Research group: Alison FORRESTER

Laboratory of Cellular and Molecular Biology (URBC)

HomER: ERES Modulation and Homeostasis

To study the modulation of the early secretory pathway, the effects on cellular homeostasis, and to identify new compounds that modulate this process to develop a therapeutic approach

narilis
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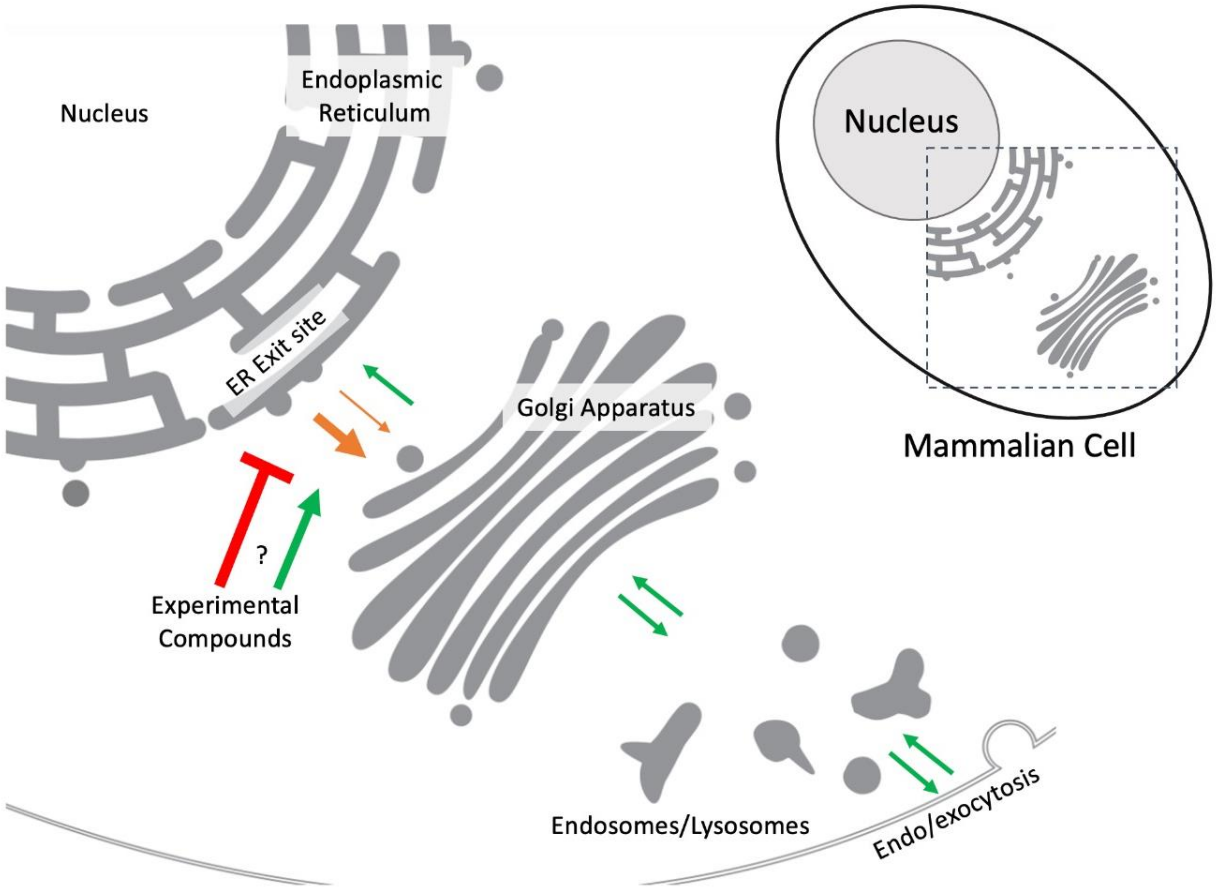
Secretion is essential to life. 30% of the body's proteins are produced in the ER, and trafficked through **ER Exit Sites**. Secretion is highly error prone and thus errors can **cause many diseases**.

Using **cell biology** and **advanced microscopy** approaches combined with interdisciplinary collaborations, the HomER team will i) identify mechanisms of ERES modulation, ii) identify novel compounds that modulate ERES activity, iii) apply ERES modulation to disease models. This new therapeutic approach will be developed with a view to **treat diseases of aberrant secretion**.



The secretory pathway of a mammalian cell. Protein trafficking begins in the endoplasmic reticulum (ER) where the majority of cellular proteins undergo their first steps of production. They leave the ER through ER exit sites, cross the Golgi Apparatus, where they undergo various modifications, and are then sent to their final destination within the cell, or they are secreted outside the cell. My group will identify compounds that target an early step of the secretory pathway at ER exit sites, increasing or decreasing the efficiency that proteins leave the ER.

Research group: Alison FORRESTER

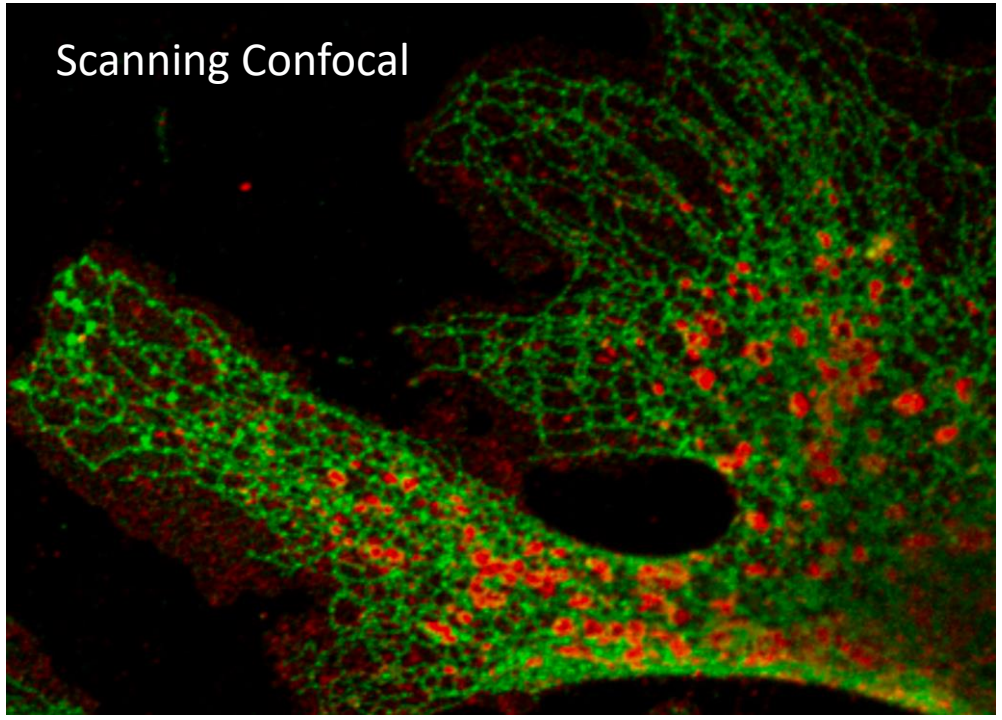
Group leader

Alison Forrester

Expertise: Microscopy

Postdocs & PhD students

TBC!



Lattice Light-Sheet Microscopy