FIG. 1(a)

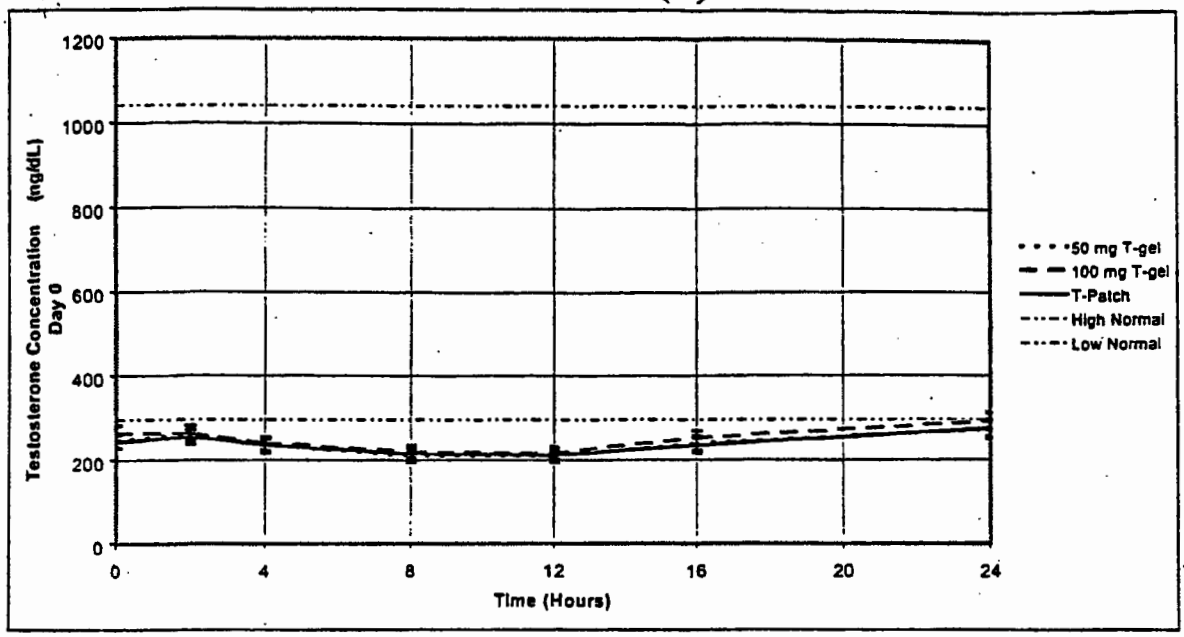

Testosterone Concentration (ng/dL)
Day 0
1200
1000
800
600
400
200
0
0
4
8
12
16
20
24
Time (Hours)
50 mg T-gel
100 mg T-gel
T-Patch
High Normal
Low Normal

FIG. 1(b)

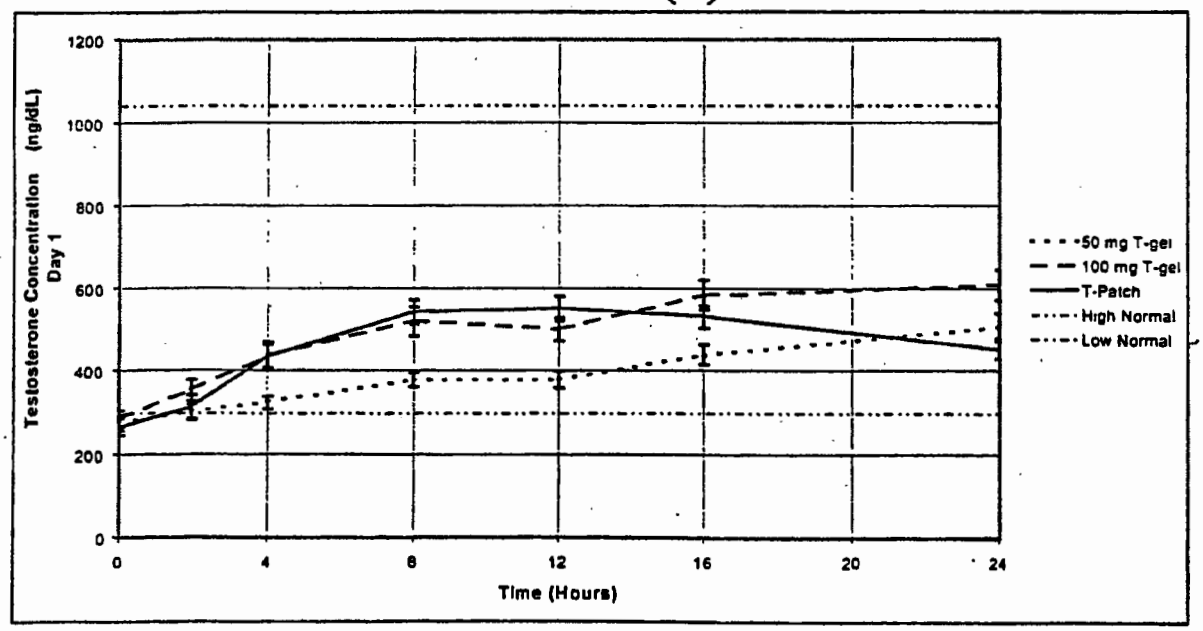

Testosterone Concentration (ng/dL)
Day 1
1200
1000
800
600
400
200
0
0
4
8
12
16
20
24
Time (Hours)
50 mg T-gel
100 mg T-gel
T-Patch
High Normal
Low Normal

FIG. 1(c)

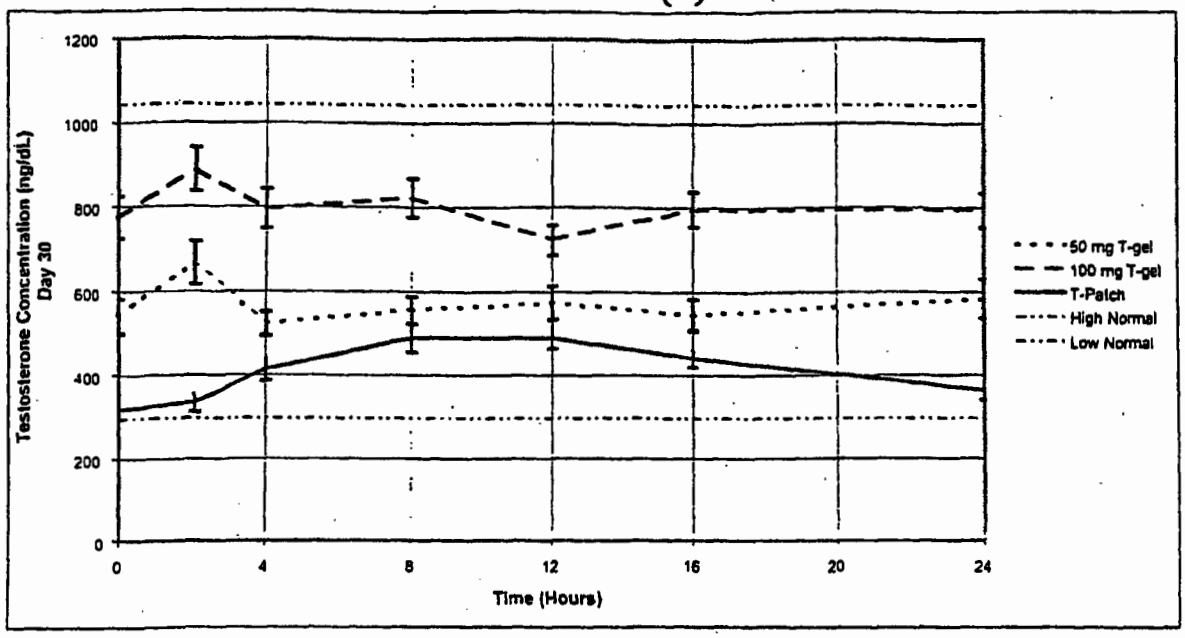

Testosterone Concentration (ng/dL)
Day 30
1200
1000
800
600
400
200
0
0
4
8
12
16
20
24
Time (Hours)
50 mg T-gel
100 mg T-gel
T-Patch
High Normal
Low Normal

FIG. 1(d)

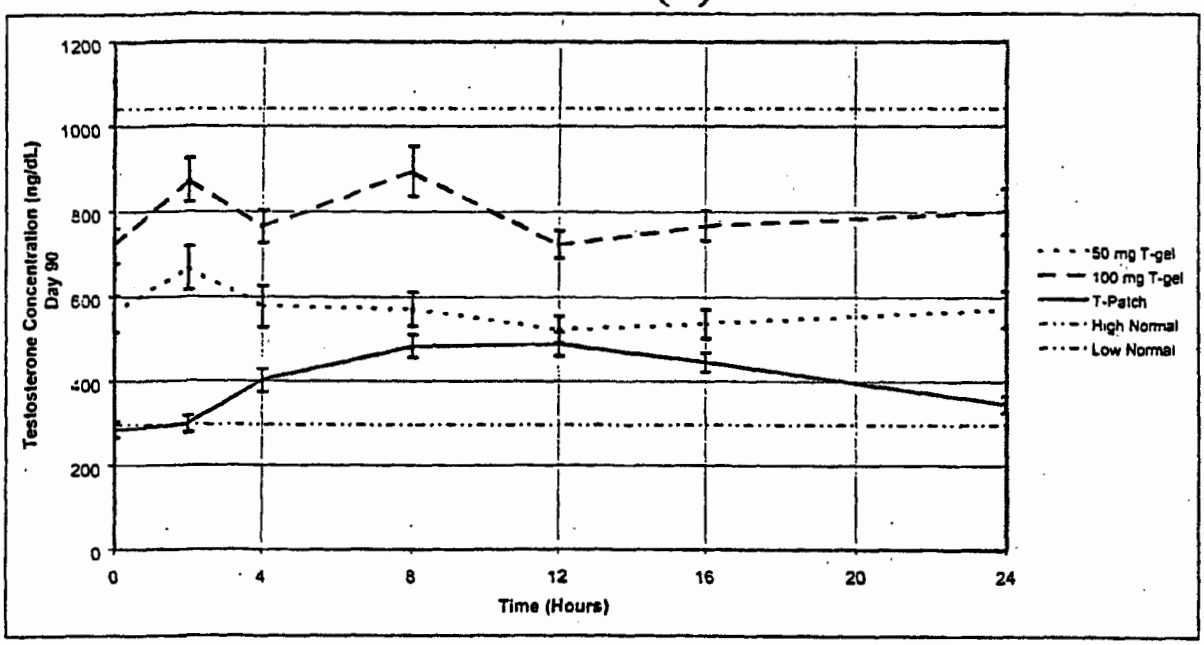

Testosterone Concentration (ng/dL)
Day 90
1200
1000
800
600
400
200
0
0
4
8
12
16
20
24
Time (Hours)
50 mg T-gel
100 mg T-gel
T-Patch
High Normal
Low Normal

FIG. 1(e)

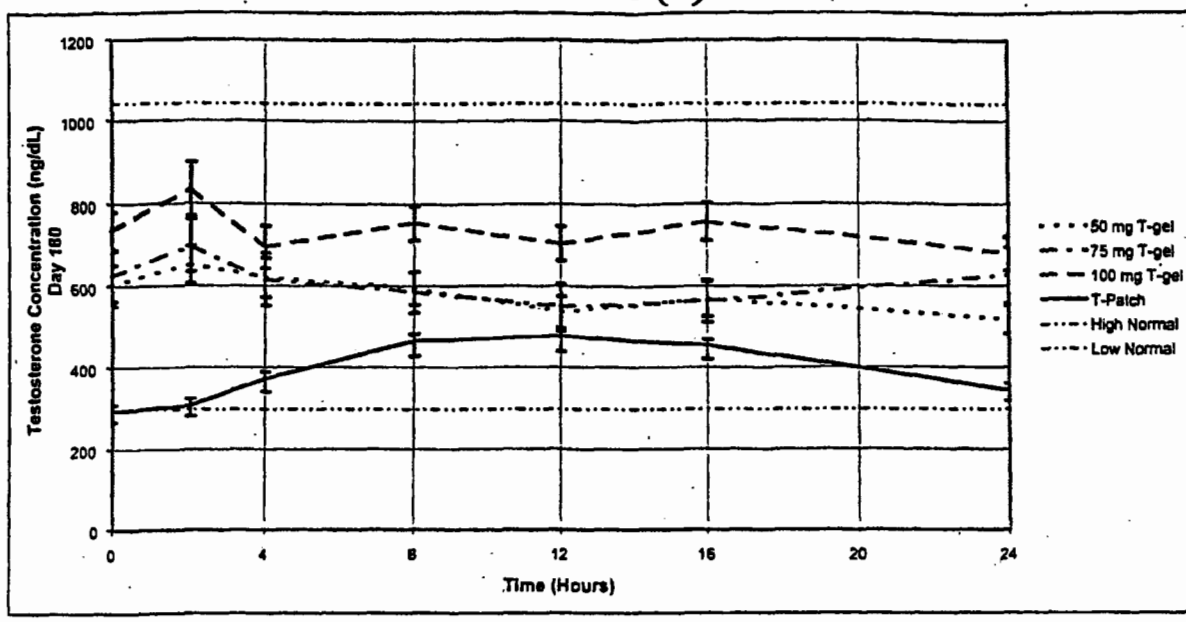

Testosterone Concentration (ng/dL)
Day 180
1200
1000
800
600
400
200
0
0
4
8
12
16
20
24
Time (Hours)
50 mg T-gel
75 mg T-gel
100 mg T-gel
T-Patch
High Normal
Low Normal

FIG. 1(f)

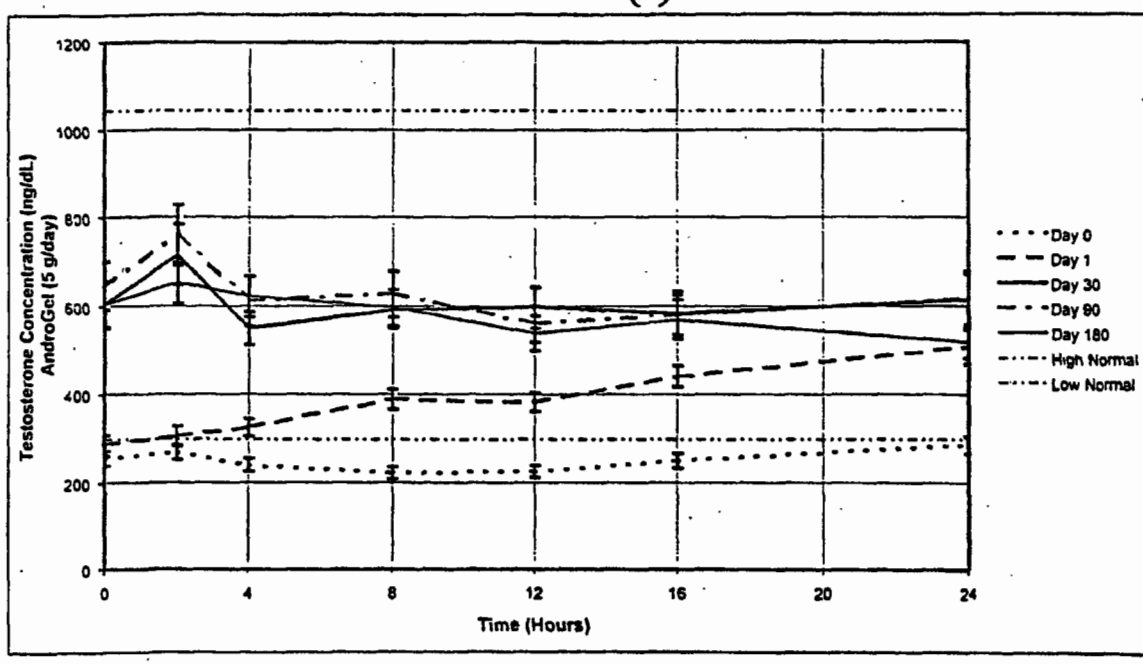

Testosterone Concentration (ng/dL)
AndroGel (5 g/day)
1200
1000
800
600
400
200
0
0
4
8
12
16
20
24
Time (Hours)
Day 0
Day 1
Day 30
Day 90
Day 180
High Normal
Low Normal

FIG. 1(g)

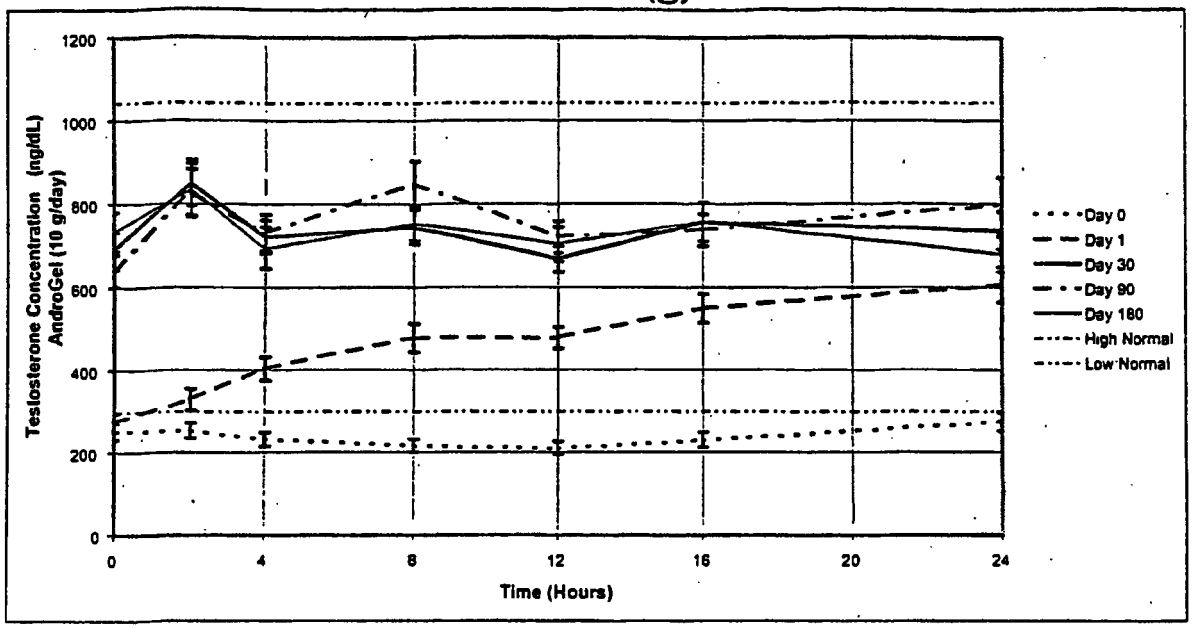

Testosterone Concentration (ng/dL)
AndroGel (10 g/day)
1200
1000
800
600
400
200
0
0
4
8
12
16
20
24
Time (Hours)
Day 0
Day 1
Day 30
Day 90
Day 180
High Normal
Low Normal

FIG. 1(h)

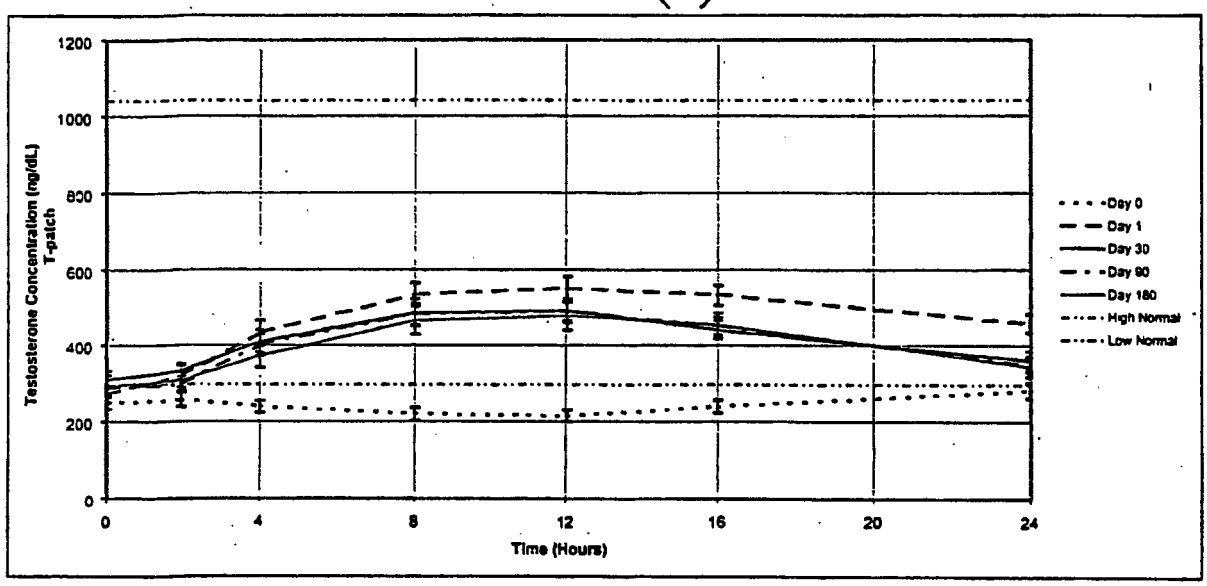

Testosterone Concentration (ng/dL)
T-patch
1200
1000
800
600
400
200
0
0
4
8
12
16
20
24
Time (Hours)
Day 0
Day 1
Day 30
Day 90
Day 180
High Normal
Low Normal

FIG. 2(a)

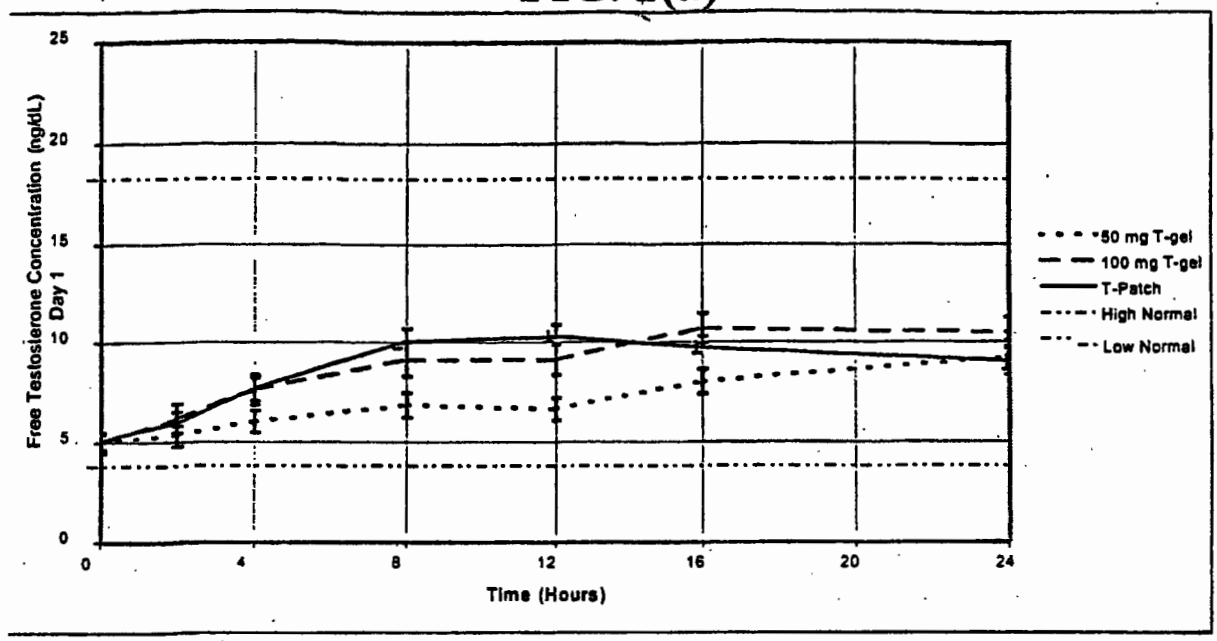

Free Testosterone Concentration (ng/dL)
Day 1
25
20
15
10
5
0
0
4
8
12
16
20
24
Time (Hours)
50 mg T-gel
100 mg T-gel
T-Patch
High Normal
Low Normal

