P009 Characterisation of microvesicles released from cells constitutively and upon stimulation

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Constitutively released microvesicles (cMVs) are released as a part of normal cell physiology. However, stimulated microvesicles (sMVs) are released as a result of a number of possible stress factors. We found sMVs to be released in higher numbers than cMVs, typically ten-fold higher numbers, in the same time frame, and where the stress factor was a pharmacological agent, the microvesiculation was an attempt to release this chemical stress factor. Using a mass sensing technique, the sMVs were released over a 15 min period after stimulation. Using sizing beads on a flow cytometer and by transmission electron microscopy the cMVs were typically smaller (less than 300 nm in diameter) than sMVs (300-500 nm in diameter). However cMVs were found to carry more protein. By contrast, phosphatidylserine expression was greater on the larger sMVs, which also more effectively inhibited complement-mediated lysis.