# Karyokinesis and cytokinesis

<table>
<thead>
<tr>
<th>Process</th>
<th>Mechanical agent</th>
<th>Major protein composition</th>
<th>Location</th>
<th>Major disruptive drug</th>
</tr>
</thead>
<tbody>
<tr>
<td>Karyokinesis</td>
<td>Mitotic spindle</td>
<td>Tubulin microtubules</td>
<td>Central cytoplasm</td>
<td>Colchicine</td>
</tr>
<tr>
<td>Cytokinesis</td>
<td>Contractile ring</td>
<td>Actin microfilaments</td>
<td>Cortical cytoplasm</td>
<td>Cytochalasin B</td>
</tr>
</tbody>
</table>
“It is not birth, marriage, or death, but gastrulation which is truly the most important time in your life.”

Lewis Wolpert
Animal pole

Blastocoel

Deep marginal cells

Superficial marginal cells

Bottle cells

ARCHENTERON

DEEP MARGINAL CELLS

DEEP MARGINAL CELLS

LIP OF BLASTOPORE

EARLY GASTRULA

MIDDLE GASTRULA

LATE GASTRULA

ARCHENTERON

ARCHENTERON

ARCHENTERON

ARCHENTERON TIP

ARCHENTERON TIP