FIG. 2(b)

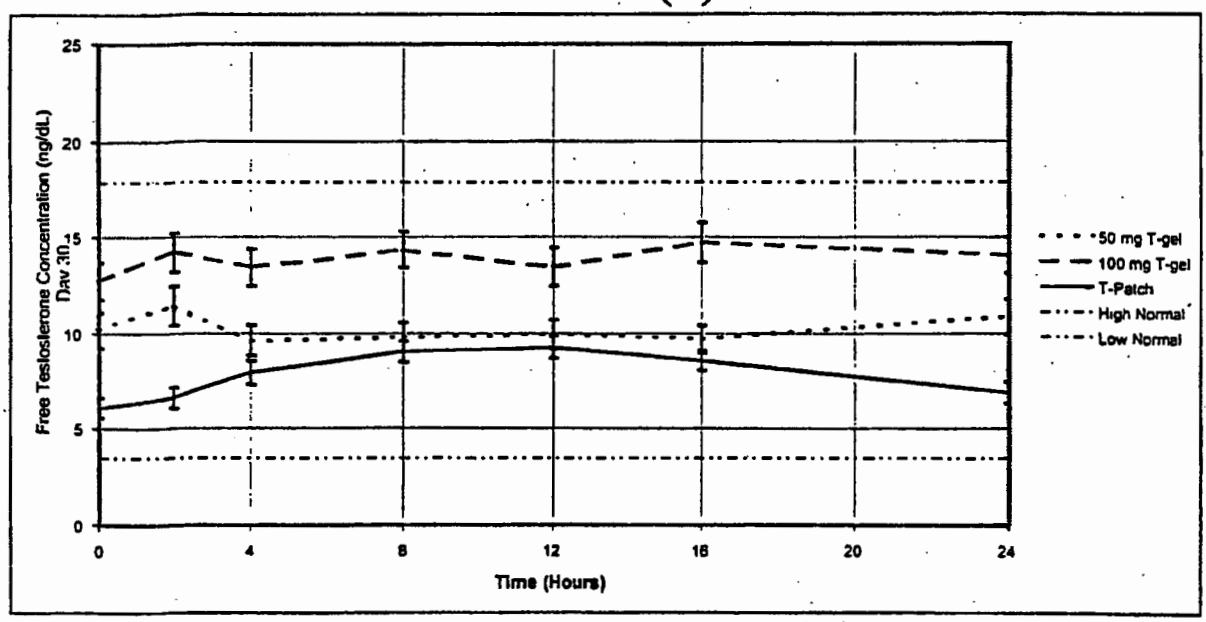

Free Testosterone Concentration (ng/dL)
Day 30
25
20
15
10
5
0
0
4
8
12
16
20
24
Time (Hours)
50 mg T-gel
100 mg T-gel
T-Patch
High Normal
Low Normal

FIG. 2(c)

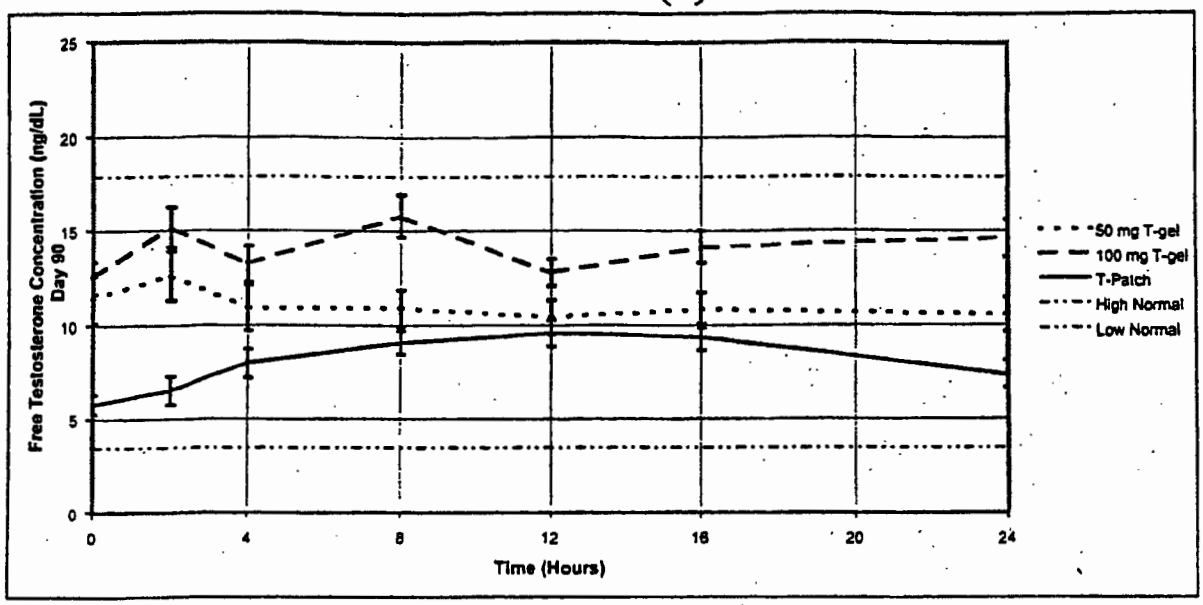

Free Testosterone Concentration (ng/dL)
Day 90
25
20
15
10
5
0
0
4
8
12
16
20
24
Time (Hours)
50 mg T-gel
100 mg T-gel
T-Patch
High Normal
Low Normal

FIG. 2(d)

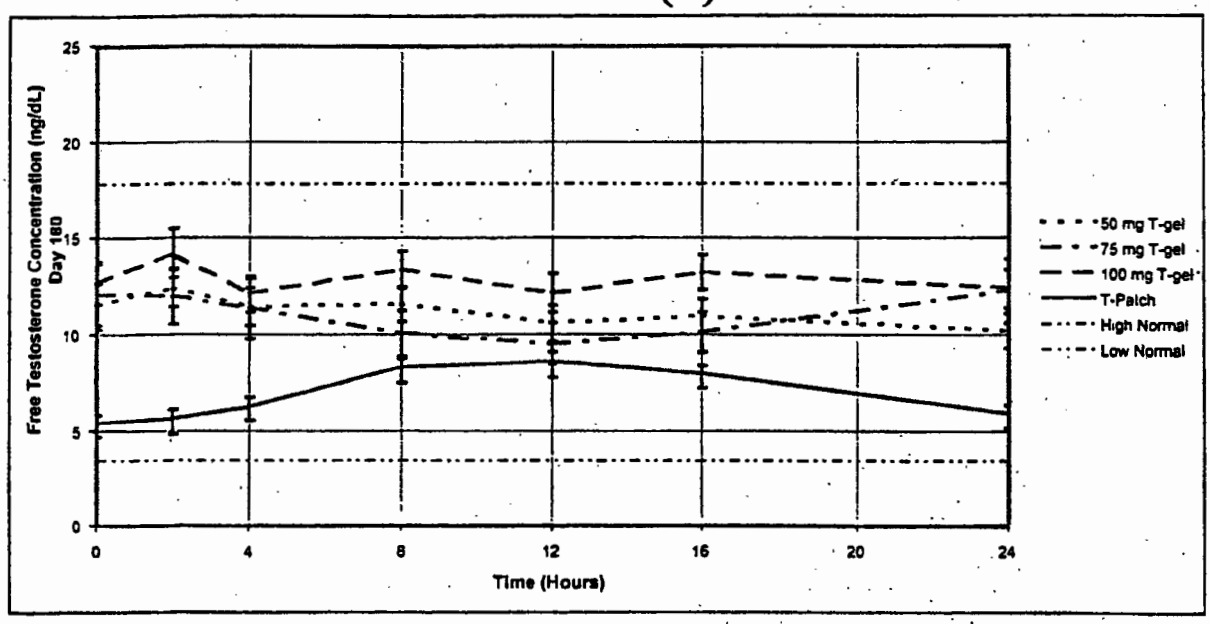

Free Testosterone Concentration (ng/dL)
Day 180
25
20
15
10
5
0
0
4
8
12
16
20
24
Time (Hours)
50 mg T-gel
75 mg T-gel
100 mg T-gel
T-Patch
High Normal
Low Normal

FIG. 2(e)

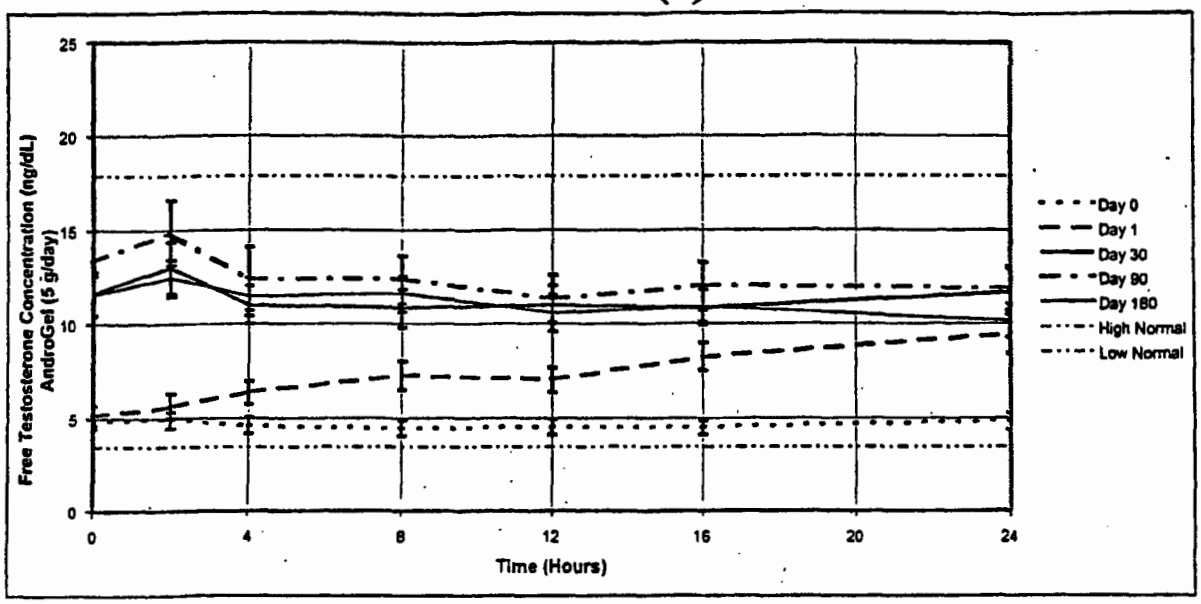

Free Testosterone Concentration (ng/dL)
AndroGel (5 g/day)
25
20
15
10
5
0
0
4
8
12
16
20
24
Time (Hours)
Day 0
Day 1
Day 30
Day 90
Day 180
High Normal
Low Normal

FIG. 2(f)

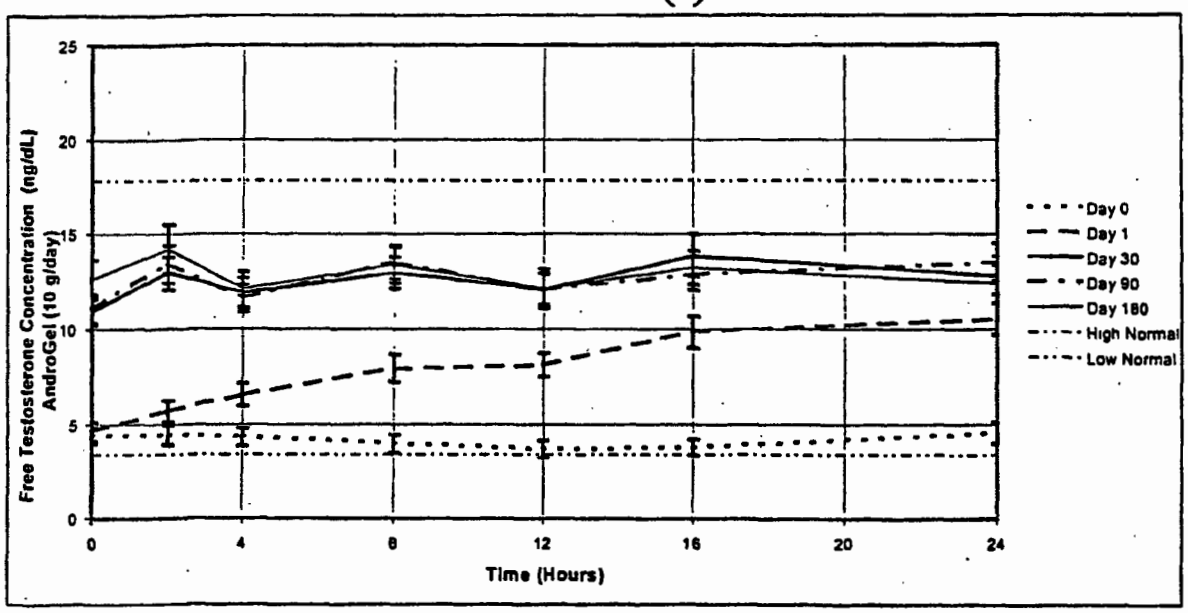

Free Testosterone Concentration (ng/dL)
AndroGel (10 g/day)
25
20
15
10
5
0
0
4
8
12
16
20
24
Time (Hours)
Day 0
Day 1
Day 30
Day 90
Day 180
High Normal
Low Normal

FIG. 2(g)

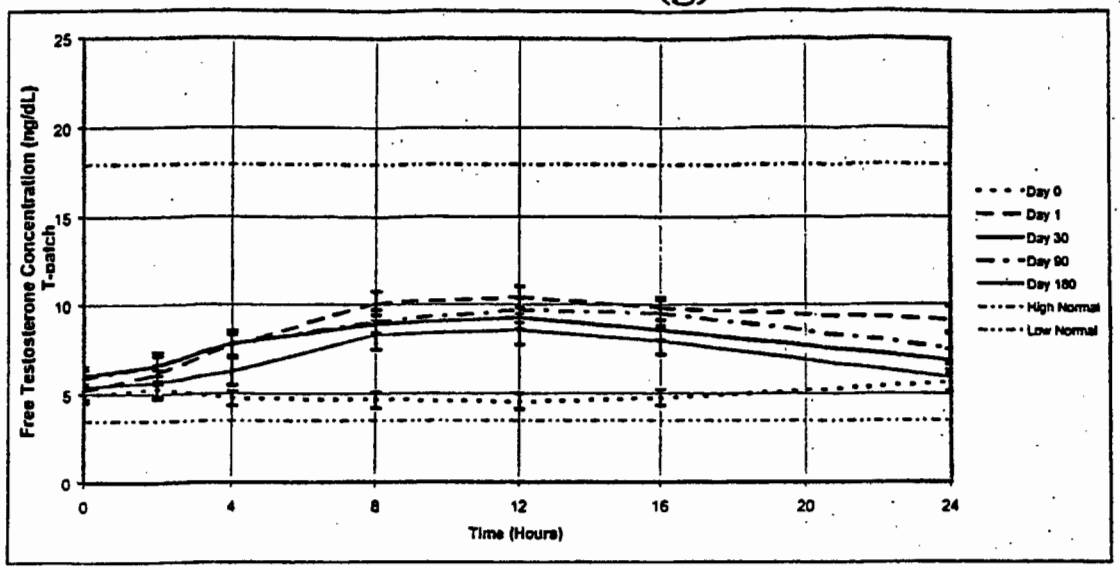

Free Testosterone Concentration (ng/dL)
T-patch
25
20
15
10
5
0
0
4
8
12
16
20
24
Time (Hours)
Day 0
Day 1
Day 30
Day 90
Day 180
High Normal
Low Normal

FIG. 3

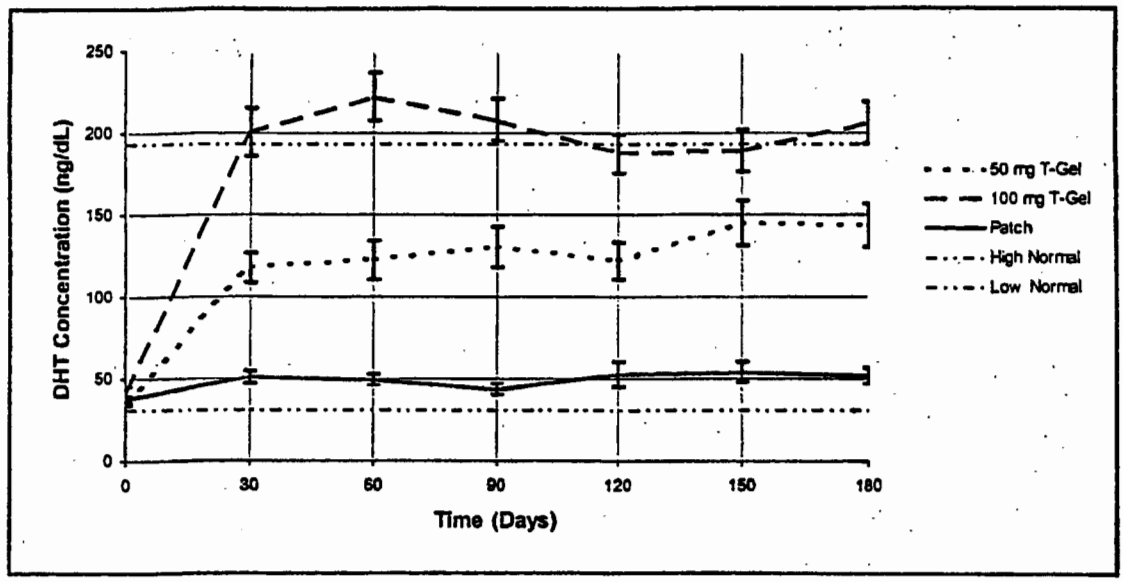

DHT Concentration (ng/dL)
250
200
150
100
50
0
0
30
60
90
120
150
180
Time (Days)
50 mg T-Gel
100 mg T-Gel
Patch
High Normal
Low Normal

FIG. 4

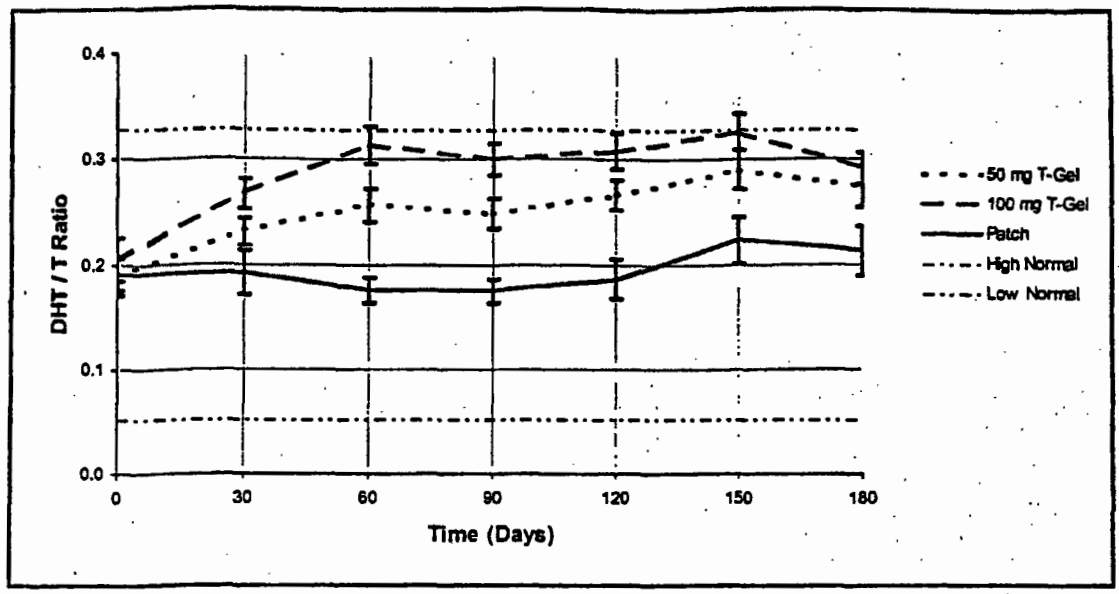

DHT / T Ratio
0.4
0.3
0.2
0.1
0.0
0
30
60
90
120
150
180
Time (Days)
50 mg T-Gel
100 mg T-Gel
Patch
High Normal
Low Normal

FIG. 5

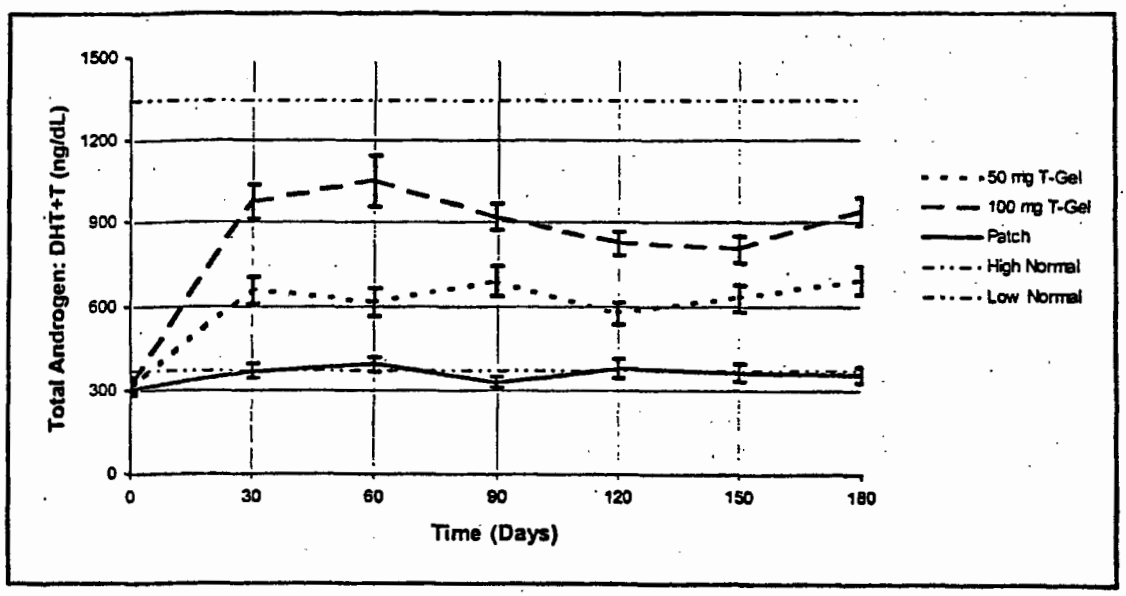

Total Androgen: DHT+T (ng/dL)
1500
1200
900
600
300
0
0
30
60
90
120
150
180
Time (Days)
50 mg T-Gel
100 mg T-Gel
Patch
High Normal
Low Normal

