

Lars Melholt Rasmussen Født i 1959 Professor, overlæge,
dr.med., Forskningsleder for Klinisk Biokemi Kardiovaskulær
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Uddannelse / autorisationer / akademiske grader

Okt. 2004 Speciallæge i klinisk biokemi
Nov. 1999 Dr.med. fra Aarhus Universitet
Maj 1994 Autorisation som selvstændig læge
Jan. 1986 Cand.med. fra Aarhus Universitet

Ansættelser

2013- Leder af Eliteforskningscentret CIMA, Centre for Individualized Medicine in Arterial Disease
2006- Professor, overlæge, forskningsleder, Afd. for Klinisk Biokemi og Farmakologi, Odense
 Universitetshospital og Syddansk Universitet
2004-2006 Afdelingslæge, Klinisk Biokemisk Afdeling, Århus Universitetshospital
1999-2004 Reservelægeuddannelse i klinisk biokemi, Aalborg Sygehus & Aarhus Universitetshospital
1995-2009 Lektor, Molekylær Patologi, Patologisk Institut, Århus Universitetshospital
1993-2005 Reservelæge, (kirurgisk og medicinske afdelinger) Aarhus Universitetshospital
1990-1993: Post doc., The Burnham Institute, San Diego, USA
1986-1990: Kandidatstipendiat, Biokemisk Patologi, Århus Universitetshospital

Aktuelle forskningsledelsesmæssige funktioner

2013- Leder af Elite Research Centre for Individualized Medicine in Arterial Diseases (CIMA), OUH
2011- Leder af Det Kliniske Laboratorium under Center for Klinisk Proteomik, (CCP) OUH/SDU
2006- Forskningsleder for Forskningsenheden for Klinisk Biokemi, Klinisk Institut, Syddansk Universitet

Aktuelle undervisningsledelsesmæssige funktioner

2007- Modulansvarlig for Modul B11, bachelorprojekt for medicin og klinisk biomekanik, SDU
2007- Ansvarlig for undervisningen i klinisk biokemi på medicinstudiet på SDU

Forskningsvejlederfunktioner

Ph.D.-studerende >10 afsluttede
Specialer: >10 afsluttede forskningsårsopgaver og specialer

Forskningsbedømmelsesopgaver

* >30 Ph.D.-afhandlinger, 3 disputatser, +10 professoransættelser
2008-2016 Medlem af Odense Universitetshospitals Forskningsråd
2015 Formand for Astrup Priskomiteén, (nordisk pris for yngre klinisk biokemiker, NFKK, Nordisk Forening
 for Klinisk Kemi)
2013-2015 Medlem af priskomiteén for Øresund Award, (Region Hovedstad, Danmark og Region Skåne, Sverige)

Større forskningsbevillinger (> DKK 0,5 million kr, siden 2012)

2008 DKK 1,5 mio. research grant for research grant for in arterial diseases from the Region of Southern
 Denmark
2012-2016 DKK 2,04 mio., rammebevilling fra FSS
2012 DKK 4.2 mio. fra OUH's Forskningsråd til start af Centre for Clinical Proteomics
2013-2022 DKK 28 mio., CIMA -Eliteforskningscente-bevilling fra OUH
2015 DKK 0,6 mio., Arterial Proteomics, NNF
2017 DKK 1,23 mio., Type IV Collagen and Arteries, FSS
2018 DKK 0.9 mio., Arterial Basement Membranes, NNF

Publikationer

Artikler i peer-reviewed tidsskrifter pr. 01.06.2020 = 192; Andre artikler = 8. Total antal citationer = 4570 , h-index = 33. Seneste 5 år: >50 publikationer, heraf >20 som seniorforfatter. Artiklerne omhandler klinisk proteomik, diabetisk arteriesygdom, matrixforandringer i arterievæggen, kardiovaskulære biomarkører samt andre klinisk biokemiske emner.

