

1. Lentodegenerative alterations in Wilson's disease
2. Biochemical changes related to hepatic encephalopathy
 - measurement of the blood-brain barrier by ^{68}Ga -DTPA
 - determination of neuroreceptors by ^{18}F -dopa, ^{11}C -dopamine, ^{11}C -serotonin
 - neurotransmitter mapping by ^{18}F in combination with metaraminol, *etc.*
3. Questions on protein synthesis
 - by means of ^{11}C -labelled methionine, leucine, phenylalanine
4. Hypoxia/necrosis markers
 - by means of ^{18}F -labelled misonidazole
5. Glucose metabolism-related activity patterns of liver cells
6. Measurable assessment of liver cell regeneration
 - by means of 2- ^{11}C thymidine, *etc.*
7. Detection of hepatocellular carcinoma
 - by means of ^{11}C -acetate