BS15

MULTIPLEXED MEASUREMENT OF PROTEIN BIOMARKERS OF CARDIOVASCULAR DISEASE IN BLOOD

¹Claire Tonny*, ²Nadezhda Glezeva, ³Cathy Rooney, ⁴Belinda Hernandez, ⁵Brian Morrissey, ⁶Mark Ledwidge, ⁷Ken McDonald, ⁸Stephen Pennington, ⁹John Baugh, ¹⁰Chris Watson. ¹Queen's University Belfast; ²University College Dublin; ³Conway Institute, University College Dublin; ⁴Conway Institute, University College Dublin; ⁵Conway Institute, University College Dublin; ⁶St. Vincent's University Hospital; ⁷St. Vincent's University Hospital; ⁸Conway Institute, University College Dublin; ⁹University College Dublin; ¹⁰Queens University

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Brief introduction Almost half of all deaths in Europe are attributable to by Cardiovascular Disease (CVD). There is a critical unmet need for better biomarkers so that CVD can be diagnosed at an earlier stage and with greater accuracy. Mass spectrometry-based multiple reaction monitoring (MRM) allows for rapid, targeted measurement of multiple protein biomarkers via detection of 'proteotypic' peptide fragments. Such assays can be developed in blood samples, which is desirable for minimally-invasive, routine monitoring of

Abstract BS15 Table 1 Candidate Protein Biomarkers for Heart Failure

Novel Biomarkers			Known Biomarkers	
Protein name	Fold change in serum of high risk patients ⁵	MRM Developed	Protein name	MRM Developed
Complement factor I	6.8 increase	Y	interleukin 6	Y
Pigment epithelium – derived factor	4.8 increase	Y	interleukin 8	
Isoform Migration stimulation factor FN70 of Fibronectin	4.8 increase	Y	monocyte chemoattractant protein 1 (MCP1)	
Serum paraoxonase/arylesterase 1	4.2 increase	Y	tumour necrosis factor α	
Beta-2-glycoprotein 1	3.4 increase	Y	carboxy-terminal propeptide of collagen 1 (PICP)	Y
Apolipoprotein a-iv	3.1 increase	Y	Aminoterminal propeptide of collagen 1 (PINP)	
Apolipoprotein a-i	2.6 increase	Y	amino-terminal propeptide of collagen 3 (PIIINP)	Y
Leucine-rich alpha-2-glycoprotein	2.1 increase	Y	carboxy-terminal telopeptide of collagen 1 (CITP)	
Complement C3 (Fib)	1.7 increase	Y	matrix metalloproteinase 2 (MMP2)	Y
Zinc-alpha-2-glycoprotein	1.7 increase	Y	matrix metalloproteinase 9 (MMP9)	Y
		Y	tissue inhibitor of metalloproteinase 1 (TIMP1)	Y
Serum amyloid P-component	1.7 decrease	Y	tissue inhibitor of metalloproteinase 2 (TIMP2)	
Complement c1s subcomponent	1.7 decrease	Y	Galectin 3	Y
Vitamin d-binding protein	1.6 decrease	Y	Soluble ST2	
Isoform 1 of gelsolin	1.6 decrease	Y	Pentraxin 3	Y
Transthyretin	1.5 decrease	Y	Macrophage migration inhibitory factor	Y
Clusterin	1.5 decrease	Y	Natriuretic Peptide Receptor A (NPRA, GCA, NPR1)	
			BNP	