Study Design-Louise Fong

GCTOF & lipidomics

mouse plasma, esophaugus, and prostate (72)

Sample prep:

Plasma: Whole blood from the retro-orbital venous plexus of the rats was collected into a BD lithium heparin (green tops) tube. Cells were removed by centrifugation for 10 min at 1,500 x g, using an Eppendorf 5417R centrifuge. Plasma was collected from the resultant supernatant.

Esophagus: At sacrifice, esophagi were isolated. Esophageal epithelium was prepared by using a blade to remove the submucosal and muscularis layers, snap-frozen in liquid nitrogen, and stored at –80 °C.

Lateral Prostate: At sacrifice, the genital urinary tract of male rats, comprising the bladder, urethra, seminal vesicles, and the prostate is excised, and micro-dissected under a dissecting microscope. The lateral prostate was removed, snap-frozen in liquid nitrogen, and stored at –80 °C.

Treatments: 3; Three dietary Zn-modulated groups: Zn-deficient, Zn-replenished, and control Zn-sufficient

Male weanling rats were fed a Zn-deficient diet ad libitum (n = 16) or pair-fed a control Zn-sufficient diet (n = 8). After 6 weeks Zn-deficient rats evidenced increased cell proliferation in the esophagus. Eight Zn-deficient rats were switched immediately to the Zn-sufficient diet to form the Zn-replenished group. At 72 hours after replenishment, all animals (Zn-deficient, Zn-replenished, and Zn-sufficient; n = 8/group) were killed.

Note: Zn-sufficient is the control group for each tissue (plasma, esophagus, or prostate)