FIG. 6

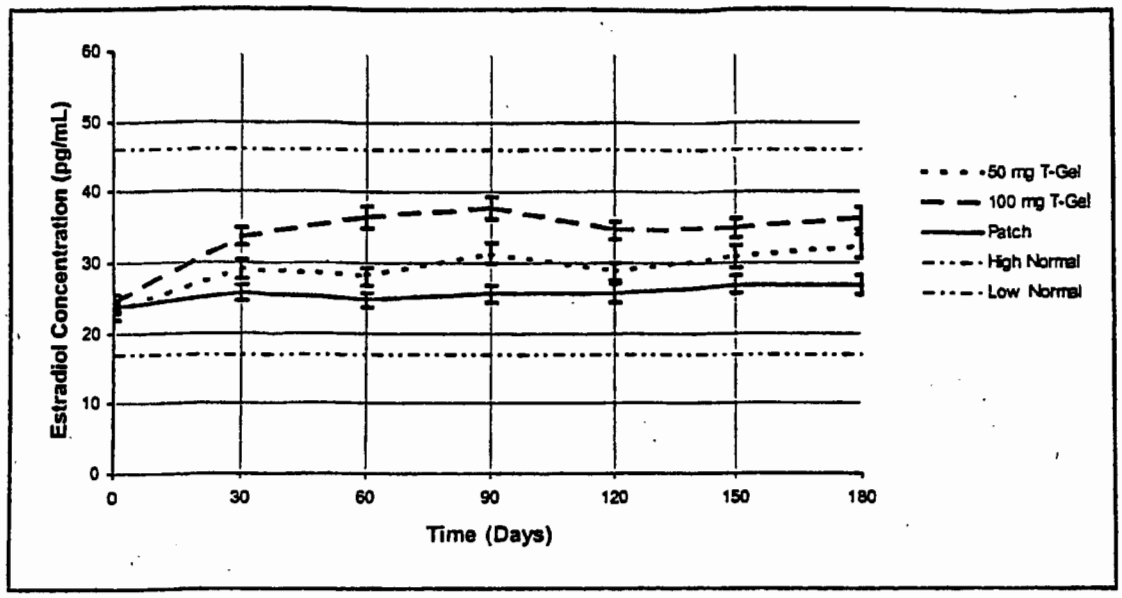

Estradiol Concentration (pg/mL)
60
50
40
30
20
10
0
0
30
60
90
120
150
180
Time (Days)
50 mg T-Gel
100 mg T-Gel
Patch
High Normal
Low Normal

FIG. 7

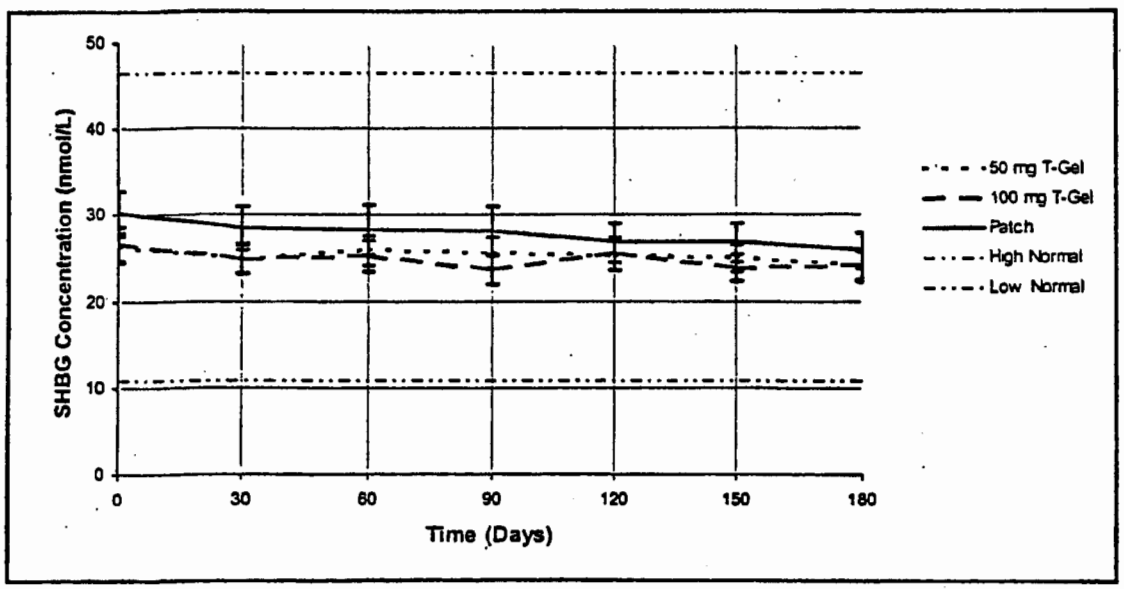

SHBG Concentration (nmol/L)
50
40
30
20
10
0
0
30
60
90
120
150
180
Time (Days)
50 mg T-Gel
100 mg T-Gel
Patch
High Normal
Low Normal

FIG. 8(a)

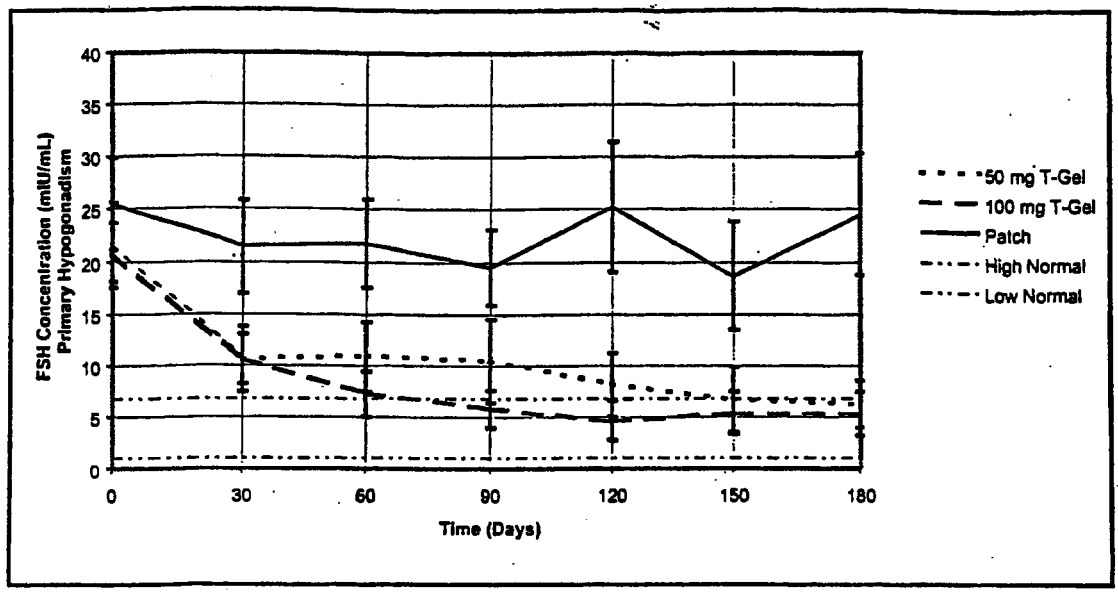

FSH Concentration (mIU/mL)
Primary Hypogonadism
40
35
30
25
20
15
10
5
0
0
30
60
90
120
150
180
Time (Days)
50 mg T-Gel
100 mg T-Gel
Patch
High Normal
Low Normal

FIG. 8(b)

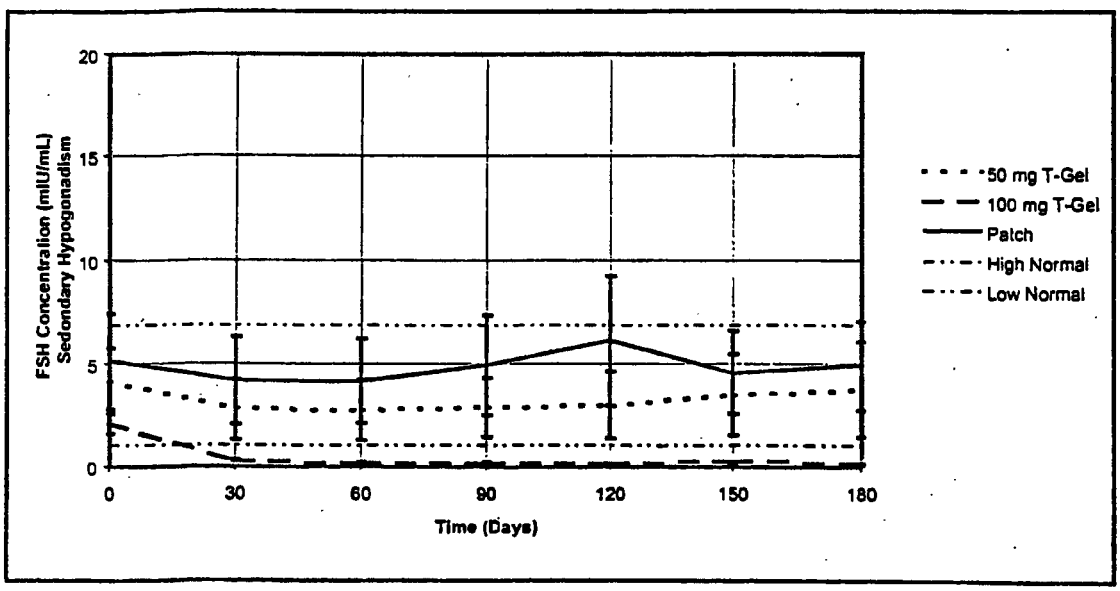

FSH Concentration (mIU/mL)
Sedondary Hypogonadism
20
15
10
5
0
0
30
60
90
120
150
180
Time (Days)
50 mg T-Gel
100 mg T-Gel
Patch
High Normal
Low Normal

FIG. 8(c)

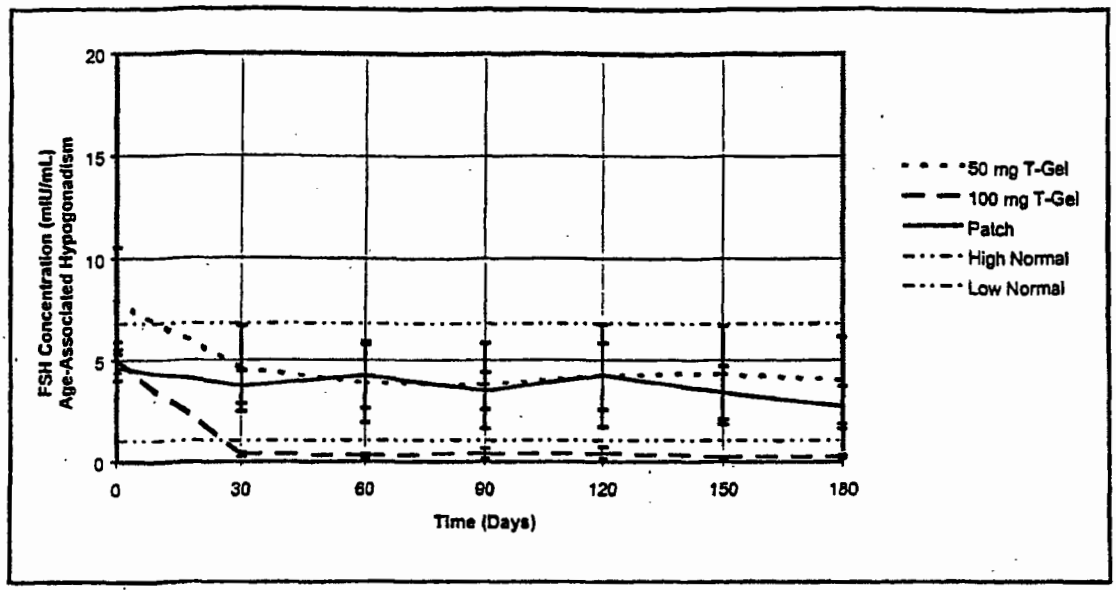

FSH Concentration (mIU/mL)
Age-Associated Hypogonadism
20
15
10
5
0
0
30
60
90
120
150
180
Time (Days)
50 mg T-Gel
100 mg T-Gel
Patch
High Normal
Low Normal

FIG. 8(d)

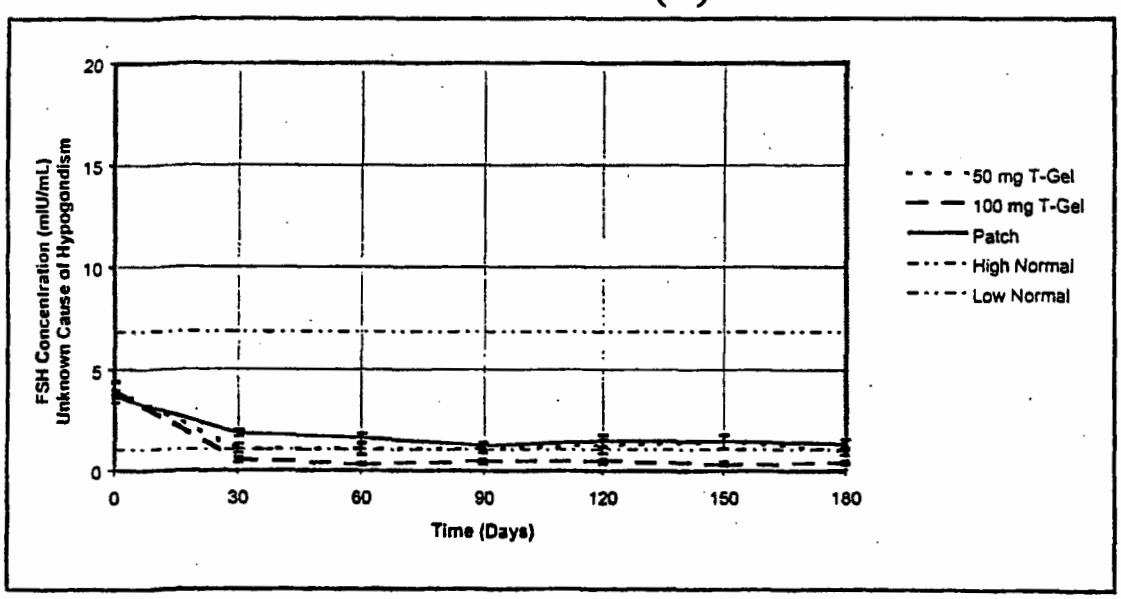

FSH Concentration (mIU/mL)
Unknown Cause of Hypogondism
20
15
10
5
0
0
30
60
90
120
150
180
Time (Days)
50 mg T-Gel
100 mg T-Gel
Patch
High Normal
Low Normal

FIG. 9(a)

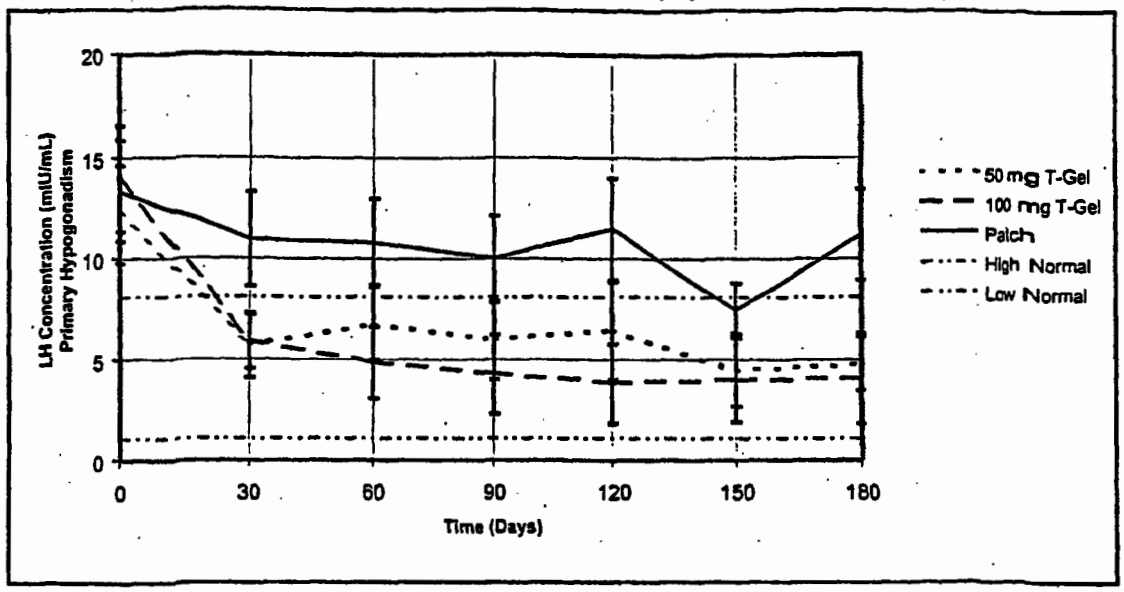

LH Concentration (milU/mL)
Primary Hypogonadism
20
15
10
5
0
0
30
60
90
120
150
180
Time (Days)
50 mg T-Gel
100 mg T-Gel
Patch
High Normal
Low Normal

FIG. 9(b)

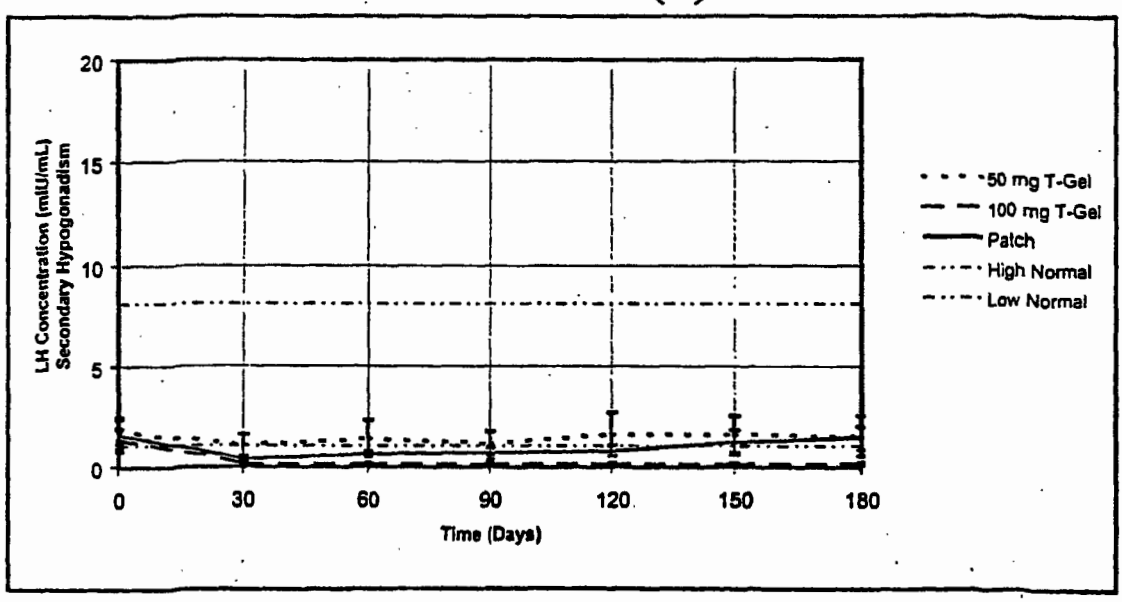

LH Concentration (milU/mL)
Secondary Hypogonadism
20
15
10
5
0
0
30
60
90
120
150
180
Time (Days)
50 mg T-Gel
100 mg T-Gel
Patch
High Normal
Low Normal

FIG. 9(c)

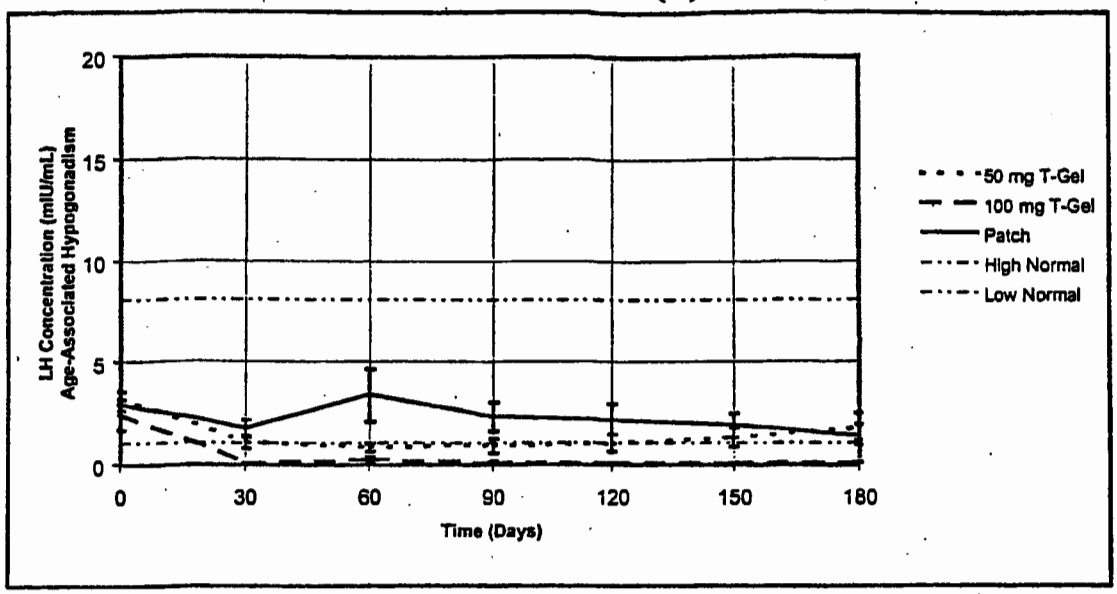

LH Concentration (mIU/mL)
Age-Associated Hypogonadism
20
15
10
5
0
0
30
60
90
120
150
180
Time (Days)
50 mg T-Gel
100 mg T-Gel
Patch
High Normal
Low Normal

FIG. 9(d)

