

# The 20th Annual Norwegian Symposium on Heart Research

Holmenkollen Scandic Park, 8.-9.09.2022

## ABSTRACTS

### Biomarkers and imaging

1. Maria Taraldsen - Associations between circulating microRNAs, lipid content and plaque geometry in coronary atheromatous plaques assessed by near-infrared spectroscopy and intravascular ultrasound
2. Nur Sourour - N-terminal pro-B-type natriuretic peptide for prediction of ventricular arrhythmias; data from the SMASH 1 Study
3. Ida Marie Hauge-Iversen - Evaluation of echocardiographic and magnetic resonance imaging biomarkers in a rat model of graded diastolic dysfunction
4. Bianca Papotti - MACROPHAGE POLARIZATION MARKERS IN SUBCUTANEOUS, PERICARDIAL AND EPICARDIAL ADIPOSE TISSUE IN PATIENTS WITH CORONARY HEART DISEASE
5. Ellen Mathea Kirsch Warlo - The interplay between VWF, ADAMTS13 and TSP1, and their relation to clinical endpoints
6. Ana Calejo - Novel guanylyl cyclase-B antagonists
7. Rahul Bhatnagar - Cardiac troponin T concentrations are closely associated with 30-day re-admission rate or mortality within 30 days in patients hospitalised with acute dyspnoea
8. Kristian Berge - Serum advanced glycation end products and coronary atherosclerosis characteristics in middle-aged and older male athletes
9. Caroline Berge - Hypertension is associated with increased low-attenuation plaque progression in non-obstructive coronary artery disease
10. Andraž Nendl - Intestinal fatty acid binding protein is associated with cardiac dysfunction and gut microbiota alterations in chronic heart failure

### Inflammation and remodeling

1. Thea Støle - The Female Syndecan-4 -/- Heart has an Elevated Insulin/pSer473-Akt/pSer9-GSK-3 $\beta$  Signaling Pathway and Lowered SCOP, pThr308-Akt/Akt and GLUT4 Levels
2. Chloe Rixon - Reducing lumican has favourable effects on the progression of hypertrophic cardiomyopathy in mice
3. Athiramol Sasi - The extracellular matrix proteoglycan versican regulates cardiac fibrosis

4. Ilde Rugolo - Identification of a novel peptide that inhibits CaMKII activity
5. Camilla Huse - IL-6R inhibition modifies innate, but not adaptive, immune responses in myocardial infarction
6. Mette Ovesen - Natriuretic peptide signaling and its influence on cardiac mitochondria
7. Simon Andrup - Changes in novel cardiac extracellular matrix biomarkers in STEMI: associations with adverse outcomes
8. Daria Semenova - Dysregulation of cross-talk between different types of cells in aortic valve caused by abnormalities in Notch-dependent mechanisms is involved in initiation and progression of aortic valve calcification
9. Christine W. Wiger - Inhibition of TLR4 reduced pro-inflammatory signaling pathways and cytokine release in lipopolysaccharide-treated isolated mouse hearts and primary adult cardiomyocytes
10. Xin Shen - Prolonged  $\beta$ -Adrenergic stimulation disperses ryanodine receptor clusters in cardiomyocytes: implications for heart failure

#### Cardiac function

1. Lars-Egil Hammersbøen - Resynchronization of the left atrium may play an important role in cardiac resynchronization therapy
2. Karoline Bjarnesdatter Rypdal - ADAMTSL3 deletion results in increased TGF $\beta$  signalling and exacerbated heart failure with high mortality in mice after aortic banding
3. Esra Kaya - Left Ventricular Mechanical Dispersion by Speckle Tracking Echocardiography is a predictor of Atrioventricular Block after Transcatheter Aortic Valve Implantation
4. Dulasi Arunthavarajah - Long-term delivery of CNP in a mouse model of heart failure with preserved ejection fraction
5. Olav S. Eken - Disruption of phosphodiesterase 3A binding to SERCA2 increases SERCA2 activity and reduces mortality in mice with chronic heart failure
6. Tarjei Øvrebotten - Minor myocardial scars in association with cardiopulmonary function after COVID-19
7. Gurdeep Marwarha - miR-210 attenuates the hypoxia-induced apoptotic cell death through the inhibition of Glycogen Synthase Kinase 3 beta kinase activity
8. Henrik Dukefoss - RELAX – Investigating Cardiac Remodeling in the Failing Human Heart
9. Daiana Sedneva-Lugovets - The cytohesin inhibitor SecinH3 influences natriuretic peptide signalling in the heart
10. Nelsy Efundem Taboko - Metabolic, bioenergetic and mitochondrial changes in the heart following breast cancer treatment

### Genetics and arrhythmias

1. Anna Bergan Dahl - Localized CaMKII $\delta$  movement at the RyR nanodomain
2. Ioanni Veras - Phosphodiesterase 2 inhibition selectively activates the Na<sup>+</sup>/K<sup>+</sup> -ATPase and prevents ventricular tachycardia
3. Stine Aagaard-Nilsen - Clinical utility of the inferior axis/left bundle branch block pattern for categorization of PVCs prior to catheter ablation
4. Christian K. Five - Non-sustained ventricular arrhythmias at exercise ECG predict severe ventricular arrhythmias in arrhythmic mitral valve prolapse
5. Marit Kristine Smedsrud - Early-onset arrhythmogenic cardiomyopathy
6. Marie Haugsten Hansen - The effect of the strong antioxidant N-acetylcysteine on ischemia-reperfusion arrhythmias in a porcine model of myocardial infarction
7. Anna Isotta Castrini - Pregnancy in Lamin A/C genotype positive women – a case series
8. Eivind W. Aabel - High incidence of ventricular arrhythmias in arrhythmic mitral valve syndrome - an implantable loop recorder study
9. Christine Rootwelt-Norberg - Timing of ICD implantation in patients with cardiac laminopathy – echocardiographic disease progression rate for prediction of ventricular arrhythmias

### Exercise, prevention and diagnostics

1. Kristine Andreassen - Exercise training in patients and mice with hypertrophic cardiomyopathy genetic variants is associated with a favorable diastolic function and reduced collagen expression
2. Marianne Forså - Cardiac remodelling in adolescent athletes – sex differences progress through adolescence
3. Mathias Nyman - Exercise training post myocardial infarction reduces susceptibility to ventricular tachycardia by modification of myocardial action potentials in non-infarct and infarct zones.
4. Hani Zaidi - Abdominal adipose tissue associates with adiponectin and TNF $\alpha$  in middle-aged healthy men
5. August Flø - Prevalence of cardiac amyloidosis in patients with severe aortic stenosis undergoing transcatheter aortic valve implantation
6. Kristina Ødegaard - Compliance to pharmacotherapy in patients with heart failure, 2014 to 2020
7. Sindre H. Olaisen - Real-time AI-assisted calculation of left ventricular ejection fraction in echocardiography