**Supplementary table 7.** **Overview of samples collected from 3-year-old, ovariectomized lean (fasted, n=5) and obese (fasted, n=6 and refed, n=6) Göttingen Minipigs**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Organ system** | **Organ/tissue** | **Organ/tissue compartment** | **Samples** | **Downstream analyses** |
| **Cardiovascular system** | **Heart** | Right and left atrium and ventricle, septum, bicuspid, tricuspid, pulmonary, aortic valve, left and right auricle (PE), *papillary muscle; left and right ventricle and septum (-80°C)* | PE, *-80°C* |  |
| **Blood vessels** | End branching abdominal aorta (PE only), external iliac artery (-80°C only) coronary vessels | PE, -80°C |  |
| **Respiratory tract (RT)** | **Lung** | Lung parenchyma from all lobes | PE, -80°C |  |
| **Hepato-pancreatic system** | **Liver** | Liver parenchyma, gall bladder | PE, -80°C |  |
| **Pancreas** | Systematically randomly sampled locations from the entire pancreas [27] | PE, EL,CRYO, -80°C |  |
| **Gastro-intestinal tract** | **Stomach** | Cardiac portion, fundus portion, non-glandular portion, pyloric portion | PE, -80°C |  |
| **Intestine** | Duodenum, jejunum, ileum, colon, ileocecal papilla (PE only), rectum (PE only) and ingesta of dodenum, jejunum, ileum and colon | PE, -80°C |  |
| **Uro-genital system** | **Kidney** | Left and right kidney; cortex, Inner and outer zone of the medulla | PE, -80°C |  |
| **Lower urinary tract** | Bladder | PE |  |
| **Genital tract** | Vagina, cervix, left and right uterine horn, fallopian tube | PE |   |
| **Immune and hematopoietic system** | **Spleen** | Parenchyma | PE, -80°C |  |
| **Endocrine system** | **Adrenal gland** | Cortex, medulla | PE, -80°C |  |
|  | **Pituitary** | Segment of pars distalis (-80° C only), Rest (PE only) | PE, -80°C |  |
|  | **Thyroid gland** | Parenchyma | PE, -80°C |  |
| **Nervous system** | **Brain**  | One cerebral hemisphere (PE only), one cerebral hemisphere cut in slices (-80°C only) | PE, -80°C |  |
|  |  | Hypothalamus from one cerebral hemisphere (-80°C only) | -80°C |  |
| **Integument** | **Skin** | Back (PE only), inner thigh | PE, -80°C |  |
| **Adipose tissue** | **Subcutaneous adipose tissue** | Abdomen, back | PE, CRYO, -80°C |  |
| **Visceral adipose tissue** | Subperitoneal abdominal, peri-renal, mesenterium, omentum | PE, CRYO, -80°C |  |
| **Musculo-skeletal system** | **Skeletal muscles** | Gluteobiceps muscle, longissimus dorsi muscle, diaphragm | PE, -80°C |  |
| **Bones** | Femoral bone growth joint, tibial bone growth joint | PE |   |
| **Body fluids** |  | Urine (5), blood serum (10), blood EDTA-plasma (10), blood Lithium-heparin-plasma (10), Blood EDTA-plasma with protease inhibitors (16) | -80°C |  |

**Sample processing**: Samples for morphologic analyses were fixed using 4% formaldehyde-solution or 6.25% glutaraldehyde solution; **PE**: Paraffin-embedding; **CRYO**:Preparation of frozen samples for cryo-histology; **-80°C**: Cryopreservation of samples for molecular analyses.

**Downstream analysis pictograms**:: Microscopy; : Electron microscopy; : (Quantitative) morphological analyses; : Molecular analyses (e.g. RNA-, protein-, metabolite profiling).