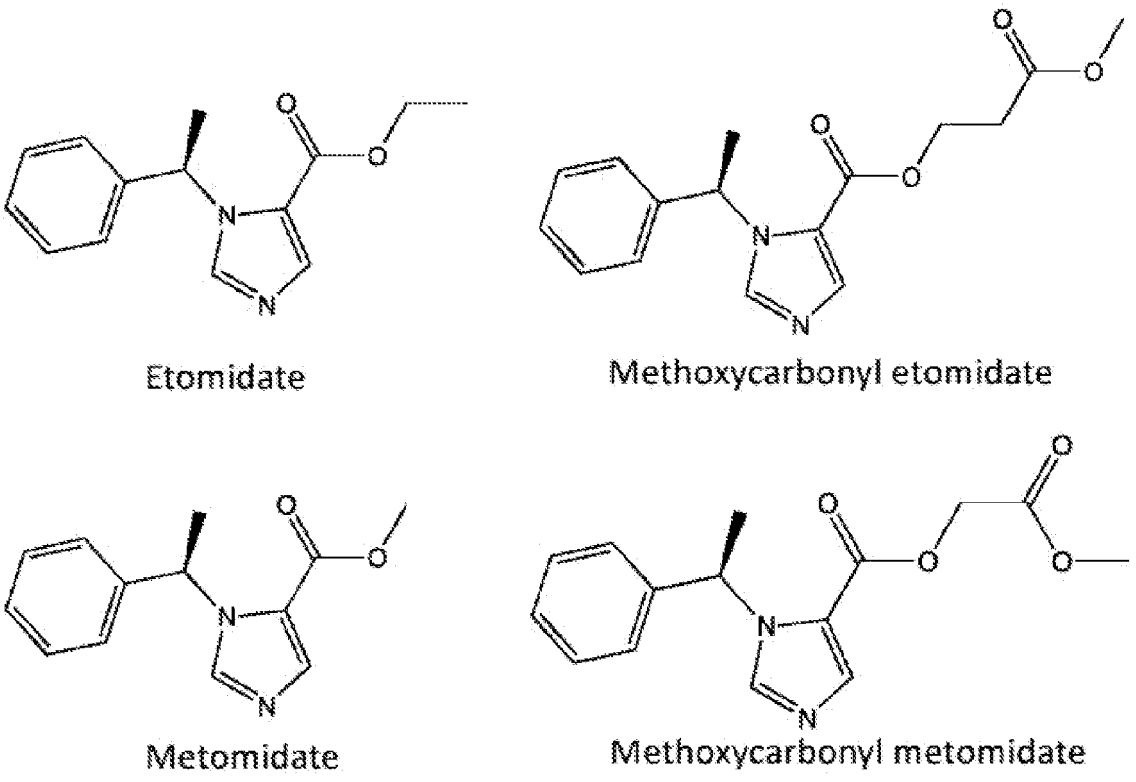

Etomidate
Methoxycarbonyl etomidate
Metomidate
Methoxycarbonyl metomidate

FIG. 1

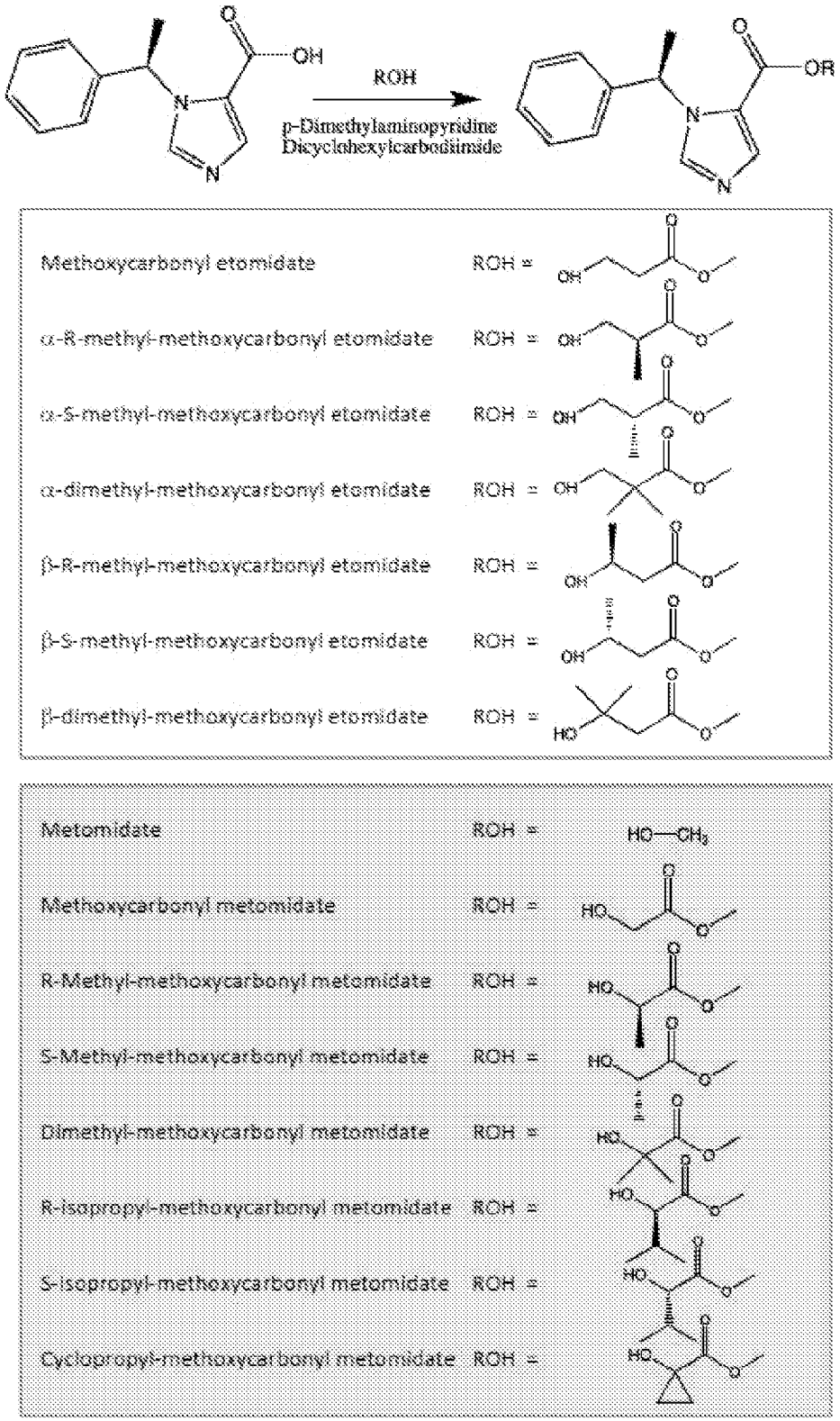

ROH
p-Dimethylaminopyridine
Dicyclohexylcarbodiimide
Methoxycarbonyl etomidate ROH =
α-R-methyl-methoxycarbonyl etomidate ROH =
α-S-methyl-methoxycarbonyl etomidate ROH =
α-dimethyl-methoxycarbonyl etomidate ROH =
β-R-methyl-methoxycarbonyl etomidate ROH =
β-S-methyl-methoxycarbonyl etomidate ROH =
β-dimethyl-methoxycarbonyl etomidate ROH =
Metomidate ROH =
Methoxycarbonyl metomidate ROH =
R-Methyl-methoxycarbonyl metomidate ROH =
S-Methyl-methoxycarbonyl metomidate ROH =
Dimethyl-methoxycarbonyl metomidate ROH =
R-isopropyl-methoxycarbonyl metomidate ROH =
S-isopropyl-methoxycarbonyl metomidate ROH =
Cyclopropyl-methoxycarbonyl metomidate ROH =

