

Supplementary information

**Sex differences in the serum level of endogenous ligands for
estrogen receptor β in the elderly population**

Miyuki KOBAYASHI^{1,2}, Nobuhiro SUGIYAMA^{1,*}, Daimei SASAYAMA¹,

Hidehiko SASAMOTO³, Yoshimichi MIYASHIRO³, Kunimasa ARIMA²,

Shinsuke WASHIZUKA¹

¹Department of Psychiatry, Shinshu University School of Medicine, 3-1-1 Asahi, Matsumoto,

Nagano 390-8621, Japan; ²Department of Psychiatry, National Hospital Organization Komoro

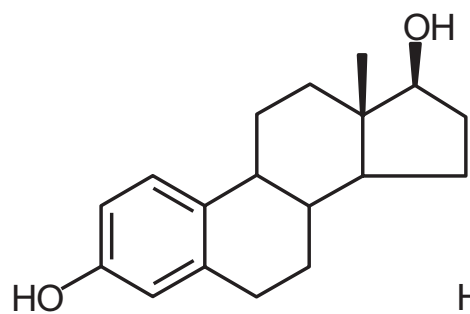
Kogen Hospital, 4598 Ko, Komoro, Nagano 384-8540, Japan; ³ASKA Pharmaceutical Medical

Co., Ltd. 5-36-1 Shimosakunobe, Kawasaki Takatsu-ku, Kanagawa 213-8522, Japan;

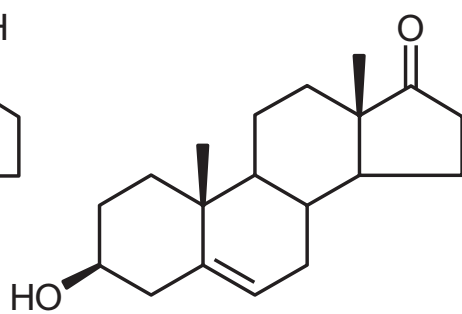
**Corresponding author and person to whom reprint requests should be addressed:*

Nobuhiro Sugiyama, MD, PhD

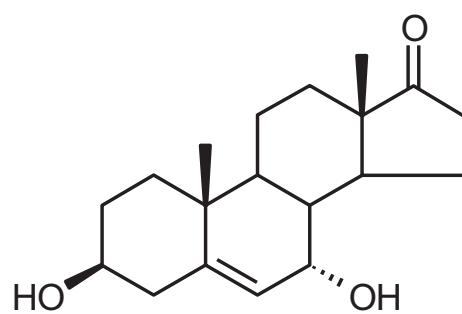
Supplementary Information Figure S1



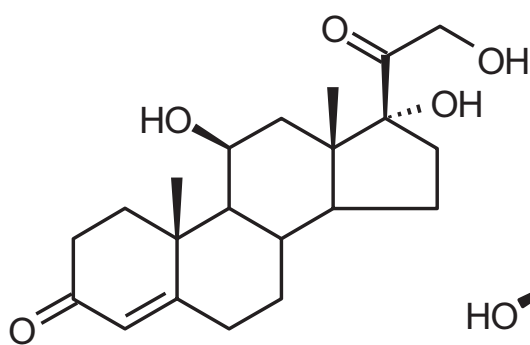
17 β -Estradiol
(E2)



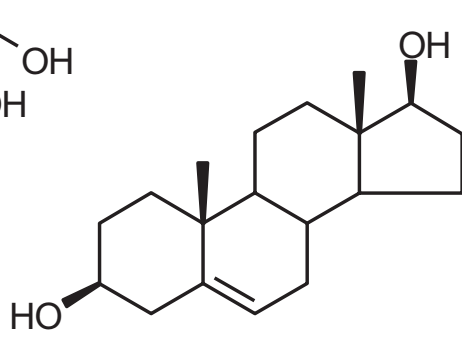
Dehydroepiandrosterone
(DHEA)



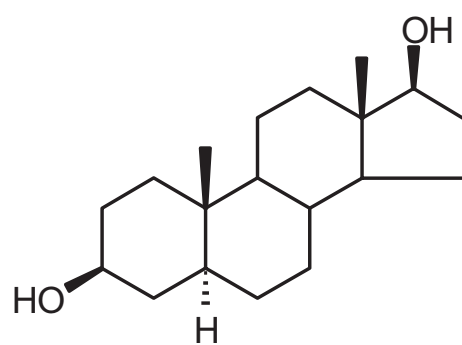
7 α -hydroxydehydroepiandrosterone
(7 α -OH-DHEA)



