohse, N. Duverger, J.J. Albers, D.J. Rader, L.A. Zech, S. Santamarina-Fojo, H.B. Brewer Jr. Two different allelic mutations in the lecithin-cholesterol acyltransferase (LCAT) gene resulting in classic LCAT deficiency: LCAT (Tyr_{83}->Stop) and LCAT (Tyr_{156}-> Asn). *J. Lipid Res.* 34:49-58, 1993.

(5) **H.-G. Klein**, S. Santamarina-Fojo, N. Duverger, M. Clerc, M.F. Dumas, J.J. Albers, S. Marcovina, H.B. Brewer Jr. Fish Eye Syndrome: A molecular defect in the lecithin-cholesterol acyltransferase (LCAT) gene associated with normal α-LCAT specific activity - Implications for classification and prognosis. *J. Clin. Invest.* 92:479-485, 1993.

(6) **H.-G. Klein**, N. Duverger, J.J. Albers, S. Marcovina, H.B. Brewer Jr., S. Santamarina-Fojo. In vitro expression of structural defects in the lecithin-cholesterol acyltransferase (LCAT) gene**.** *J. Biol. Chem.* 270:9443-9447, 1995.

(7) **H.-G. Klein**, U. Grau. Arzneimittelnebenwirkungen vermeiden: Möglichkeiten der pharmako-genetischen Diagnostik. *J. Lab. Med.* 11/12:477-484, 2001.

(8) **H.-G. Klein**, J. Rauch, B. Busse, U. Grau, C. Marschall. Single Nucleotide Polymorphisms in der medizinischen Prädispositionsdiagnostik. Frauenarzt 44:30-39 (2003).

(9) **H.-G. Klein**, D. Gorinevski, J. Hörmann, C. Marschall, K. Mayer, M. Vanetti. Whole genome microarray analysis and target validation by using qPCR. *J. Lab. Med.* 28:215-224, 2004.

(10) **H.-G. Klein**, H. Funke, M. Neumaier, Th. Langmann, C. Knabbe, P. Cullen. Kriterien für den Einsatz von Einzelnukleotidpolymorphismen (SNPs) in der medizinischen Routinediagnostik: Erarbeitung technischer und diagnostischer Empfehlungen. *J. Lab. Med.* 30:142-151, 2006.

(11) **H.-G. Klein**, B. Busse. Pharmacogenetics in Laboratory Diagnostics. *Curr. Pharmaco-genomics Personalized Med.* 6:12-22, 2008.

(12) I. Vogl, A. Benet-Pages, S.H. Eck, M. Kuhn, S. Vosberg, P.A. Greif, K.H. Metzeler, S. Biskup, C. Müller-Reible, **H.-G. Klein**. Applications and data analysis of enxt-generation sequencing. *J Lab Med* 37:305-315, 2013.

(13) **H.-G. Klein**, P. Bauer, T. Hambuch. Whole genome sequencing (WGS), whole exome sequencing (WES) and clinical exome sequencing (CES) in patient care. *J Lab Med* 38:221-230, 2014

(14) **H.-G. Klein**, I. Rost. Moderne genetische Analysemethoden – Grundlagen für eine genetisch basierte Prävention. *Bundesgesundheitsbl* 58:113-120, 2015

(15) T. Harasim, I. Rost, **H.-G. Klein**. Current status of non-invasive prenatal testing (NIPT): Genetic counseling, dominant methods and overall performance*. LaboratoriumsMedizin* 40(5), 2016

(16) **H.-G. Klein**, A. Wagner, U. Eichenlaub-Ritter, M. Stumm, F. Tüttelmann. Update der AG Reproduktionsgenetik der DGRM zur Präimplantationsdiagnostik (PID) in Deutschland. J*. Reproduktionsmed. Endokrinol.* 13(1): 13-17, 2016

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(18) A. Benachi, J. Caffrey, P. Calda,…**H.-G. Klein**, Y. Yaron, Understanding attitudes and behaviors towards cell-free DNA-based noninvasive prenatal testing (NIPT): A survey of European health-care providers, January 2019, Eur J Medical Genetics DOI:10.1016/j.ejmg.2019.01.006

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(23) Variant panorama in 1,385 index patients and sensitivity of expanded next-generation sequencing panels in arrhythmogenic disorders. Marschall C, Moscu-Gregor A, **Klein HG**. Cardiovascular Diagnosis and Therapy. (DOI) – 10.21037/cdt.2019.06.06, 2019

Editorials:

F. Thiemann, P.M. Cullen, **H.-G. Klein**. Leitfaden Molekulare Diagnostik. Wiley-VCH Verlag, Weinheim, 2nd Edition 2014

H.-G. Klein and K. Haen. Pharmakogenetik and therapeutisches Drug Monitoring. De Gruyter Publishers, 1st Edition 2017

L. Page-Christiaens and **H.-G. Klein**. Non-invasive Prenatal Testing, Elsevier Publishers, 1st Edition 2018

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