

SYNTHESIS OF HETEROCYCLIC NATURAL PRODUCTS
THROUGH ORGANOSELENIUM INTERMEDIATES

Tetsuji Kametani

Hoshi College of Pharmacy, Ebara 2-4-41, Shinagawa-ku,
Tokyo 142, Japan

Hideo Nemoto, Hiroshi Kurobe, Koji Suzuki, and Keiichiro Fukumoto
Pharmaceutical Institute, Tohoku University, Aobayama,
Sendai 980, Japan

β -Hydroxy phenylselenide (1) was subjected to the cyclisation reaction in acidic media to give (2) which was further converted into safranal (3). From the same type of reaction of (4), p-menthans (5) and (6) were also obtained. This new cyclisation reaction was applied to the synthesis of davanone and caparrapi oxide derivatives. Thus β -hydroxy phenylselenide (7) prepared starting from nerolidol was subjected to the cyclisation reaction to afford (8) and (9). Oxidative elimination of phenylselenenyl group of (8) gave (10) and (11). On the other hand, reductive elimination of phenylselenenyl group of (9) afforded caparrapi oxide (12) and its C₈-epimer (13).