Cortisol
(F)



Androstenediol
(Δ 5-diol)



5 α -androstane-3 β , 17 β -diol
(3 β Adiol)

Figure S1. Chemical structures of the steroids of interest

Supplementary Information Figure S2

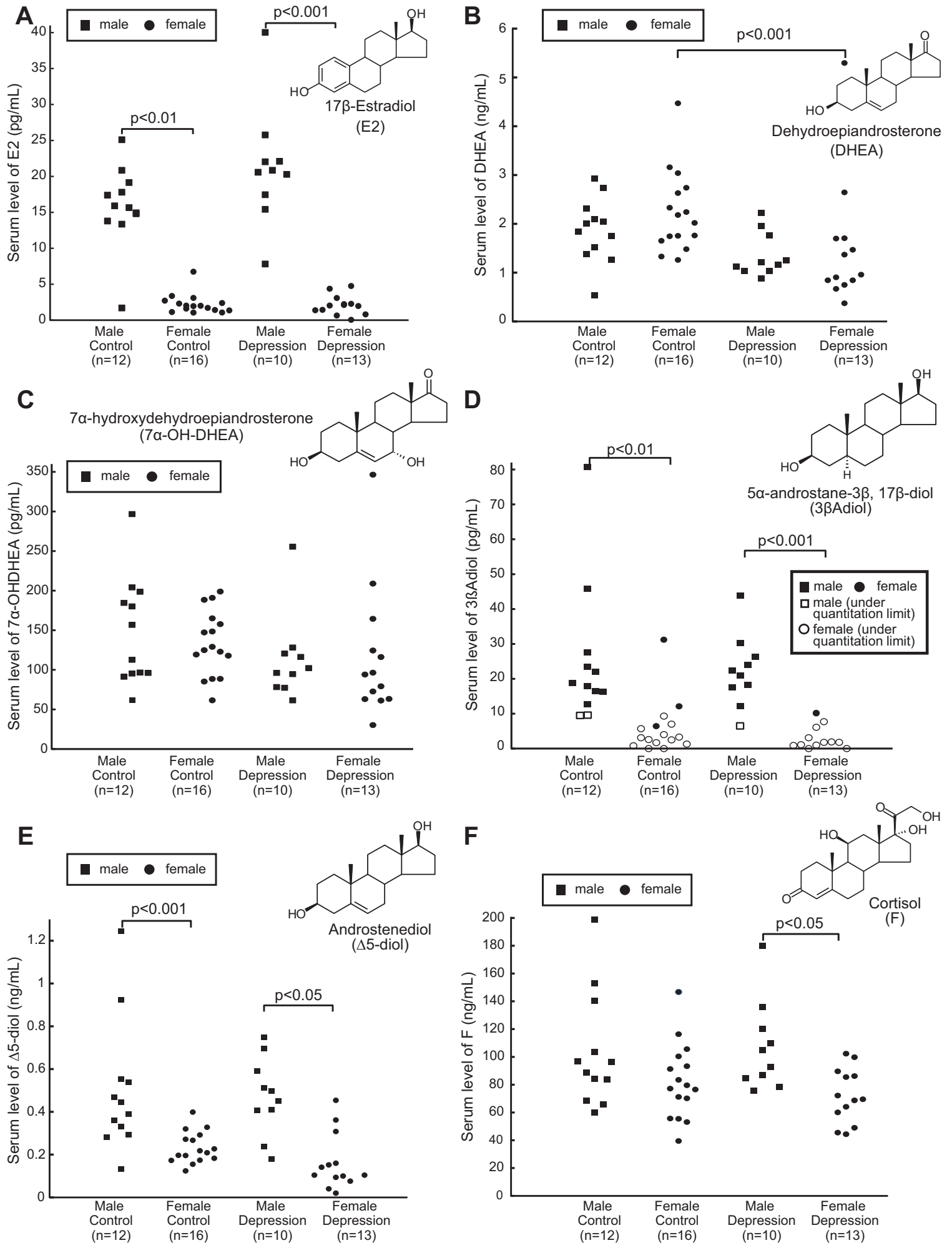


