

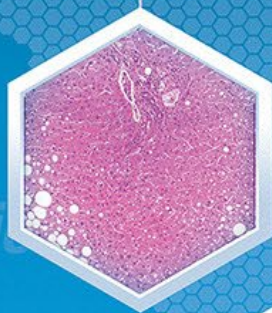
# XENOTECH

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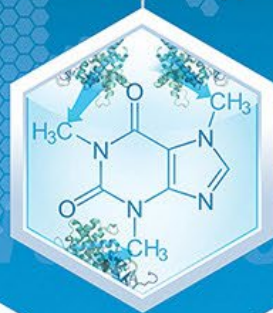
25 Years

## ADME | DRUG-DRUG INTERACTION | DMPK CONTRACT RESEARCH & TEST SYSTEM EXPERTISE

Cell & Tissue-Based Products



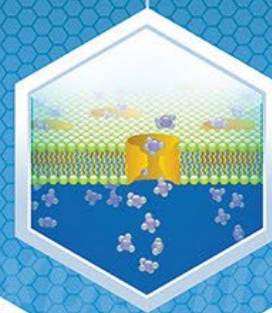
Reaction Phenotyping



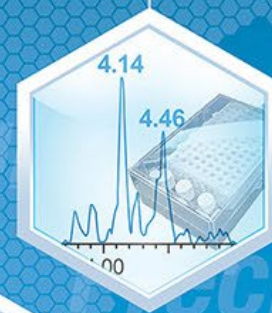
Enzyme Induction & Inhibition



Drug Transporters



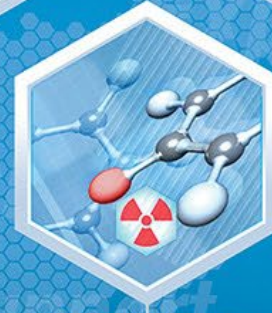
Metabolite ID & Production



Screening



Pharmacokinetics & QWBA



Radiolabeling



Bioanalytical



**XENO TECH**

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OVER 25 YEARS OF GLOBAL ADME / DMPK / DDI EXPERTISE

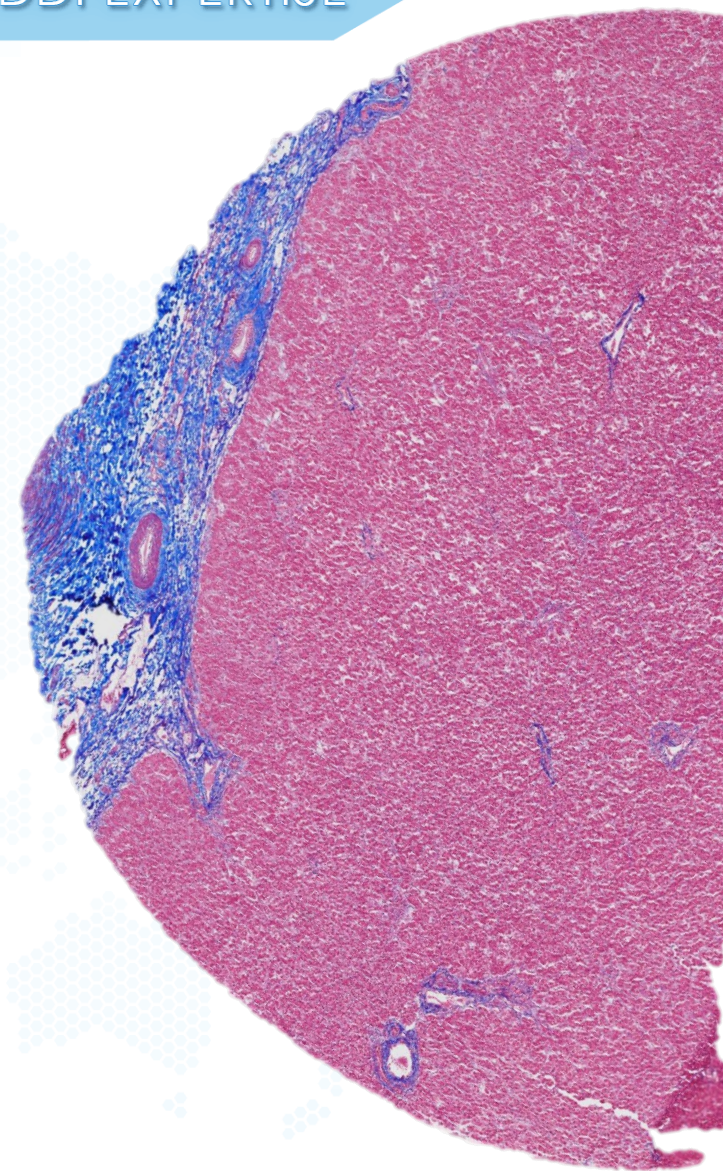
# XenoTech Biobank

Fatty Liver Disease tissues and their exploration in  
microarrays

**Maciej Czerwinski, PhD**

**Director of Scientific Consulting**

**June, 2020**



## XT Biobank

- XenoTech's on-call teams have processed close to 1500 human livers
- Biobank was established to preserve, characterize histologically, and distribute a diverse selection of samples from normal and diseased organs
- Fatty liver disease is the focus of the collection, major categories include:
  - Normal livers (74)
  - Steatosis (64)
  - Steatohepatitis (27)
    - Alcoholic
    - Non-alcoholic (NASH)
- We provide lysates, subcellular fractions, and tissue microarrays (TMA)





