**Supplementary data to:**

**Paraoxonase 1 (PON1) and pomegranate influence circadian gene expression and period length**

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**Supplementary Table 1. Composition of the diets**

|  |  |  |
| --- | --- | --- |
| **Ingredients** | **Low fat diet (g%)** | **High fat diet (g%)** |
| Casein | 210.0 | 265.0 |
| L-Cystine | 3.0 | 4.0 |
| Maltodextrin | 50.0 | 160.0 |
| Sucrose | 325.0 | 90.0 |
| Lard | 20.0 | 310.0 |
| Soybean Oil | 20.0 | 30.0 |
| Cellulose | 37.15 | 65.5 |
| Mineral Mix, AIN-93G-MX (94046) | 35.0 | 48.0 |
| Calcium Phosphate, dibasic | 2.0 | 3.4 |
| Vitamin Mix, AIN-93-VX (94047) | 15.0 | 21.0 |
| Corn Starch | 280.0 | 0 |

**Supplementary Table 2. Characteristics of human donors**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Characteristics of donors for skeletal muscle biopsies | | | | | |
| **Donor** | **Sex** | **Age (years)** | **BMI (kg/m2)** | **Biopsy source** |
| #1 | M | 57 | 28.10 | *Gluteus maximus* |
| #2 | M | 62 | 24.30 | *Gluteus maximus* |
| #3 | F | 65 | 25.85 | *Gluteus maximus* |
| #4 | F | 66 | 24.77 | *Gluteus maximus* |
| **N=4** | **M=2, F=2** | **62.5 ± 4** | **25.75 ± 1.69** |  |

**Supplementary Materials and Methods**

**Cell culture**

NIH3T3 and U2OS cells (kindly provided by the laboratory of Prof. Schibler, University of Geneva), were maintained at a sub confluent condition in growth medium containing DMEM GlutaMAX (Thermo Fisher) with 4.5 g/L glucose, 100 µg/ml streptomycin, and 10% fetal calf serum (Sigma). Both cell lines were transduced with lentiviral particles carrying the *Bmal1-luc* reporter, as described in Materials and Methods (Main text). For bioluminescence recording, cells were pretreated pomegranate, and synchronized *in vitro* by forskolin pulse as described in details in the Materials and Methods chapter for C2C12 and human myoblast cells.

**Supplementary Figure 1**



***Supplementary Figure 1. Effect of pomegranate on the circadian phase and period length in NIH3T3 and U2OS cells.*** *NIH3T3 (A) or U2OS cells (B), transduced with Bmal1-luclentiviral particles, were preincubated with 20 µl of diluted pomegranate juice for 24h, followed by synchronization with forskolin and continuous bioluminescence recording.**Data represent the mean of oscillation profiles recorded in duplicates of 3 (NIH3T3) and 2 (U2OS) independent experiments.*