Figure S2. Serum Levels of Steroids

Supplementary Information Figure S3

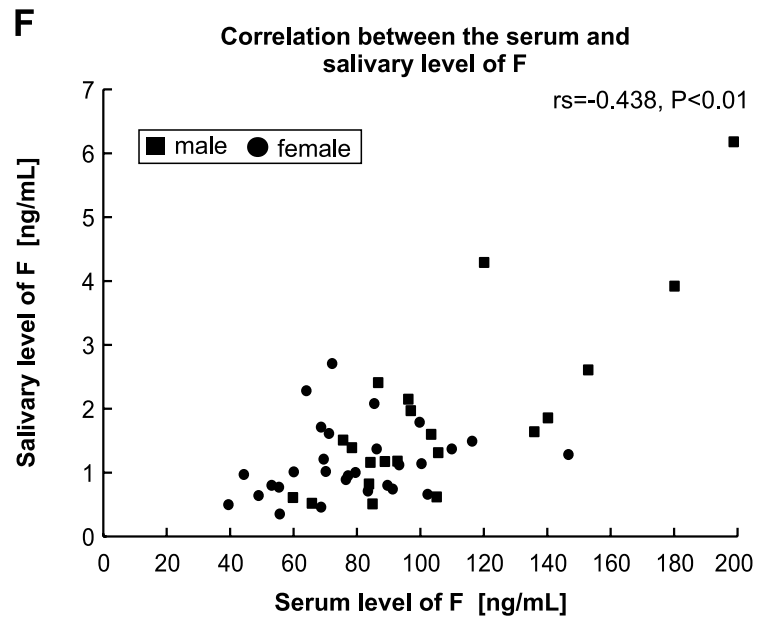
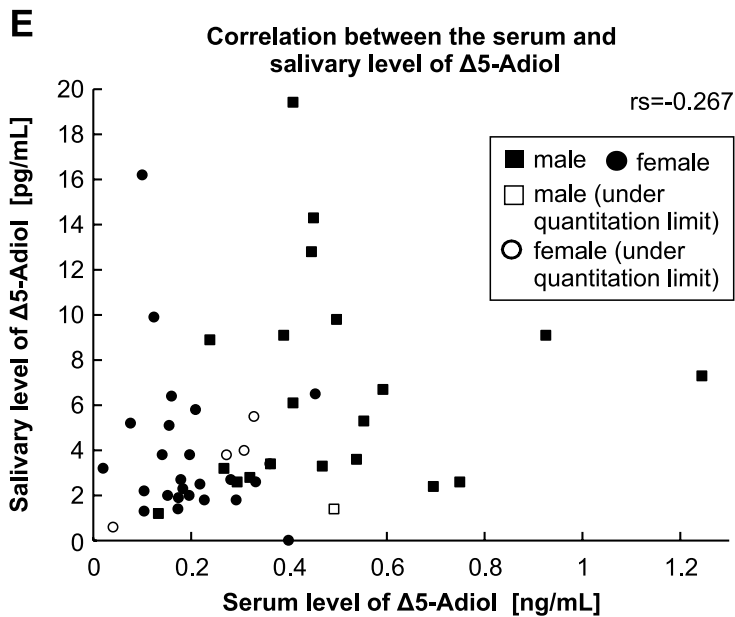
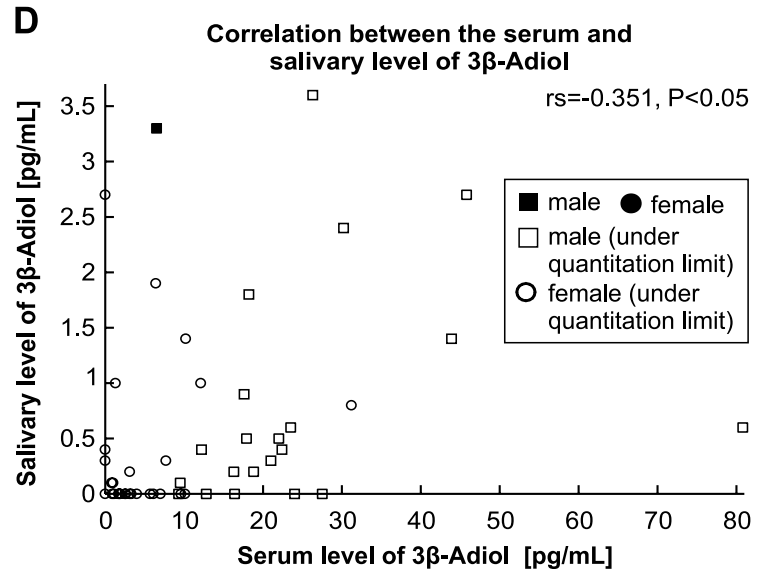