## Characterization provided on data sheets

### HHPL.NT Lot No. H1305

Research Biobank Human Liver Pre-Lysate

Diagnosis: Normal

0.5 g of tissue in 2.0 mL

Suspension Medium: Suitable buffer of customer's choosing

#### Donor Information

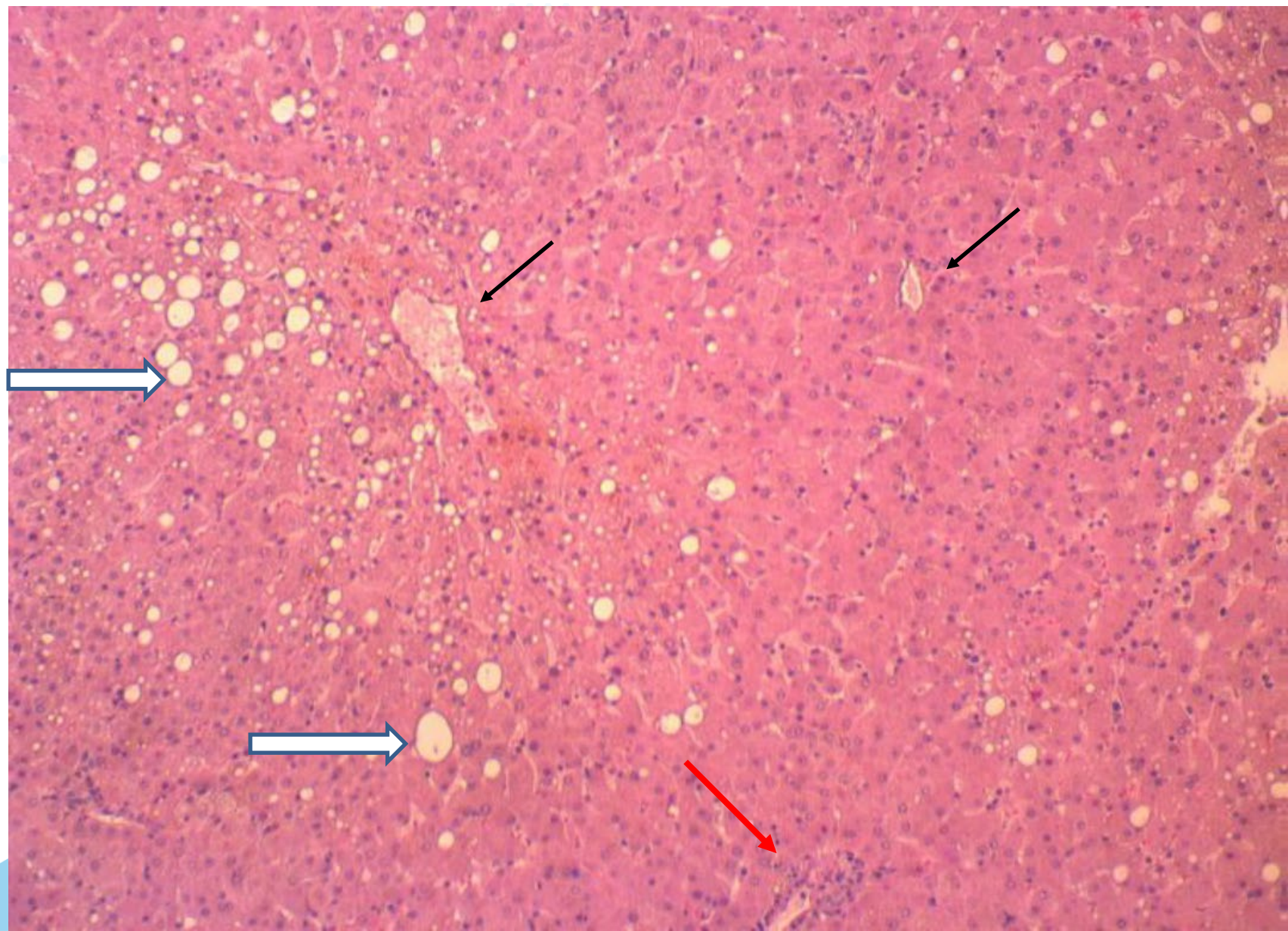
| Macro Fat % | Age | Gender | Race      | BMI  | Alcohol Use | Alcohol Frequency | Diabetes | Hepatocytes Isolated |
|-------------|-----|--------|-----------|------|-------------|-------------------|----------|----------------------|
| 1           | 38  | Male   | Caucasian | 25.3 | Yes         | Heavy             | No       | Yes                  |

