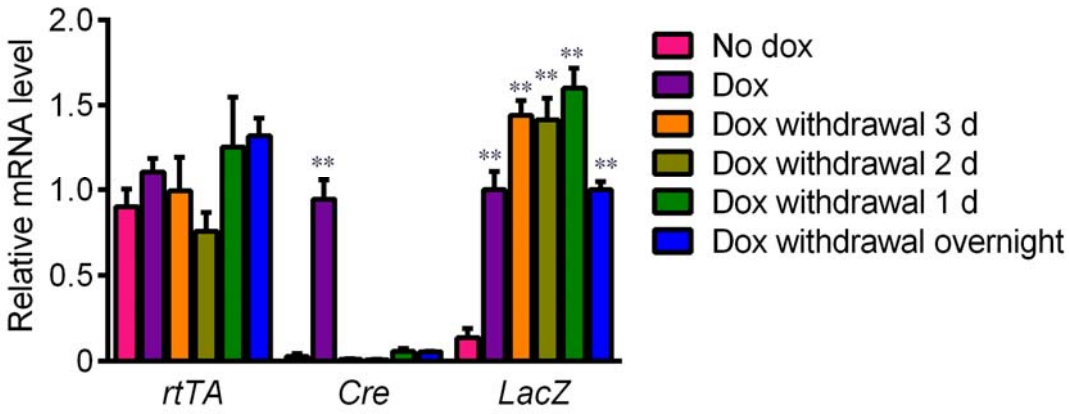
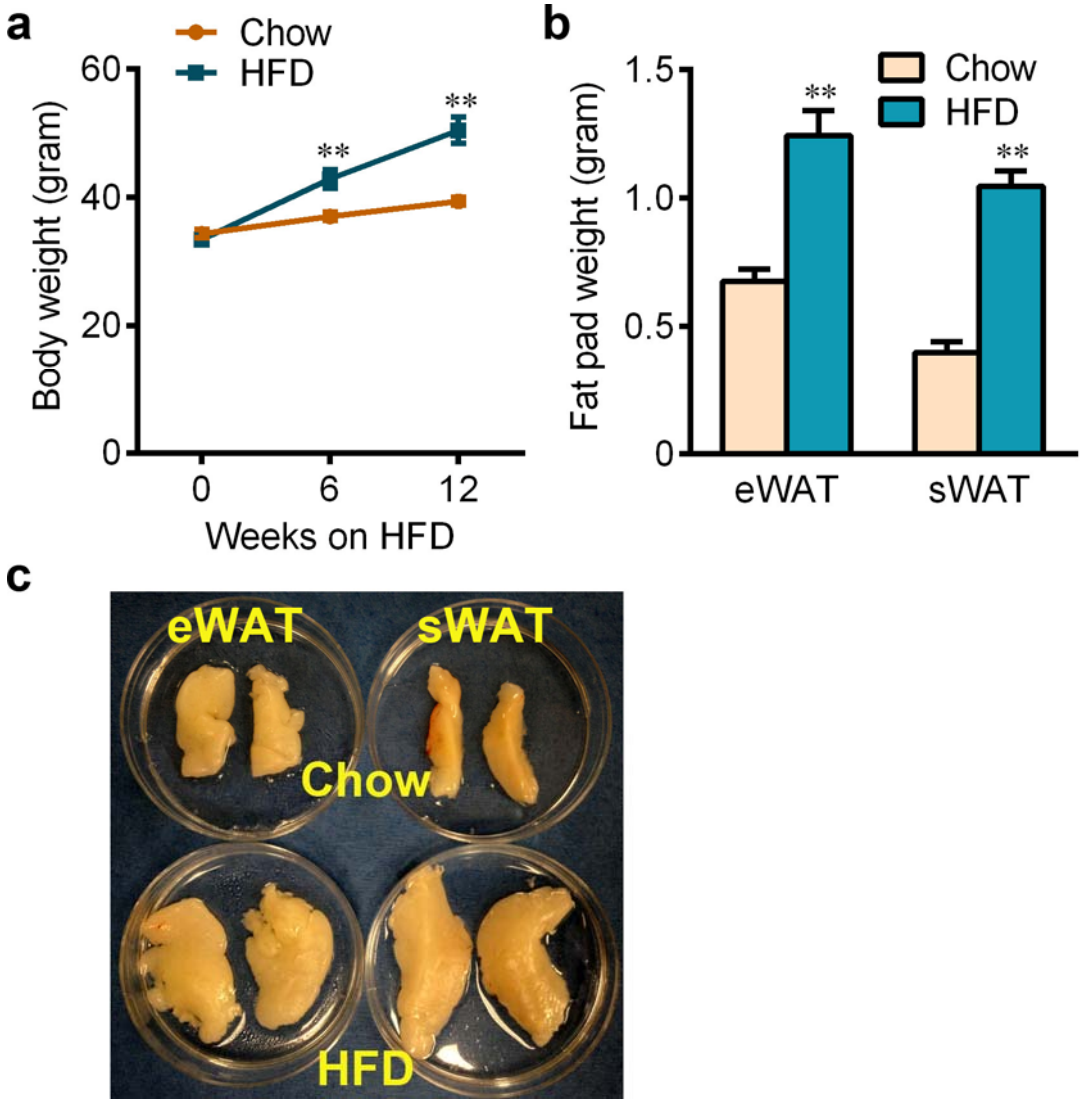
Tracking adipogenesis during white adipose tissue development, expansion and regeneration

