Supporting Information-2

Application of Nazarov type electrocyclization to access [6-5-6] and [6-5-5] core embedded new Polycycles: an easy entry to tetrahydrofluorene scaffolds related to Taiwaniaquinoids and C-nor-D homo steroids#

Ritesh Singh and Gautam Panda*

Medicinal and Process Chemistry Division, Central Drug Research Institute, Lucknow-226001, UP, India
gautam.panda@gmail.com, gautam_panda@cdri.res.in

1. Spectra

Fig. S1- S 45
Fig. S-1: $^1$H NMR of (1-Benzyl-1H-indol-2-yl)(7-methoxy-2,2-dimethyl-2H-chromen-4-yl)methanol (6a)
Fig. S-2: $^1$H NMR of (1-Benzyl-1H-indol-2-yl)(2,2-dimethyl-2H-chromen-4-yl)methanol (6b)
Fig. S-3: $^{13}$C NMR of (1-Benzyl-1H-indol-2-yl)(2,2-dimethyl-2H-chromen-4-yl)methanol (6b)
Fig. S-4: $^1$H NMR of ((1-benzyl-1H-indol-2-yl)(2,2-dimethyl-2H-thiochromen-4-yl)methanol(6c)
Fig. S-5: $^{13}$C NMR of (1-benzyl-1H-indol-2-yl)(2,2-dimethyl-2H-thiochromen-4-yl) methanol(6c)
Fig. S-6: $^1$H NMR of (3,4-Dimethoxyphenyl)(7-methoxy-2,2-dimethyl-2H-chromen-4-yl)methanol (3a)
Fig. S-7: $^{13}$C NMR of (3,4-Dimethoxyphenyl)(7-methoxy-2,2-dimethyl-2H-chromen-4-yl)methanol (3a)
Fig. S-8: $^1$H NMR of (3,4-Dimethoxyphenyl)(2,2-dimethyl-2H-chromen-4-yl)methanol (3b)
Fig. S-9: $^{13}$C NMR of (3,4-Dimethoxyphenyl)(2,2-dimethyl-2H-chromen-4-yl)methanol (3b)
Fig. S-10: $^1$H NMR of (3,4-Dimethoxyphenyl)(2,2-dimethyl-2H-thiochromen-4-yl)methanol (3c)
Fig. S-11: $^{13}$C NMR of (3,4-Dimethoxyphenyl)(2,2-dimethyl-2H-thiochromen-4-yl)methanol (3c)
Fig. S-12: $^1$H NMR of (3,4-dimethoxyphenyl)(7-methoxy-2,2-dimethyl-2H-thiochromen-4-yl)methanol (3d)
Fig. S-13: $^{13}$C NMR of (3,4-dimethoxyphenyl)(7-methoxy-2,2-dimethyl-2H-thiochromen-4-yl)methanol (3d)
Fig. S-14: $^1$H NMR of (1-benzyl-1H-indol-3-yl)(2,2-dimethyl-2H-thiochromen-4-yl)methanol (6d)
Fig. S-15: $^1$H NMR of (2,2-Dimethyl-2H-chromen-4-yl)(thiophen-3-yl)methanol (6e)
Fig. S-16: $^{13}$C NMR of (2,2-Dimethyl-2H-chromen-4-yl)(thiophen-3-yl)methanol (6e)
Fig. S-17: $^1$H NMR of (1-benzyl-2,2-dimethyl-1,2-dihydroquinolin-4-yl)(3-methoxyphenyl)methanol (9)
Fig. S-18: $^1$H NMR of (2,2-dimethyl-2H-chromen-4-yl)(phenyl)methanol(6g)
Fig. S-19: $^{13}$C NMR of (2,2-dimethyl-2H-chromen-4-yl)(phenyl)methanol (6g)
Fig. S-20: $^1$H NMR of ((2,2-dimethyl-2H-thiochromen-4-yl)(phenyl)methanol (6h)
Fig. S-21: $^1$H NMR of (benzo[b]thiophen-3-yl(7-methoxy-2,2-dimethyl-2H-chromen-4-yl)methanol (6i)