FIG. 2

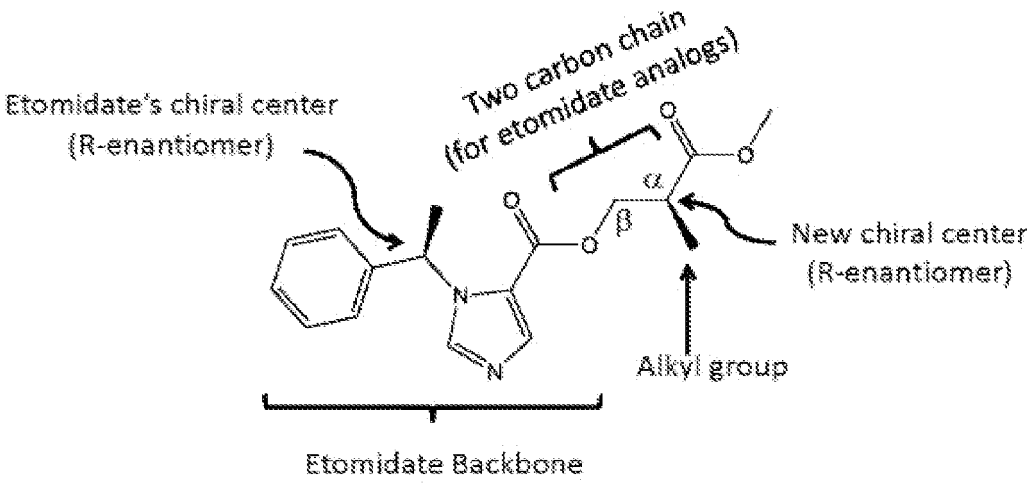

Etomidate's chiral center
(R-enantiomer)
Two carbon chain
(for etomidate analogs)
New chiral center
(R-enantiomer)
Alkyl group
Etomidate Backbone