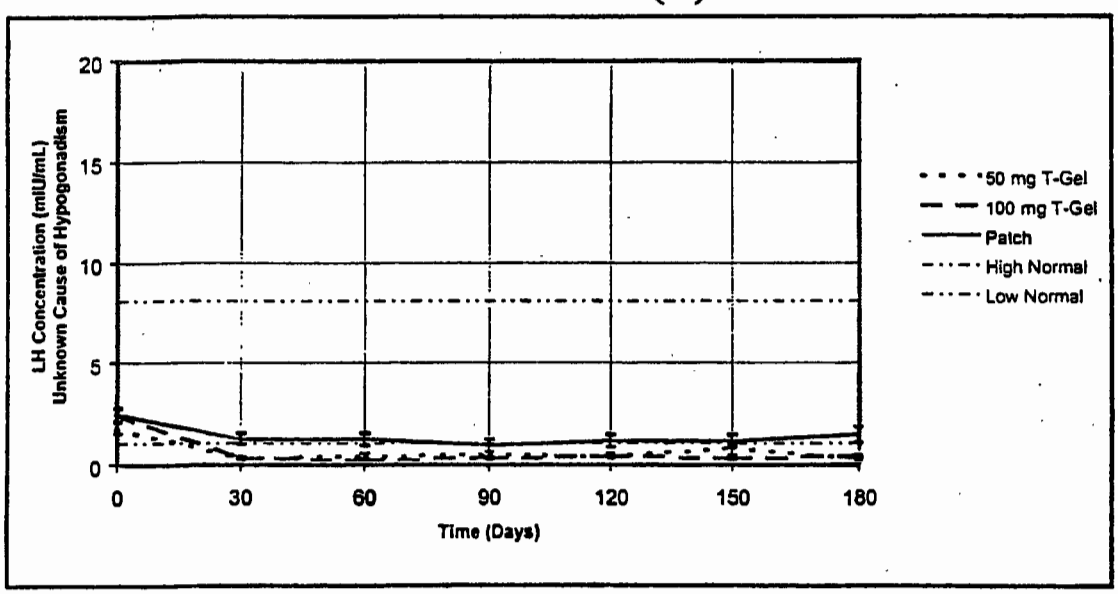

LH Concentration (mIU/mL)
Unknown Cause of Hypogonadism
20
15
10
5
0
0
30
60
90
120
150
180
Time (Days)
50 mg T-Gel
100 mg T-Gel
Patch
High Normal
Low Normal

FIG. 10(a)

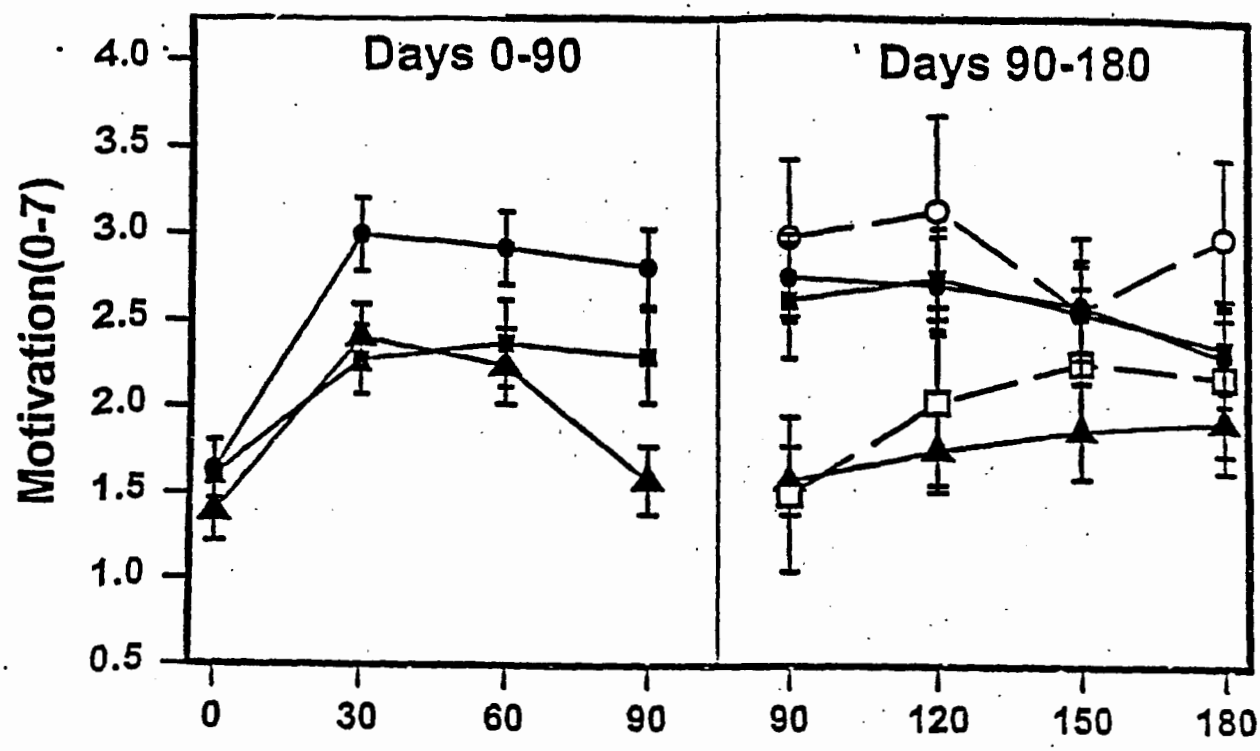


FIG. 10(b)

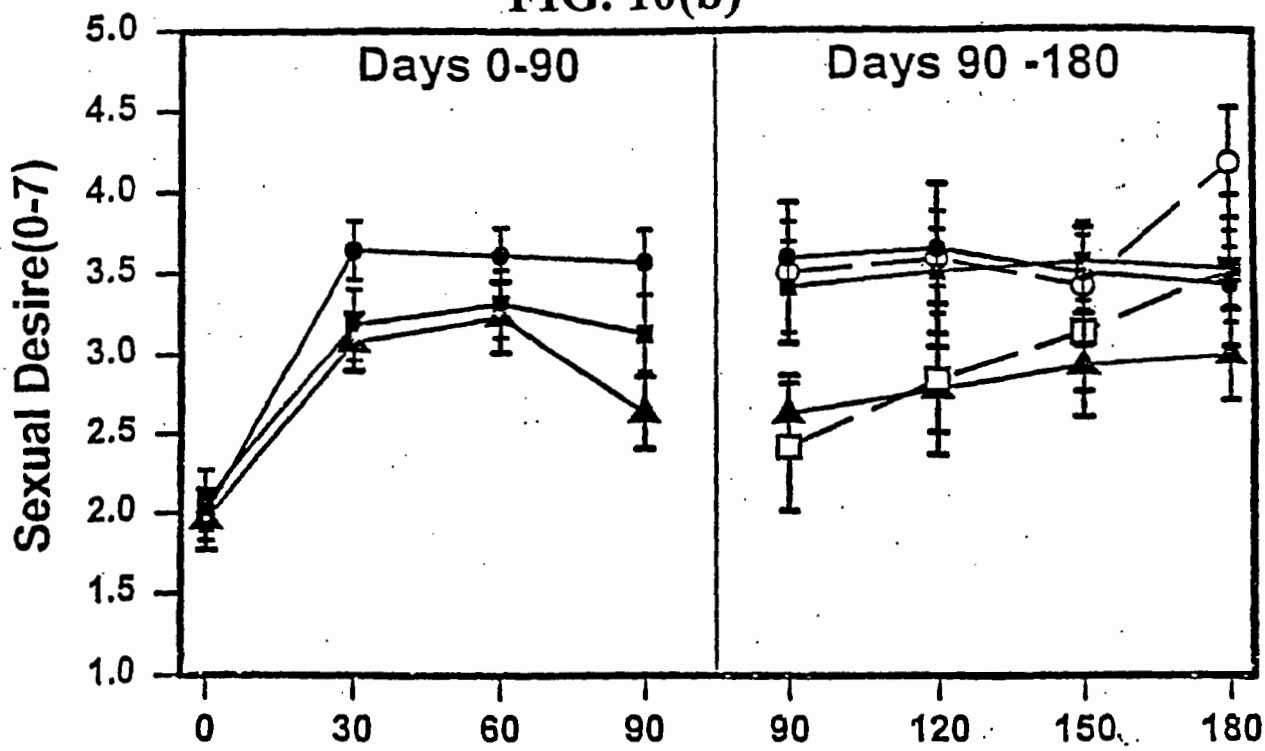


FIG. 10(c)

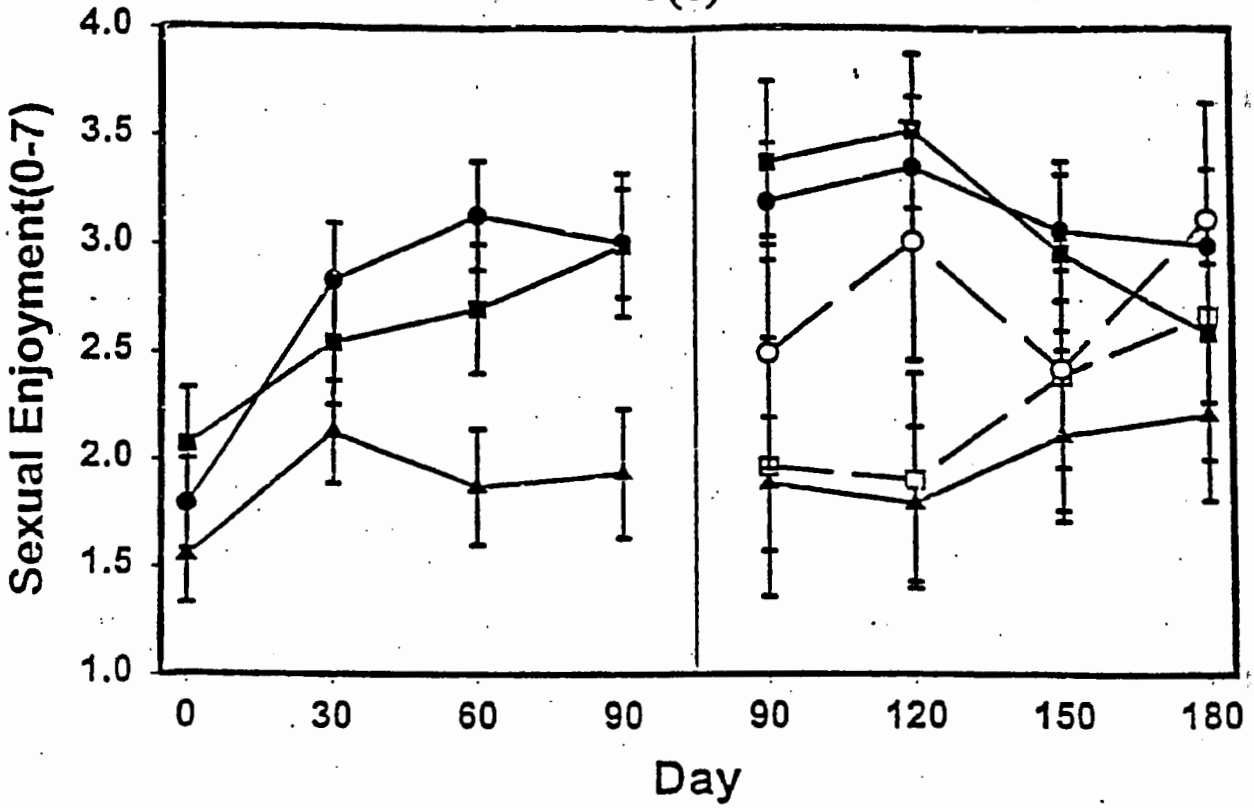


FIG. 11(a)

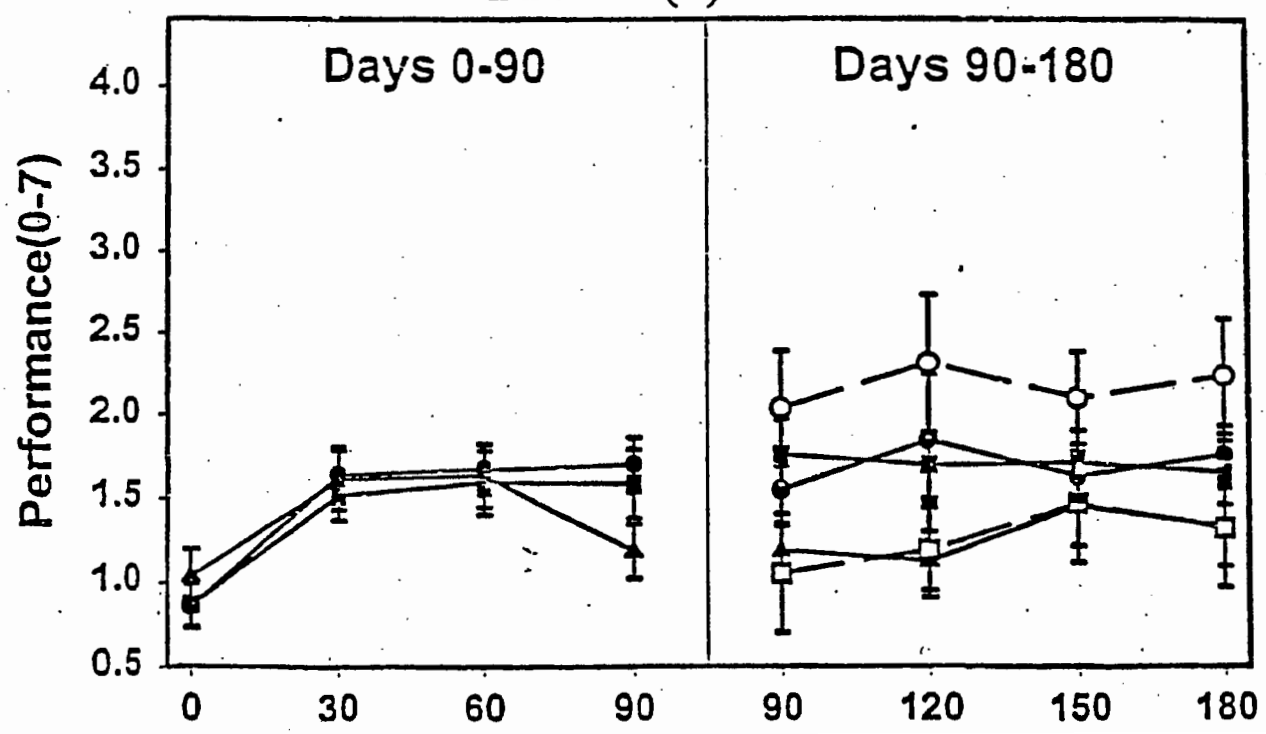


FIG. 11(b)

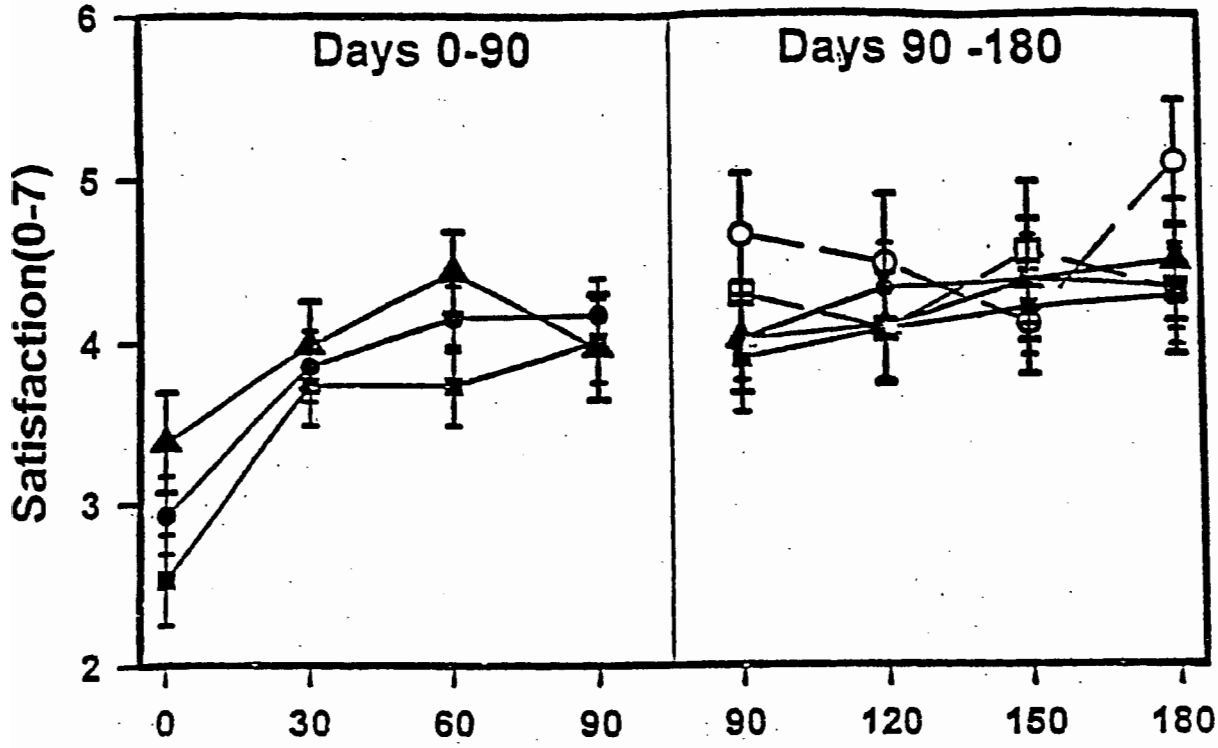


FIG. 11(c)

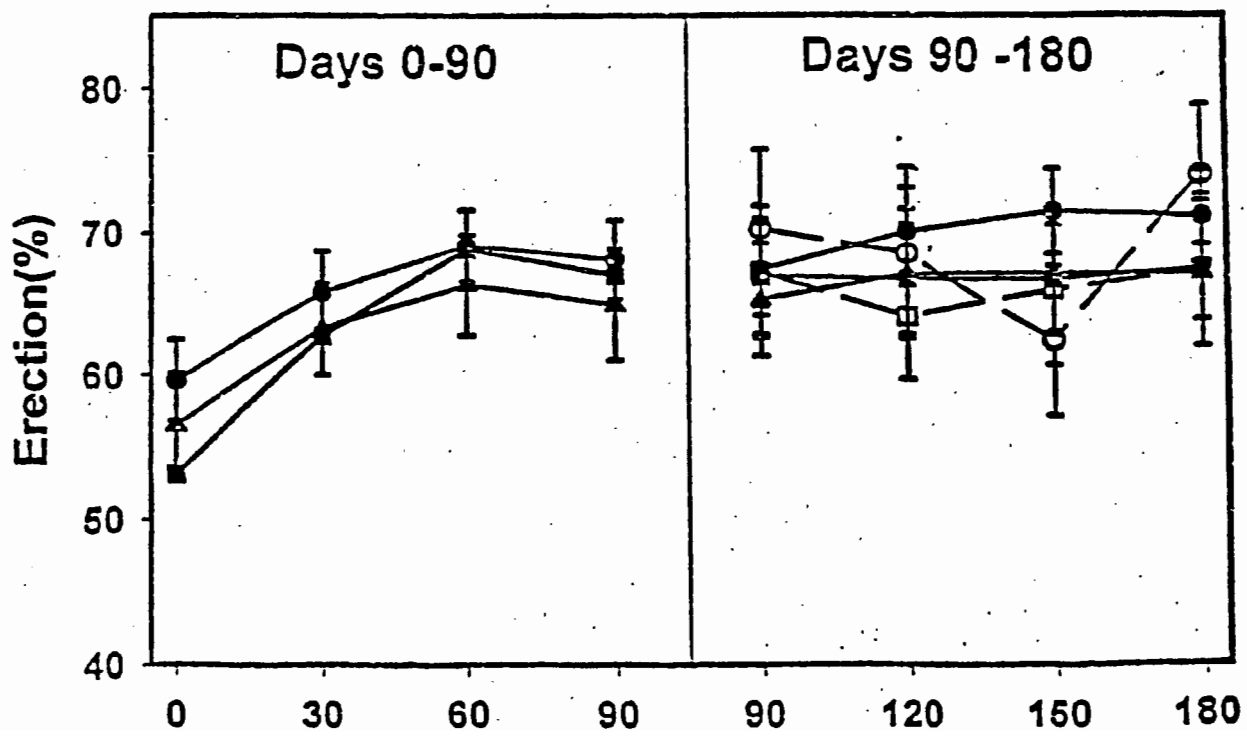


FIG. 12(a)

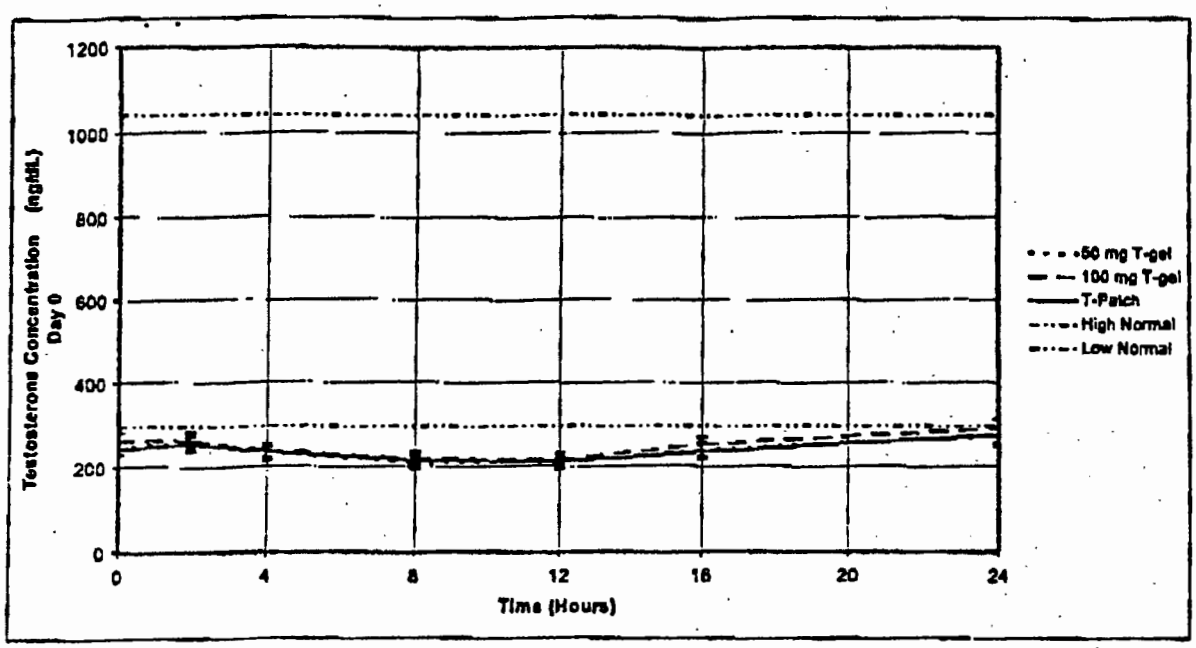


FIG. 12 (b)