Publikationer

Rathjen T, Kunkemoeller B, Cederquist CT, Wang X, Lockhart SM, Patti JC et al. **Endothelial Cell Insulin Signaling Regulates CXCR4 (C-X-C Motif Chemokine Receptor 4) and Limits Leukocyte Adhesion to Endothelium.** *Arteriosclerosis, Thrombosis, and Vascular Biology.* 2022 jul. 1;42(7):E217-E227. <https://doi.org/10.1161/ATVBAHA.122.317476>

Steffensen LB, Larsen JH, Hansen DR, Tha Thi ML, Larsen NS, Beck HC et al. **Profiling the Plasma Apolipoproteome of Normo- and Hyperlipidemic Mice by Targeted Mass Spectrometry.** *Journal of Proteome Research.* 2022 jun. 14. <https://doi.org/10.1021/acs.jproteome.2c00189>

Diederichsen ACP, Lindholt JS, Möller S, Øvrehus KA, Auscher S, Lambrechtsen J et al. **Vitamin K2 and D in Patients With Aortic Valve Calcification: A Randomized Double-Blinded Clinical Trial.** *Circulation.* 2022 maj 3;145(18):1387-1397. <https://doi.org/10.1161/CIRCULATIONAHA.121.057008>

Melin LG, Dall JH, Lindholt JS, Steffensen LB, Beck HC, Elkrog SL et al. **Cycloastragenol Inhibits Experimental Abdominal Aortic Aneurysm Progression.** *Biomedicines.* 2022 feb.;10(2). 359. <https://doi.org/10.3390/biomedicines10020359>

Palstrøm NB, Rojek AM, Møller HEH, Hansen CT, Matthiesen R, Rasmussen LM et al. **Classification of amyloidosis by model-assisted mass spectrometry-based proteomics.** *International Journal of Molecular Sciences.* 2022 jan. 1;23(1). 319. <https://doi.org/10.3390/ijms23010319>

Palstrøm NB, Matthiesen R, Rasmussen LM, Beck HC. **Recent Developments in Clinical Plasma Proteomics—Applied to Cardiovascular Research.** *Biomedicines.* 2022 jan.;10(1). 162. <https://doi.org/10.3390/biomedicines10010162>

Diederichsen A, Lindholt JS, Møller JE, Gerke O, Rasmussen LM, Dahl JS. **Sex Differences in Factors Associated With Progression of Aortic Valve Calcification in the General Population.** *Circulation. Cardiovascular Imaging.* 2022 jan.;15(1). e013165. <https://doi.org/10.1161/CIRCIMAGING.121.013165>

Jørgensen LH, Sørensen MD, Lauridsen MM, Rasmussen LM, Alfiler RM, Iversen VN et al. **Albumin-corrected Zn and available free Zn-binding capacity as indicators of Zn status—potential for clinical implementation.** *Scandinavian Journal of Clinical and Laboratory Investigation.* 2022;82(4):261-266. <https://doi.org/10.1080/00365513.2022.2064764>

Nielsen SGD, Grupe E, Lindholt JS, Fuglsang EH, Steffensen LB, Beck HC et al. **Selective inhibition of soluble tumor necrosis factor signaling reduces abdominal aortic aneurysm progression.** *Frontiers in Cardiovascular Medicine.* 2022.

Steffensen LB, Iversen XES, Hansen RS, Jensen PS, Thorsen A-SF, Lindholt JS et al. **Basement membrane proteins in various arterial beds from individuals with and without type 2 diabetes mellitus: a proteome study.** *Cardiovascular Diabetology.* 2021 dec.;20(1). 182. <https://doi.org/10.1186/s12933-021-01375-7>

Andersen LAC, Palstrøm NB, Diederichsen A, Lindholt JS, Rasmussen LM, Beck HC. **Determining plasma protein variation parameters as a prerequisite for biomarker studies: a trmt-based lc-msms proteome investigation.** *Proteomes.* 2021 dec.;9(4). 47. <https://doi.org/10.3390/proteomes9040047>

Dinesen S, Jensen PS, Bloksgaard M, Blindbæk SL, De Mey JGR, Rasmussen LM et al. **Retinal vascular fractal dimensions and their association with macrovascular cardiac disease.** *Ophthalmic Research.* 2021 aug.;64(4):561-566. <https://doi.org/10.1159/000514442>

Kristensen JSS, Melholt L, Kristensen KL, Dahl M, Lindholt JS. **Vitamin K₂ Dependent Matrix Gla Protein Relating to Abdominal Aortic Aneurysm and Overall Mortality: A Combined Case Control and Cohort Study.** *European Journal of Vascular and Endovascular Surgery.* 2021 aug.;62(2):267-274. <https://doi.org/10.1016/j.ejvs.2021.03.016>

