

## **Mosaicism in Preimplantation Human Embryos: When Chromosomal Abnormalities Are the Norm**

Along with errors in meiosis, mitotic errors during post-zygotic cell division contribute to pervasive aneuploidy in human embryos. Relatively little is known, however, about the genesis of these errors or their fitness consequences. Rapid technological advances are helping to close this gap, revealing diverse molecular mechanisms contributing to mitotic error. These include altered cell cycle checkpoints, aberrations of the centrosome, and failed chromatid cohesion, mirroring findings from cancer biology. Recent studies are challenging the idea that mitotic error is abnormal, emphasizing that the fitness impacts of mosaicism depend on its scope and severity. In light of these findings, technical and philosophical limitations of various screening approaches are discussed, along with avenues for future research.