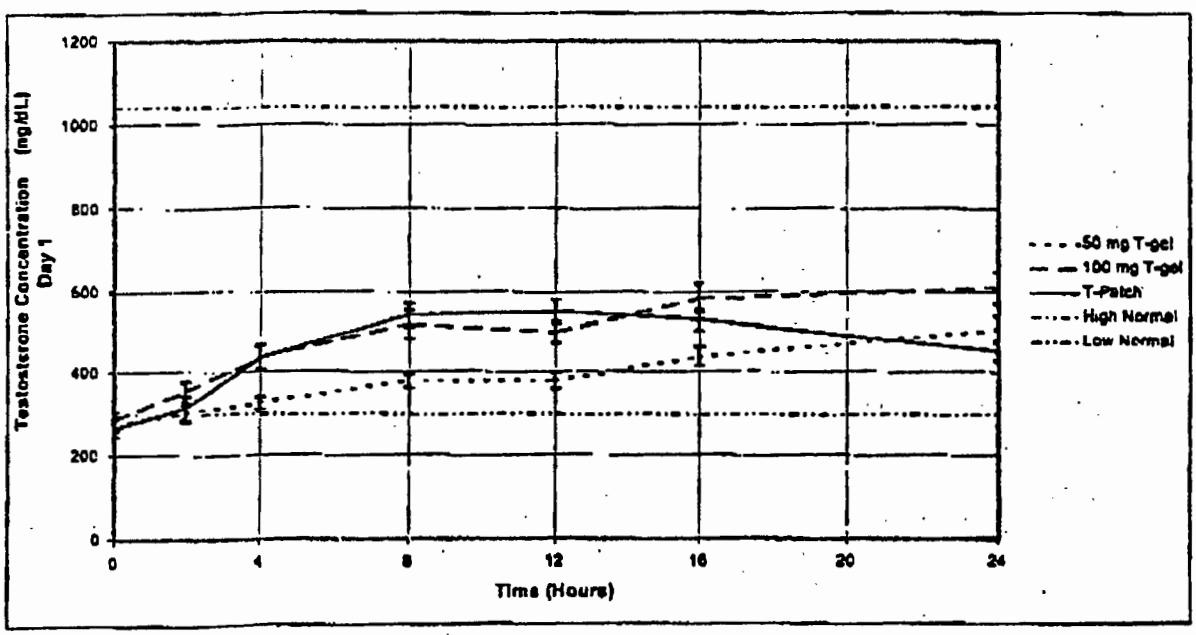


FIG. 12 (c)

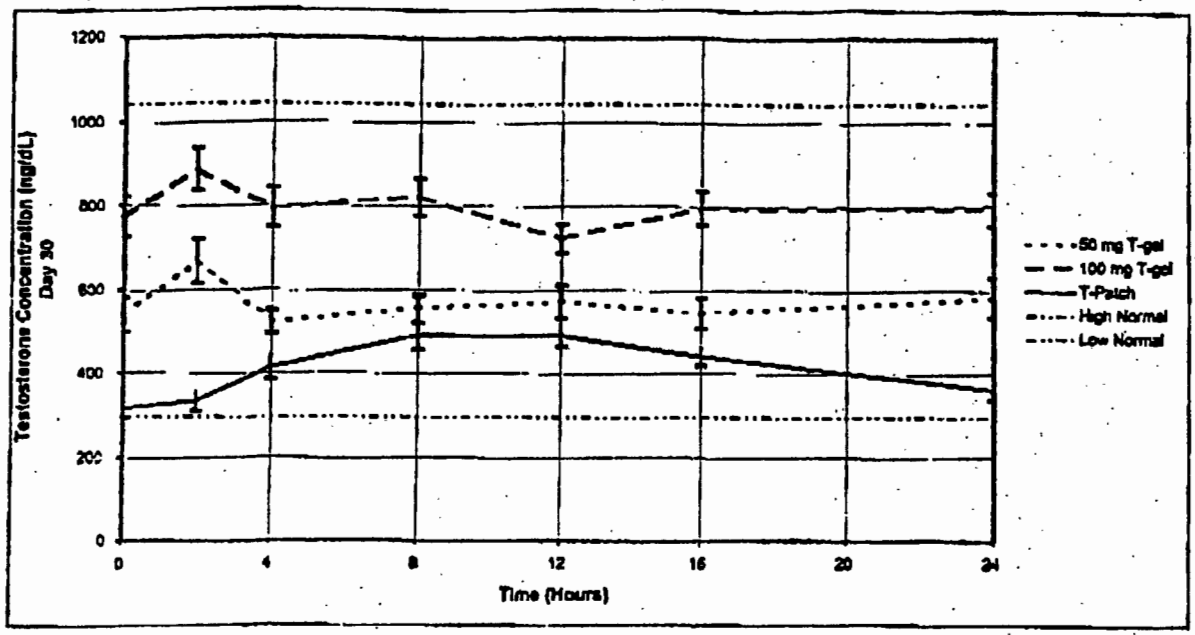


FIG. 12 (d)

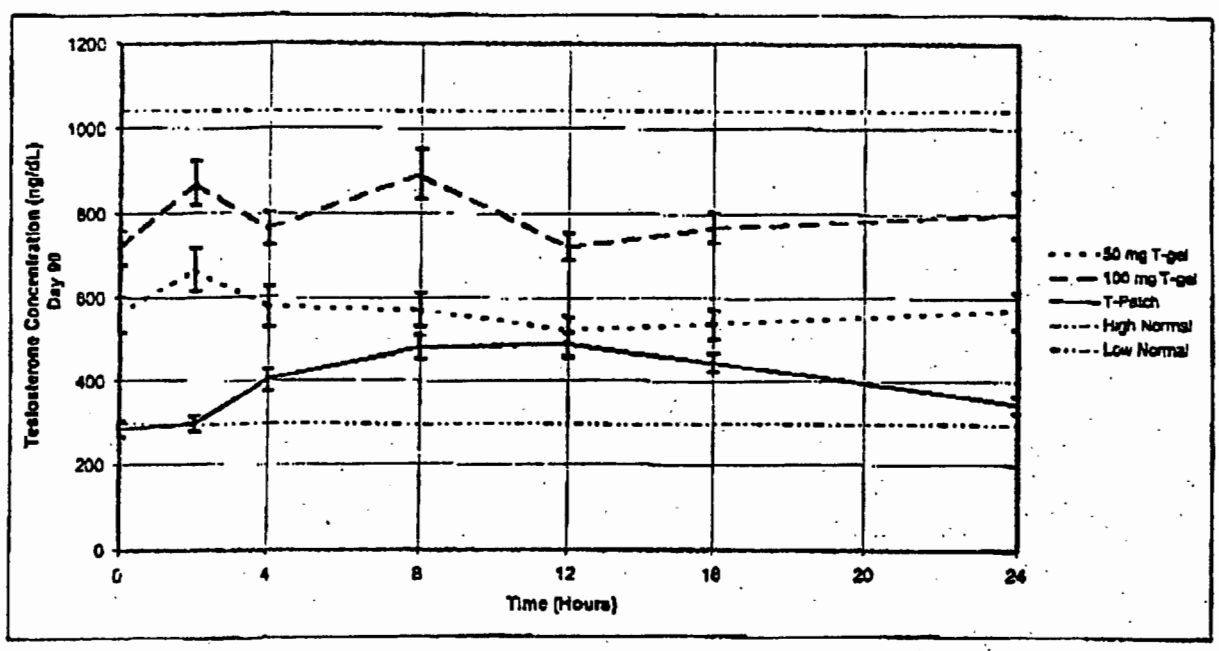


FIG. 12 (e)

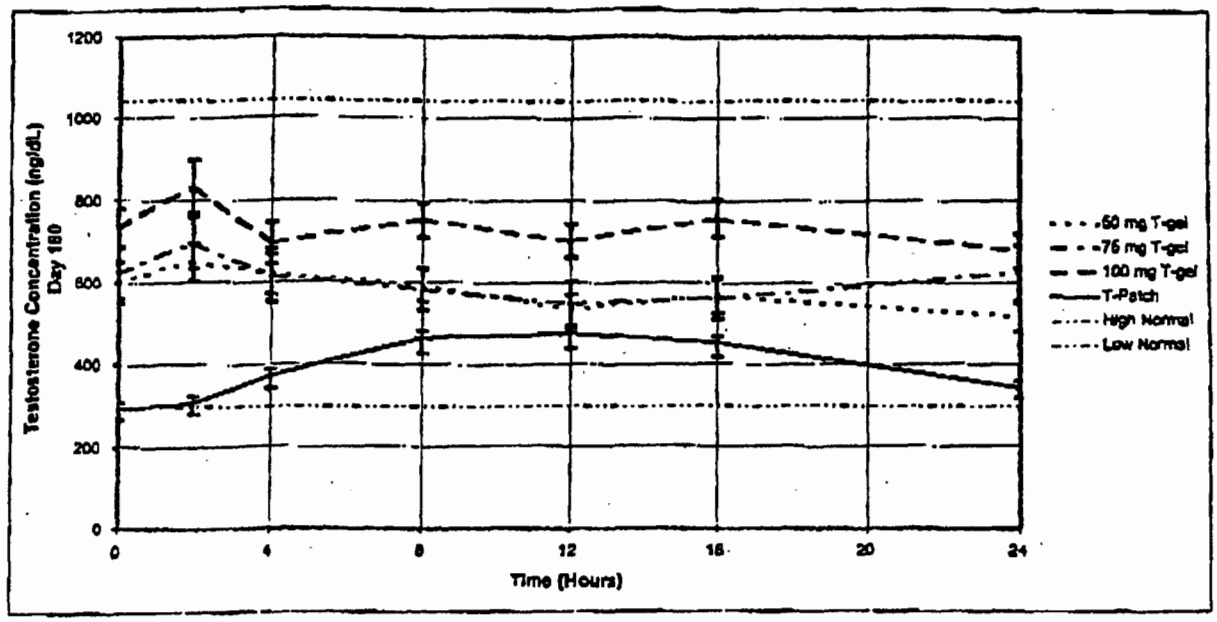


FIG. 12 (f)

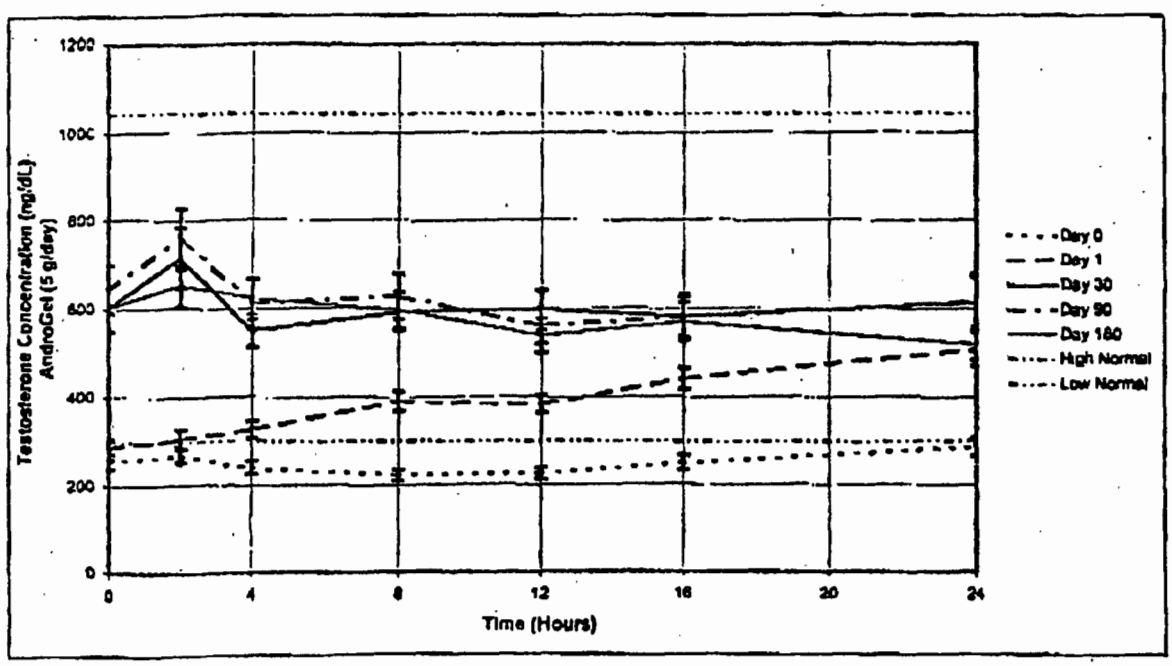


FIG. 12 (g)

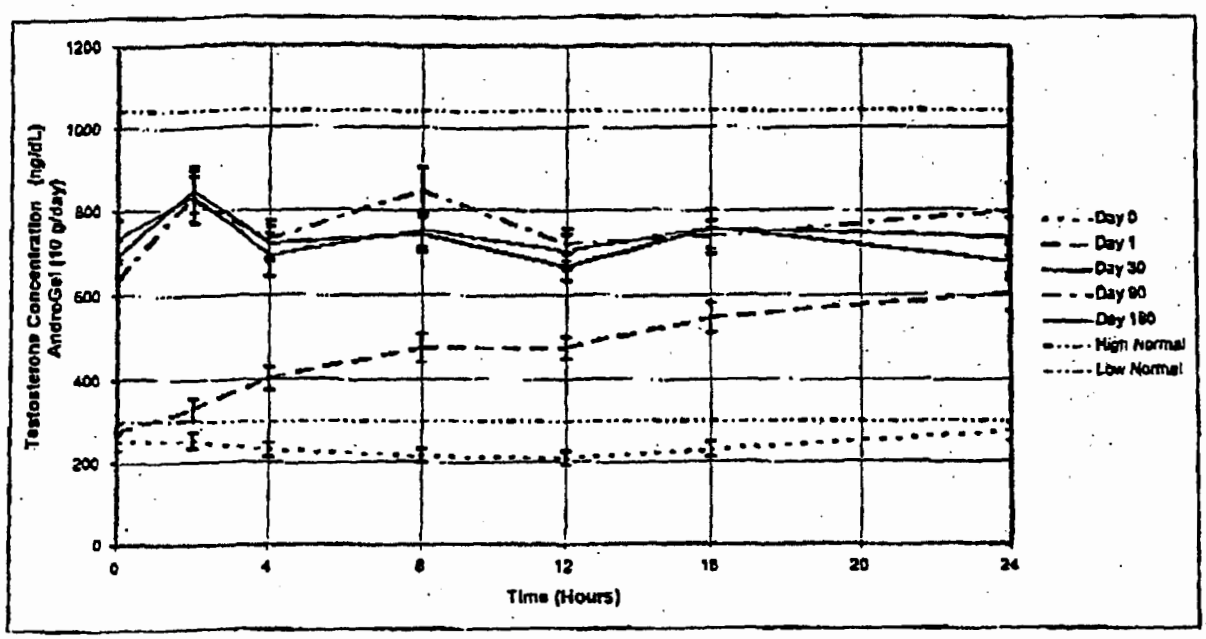


FIG. 12 (h)

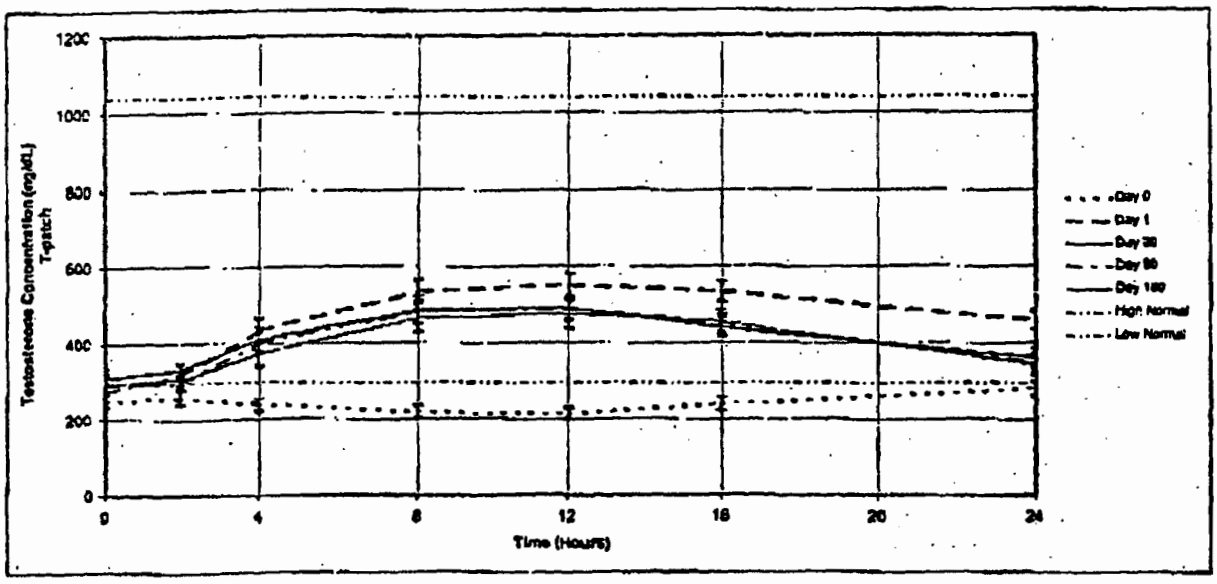


FIG. 13 (a)

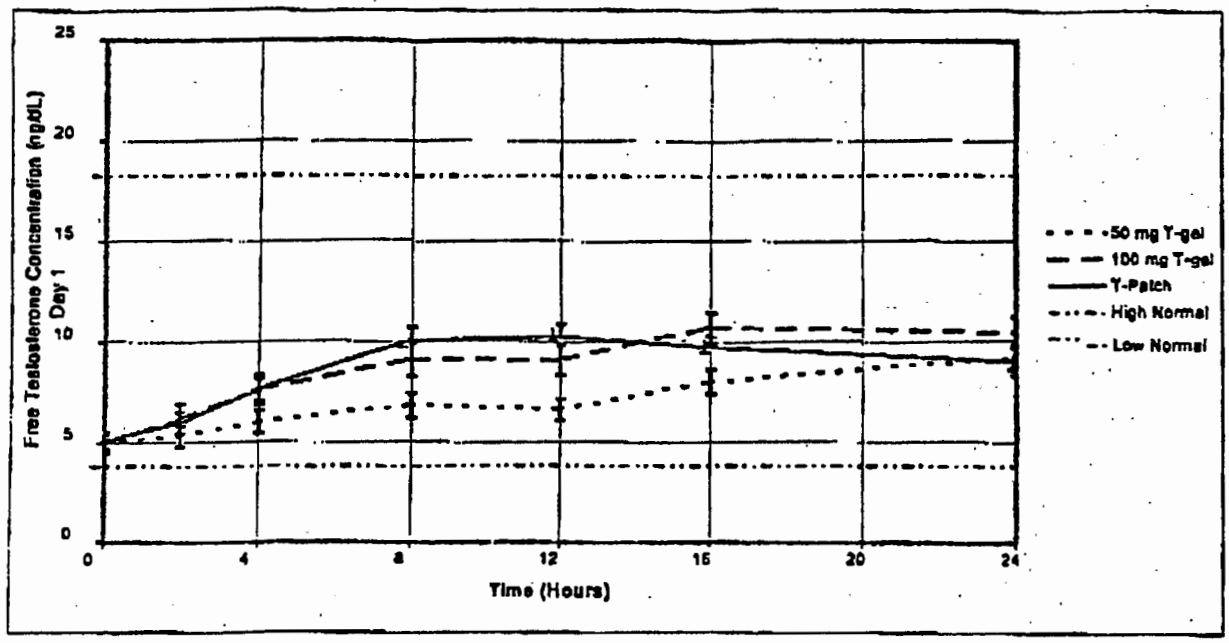


FIG. 13 (b)

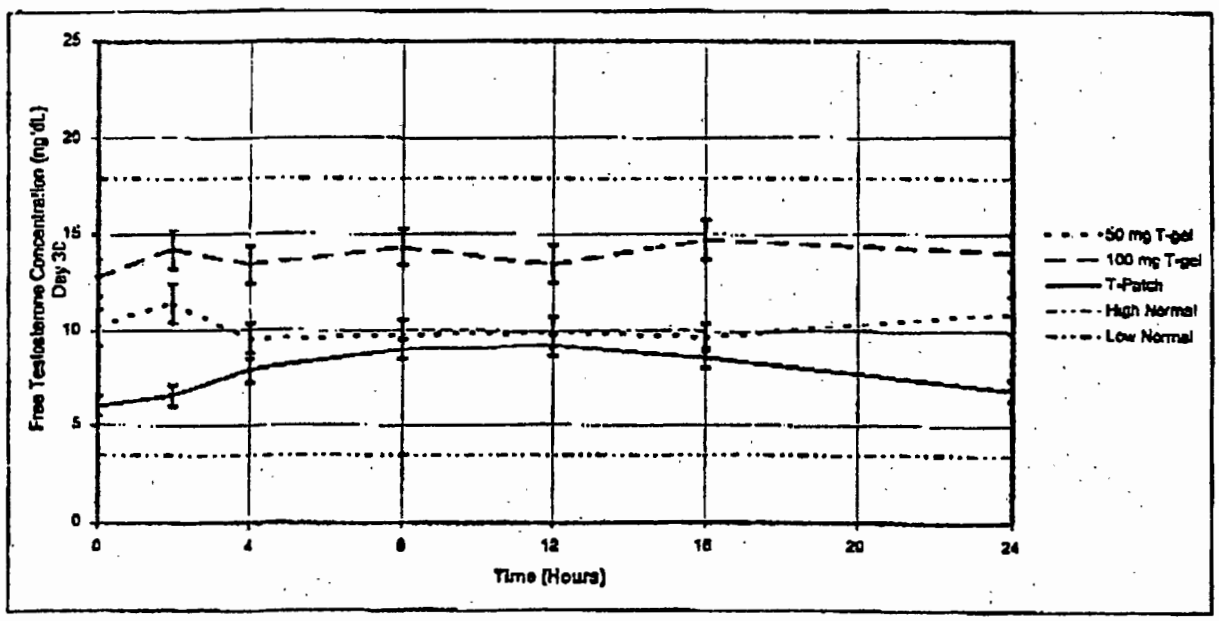


FIG. 13 (c)

