



Figure 3. Structural Inheritance of Cortical Unit Polarity in *Paramecium*

(a) Immunolabeling of basal bodies and ciliary rootlets highlights the regular organization of parallel cortical rows of wild-type cells. Shown are ventral (*left*) and dorsal (*right*) views. (b) Dorsal view of a cell exhibiting disruption of the regular organization due to the reversed antero-posterior polarity of a few rows of cortical units. Basal bodies immunolabeled in red, and ciliary rootlets in green. (c) Enlargement of a patch of cortex shows the reversed orientation of ciliary rootlets in inverted rows (I) relative to normal rows (N). (d) Schematic of basal bodies (*green circles*) duplication during growth; each is shown flanked on its right side by an anteriorly oriented ciliary rootlet (*purple*) and two microtubular ribbons. Duplication occurs with a fixed geometry: Each new basal body is positioned anterior of its parent, ensuring identical polarity. (e) The repeated duplication of basal bodies within each row maintains homogeneous orientation indefinitely. (Photographs courtesy of Janine Beisson.)