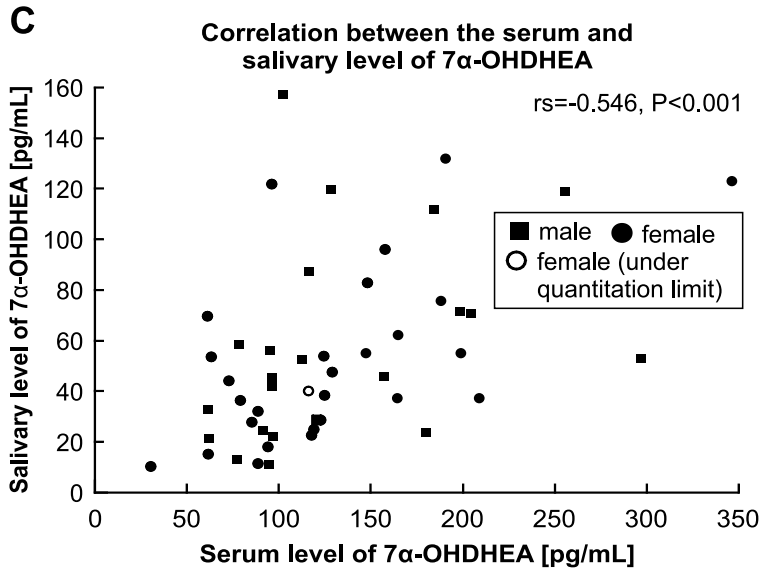
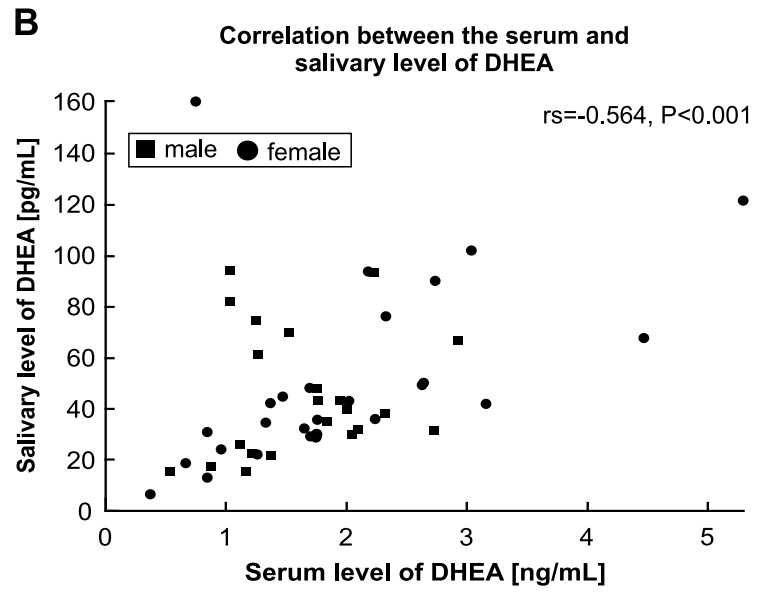
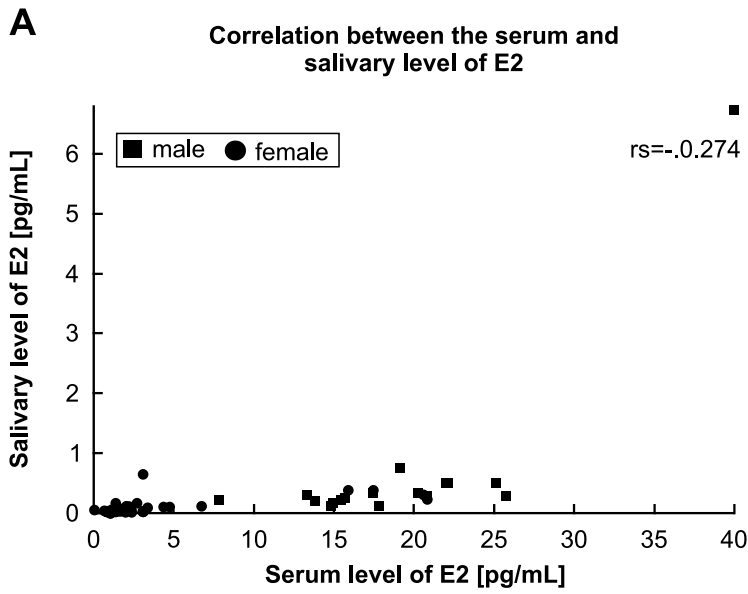


Figure S3. Correlation between the Serum and Salivary Levels of Each Steroid