Qiong A. Wang, Caroline Tao, Rana K. Gupta and Philipp E. Scherer

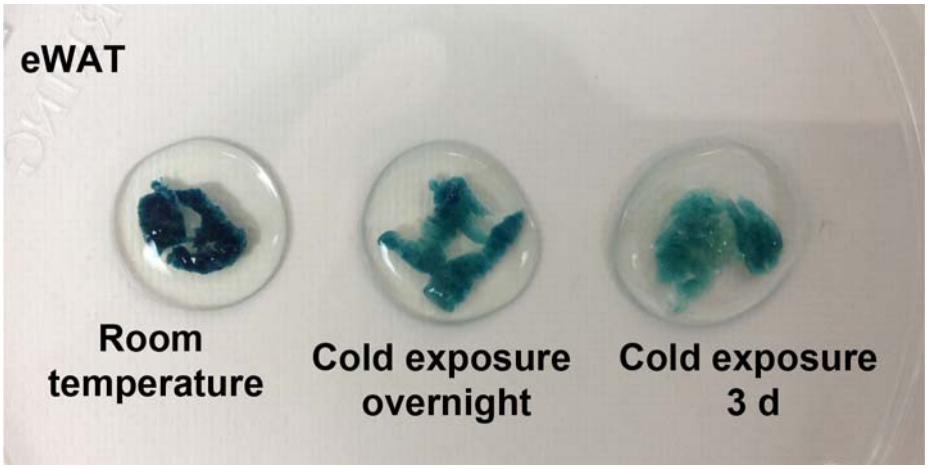
Supplementary Figures



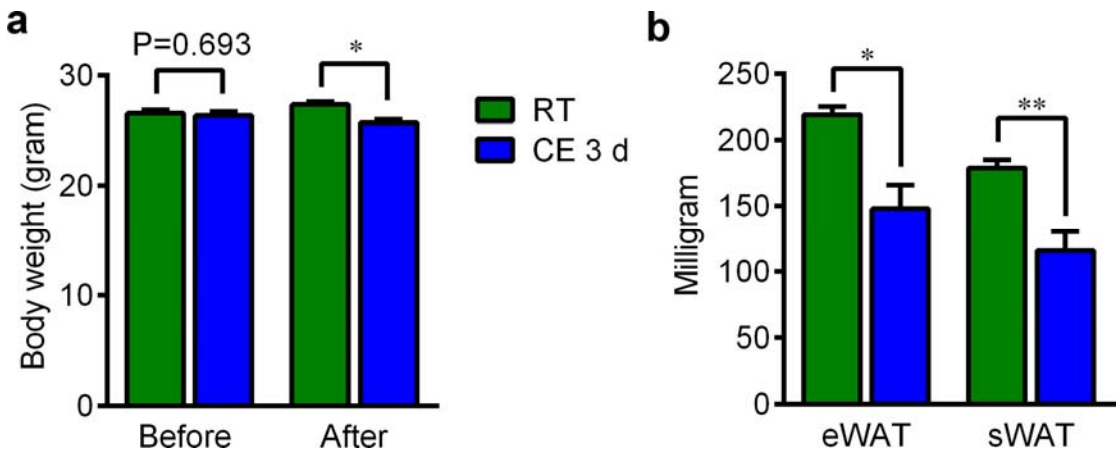
Supplementary Figure 1. Systemic washout of doxycycline. 10 week-old male AdipoChaser mice were maintained on chow diet only (no dox) or on doxycycline diet for 7 days and then switched to chow diet prior to sacrifice for 3, 2, 1 days, or overnight. Relative mRNA expression levels of *rtTA*, *Cre* and *LacZ* in sWAT of AdipoChaser mice were measured by qPCR assay. n = 2–8 per group. Data represent the mean ± s.e.m. **, $P < 0.001$ compared to no dox.



