

# INDEX

## A

- Adipose tissue ..... 71, 112  
 Alanine Aminotransferase (ALT) ..... 123, 124, 147, 156  
 Alcohol ..... 31, 78, 84, 140, 145, 146, 154–156  
 Alcoholic liver disease (ALD) ..... 145, 146, 154  
 Amylin diet ..... 122  
 Anesthesia ..... 2, 29, 67, 76, 78, 79, 84, 123  
 Antibodies ..... 3, 7, 16–18, 23, 24, 47, 49, 51–53, 56–59, 63, 68, 71, 76, 81, 83, 87–89, 93, 97, 126, 133, 139, 140  
 Aspartate aminotransferase ..... 123, 147

## B

- Ballooning ..... 124–126  
 Barcodes ..... 91, 93, 98  
 Bioinformatics ..... 39  
 Biopsies ..... 11–13, 89, 92, 102

## C

- Cells ..... 1–9, 11–13, 15–19, 21–25, 27–41, 45–53, 55, 56, 65, 66, 70, 71, 75, 77, 81, 83, 84, 87–98, 102, 129, 130, 133, 139, 140  
 Centrifugations ..... 7, 9, 18, 32, 33, 69, 97, 98  
 Cholesterol ..... 1, 15, 101–104, 107, 114, 122–124  
 Clearing ..... 15, 56–59, 61–63  
 Collagenase ..... 2, 6, 9, 12, 13, 28, 31, 88, 92, 97  
 Cytokines ..... 15, 21, 46, 66

## D

- Data analysis ..... 33–39, 87, 94  
 Delivery ..... 16, 67, 70, 71, 129, 140, 141  
 Diabetes ..... 21, 110  
 Diets ..... 9, 52, 71, 96, 109–114, 121–125, 136, 146, 147, 149–152, 154–156  
 Digestion ..... 2, 6, 9, 12, 13, 31, 92, 97, 105, 107

## E

- ECG ..... 111, 113  
 ELISA ..... 75, 76, 81, 124  
 Energy expenditure ..... 110  
 Engraftment ..... 75–84  
 Ethanol ..... 4, 29, 30, 32, 46–48, 50, 67, 70, 132, 133, 136, 138, 146–156  
 Euthanasia ..... 46, 47, 79, 136

## F

- Fibrosis ..... 15, 21, 45, 121, 122, 124–126, 146, 147, 154  
 Fixation ..... 46, 47, 58, 93, 136  
 Flow cytometries ..... 9, 15–19, 83, 87, 88, 94, 95  
 FlowJO ..... 77, 83, 94, 95  
 Folch extraction ..... 101–108  
 Formaldehyde ..... 124

## G

- Gavage ..... 146–149, 151, 153–156  
 Glucan ..... 66–70, 72  
 Gradient centrifugation ..... 1–9  
 Gradients ..... 2, 7–9, 12, 13, 22, 28, 29, 31–32, 97, 112–114

## H

- Hepatectomy ..... 78, 84  
 Hepatocellular carcinoma ..... 121, 129–140, 145  
 Hepatocytes ..... 1–9, 15, 18, 27, 31, 32, 45, 65, 68, 71, 75–84, 129, 139  
 High fat diet ..... 110, 111, 122, 146  
 Histology ..... 47, 156  
 Histopathology ..... 124, 125  
 Human ..... 11–13, 55–57, 63, 68, 75–84, 88, 89, 103, 109–111, 114, 129, 130, 146, 147  
 Homogenization ..... 33, 66, 68, 69, 72, 92

## I

- Imaging ..... 55, 56, 59, 61, 63, 112, 114  
 Immunofluorescence ..... 3, 45–53, 68

Inflammation ..... 15, 21, 45, 65, 66,  
 75, 121, 122, 124–126, 145, 147

Injection  
 hydrodynamic tail vein ..... 129, 131, 135–136  
 intravenous ..... 71  
 retro-orbital ..... 72  
 tail vein ..... 129–141