FIG. 3

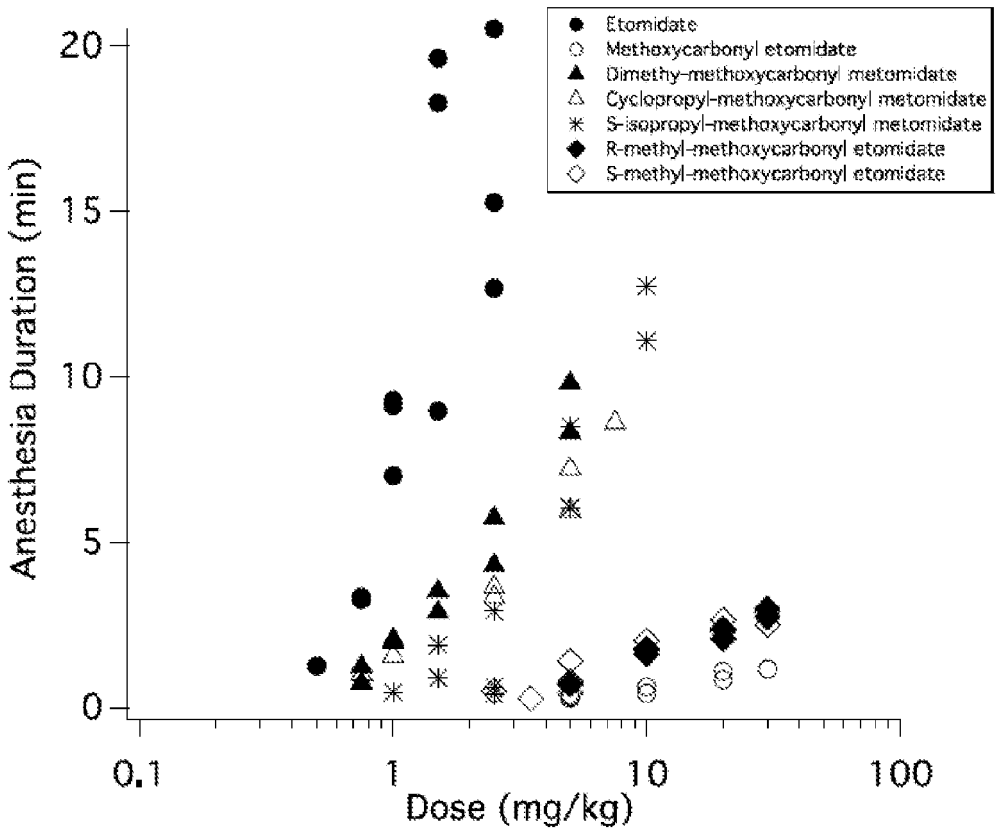

Etomidate
Methoxycarbonyl etomidate
Dimethy-methoxycarbonyl metomidate
Cyclopropyl-methoxycarbonyl metomidate
S-isopropyl-methoxycarbonyl metomidate
R-methyl-methoxycarbonyl etomidate
S-methyl-methoxycarbonyl etomidate
Anesthesia Duration (min)
0
5
10
15
20
0.1
1
10
100
Dose (mg/kg)