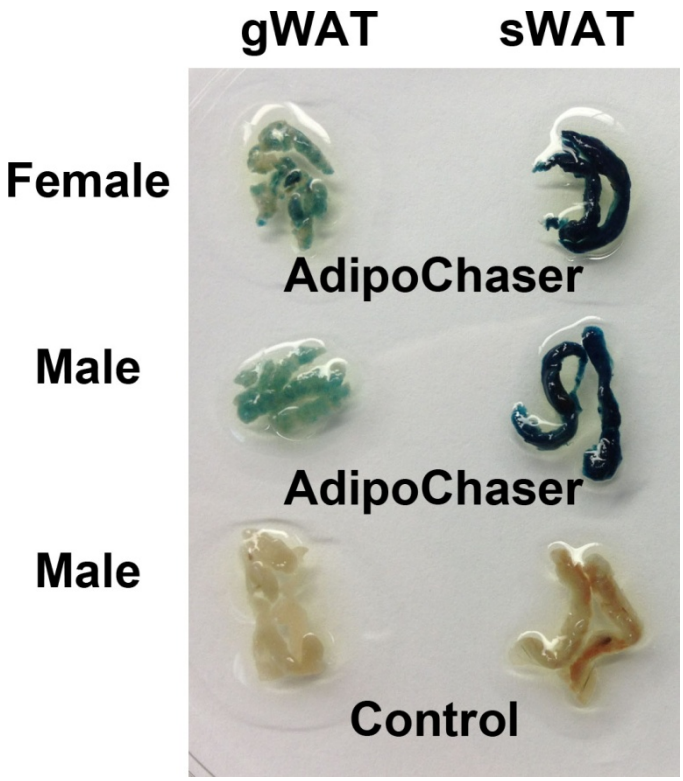
Supplementary Figure 2. High fat diet induced body weight gain and white adipose tissue expansion. **(a, b, c)** 10 week-old doxycycline pre-treated AdipoChaser male mice were on high fat diet (HFD) for 12 weeks. **(a)** Body weight of AdipoChaser mice during 0, 6 or 12 weeks of HFD feeding. Age-matched AdipoChaser mice kept on chow diet are presented as controls. n = 8 per group. **(b)** eWAT and sWAT weights of AdipoChaser mice after 12 weeks of HFD feeding compared to age-matched AdipoChaser mice kept on chow diet. n = 4 per group. **(c)** Picture of eWAT and sWAT of AdipoChaser mice kept on chow diet or on HFD for 12 weeks. Data represent the mean ± s.e.m. **, $P < 0.001$ compared to chow.



Supplementary Figure 3. Whole tissue image of LacZ staining of eWAT. AdipoChaser male mice were on doxycycline diet for 7 days, followed by chow diet for 3 days prior to cold exposure. Mice were kept at room temperature or exposed to the cold for overnight or 3 days before sacrifice. eWAT of AdipoChaser mice was cut into small slices before staining to get a better penetration of LacZ staining buffer.



Supplementary Figure 4. Cold exposure alters body weight and white adipose tissue mass. **(a,b)** 8 week-old C57BL/6 WT male mice were divided into two groups. One group was kept in room temperature (RT) and the other was exposed to the cold (CE) for 3 days. **(a)** Body weights of mice from each group before or after cold exposure. **(b)** eWAT and sWAT weights of mice from each group after cold exposure. $n = 5$ per group. Data represent the mean ± s.e.m. *, $P < 0.05$ compared to chow; **, $P < 0.001$ compared to chow.



Supplementary Figure 5. Whole tissue image of LacZ staining of gonadal fat (gWAT) and sWAT. AdipoChaser mice were 28 days old, and mothers of both control and AdipoChaser mice were on doxycycline diet during E19–P10. LacZ staining were performed on tissue slides of gWAT (left) and sWAT (right) from female AdipoChaser mice (top), male AdipoChaser mice (middle) or male control (bottom) mice. Tissues were cut into small slices before staining to get a better penetration of LacZ staining buffer.