Insulin ..... 3, 11, 110, 122–124

Isolation ..... 1–9, 11–13, 15–19, 21–25,  
 28–32, 81, 88, 95

**K**

Kupffer cells (KCs) ..... 1, 7, 15, 21, 27–30,  
 45, 52, 65, 67, 71, 88, 89

**L**

Lateral lobe ..... 78, 124, 156

Libraries ..... 28, 30, 33–41

Lipids ..... 11, 45, 65, 97,  
 101–107, 109–116, 156

Liver ..... 1–9, 11–13, 15, 16, 18, 19,  
 21, 22, 24, 27–33, 45–53, 55–63, 65–73, 75, 77,  
 78, 81, 82, 85, 88, 89, 92, 95–97, 101–107, 109,  
 110, 113, 114, 116, 121, 122, 124, 125,  
 129–131, 136, 139–141, 145, 146, 149, 154, 156

Lysis ..... 22, 25, 88, 92

**M**

Macrophages ..... 1, 7, 11–13,  
 15–19, 21, 27–33, 40, 45–53, 55–63, 65, 66, 71,  
 88, 97, 126

Magnetic resonance (MR) ..... 111–113

Maltodextrin ..... 147–151, 153–154, 156

Mass cytometry ..... 87–98

Metabolism ..... 1, 27, 28, 45, 65, 66, 101

Mice ..... 1–9, 11, 12, 15–17, 22,  
 24, 28–31, 45–53, 56, 63, 66–68, 71, 72, 75–85,  
 89, 90, 95, 110, 112–114, 121–126, 129–141,  
 146–149, 151–156

Microscopy ..... 7, 51, 55–63, 134, 138

Monocytes ..... 52

Mouse models  
 alcoholic steatohepatitis (ASH) ..... 145–156  
 insulin resistance ..... 122  
 non-alcoholic fatty liver disease (NAFLD) ..... 121  
 non-alcoholic steatohepatitis (NASH) ..... 121  
 obesity ..... 11, 110

mRNA ..... 27–42

**N**

Non-parenchymal cells (NPCs) ..... 16, 17

Nucleic acid ..... 47

**P**

Pathogenesis ..... 21, 146

Percoll ..... 2, 7–9, 12, 13,  
 28, 29, 31, 77, 81, 97

Perfusion ..... 2–3, 5–9, 16,  
 28–31, 77, 81

Phosphate buffered saline (PBS) ..... 2, 4, 7,  
 12, 13, 16, 18, 22, 23, 28–30, 32, 46, 47, 49, 51,  
 56–58, 60, 62, 67, 70, 77, 81, 83, 88, 89, 93, 133,  
 136, 139, 140

Phospholipids ..... 102–104, 114, 115

Plasma ..... 94, 124, 125

Plasmids ..... 131–135, 139–141

Protein detection ..... 21–25

**R**

Real time PCR ..... 3, 7, 156

Regeneration ..... 45, 75

**S**

Sequencing ..... 27–44, 87

Sex ..... 110, 122, 154

Silencing ..... 66, 72, 131

siRNAs ..... 66, 67, 70, 72

Sorting ..... 15–19

Staining ..... 16–18, 47, 50,  
 51, 53, 57–60, 63, 82, 93, 98, 124, 133, 138, 140,  
 156

Steatosis ..... 11, 110, 121,  
 122, 124–126, 145–147, 156

**T**

Three-dimensional microscopy ..... 55–63

Tissues ..... 12, 13, 15, 21, 23,  
 46, 47, 50, 51, 53, 55–63, 65, 66, 70, 71, 76, 88,  
 97, 101, 102, 104, 105, 107, 124, 125, 130, 132,  
 134, 136, 138–140, 156

Transposons ..... 130, 131

Triglycerides ..... 101–104, 106, 107,  
 114, 115, 124, 156

**W**

Western blot ..... 21–26

**X**

Xenografts ..... v

Xylene ..... 46, 48, 50, 84, 133, 138