FIG. 4

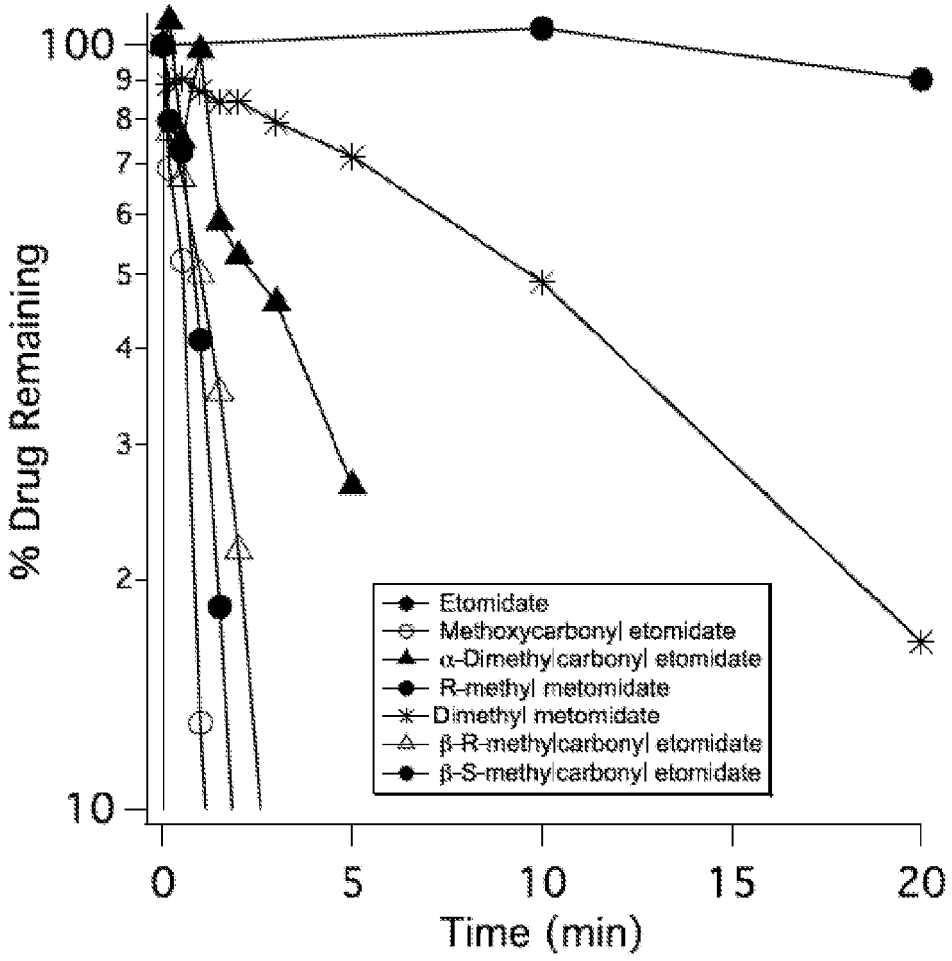

100
9
8
7
6
5
4
3
2
10
% Drug Remaining
0
5
10
15
20
Time (min)
Etomidate
Methoxycarbonyl etomidate
α-Dimethylcarbonyl etomidate
R-methyl metomidate
Dimethyl metomidate
β-R-methylcarbonyl etomidate
β-S-methylcarbonyl etomidate

FIG. 5

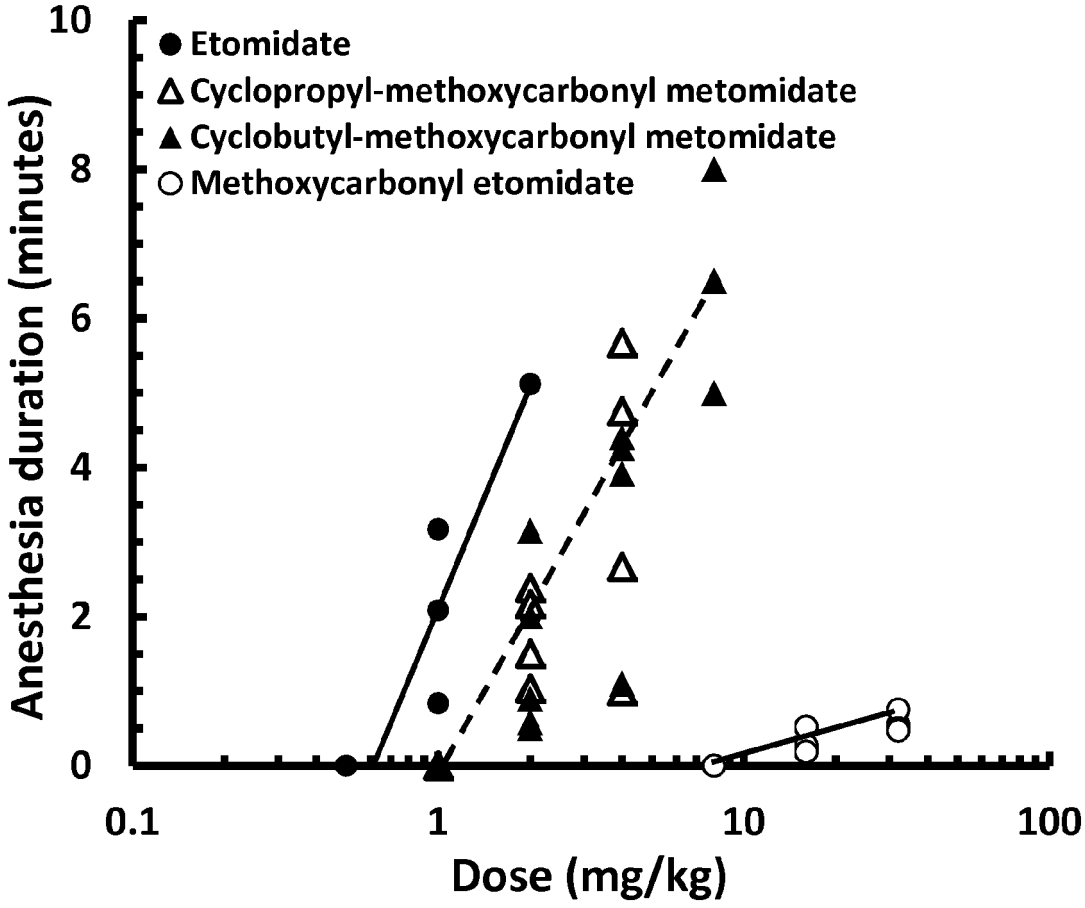

Etomidate
Cyclopropyl-methoxycarbonyl metomidate
Cyclobutyl-methoxycarbonyl metomidate
Methoxycarbonyl etomidate
Anesthesia duration (minutes)
0
2
4
6
8
10
0.1
1
10
100
Dose (mg/kg)