Obel LM, Diederichsen AC, Steffensen FH, Frost L, Lambrechtsen J, Busk M et al. **Population-Based Risk Factors for Ascending, Arch, Descending, and Abdominal Aortic Dilations for 60-74-Year-Old Individuals.** *Journal of the American College of Cardiology.* 2021 jul.;78(3):201-211. <https://doi.org/10.1016/j.jacc.2021.04.094>

Steffensen LB, Stubbe J, Lindholt JS, Beck HC, Overgaard M, Bloksgaard M et al. **Basement membrane collagen IV deficiency promotes abdominal aortic aneurysm formation.** *Scientific Reports.* 2021 jun. 18;11. 12903. <https://doi.org/10.1038/s41598-021-92303-y>

Soerensen M, Debrabant B, Halekoh U, Møller JE, Hassager C, Frydland M et al. **Does diabetes modify the effect of heparin on plasma proteins? - A proteomic search for plasma protein biomarkers for diabetes-related endothelial dysfunction.** *Journal of Diabetes and Its Complications.* 2021 jun.;35(6). 107906. <https://doi.org/10.1016/j.jdiacomp.2021.107906>

Jiang S, Häggglund P, Carroll L, Rasmussen LM, Davies MJ. **Crosslinking of human plasma C-reactive protein to human serum albumin via disulfide bond oxidation.** *Redox Biology.* 2021 maj;41. 101925. <https://doi.org/10.1016/j.redox.2021.101925>

Linde L, Carter-Storch R, Christensen NL, Øvrehus KA, Diederichsen ACP, Laursen K et al. **Sex differences in aortic valve calcification in severe aortic valve stenosis: association between computer tomography assessed calcification and valvular calcium concentrations.** *European Heart Journal Cardiovascular Imaging.* 2021 maj;22(5):581-588. <https://doi.org/10.1093/ehjci/jeaa096>

Liu C-L, Liu X, Zhang Y, Liu J, Yang C, Luo S et al. **Eosinophils Protect Mice from Angiotensin-II Perfusion-Induced Abdominal Aortic Aneurysm.** *Circulation Research.* 2021 jan. 22;128(2):188-202. <https://doi.org/10.1161/CIRCRESAHA.120.318182>

Debrabant B, Halekoh U, Sørensen M, Møller JE, Hassager C, Frydland M et al. **Stemi, Cardiogenic Shock and Mortality in Patients Admitted For Acute Angiography: Associations and Predictions from Plasma Proteome Data.** *Shock (Augusta, Ga.).* 2021 jan. 1;55(1):41-47. <https://doi.org/10.1097/SHK.0000000000001595>

Jiang S, Carroll L, Rasmussen LM, Davies MJ. **Oxidation of protein disulfide bonds by singlet oxygen gives rise to glutathionylated proteins.** *Redox Biology.* 2021 jan.;38. 101822. <https://doi.org/10.1016/j.redox.2020.101822>

Liu J, Yang C, Liu T, Deng Z, Fang W, Zhang X et al. **Eosinophils improve cardiac function after myocardial infarction.** *Nature Communications.* 2020 dec. 16;11. 6396. <https://doi.org/10.1038/s41467-020-19297-5>

Carroll L, Jiang S, Irnstorfer J, Beneyto S, Ignasiak MT, Rasmussen LM et al. **Oxidant-induced glutathionylation at protein disulfide bonds.** *Free Radical Biology and Medicine.* 2020 nov. 20;160:513-525. <https://doi.org/10.1016/j.freeradbiomed.2020.08.018>

Dinesen S, Jensen PS, Bloksgaard M, Mey JD, S.Lindholt J, Rasmussen LM et al. **Coronary artery bypass surgery independently associates with retinal vascular oxygen saturation.** *Acta Ophthalmologica.* 2020 nov.;98(7):709-715. <https://doi.org/10.1111/aos.14444>

Hjortebjerg R, Rasmussen LM, Gude MF, Irmukhamedov A, Riber LP, Frystyk J et al. **Local IGF Bioactivity Associates with High PAPP-A Activity in the Pericardial Cavity of Cardiovascular Disease Patients.** *The Journal of clinical endocrinology and metabolism.* 2020 nov.;105(11):e4083-e4093. <https://doi.org/10.1210/clinem/dgaa617>

Hasific S, Øvrehus KA, Gerke O, Hallas J, Busk M, Lambrechtsen J et al. **Extent of arterial calcification by conventional vitamin K antagonist treatment.** PLOS ONE. 2020 okt. 29;15(10). e0241450. <https://doi.org/10.1371/journal.pone.0241450>

