**Sample Abstract Guidelines:**

1. Abstract Content should be in English
2. The maximum word count should be 250-300 words
3. If your title includes scientific notation, Greek letters, bold, italics, or other special characters/symbols, do make sure they appear correctly.
4. Corresponding details of corresponding author should be correct which will be used for further communication.
5. Abstracts should highlight the major points of your research and should not include tables, figures and references.

**Format**

**Presentation title: PIEZO1 in red cells and in cancer**

**Corresponding Author name: Gordon W Stewart**

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**Any alternative number:

Twitter:**

**LinkedIn:

Facebook:**

**Other Authors if any:**

**Presentation type:** (Oral presentation/ ~~Poster presentation~~)

**Abstract (250-300 words):**

This author has an interest in a series of dominantly-inherited human haemolytic anaemias, known as the ‘hereditary stomatocytoses and allied disorders.’ The key feature common to all of these conditions is that the plasma membrane of the red cell ‘leaks’ sodium and potassium, challenging the osmotic stability of the cell. These conditions can be caused by mutations in one of six genes, all coding for multi-membrane-spanning proteins of different characters: *RhAG*, *SLC4A1*, *KCNN4*, *ABCB6*, *GLUT1*, and *PIEZO1*. The first five need not concern us further. The last, *PIEZO1*, codes for a mechanically-activated cation channel. *PIEZO1* is a very large, widely-expressed protein, certainly not confined to red cells. While the patients typically show only haemolytic problems, some show lymphatic problems, either lymphoedema in adulthood, or neonatal ascites in infants. Its Ca2+ conductance is stimulated by ‘shear stress’, the sideways force on the cell membrane. The mouse knock-out shows failure of blood vessel development; recessive human mutations cause ‘lymphatic malformation 6 syndrome’. PIEZO1 is described as a ‘pivotal integrator in vascular biology’ (Wikipedia) and has been extensively studied in cancer (Dombroski and others, *cells* 2021, **10**, 2815). Given all this, there is no notable increase or decrease in cancer among patients with the heterozygous, constitutively-active PIEZO1 mutants seen in the haemolytic conditions, but the numbers are small.

**Biography (150-200 words):**

Gordon Stewart has wide experience in both clinical medicine and molecular biology research. He is an emeritus professor of experimental medicine at University College London, and a visiting scientist at the Francis Crick Institute in London.