

P004 Multivesicular body-ESCRT components and pH response regulation in *Aspergillus nidulans*

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Involvement of MVB class E components in pH signalling is well characterised in yeasts. In *S. cerevisiae*, all components, of ESCRT-I, -II and Vps32p-Vps20p of ESCRT-III are required for pH signalling. Regulation of gene expression by ambient pH in *Aspergillus nidulans* is mediated by the transcription factor PacC. The ESCRT -III components Vps32 and Vps24 interact with the pH signalling components PalA and PalB respectively, thus participating in pH signalling.

We report that the deletion of genes encoding Vps20, Vps32 and Vps36 in *A. nidulans* is nearly lethal and nearly always accompanied by selection of suppressor mutations greatly improving growth. These (partial) suppressors occur in two genes, *supA* and *supB*. SupA is a transcription factor and SupB is a putative protein kinase. The suppressor mutations do not affect pH regulation or trafficking but they do alter the volume and quantity of vacuoles, even in *vps*⁺ strains. *vps20*, -32 and -36 deletions prevent pH signalling, consistent with results in yeast. These deletions also impair trafficking of FM4-64 and of the dicarboxylic amino acid transporter to the vacuolar membrane. We conclude that at least ESCRT-II and -III components are required for pH signalling.