Mulorz J, Spin JM, Beck HC, Tha Thi ML, Wagenhäuser MU, Rasmussen LM et al. **Hyperlipidemia does not affect development of elastase-induced abdominal aortic aneurysm in mice.** Atherosclerosis. 2020 okt.;311:73-83. <https://doi.org/10.1016/j.atherosclerosis.2020.08.012>

Wikstrøm S, Lentz KA, Hansen D, Rasmussen LM, Jakobsen J, Hansen HP et al. **Causes of vitamin K deficiency in patients on haemodialysis.** Nutrients. 2020 sep.;12(9). 2513. <https://doi.org/10.3390/nu12092513>

Christiansen AL, Brock A, Bygum A, Rasmussen LM, Jepsen P. **Increased mortality in patients with porphyria cutanea tarda - a nationwide cohort study.** Journal of the American Academy of Dermatology. 2020 sep.;83(3):817-823. <https://doi.org/10.1016/j.jaad.2019.07.082>

Palstrøm NB, Rasmussen LM, Beck HC. **Affinity Capture Enrichment versus Affinity Depletion: A Comparison of Strategies for Increasing Coverage of Low-Abundant Human Plasma Proteins.** International Journal of Molecular Sciences . 2020 aug. 17;21(16). 5903. <https://doi.org/10.3390/ijms21165903>

Kristensen KL, Rasmussen LM, Hallas J, Lindholt JS. **Diabetes Is Not Associated with the Risk of Rupture Among Patients with Abdominal Aortic Aneurysms – Results From a Large Danish Register Based Matched Case Control Study From 1996 to 2016.** European Journal of Vascular and Endovascular Surgery. 2020 jul.;60(1):36-42. <https://doi.org/10.1016/j.ejvs.2020.02.020>

Snipsøyr MG, Wiggers H, Ludvigsen M, Stensballe A, Vorum H, Poulsen SH et al. **Towards identification of novel putative biomarkers for infective endocarditis by serum proteomic analysis.** International Journal of Infectious Diseases. 2020 jul.;96:73-81. <https://doi.org/10.1016/j.ijid.2020.02.026>

Sønderskov PS, Lindholt JS, Hallas J, Gerke O, Hasific S, Lambrechtsen J et al. **Association of aortic valve calcification and vitamin K antagonist treatment.** European Heart Journal Cardiovascular Imaging. 2020 maj 3;21(7):718-724. <https://doi.org/10.1093/ehjci/jeaa065>

Kring C, Rasmussen LM, Lindholt JS, Diederichsen ACP, Vinholt PJ. **Platelet aggregation is not altered among men with diabetes mellitus.** Acta Diabetologica. 2020 apr.;57(4):389-399. <https://doi.org/10.1007/s00592-019-01438-y>

Abildgaard N, Rojek AM, Møller HE, Palstrøm NB, Nyvold CG, Rasmussen LM et al. **Immunoelectron microscopy and mass spectrometry for classification of amyloid deposits.** Amyloid : the international journal of experimental and clinical investigation : the official journal of the International Society of Amyloidosis. 2020 mar.;27(1):59-66. <https://doi.org/10.1080/13506129.2019.1688289>

Lindholt JS, Frystyk J, Hallas J, Rasmussen LM, Diederichsen ACP. **Feasibility study of advanced cardiovascular screening in middle-aged patients with diabetes.** Clinical Epidemiology. 2020 jan. 1;12:447-455. <https://doi.org/10.2147/CLEP.S246636>

Lindholt JS, Diederichsen AC, Rasmussen LM, Frost L, Steffensen FH, Lambrechtsen J et al. **Survival, prevalence, progression and repair of abdominal aortic aneurysms: Results from three randomised controlled screening trials over three decades.** Clinical Epidemiology. 2020 jan. 1;12:95-103. <https://doi.org/10.2147/CLEP.S238502>

Larsen JH, Rasmussen LM, Lindholt JS, Steffensen LB. **Plasma CCN2 is independently related to subsequent need for abdominal aorta aneurysm repair.** Growth Factors. 2019 sep. 6;37(3-4):146-152. <https://doi.org/10.1080/08977194.2019.1662416>

Dinesen S, Jensen PS, Bloksgaard M, Mey JD, Lindholt JS, Rasmussen LM et al. **Retinal vascular oxygen saturation increases after cardiac surgery.** Acta Ophthalmologica. 2019 sep.;97(6):e941-e942. <https://doi.org/10.1111/aos.14084>