#### Serology Information

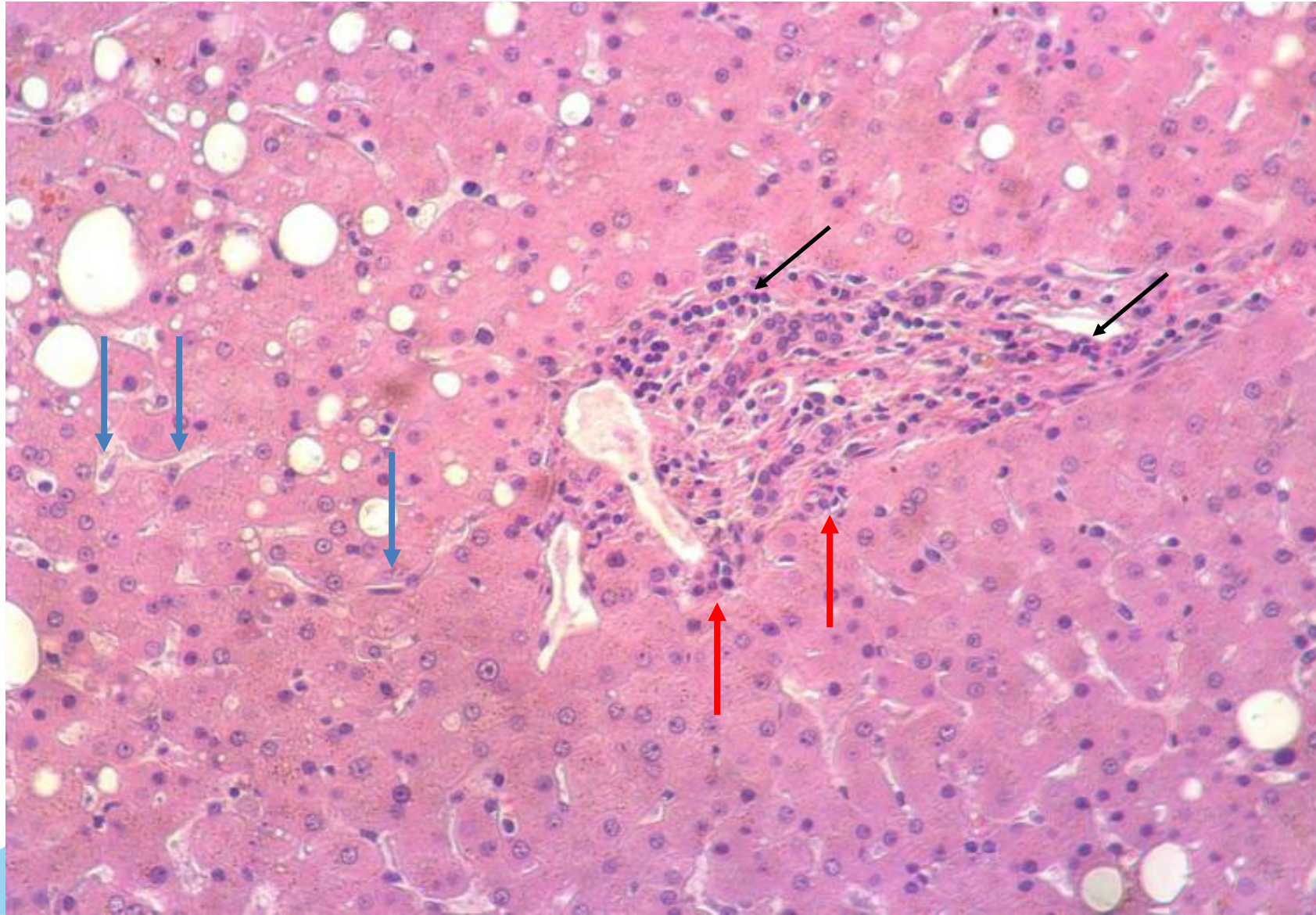
|                                      |          |
|--------------------------------------|----------|
| Antibody to Cytomegalovirus (CMV):   | Positive |
| Human Immunodeficiency Virus (HIV):  | Negative |
| Hepatitis B Surface Antigen (HbsAg): | Negative |
| Antibody to Hepatitis C Virus (HCV): | Negative |