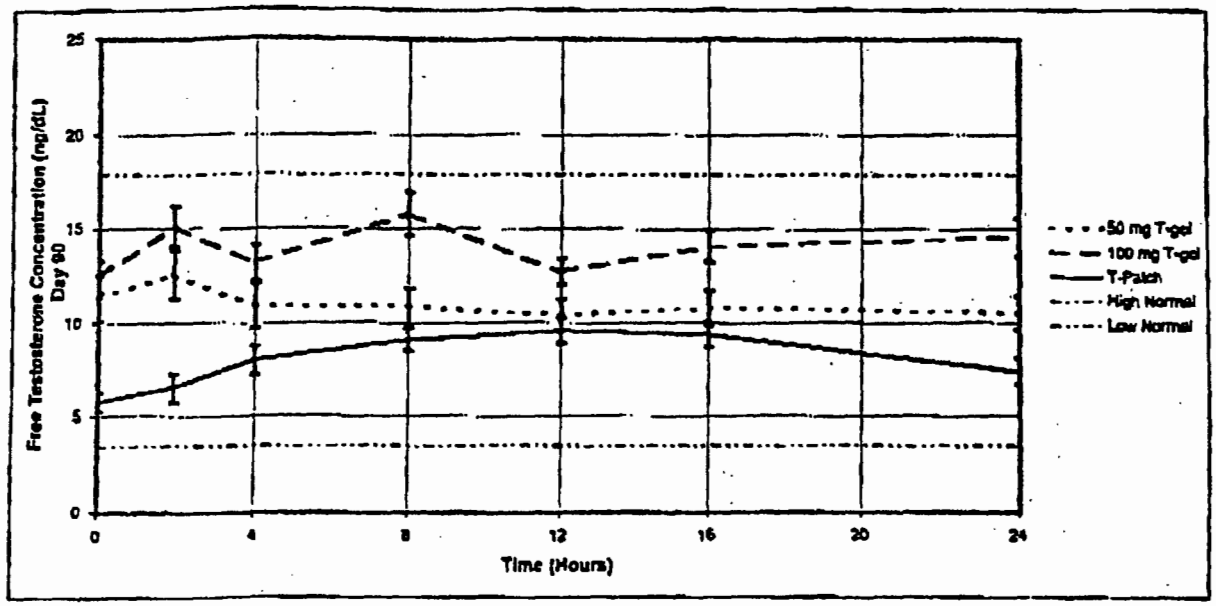


FIG. 13 (d)

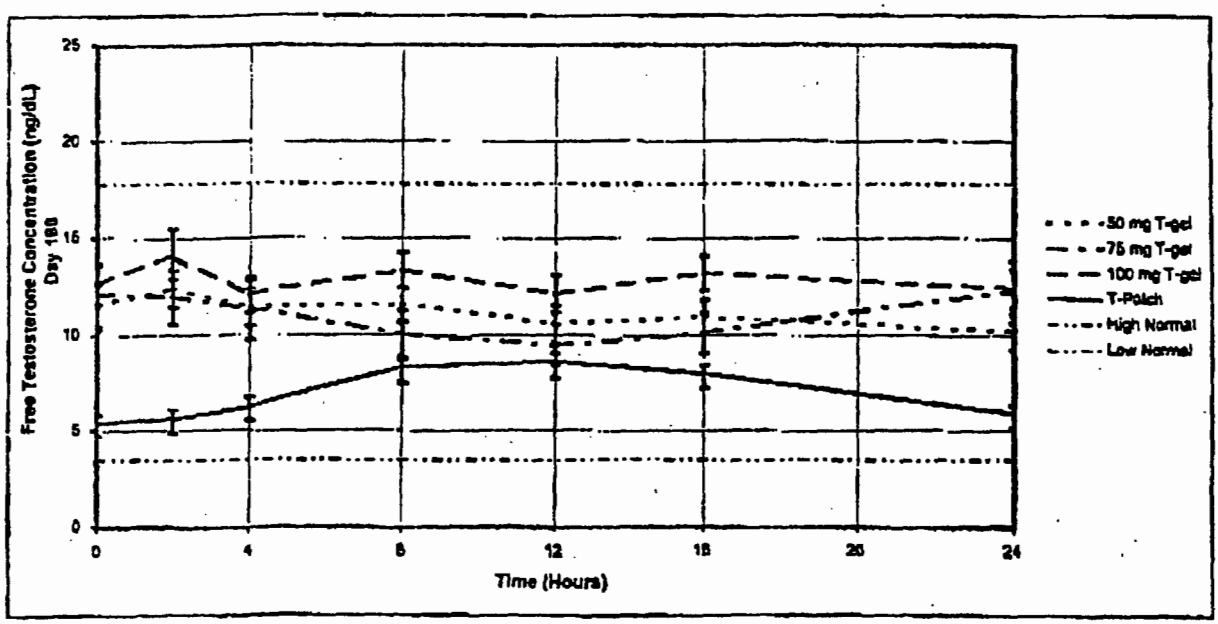


FIG. 13 (e)

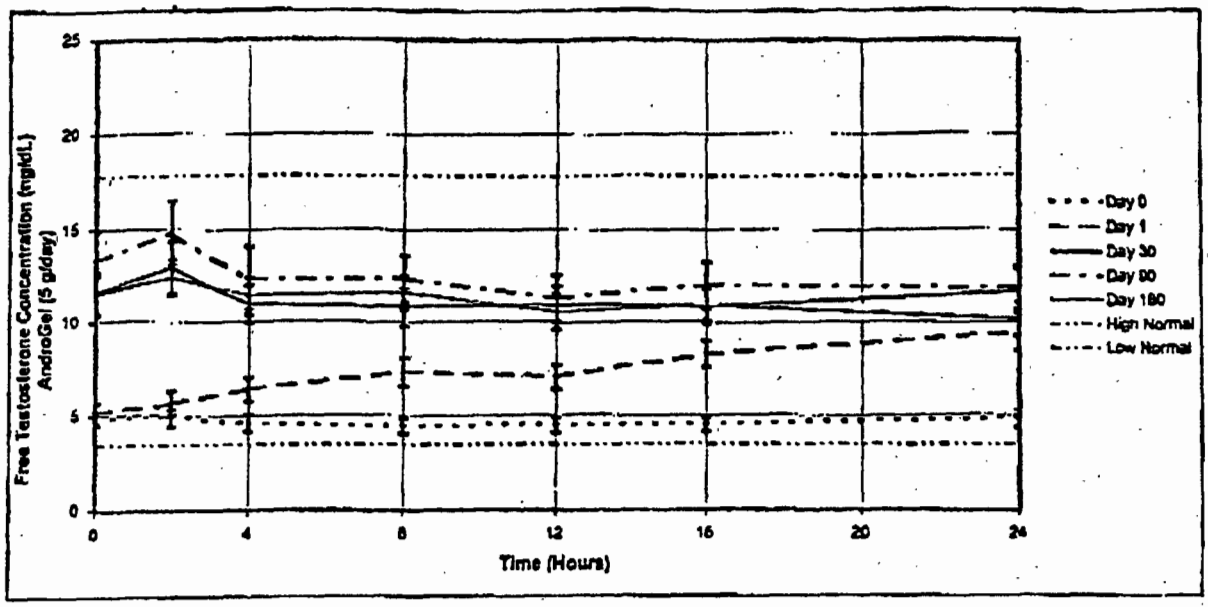


FIG. 13 (f)

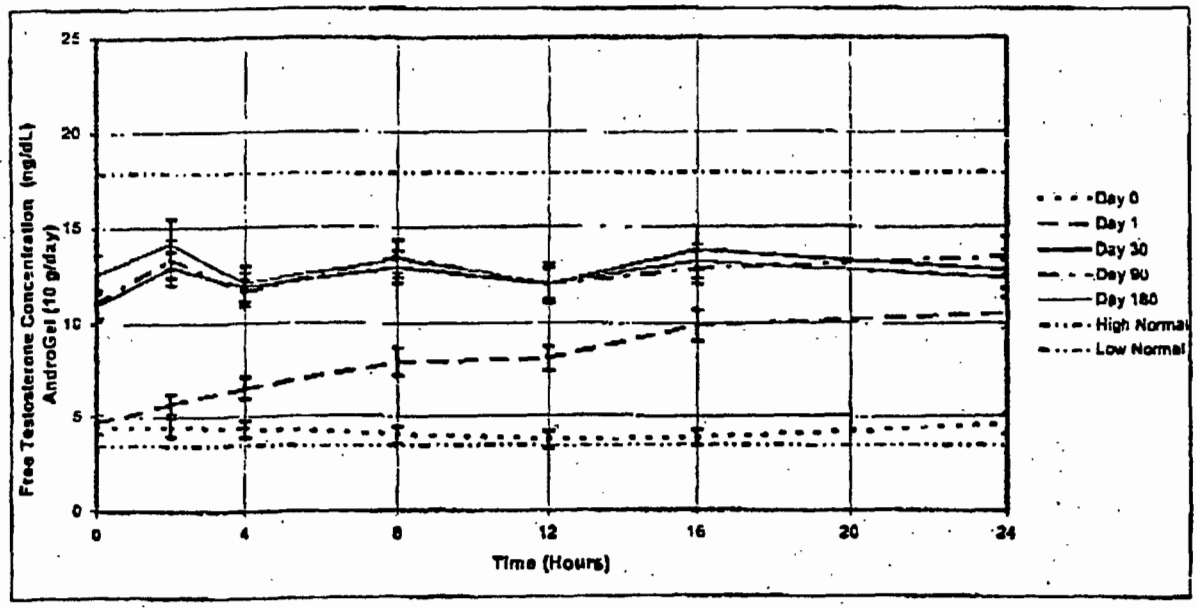


FIG. 13 (g)

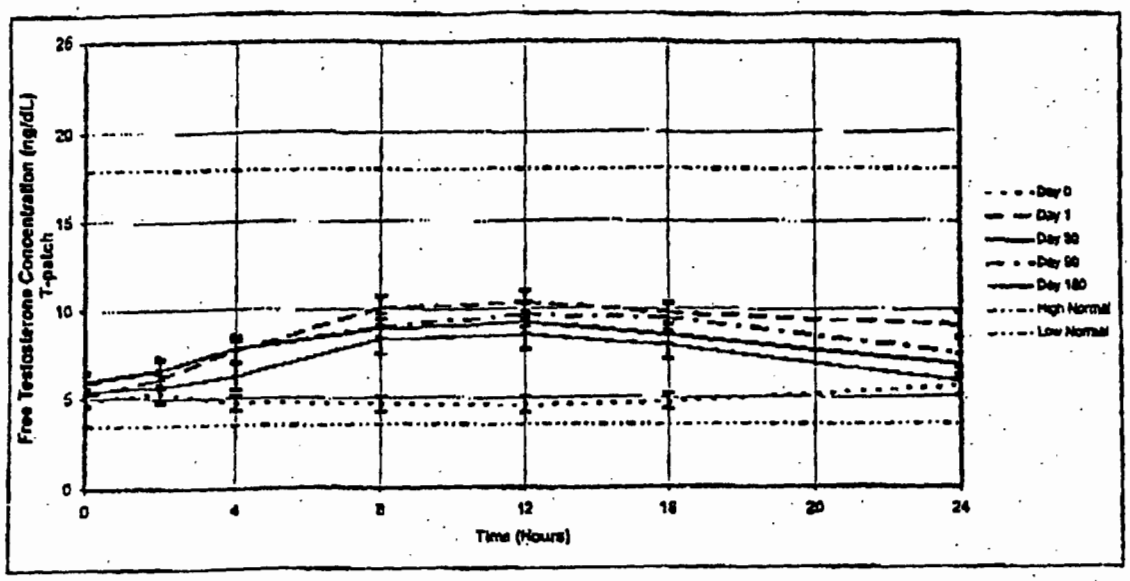


FIG. 14

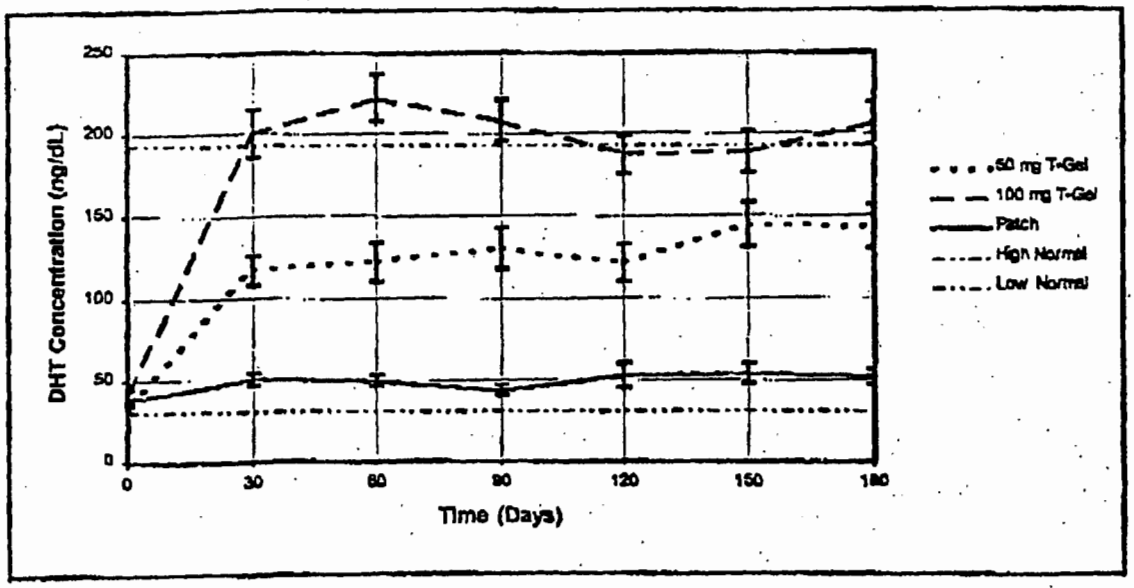


FIG. 15

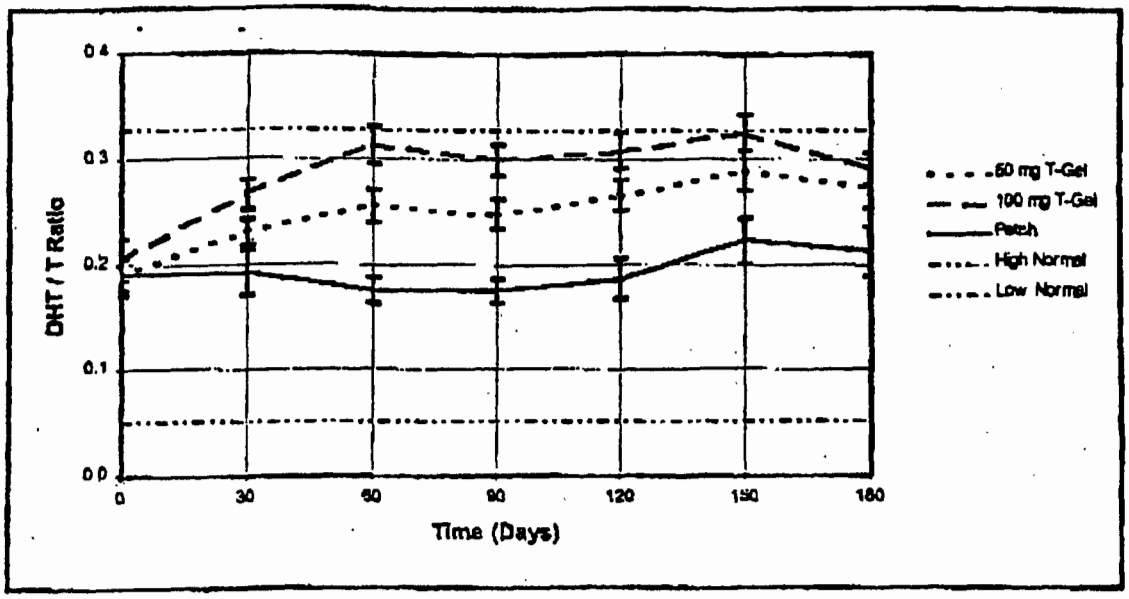

DHT / T Ratio
0.4
0.3
0.2
0.1
0.0
0
30
60
90
120
150
180
Time (Days)
50 mg T-Gel
100 mg T-Gel
Patch
High Normal
Low Normal

FIG. 16

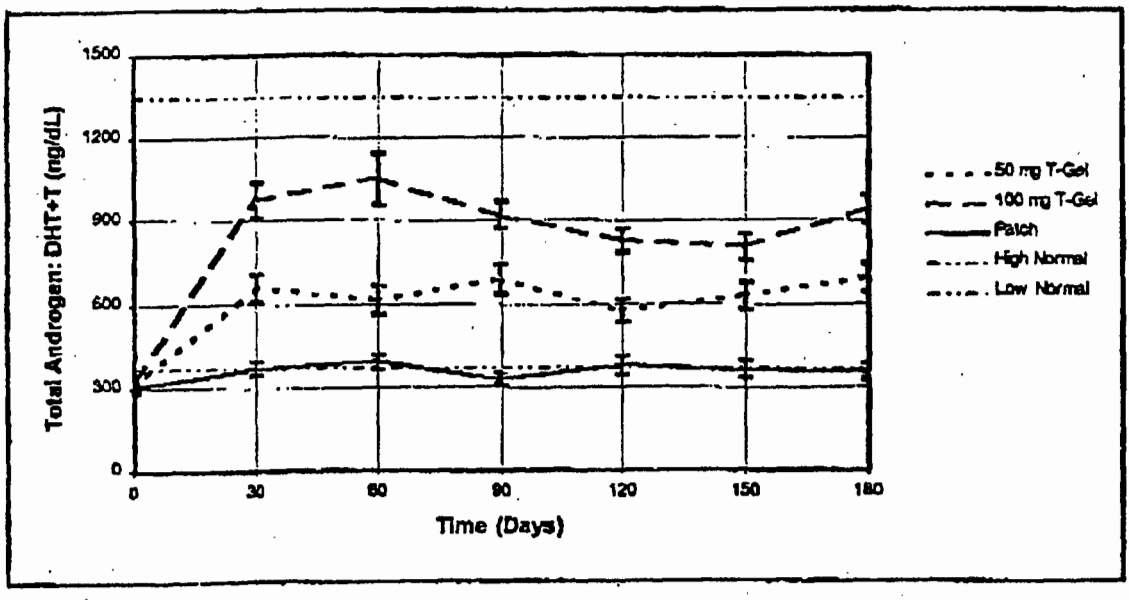

Total Androgen: DHT+T (ng/dL)
1500
1200
900
600
300
0
0
30
60
90
120
150
180
Time (Days)
50 mg T-Gel
100 mg T-Gel
Patch
High Normal
Low Normal

FIG. 17

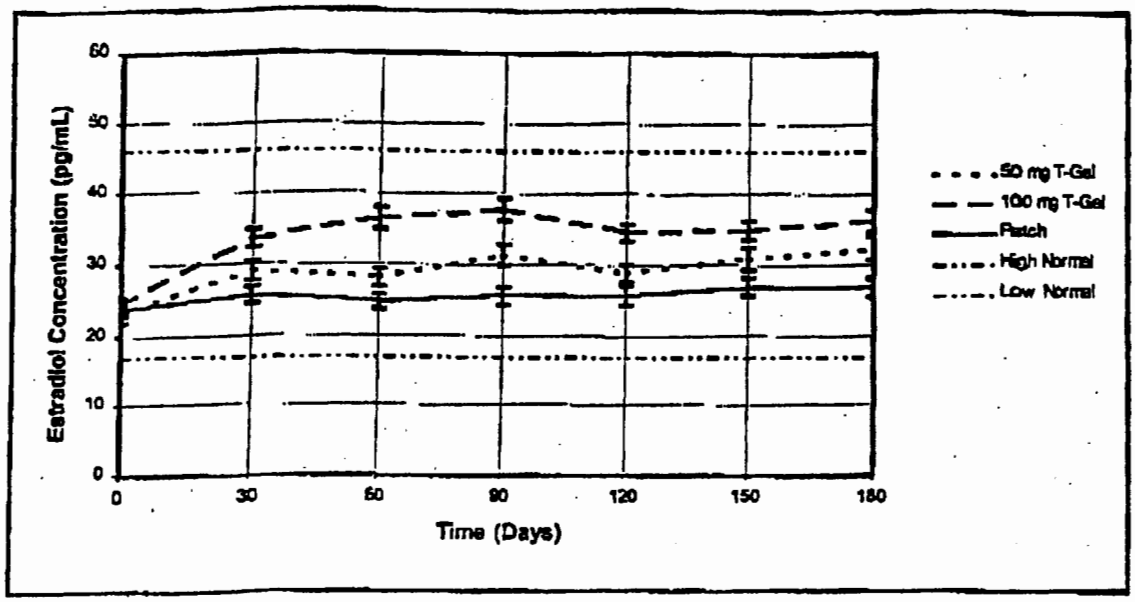

Estradiol Concentration (pg/mL)
60
50
40
30
20
10
0
0
30
60
90
120
150
180
Time (Days)
50 mg T-Gel
100 mg T-Gel
Patch
High Normal
Low Normal

FIG. 18

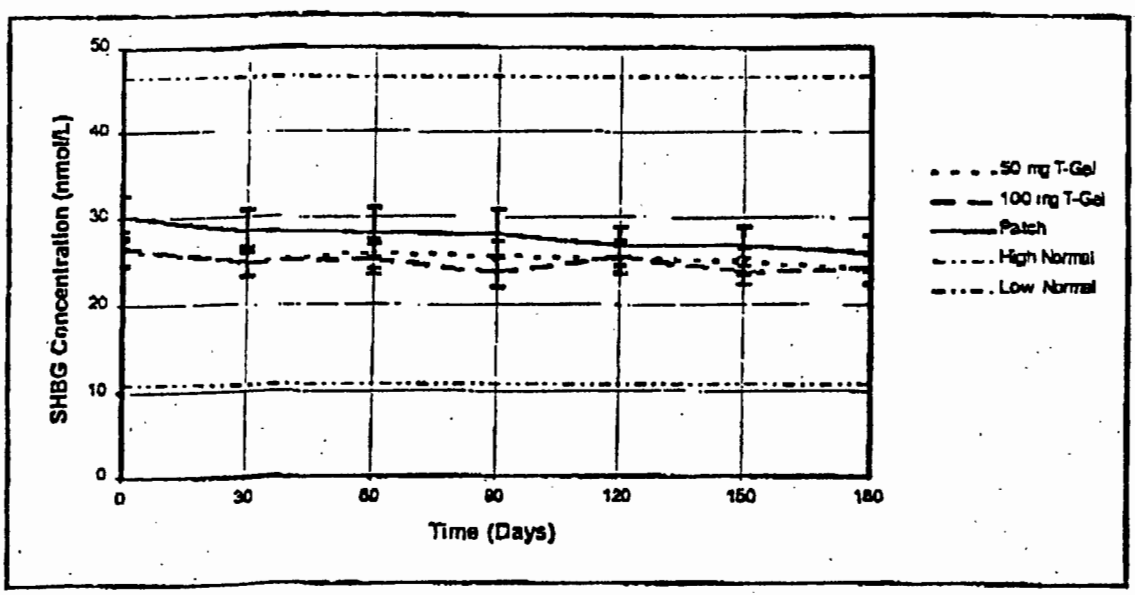

SHBG Concentration (nmol/L)
50
40
30
20
10
0
0
30
60
90
120
150
180
Time (Days)
50 mg T-Gel
100 mg T-Gel
Patch
High Normal
Low Normal