Freise C, Schaefer B, Bartosova M, Bayazit A, Bauer U, Pickardt T et al. **Arterial tissue transcriptional profiles associate with tissue remodeling and cardiovascular phenotype in children with end-stage kidney disease.** Scientific Reports. 2019 jul. 16;9. 10316. <https://doi.org/10.1038/s41598-019-46805-5>

Lindholt JS, Rasmussen LM, Søgaard R, Lambrechtsen J, Steffensen FH, Frost L et al. **Baseline findings of the population-based, randomized, multifaceted Danish cardiovascular screening trial (DANCAVAS) of men aged 65-74 years.** The British journal of surgery. 2019 jun.;106(7):862-871. <https://doi.org/10.1002/bjs.11135>

Carter-Storch R, Moller JE, Christensen NL, Rasmussen LM, Pecini R, Søndergård E et al. **End-systolic wall stress in aortic stenosis: Comparing symptomatic and asymptomatic patients.** Open Heart. 2019 apr. 1;6(1). e001021. <https://doi.org/10.1136/openhrt-2019-001021>

Holler JG, Jensen HK, Henriksen DP, Rasmussen LM, Mikkelsen S, Pedersen C et al. **Etiology of Shock in the Emergency Department: A 12 Year Population Based Cohort Study.** Shock. 2019 jan.;51(1):60-67. <https://doi.org/10.1097/SHK.0000000000000816>

Assersen KB, Jensen PS, Briones AM, Rasmussen LM, Marcussen N, Toft A et al. **Periarterial fat from two human vascular beds is not a source of aldosterone to promote vasoconstriction.** American Journal of Physiology: Renal Physiology. 2018 okt. 3;315(6):F1670-F1682. <https://doi.org/10.1152/ajprenal.00391.2018>

Beck HC, Jensen LO, Gils C, Ilondo AMM, Frydland M, Hassager C et al. **Proteomic Discovery and Validation of the Confounding Effect of Heparin Administration on the Analysis of Candidate Cardiovascular Biomarkers.** Clinical Chemistry. 2018 okt.;64(10):1474-1484. <https://doi.org/10.1373/clinchem.2017.282665>

Behr-Rasmussen C, Lindholt JS, Urbonavicius S, Halekoh U, Jensen PS, Stubbe J et al. **Abdominal Aortic Aneurysms Growth Is Associated With High Concentrations of Plasma Proteins in the Intraluminal Thrombus and Diseased Arterial Tissue.** Arteriosclerosis, Thrombosis, and Vascular Biology. 2018 sep.;38(9):2254–2267. <https://doi.org/10.1161/ATVBAHA.117.310126>

Lindholt JS, Frandsen NE, Fredgart MH, Øvrehus KA, Dahl JS, Møller JE et al. **Effects of menaquinone-7 supplementation in patients with aortic valve calcification: study protocol for a randomised controlled trial.** BMJ Open. 2018 aug. 1;8(8). e022019. <https://doi.org/10.1136/bmjopen-2018-022019>

Christiansen AL, Bygum A, Hother-Nielsen O, Rasmussen LM. **Diagnosing diabetes mellitus in patients with porphyria cutanea tarda.** International Journal of Dermatology. 2018 jul. 1;57(7):763-769. <https://doi.org/10.1111/ijd.13938>

Grønhøj MH, Gerke O, Mickley H, Steffensen FH, Lambrechtsen J, Sand NPR et al. **External validity of a cardiovascular screening including a coronary artery calcium examination in middle-aged individuals from the general population.** European Journal of Preventive Cardiology. 2018 jul.;25(11):1156-1166. <https://doi.org/10.1177/2047487318774850>

Stubbe J, Skov V, Thiesson HC, Larsen KE, Hansen ML, Jensen BL et al. **Identification of differential gene expression patterns in human arteries from patients with chronic kidney disease.** American Journal of Physiology: Renal Physiology. 2018 jun. 1;314(6):F1117-F1128. <https://doi.org/10.1152/ajprenal.00418.2017>

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Diab HMM, Rasmussen LM, Duvnjak S, Diederichsen A, Jensen PS, Lindholt JS. **Computed tomography scan based prediction of the vulnerable carotid plaque**. *B M C Medical Imaging*. 2017 dec. 13;17. 61. <https://doi.org/10.1186/s12880-017-0233-5>

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