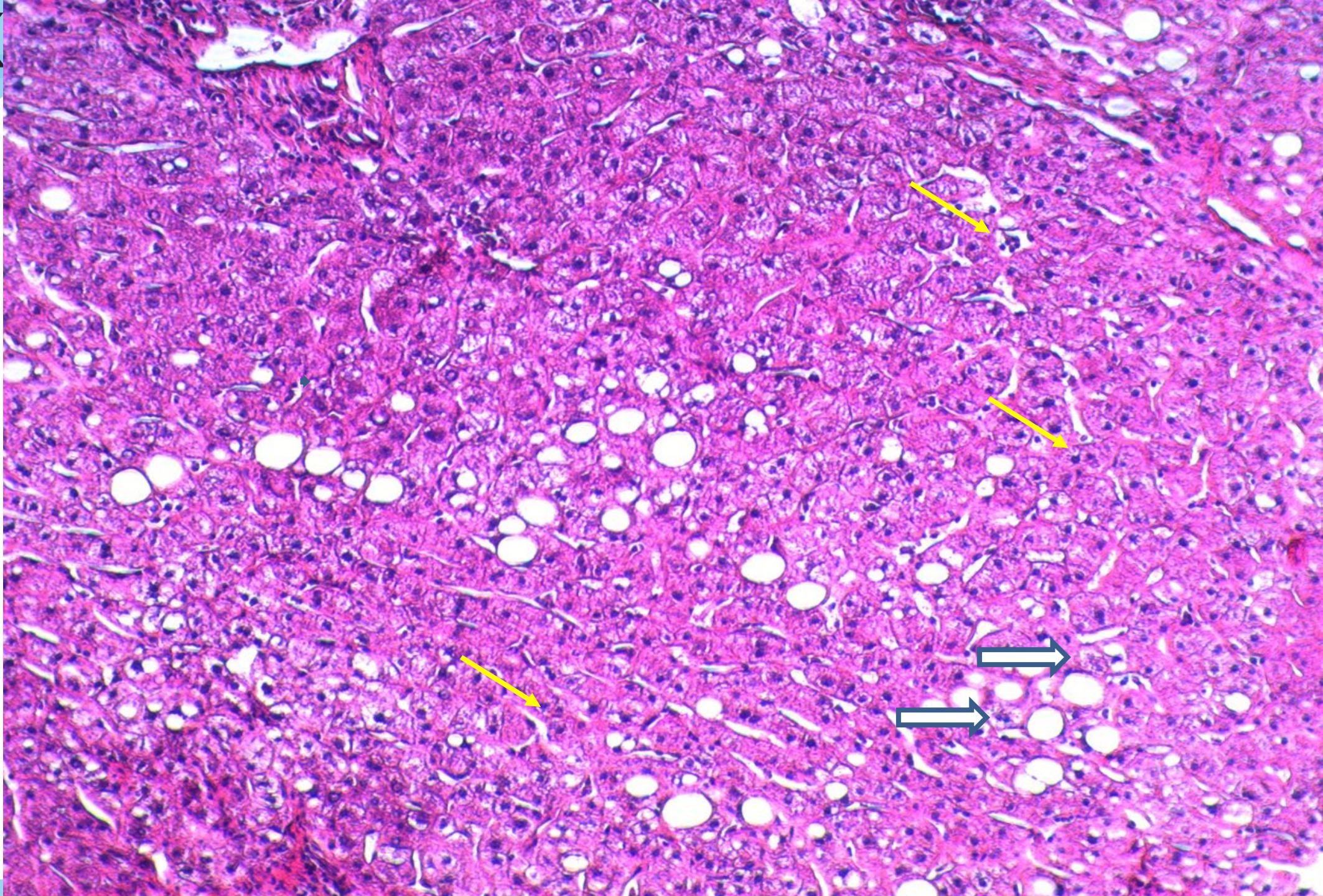


## H1305, normal, H&E stain

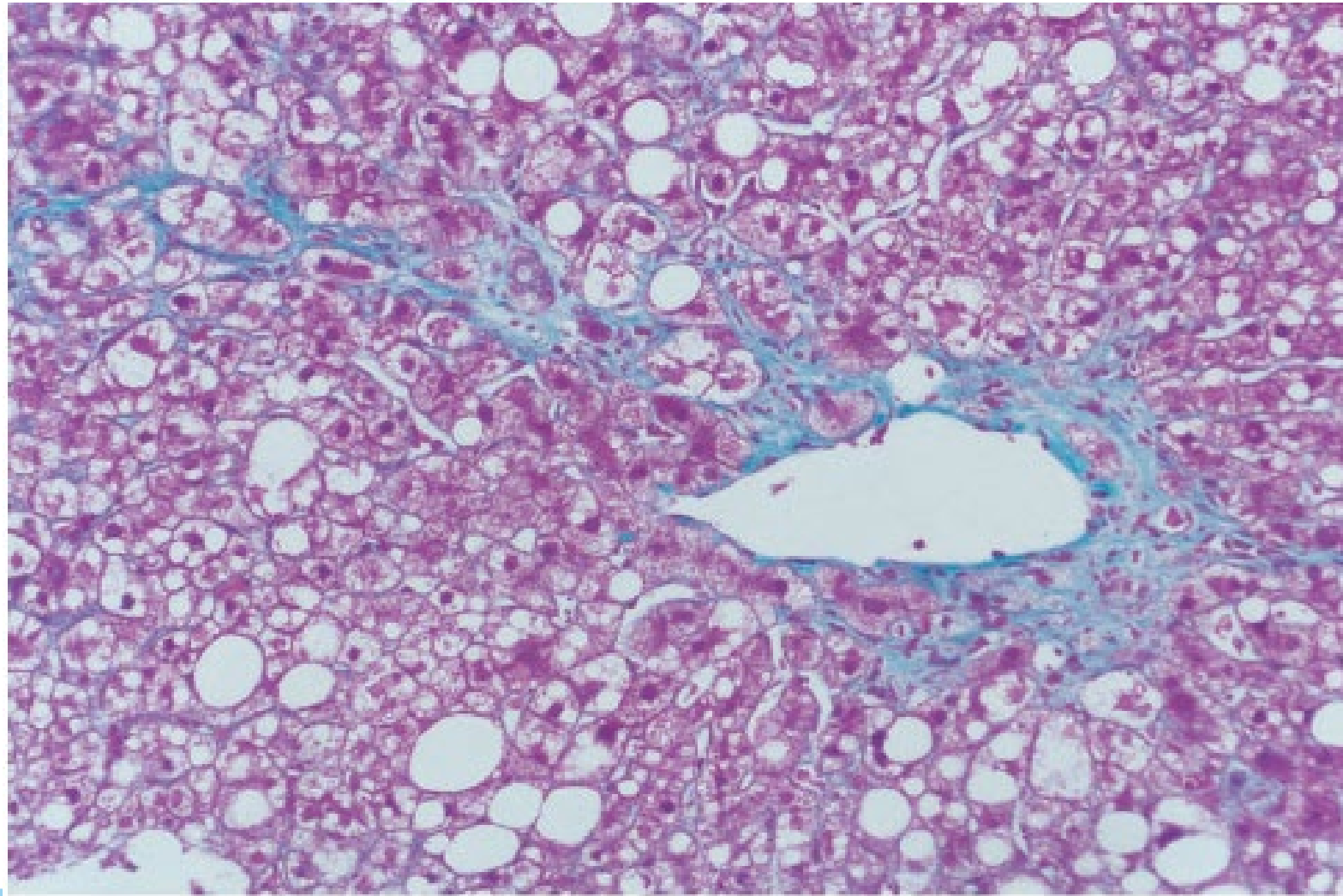


# H1305, normal, higher magnification, H&E stain





