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# Production of Viable Mouse Tetraparental Chimaeras by Injecting Cells into Postimplantation Embrios and by Micromanipulation on Blastocists

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**Abstract:** The possibility of producing mouse chimaeras between two strains by injecting embryonic cells into postimplantation mouse embryos, and into blastocysts was investigated. About 7% of the injected mouse postimplantation embryos and 10% of microinjected blastocysts, which developed to term were skin melanocyte chimaeras as indicated by the presence of pigmented patches in their coat due to the different strain genotype. During the first 30 days after birth these patches were well-contoured and with dense pigmentation, covering in some cases around 30% of the body surface. In time, however, the intensity of the pigmentation was gradually reduced and at 60 days after birth became faint in 7 of the 12, or was completely lost – in the other 5 chimaeras produced by injecting postimplantation embryos. In case of 10 live chimaeras produced by microinjection of blastocysts using micromanipulator, the intensity of black patches of pigmentation also gradually reduced and around 60 days after birth became faint in the half of animals and after 15 – 20 days was completely lost in the rest of them. This indicates of a selection against the introduced different strain mouse cells during postnatal development.

**Key words:** tetraparental chimaeras, blastocysts micromanipulation, mouse blastocysts, mouse postimplantation embryo