FIG. 19 (a)

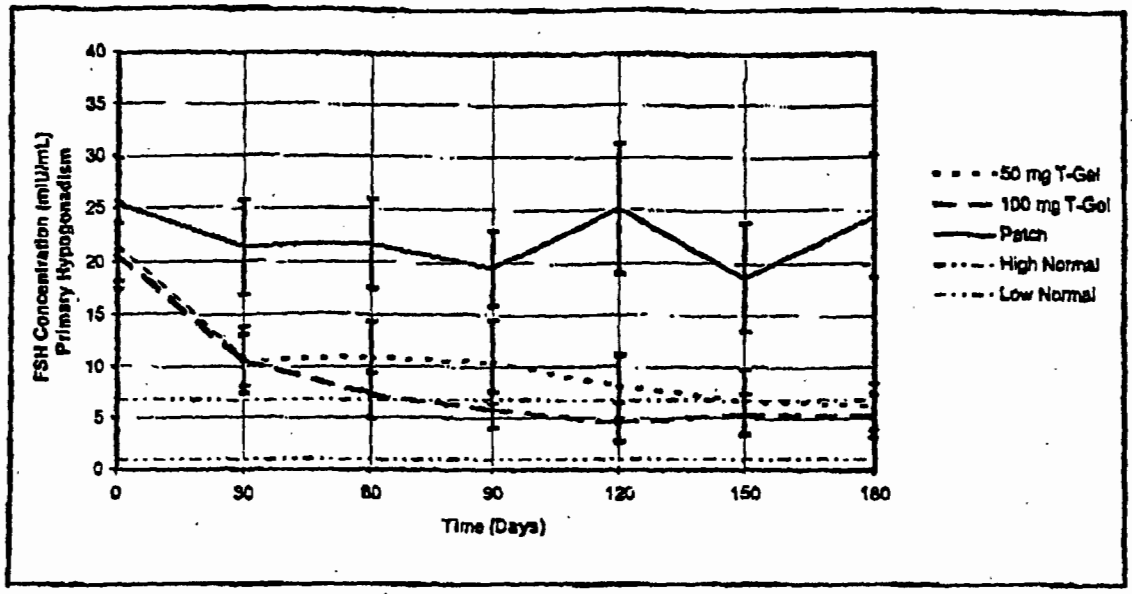


FIG. 19 (b)

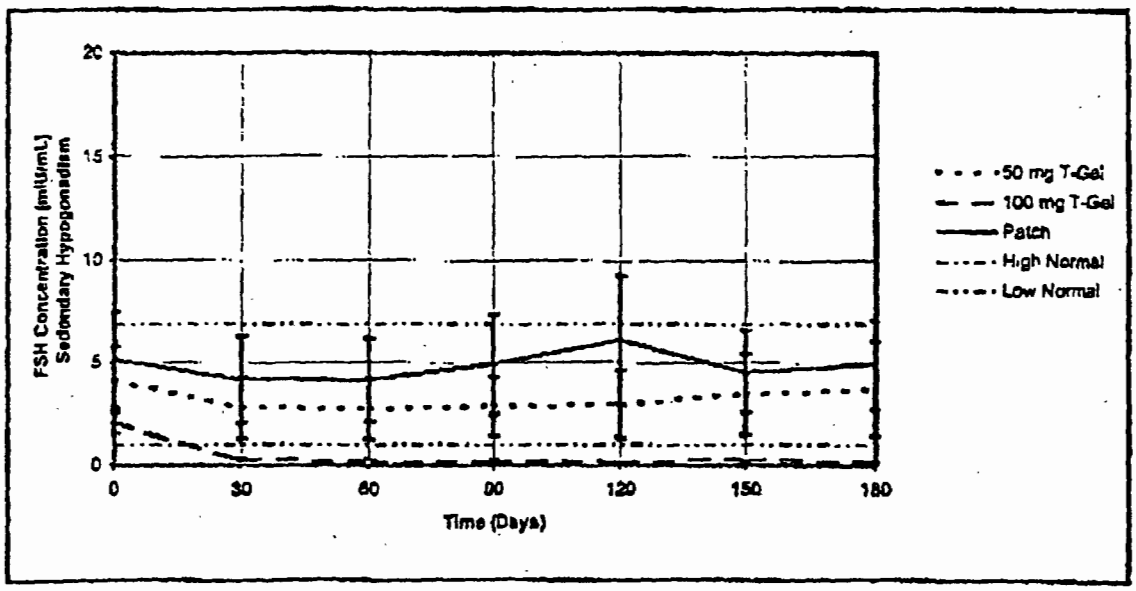


FIG. 19 (c)

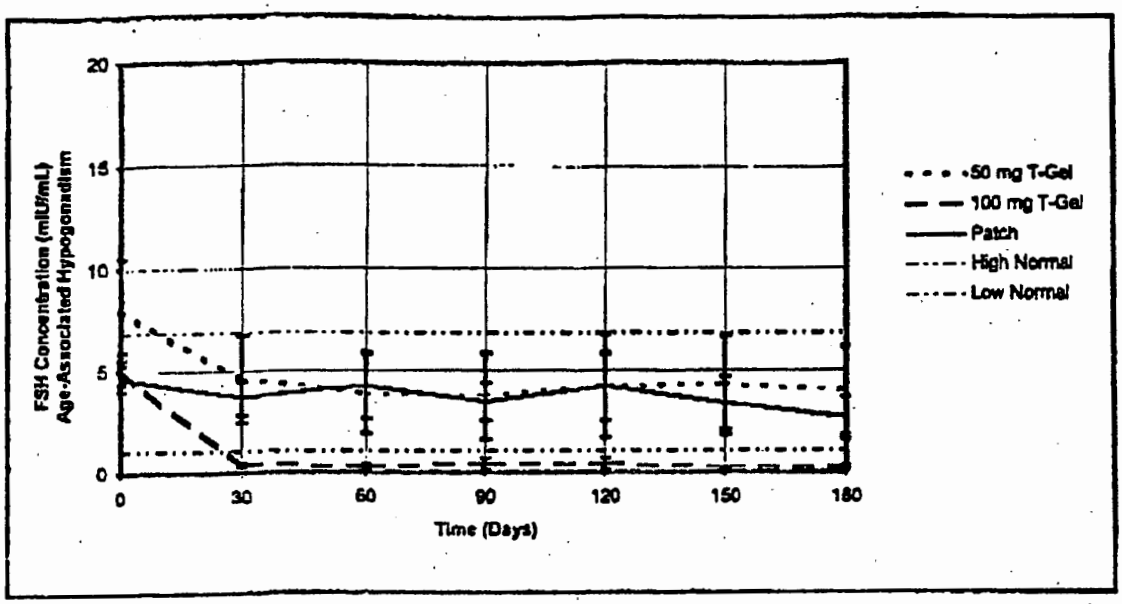


FIG. 19 (d)

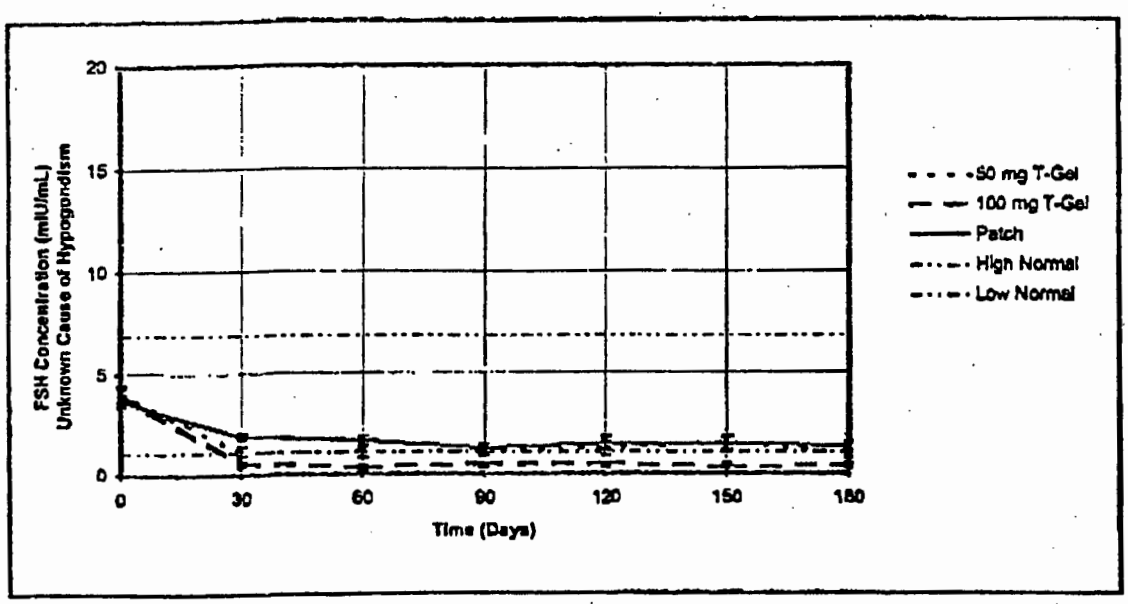


FIG. 20 (a)

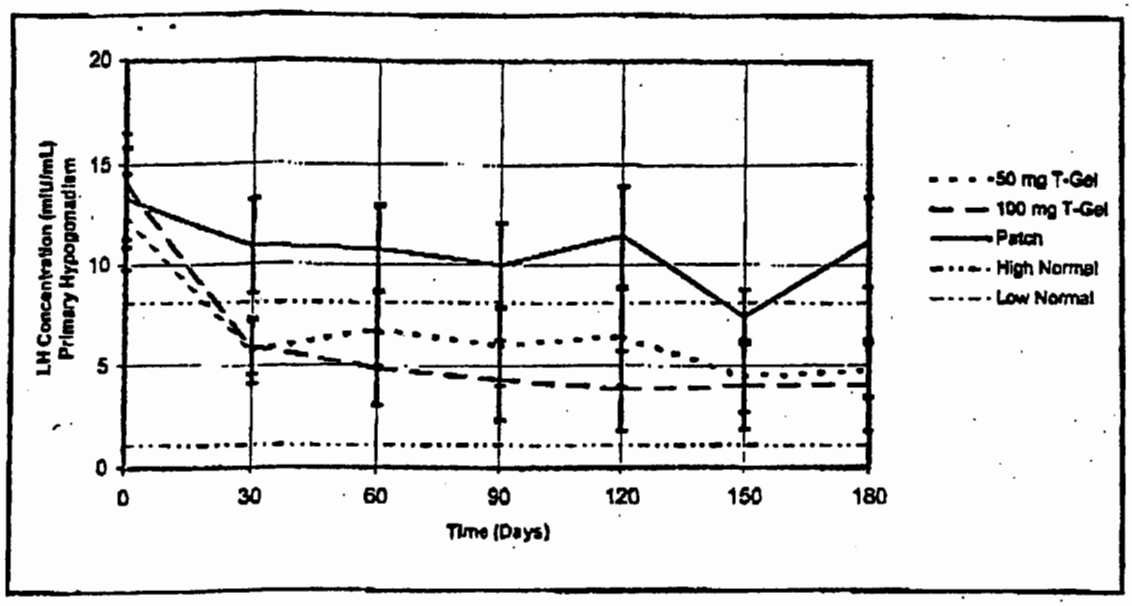


FIG. 20 (b)

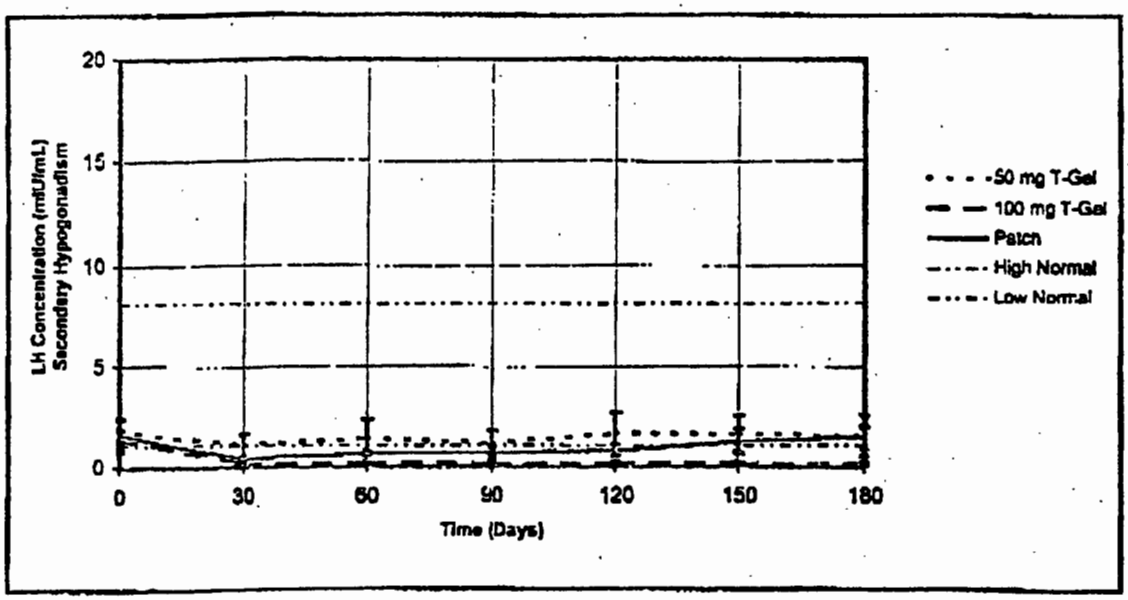


FIG. 20 (c)

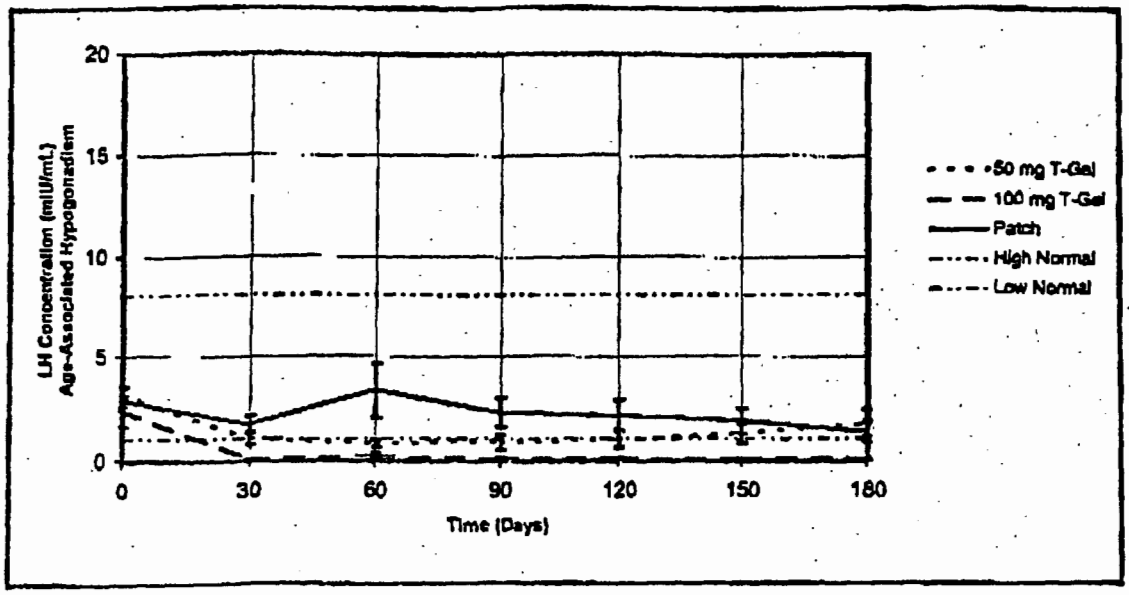


FIG. 20 (d)

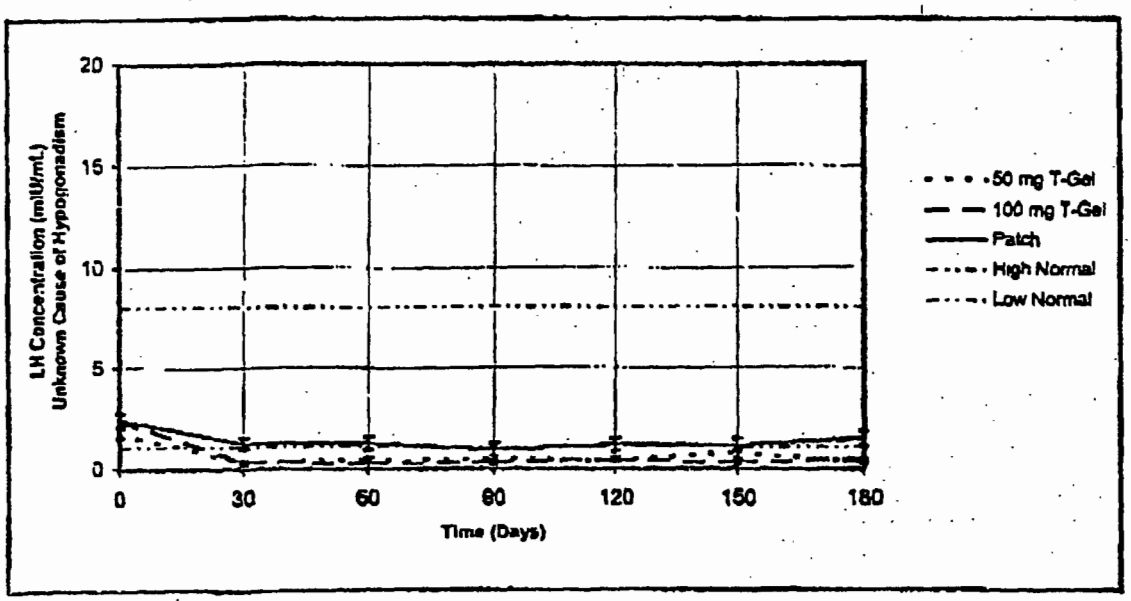


FIG. 21 (a)

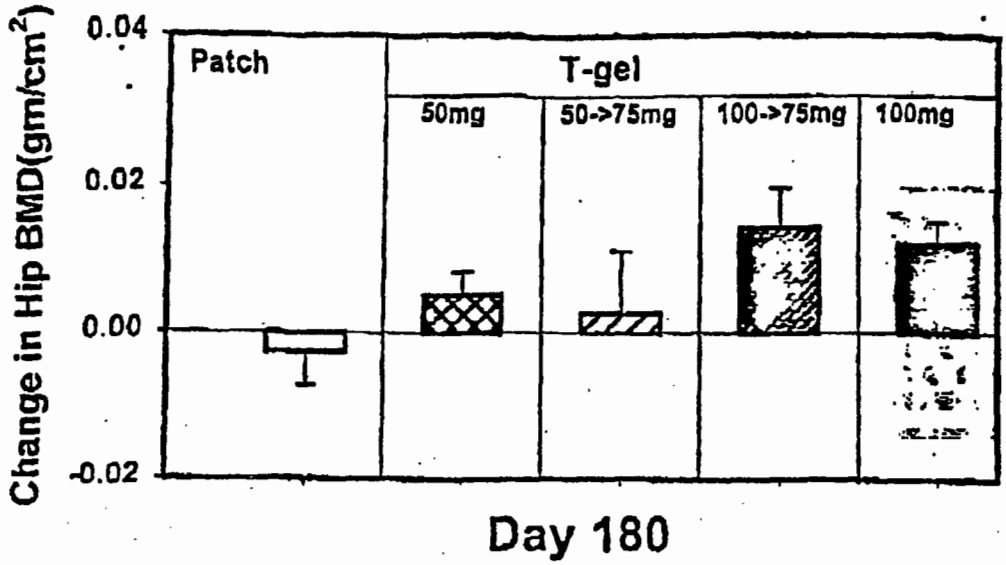


FIG. 21 (b)

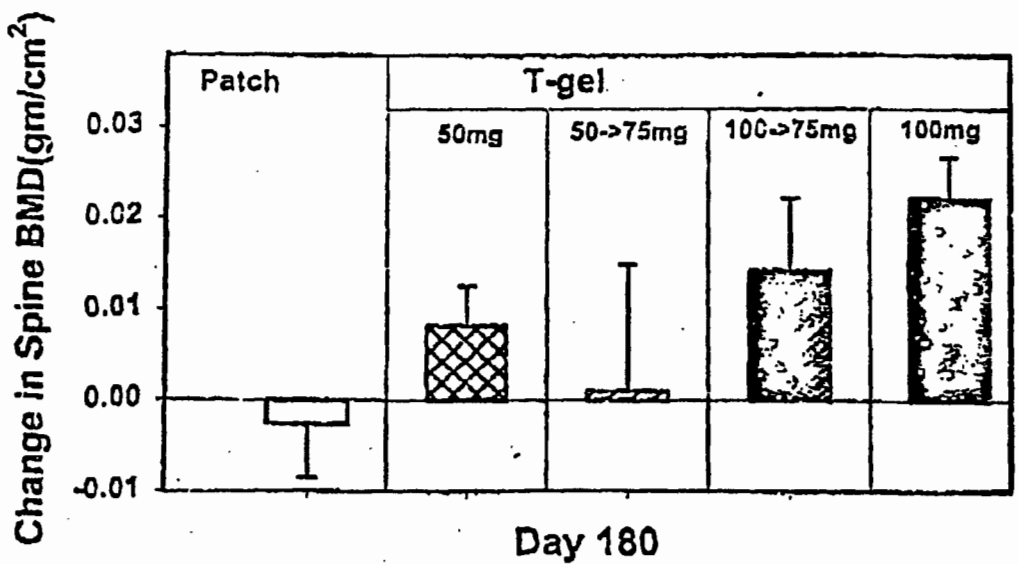


FIG. 22

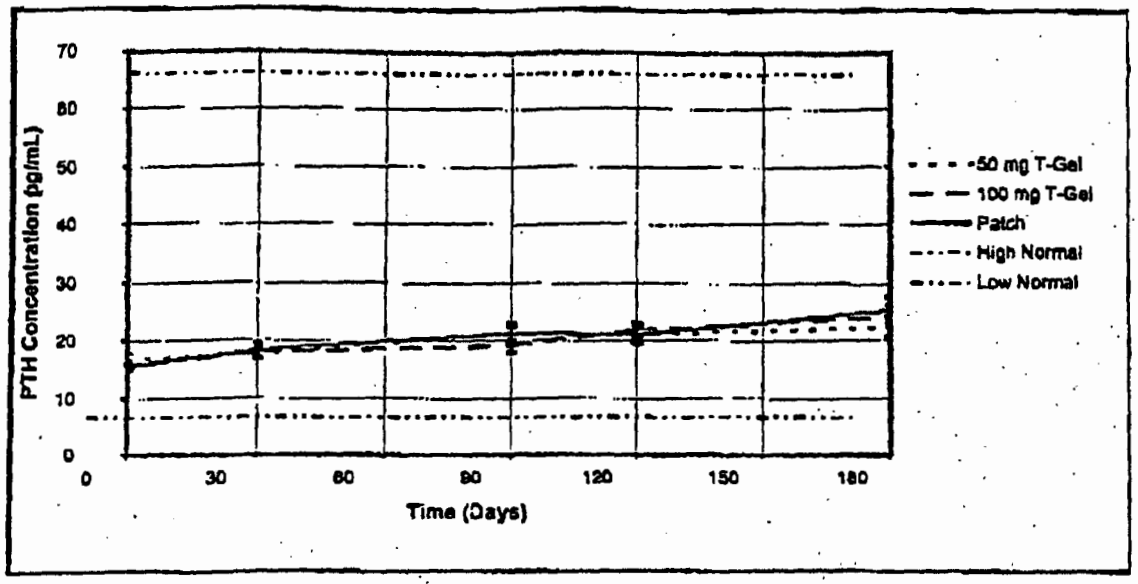

PTH Concentration (pg/mL)
70
60
50
40
30
20
10
0
0
30
60
90
120
150
180
Time (Days)
50 mg T-Gel
100 mg T-Gel
Patch
High Normal
Low Normal