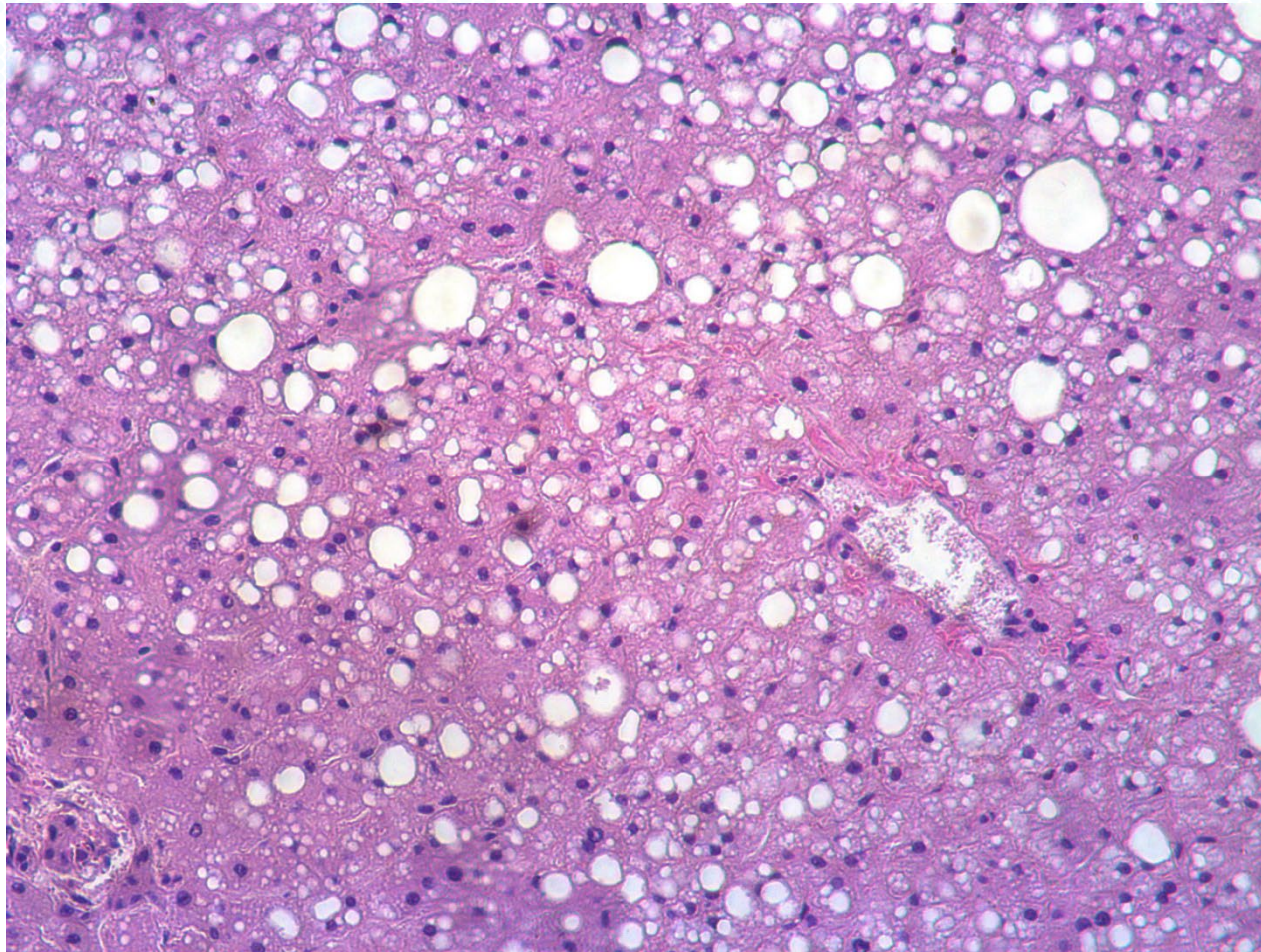
# Fibrosis, perivenular and sinusoidal





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# Steatosis, macrovesicular 30-40 %, BMI 33.1