FIG. 6

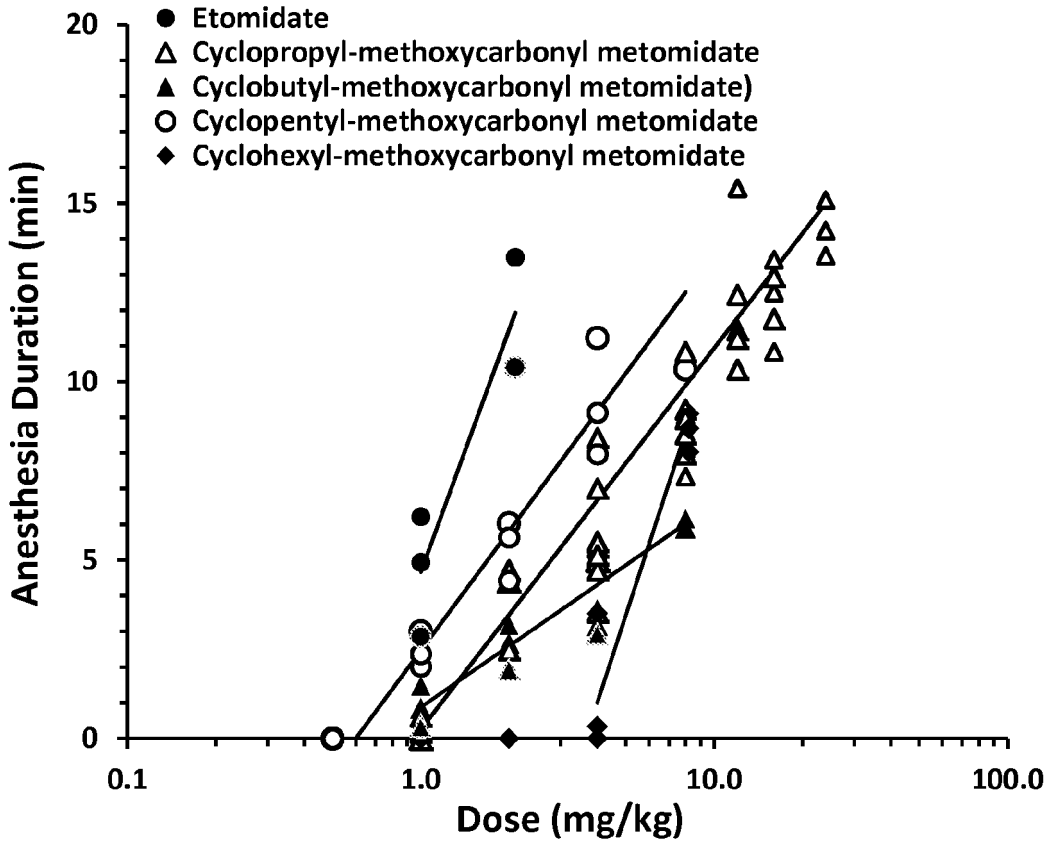

Etomidate
Cyclopropyl-methoxycarbonyl metomidate
Cyclobutyl-methoxycarbonyl metomidate)
Cyclopentyl-methoxycarbonyl metomidate
Cyclohexyl-methoxycarbonyl metomidate
Anesthesia Duration (min)
20
15
10
5
0
0.1
1.0
10.0
100.0
Dose (mg/kg)

FIG. 7