## Bright light improves sleep in patients with Parkinson's disease: possible role of circadian restoration

## Takuyuki Endo<sup>a</sup>, Ritsuko Matsumura<sup>b</sup>, Isao Tokuda<sup>c</sup>, Tomoko Yoshikawa<sup>d</sup>, Yasufumi Shigeyoshi<sup>d</sup>, Koichi Node<sup>e</sup>, Saburo Sakoda<sup>a, f</sup>and Makoto Akashi<sup>b\*</sup>

a) Department of Neurology, Osaka Toneyama Medical Center, 5-1-1 Toneyama, Toyonaka, Osaka 560-8552, Japan
b) The Research Institute for Time Studies, Yamaguchi University, 1677-1 Yoshida, Yamaguchi, Yamaguchi 753-8511, Japan
c) Department of Mechanical Engineering, Ritsumeikan University, 1-1-1 Nojihigashi, Kusatsu, Shiga 525-8577, Japan
d) Department of Anatomy and Neurobiology, Kindai University, 377-2 Ohno-Higashi, Osaka-Sayama, Osaka 589-8511, Japan
e) Department of Cardiovascular Medicine, Saga University, 5-1-1 Nabeshima, Saga, Saga 849-8501, Japan
f) Organic Clinic, 3-1-57 honmachi, Toyonaka, Osaka 560-0021, Japan



## Figure S1 Comparison of peripheral circadian phase between non-PD and PD subjects

The estimated peak time of *Per3* expression in hair follicles was compared between 10 non-PD elderly subjects (black squares; age, 71.4  $\pm$  7.4; sex, male 40%) and 18 PD patients (red squares; age, 66.2  $\pm$  7.5; sex, male 33.3%). Error bars indicate 95% confidence intervals. n.s. represents no statistical significance between the two groups.