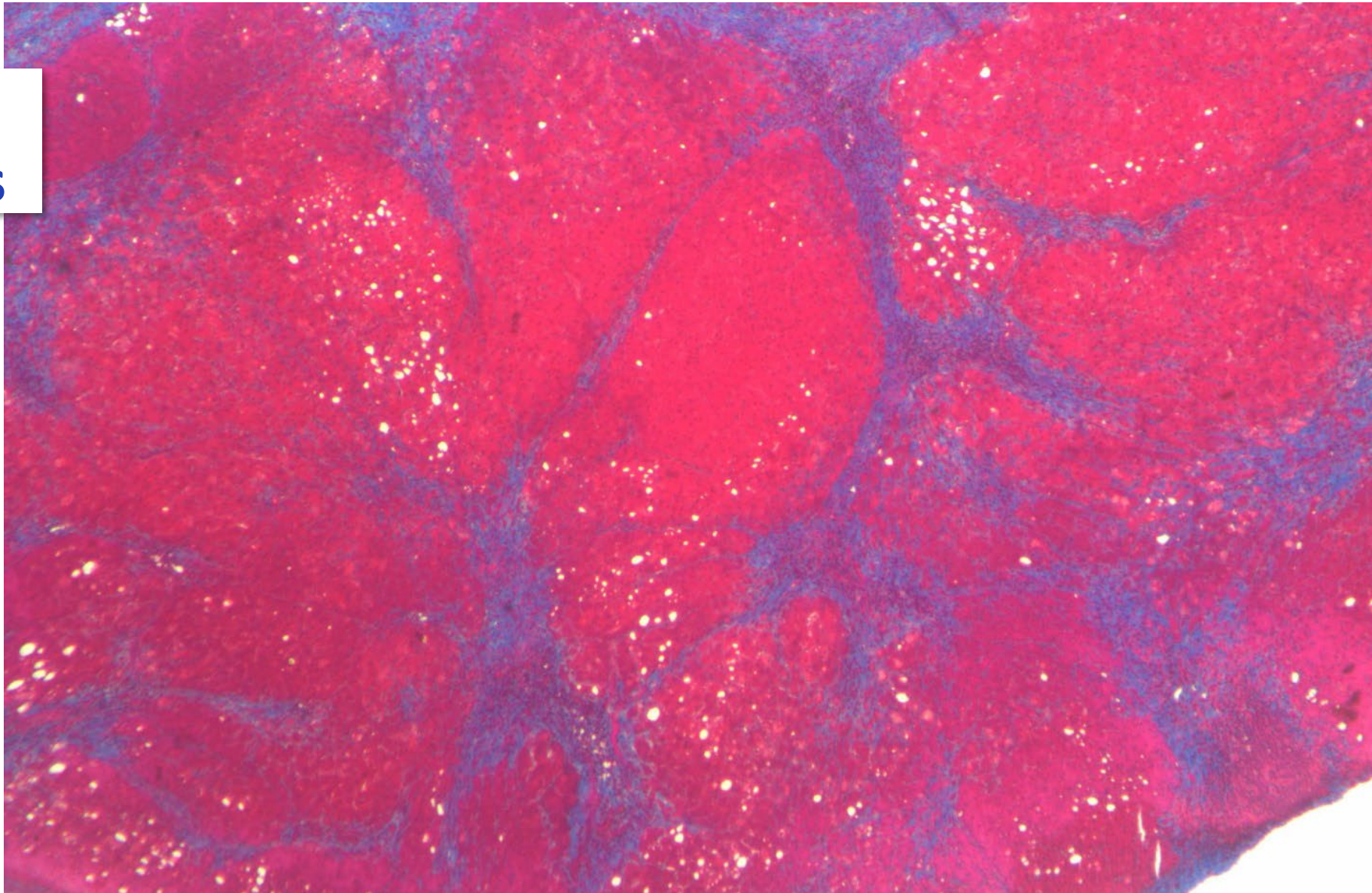


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**Liver  
cirrhosis**



IN VITRO – IN VIVO CONTRACT RESEARCH & TEST SYSTEMS



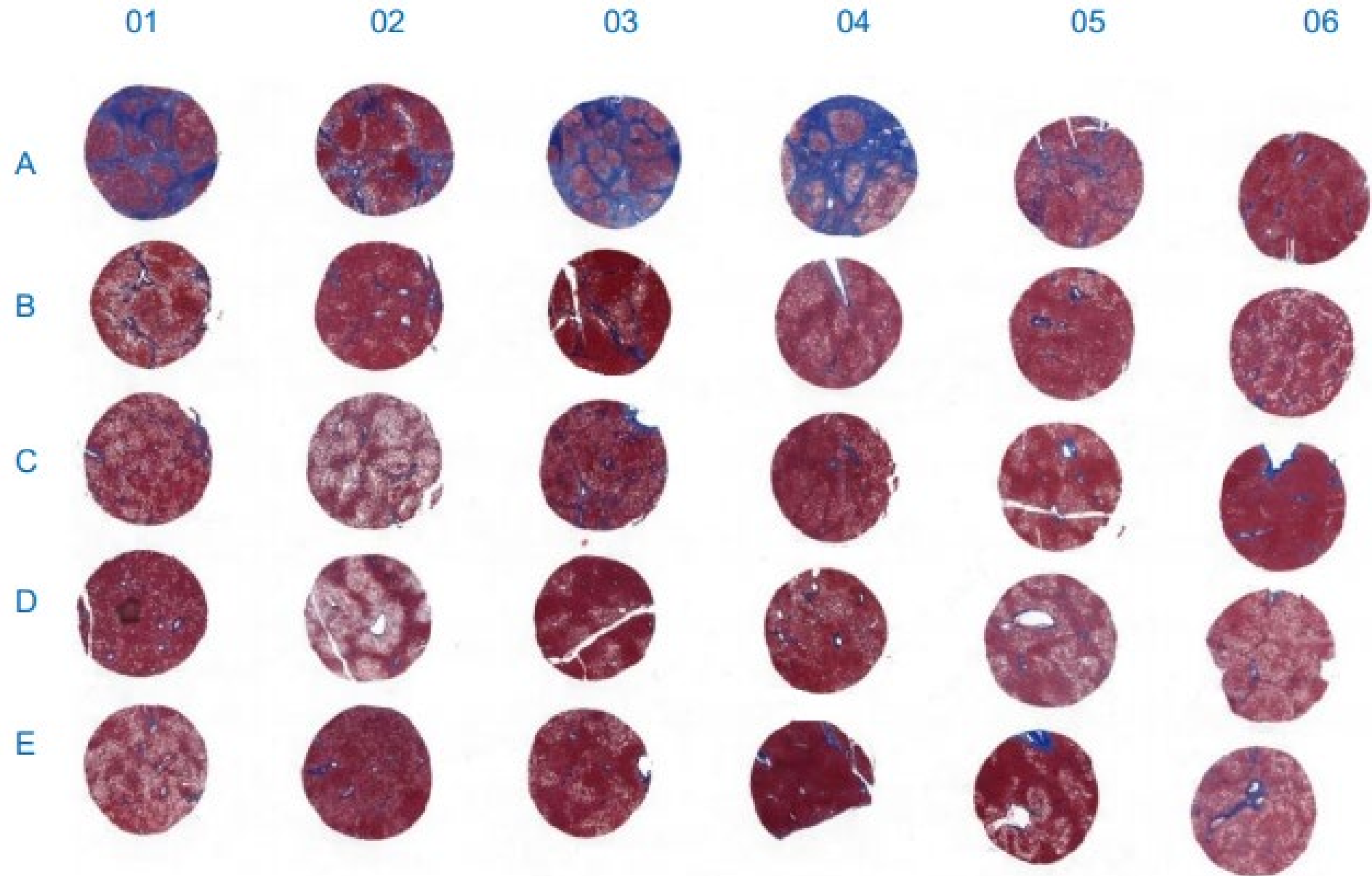
## Tissue microarrays

- Tissue cores of 3 mm in diameter are cut 5  $\mu$  thick and arrayed on a glass slide
  - NASH
  - Steatosis
  - Fibrosis
  - NIDDM
  - Normal adult
  - Steatohepatitis with Hx of alcohol use
  - Steatosis with Hx of alcohol use
  - IDDM
  - Normal and diseased pediatric
- Stored individually packaged in oxygen-depleted atmosphere at 4 C