Fig. S-22: $^{13}$C NMR of (benzo[b]thiophen-3-yl(7-methoxy-2,2-dimethyl-2H-chromen-4-yl)methanol (6i)
Fig. S-23: $^1$H NMR of (3,4-dihydronaphthalen-1-yl)(3,4-dimethoxyphenyl)methanol (6j)
Fig. S-24: $^{13}$C NMR of (3,4-dihyronaphthalen-1-yl)(3,4-dimethoxyphenyl)methanol (6j)
Fig. S-25: $^1$H NMR of (7-methoxy-2,2-dimethyl-2H-chromen-4-yl)(5-methylfuran-2-yl)methanol (6f)
Fig. S-26: $^1$H NMR of 11-Benzyl-3-methoxy-6,6-dimethyl-6a,11-dihydro-6$H$-5-oxa-11-aza- benzo[5,6]pentaleno[2,1-b]naphthalene (10a)
Fig. S-27: $^{13}$C NMR of 11-Benzyl-3-methoxy-6,6-dimethyl-6a,11-dihydro-$6H$-5-oxa-11-aza- benzo[5,6]pentalo[2,1-b]naphthalene (10a)
Fig. S-28: $^1$H NMR of 11-Benzyl-6,6-dimethyl-6a,11-dihydro-6H-5-oxa-11-aza-benzo[5,6]pentaleno[2,1-b]naphthalene (10b)
Fig. S-29: $^{13}$C NMR of 11-Benzyl-6,6-dimethyl-6a,11-dihydro-6-$H$-5-oxa-11-aza-benzo[5,6]pentalo[2,1-b]naphthalene (10b)
Fig. S-30: $^1$H NMR of 11-benzyl-6,6-dimethyl-6a,11-dihydro-6H-5-thia-11-aza-benzo[5,6]pentaleno[2,1-b]naphthalene (10c)
Fig. S-31: $^{13}$C NMR of 11-benzyl-6,6-dimethyl-6a,11-dihydro-6$H$-5-thia-11-aza-benzo[5,6]pentaleno[2,1-b]naphthalene(10c)
Fig. S-32: \(^1\)H NMR of 3,8,9-trimethoxy-6,6-dimethyl-6,6a-dihydroindeno[1,2-c]chromene (4a)
Fig. S-33: $^1$H NMR of 8,9-dimethoxy-6,6-dimethyl-6,6a-dihydroindeno[1,2-c]chromene (4b)
Fig. S-34: $^{13}$C NMR of 8,9-dimethoxy-6,6-dimethyl-6,6a-dihydroindeno[1,2-c]chromene (4b)
Fig. S-35: $^1$H NMR of 3,8,9-trimethoxy-6,6-dimethyl-6,6a-dihydroindeno[1,2-c]thiochromene (4d)
Fig. S-36: $^{13}$C NMR 3,8,9-trimethoxy-6,6-dimethyl-6,6a-dihydroindeno[1,2-c]thiochromene (4d)
Fig. S-37: $^1$H NMR of 8,9-dimethoxy-6,6-dimethyl-6,6a-dihydroindeno[1,2-c]thiochromene (4c)
Fig. S-38: $^1$H NMR of 7-Benzyl-6,6-dimethyl-6a,7-dihydro-6$H$-5-thia-7-aza-benzo[4,5]pentaleno[2,1-a]naphthalene (10d)
Fig. S-39: $^1$H NMR of 6,6-dimethyl-6,11-dihydroindeno[1,2-c]chromene (11g)
Fig. S-40: $^{13}$C NMR of 6,6-dimethyl-6,11-dihydroindeno[1,2-c]chromene (11g)
Fig. S-41: $^1$H NMR of 5-benzyl-9-methoxy-6,6-dimethyl-6,6a-dihydro-5H-indeno[1,2-c]quinoline (10h)
Fig. S-42: $^{13}$C NMR of 5-benzyl-9-methoxy-6,6-dimethyl-6,6a-dihydro-5H-indeno[1,2-c]quinoline (10h)
Fig. S-43: $^1$H NMR of 6,6-dimethyl-6,11-dihydroindeno[1,2-c]thiochromene (11i)
Fig. S-44: $^1$H NMR of 8,9-dimethoxy-6,6a-dihydro-5H-benzo[a]fluorene (10j)
Fig. S-45: $^{13}$C NMR of 8,9-dimethoxy-6,6a-dihydro-5H-benzo[a]fluorene (10j)