**Movie 1. Cranial neural crest cell migration and division.** A confocal time-lapse imaging sequence (~9 hours/5 minutes between frames) of a living chick embryo showing fluorescently labeled (Gap43-EGFP) migrating cranial NC cells. A typical NC cell division sequence (with a perpendicular cell division orientation angle) during migration is highlighted (white box). NC cells (~10 um in nuclear diameter) are moving from left (neural tube) to right (branchial arch target).

**Movie 2. Cranial neural crest cell division orientation.** A confocal time-lapse imaging sequence (~4.5 hours/5 minutes between frames) of a living chick embryo showing the cell division sequence and orientation of an individual fluorescently labeled (Gap43-EGFP, H2B-mCherry) lead cranial NC cell (~10 um in nuclear diameter). The plane of division is indicated by the dotted line and shows an example of a parallel division angle orientation.