

# OptiPrep™ Mini-Review MC10

## Hepatic non-parenchymal cells, Kupffer cells, sinusoidal endothelial cells (and other liver cell types) – a bibliography

- ◆ This Mini-Review provides a complete bibliography of publications that report the use of OptiPrep™ for the purification of all hepatic non-parenchymal cells (NPC) **other than stellate cells**.
- ◆ The only NPCs that can be isolated at sufficiently high purity using solely density gradient centrifugation, are **stellate cells**. These cells (the least dense of the liver cells) are commonly isolated in simple iodixanol flotation gradients (see **Application Sheet C33**).
- ◆ Very often a total NPC fraction is prepared using an iodixanol barrier or discontinuous gradient (see **Application Sheet C24**) and the NPCs then analyzed by flow cytometry without any further gradient fractionation. Kupffer cells and sinusoidal endothelial cells are analyzed in this manner.
- ◆ Kupffer or sinusoidal endothelial may also be resolved using a secondary technique involving (1) the use of an antibody (usually bound to magnetic beads), (2) elutriation or (3) selective adherence of Kupffer cells to a collagen-coated plastic substratum.
- ◆ There are also a few published papers reporting the resolution of Kupffer cells from stellate cells in an iodixanol density gradient (see **Application Sheet C47**).
- ◆ Dendritic cells, epithelial cells, leukocytes, macrophages, NK cells and oval (progenitor) cells are also listed in this Mini-Review.
- ◆ The vast majority of research work has been carried out with rodent cells, but the methodology has been shown to be satisfactory for both human and porcine liver
- ◆ There are two companion Mini-Reviews: **MC08** (a brief methodological survey) and **MC09** which provides a bibliography of **stellate cell** papers

### Reference list important note

- ◆ To avoid excessive duplication the references on both endothelial and Kupffer cells are listed under **Non-parenchymal cells** and are divided alphabetically according to **Research Topic**.

### 1. Dendritic cells

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### **Hedgehog ligands**

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