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Junior Clinician Scientist
nTTP-GCT-Cohort 2026

Department of Surgery | CCM | CVK
CHARITÉ - UNIVERSITÄTSMEDIZIN BERLIN

Fields of Research:

- Genetic influences on liver metabolism
- Regenerative therapies for liver failure
- Isolation, generation, and cultivation of human hepatocytes
- Tissue engineering from induced pluripotent stem cells
- Machine perfusion of marginal donor organs

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Translational Scientist
nTTP-GCT-Cohort 2026

BERLIN INSTITUTE OF HEALTH AT CHARITÉ
(BIH)

Fields of Research:

- Cell-Based Therapy
- Liver Disease
- Stem Cells
- *Ex-vivo*-Perfusion
- Liver Transplantation

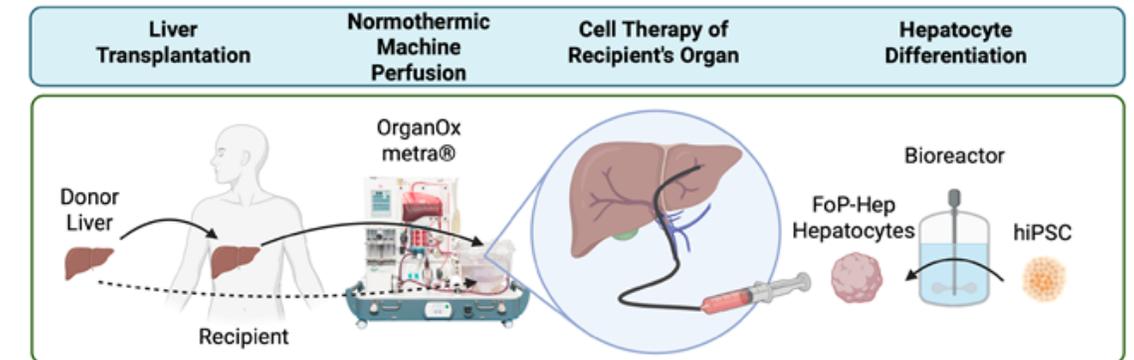
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Hepatocyte Transplantation in *ex-vivo* Perfused Livers for Organ Reconditioning

Project Description:

Normothermic machine perfusion has emerged as a promising method to expand the donor pool by evaluating and resuscitating marginal-quality livers. The perfusion allows for rigorous testing of the donor graft before transplantation is considered. Unfortunately, during *ex-vivo* perfusion, a significant number of donor grafts are excluded from transplantation due to insufficient hepatocellular function. Because the liver has a remarkable ability to regenerate, reviving those livers through cell transplantation could potentially eliminate donor liver shortages. Utilizing cell therapy with hepatocytes has the potential to improve the overall hepatocellular function of the graft. After cell transplantation, *ex-vivo* perfusion allows for rigorous evaluation before transplantation is considered. However, no attempt to revive livers for transplantation using hepatocyte cell therapy has been made yet. To address this unmet clinical need, we plan to revive explanted human livers with insufficient hepatocellular function using a hepatocyte cell therapy approach to restore the organ for transplantation. Hepatocytes (FoP-Hep) generated from human induced pluripotent stem cells (hiPSC) will serve as the cell source.



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