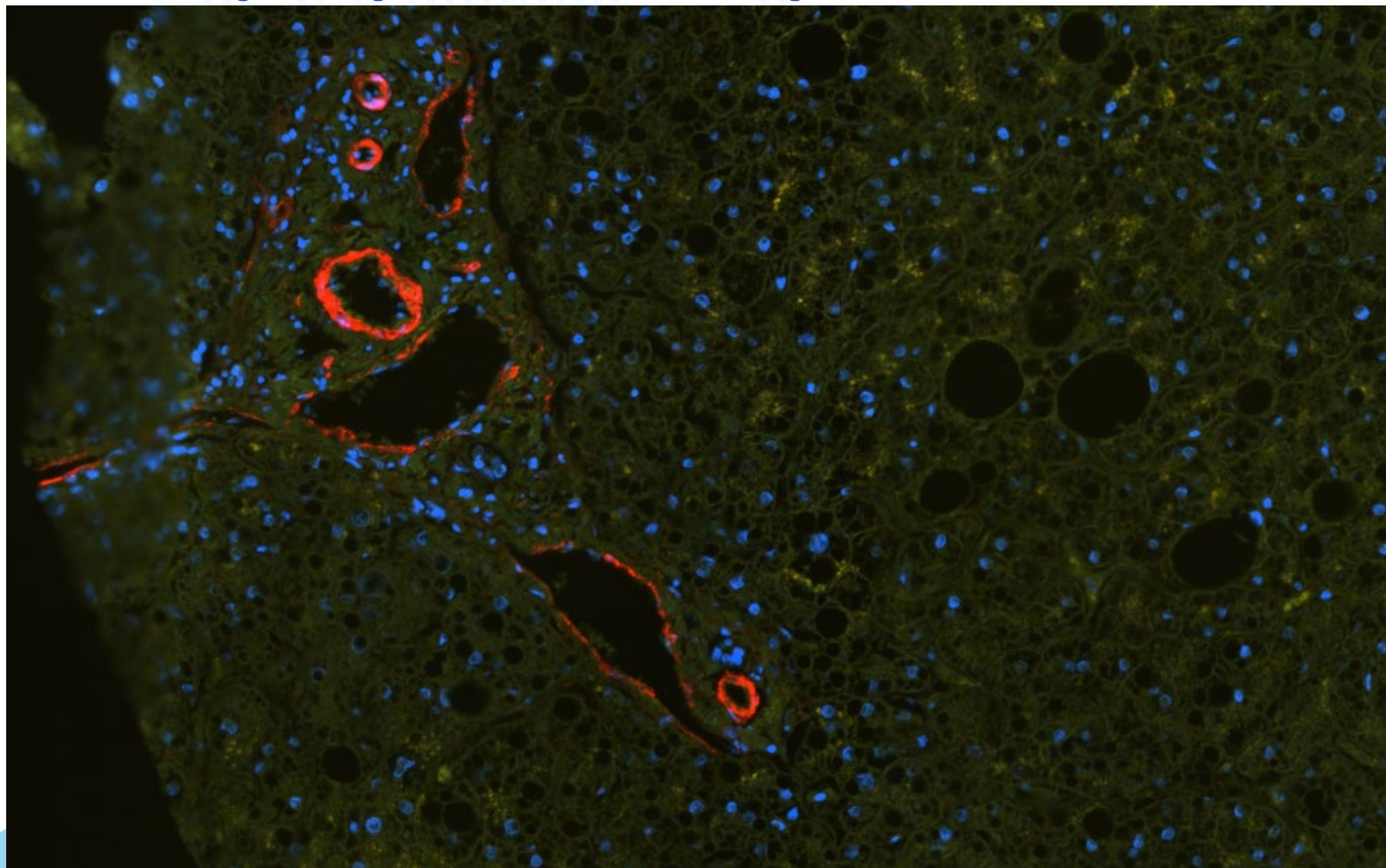




## Liver fibrosis microarray

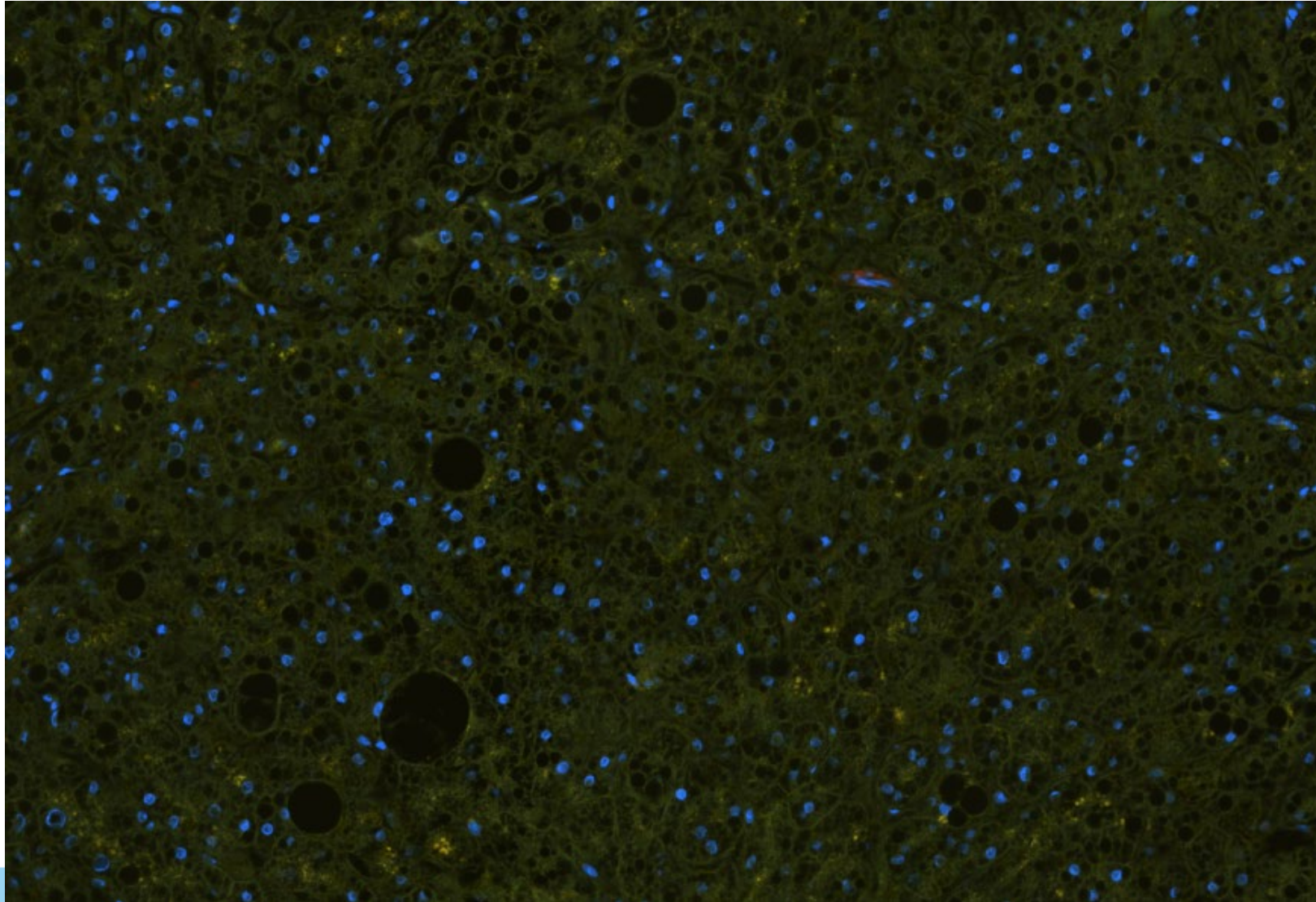


# **$\alpha$ -SMA periportal area, positive, donor 1A**



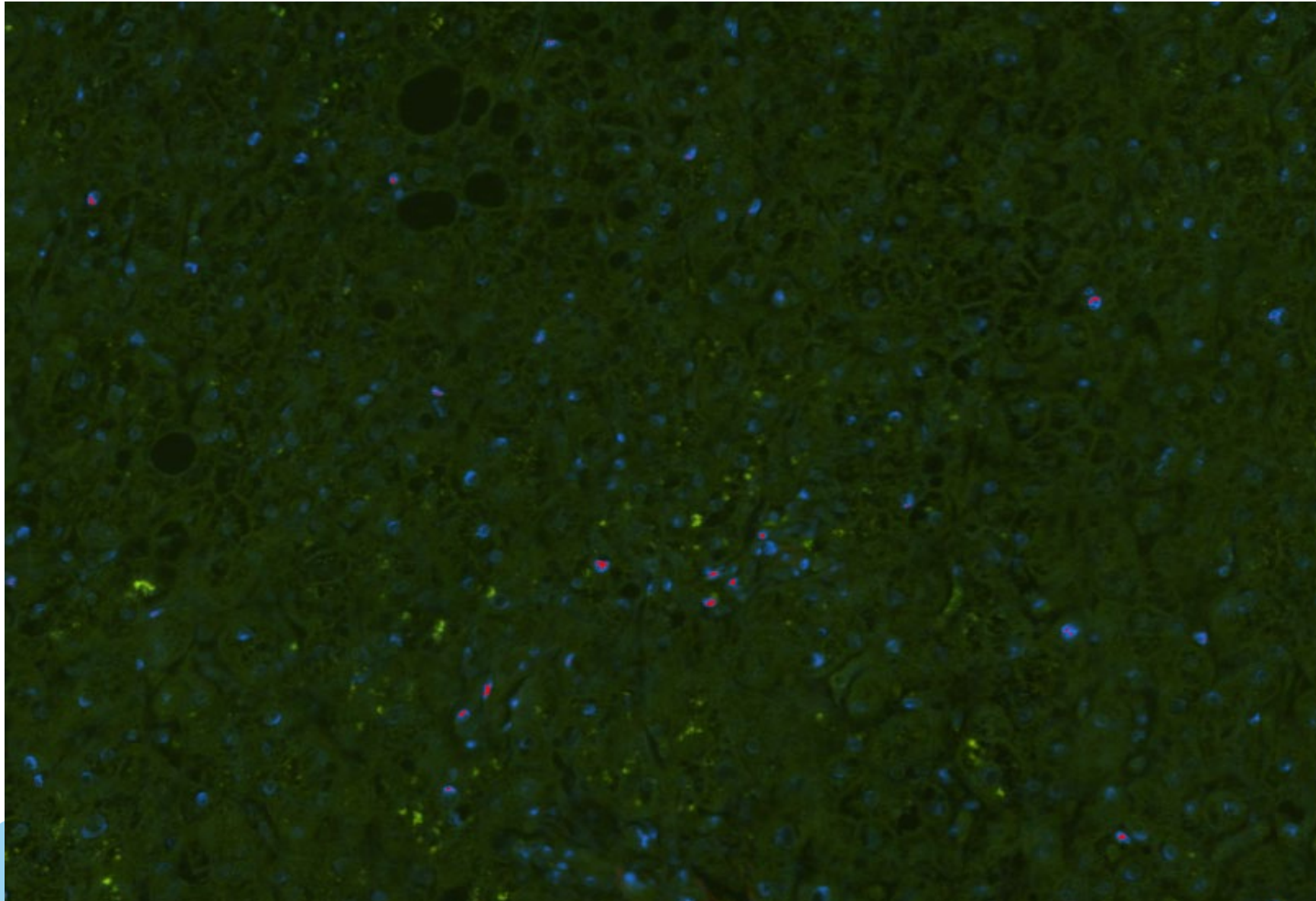
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# **$\alpha$ -SMA periportal area, negative, donor 1A**



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# **$\alpha$ -SMA lobular area, positive, donor 1C**



**Thank you for watching!**

Questions? Get in touch through the [Contact Us](#) tab on our website or use our Products pages to find Research Biobank tissue preparations & microarrays currently available