FIG. 23

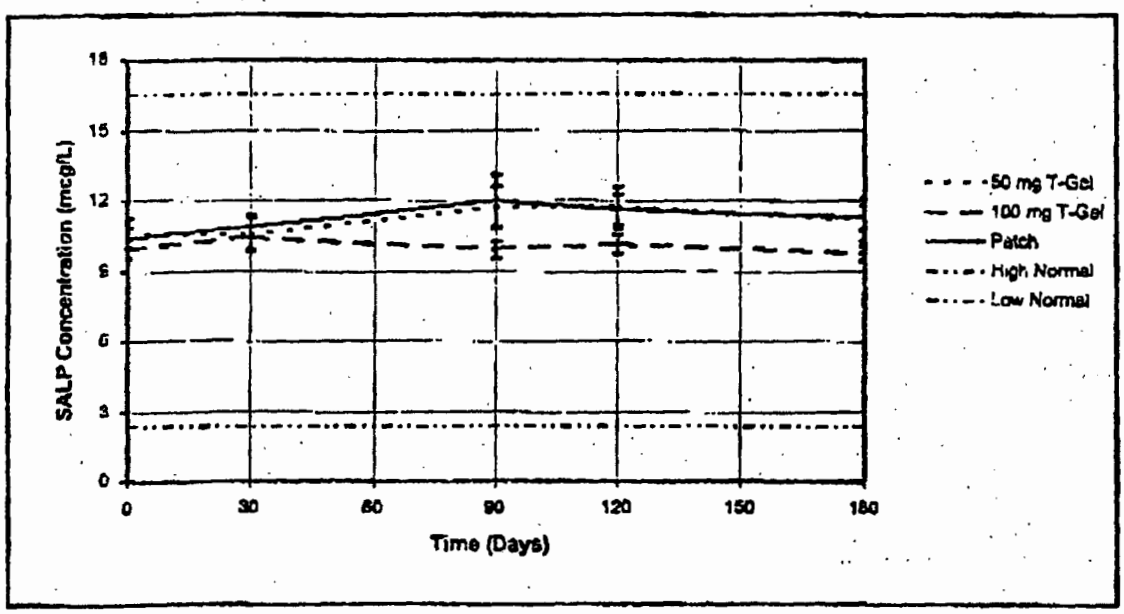

SALP Concentration (mcg/L)
18
15
12
9
6
3
0
0
30
60
90
120
150
180
Time (Days)
50 mg T-Gel
100 mg T-Gel
Patch
High Normal
Low Normal

FIG. 24

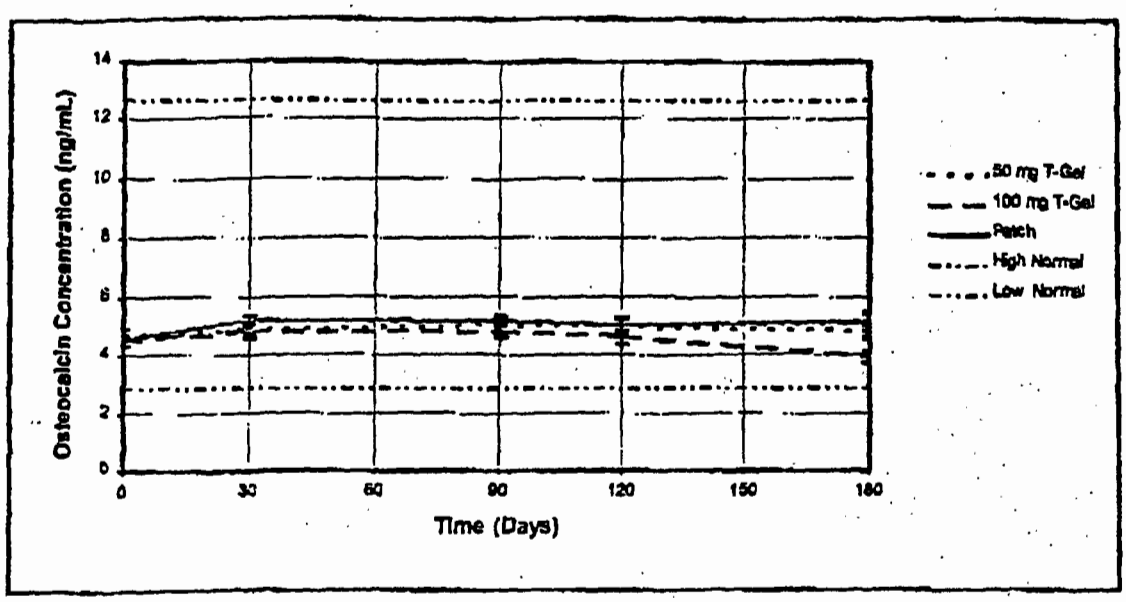

Osteocalcin Concentration (ng/mL)
14
12
10
8
6
4
2
0
0
30
60
90
120
150
180
Time (Days)
50 mg T-Gel
100 mg T-Gel
Patch
High Normal
Low Normal

FIG. 25

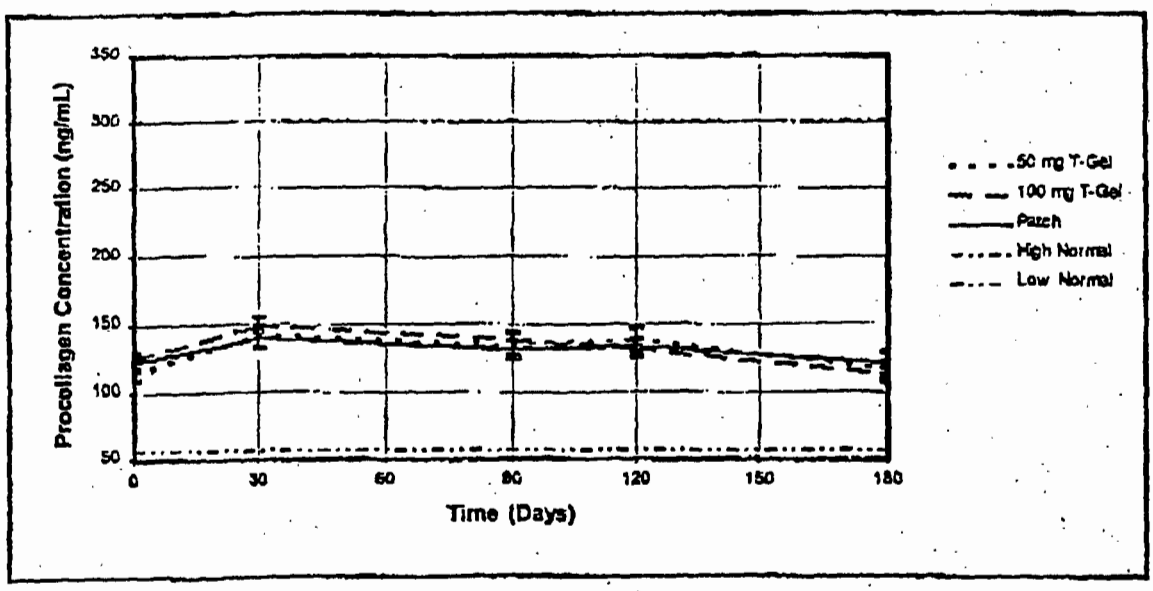

Procollagen Concentration (ng/mL)
350
300
250
200
150
100
50
0
30
60
90
120
150
180
Time (Days)
50 mg T-Gel
100 mg T-Gel
Patch
High Normal
Low Normal

FIG. 26

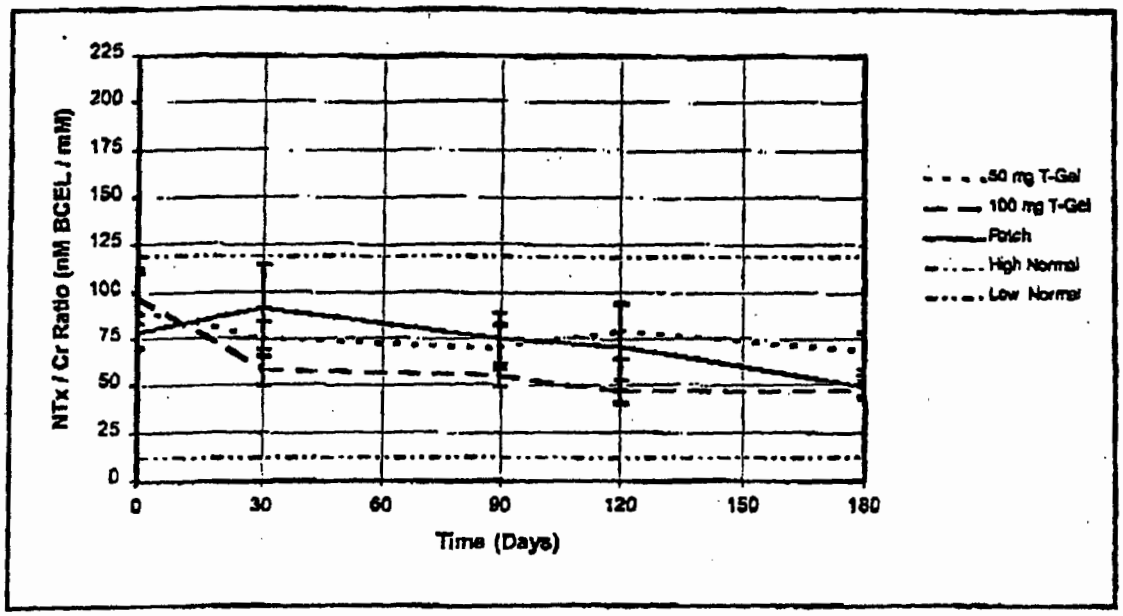

NTx / Cr Ratio (nM BCEL / mM)
225
200
175
150
125
100
75
50
25
0
0
30
60
90
120
150
180
Time (Days)
50 mg T-Gel
100 mg T-Gel
Patch
High Normal
Low Normal

FIG. 27

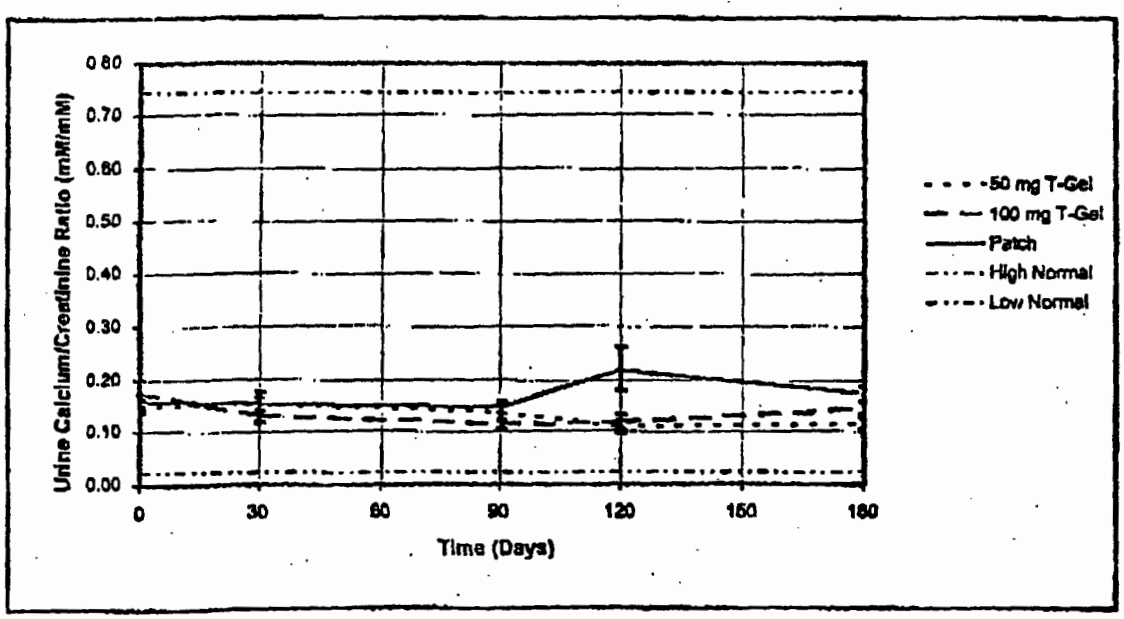

Urine Calcium/Creatinine Ratio (mM/mM)
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
0
30
60
90
120
150
180
Time (Days)
50 mg T-Gel
100 mg T-Gel
Patch
High Normal
Low Normal

FIG. 28 (a)

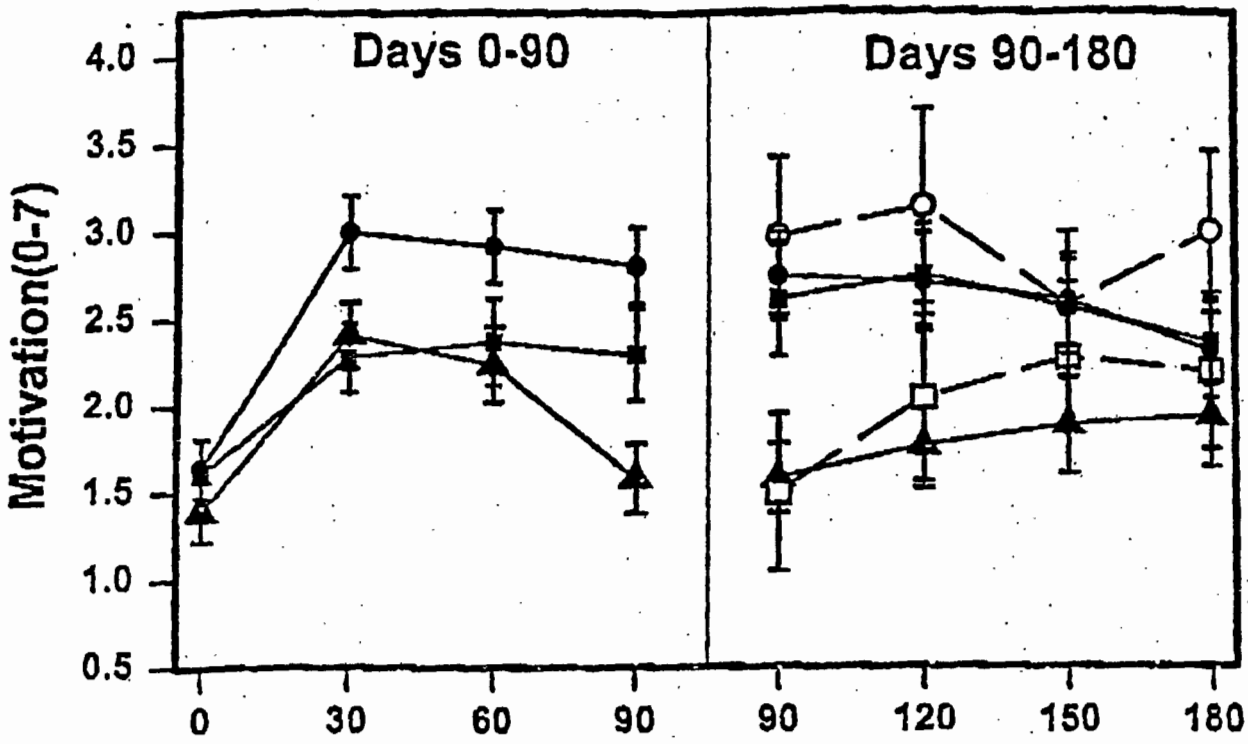


FIG. 28 (b)

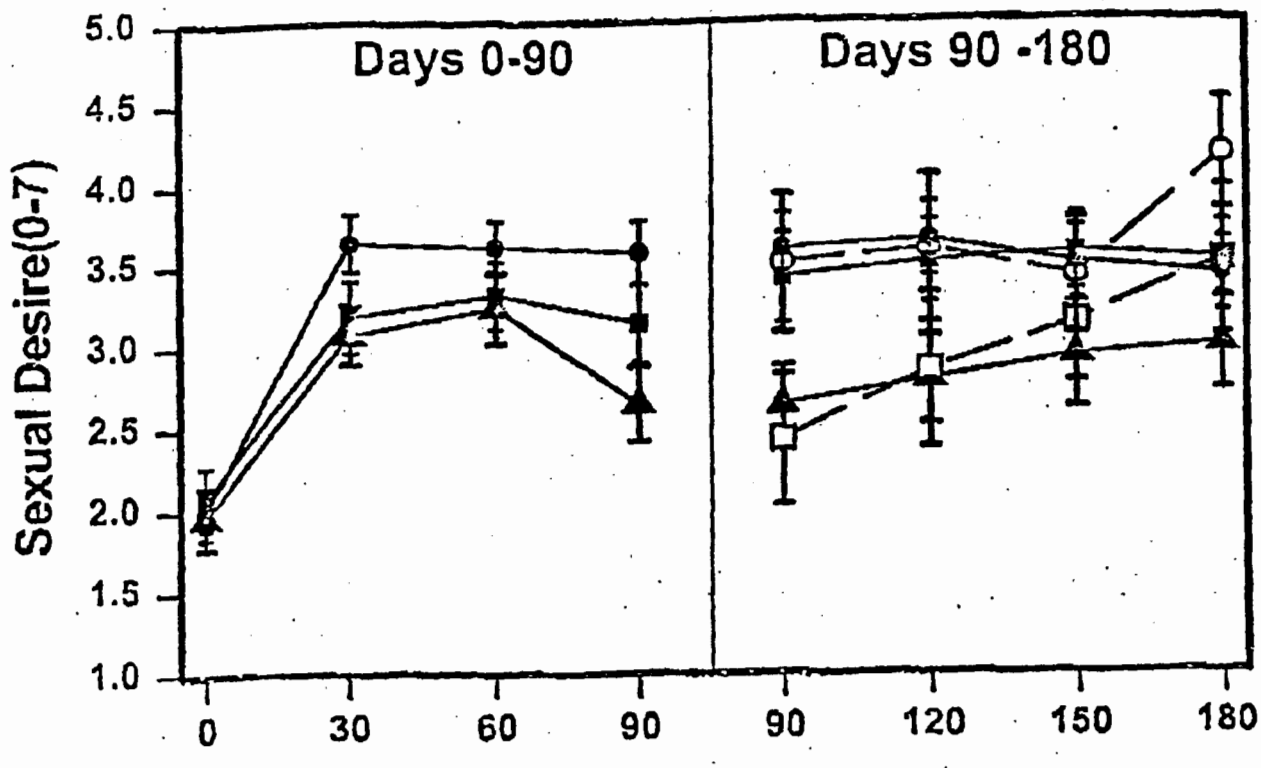


FIG. 28 (c)

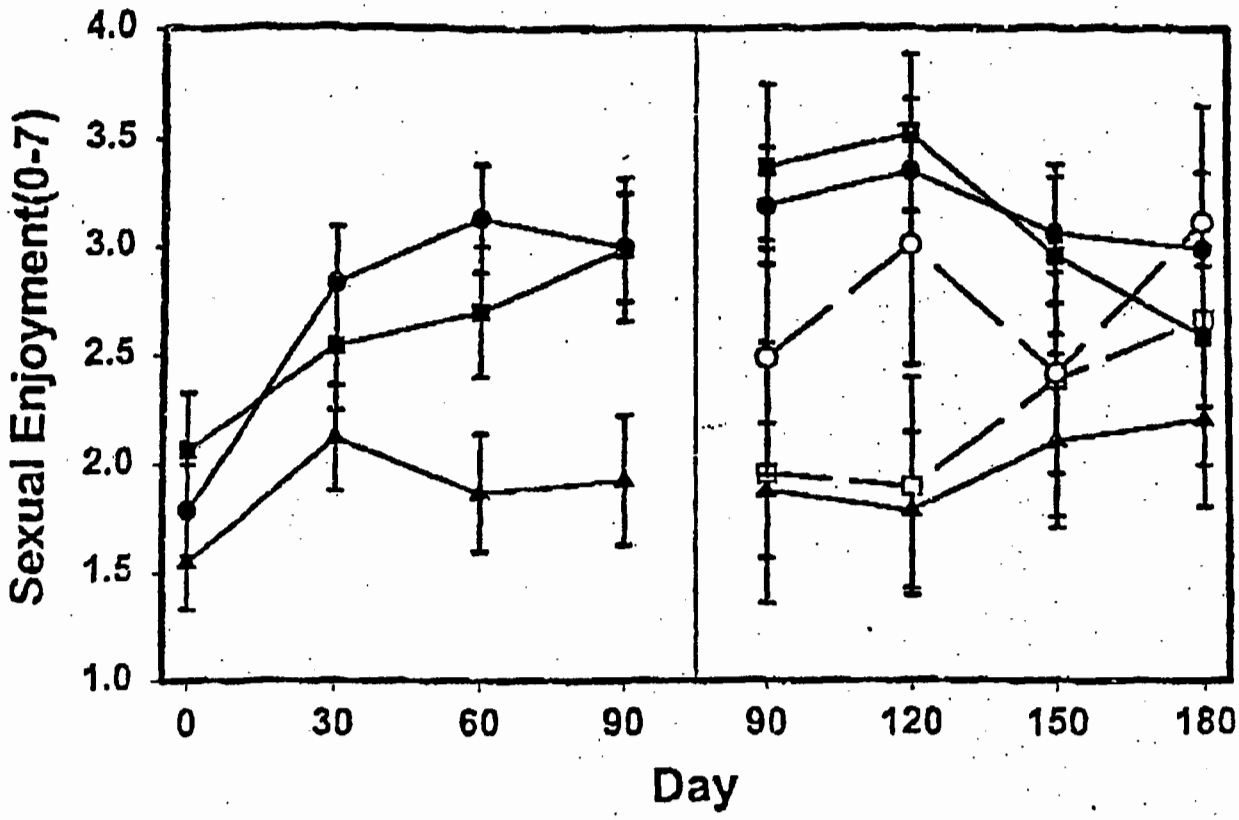


FIG. 29 (a)

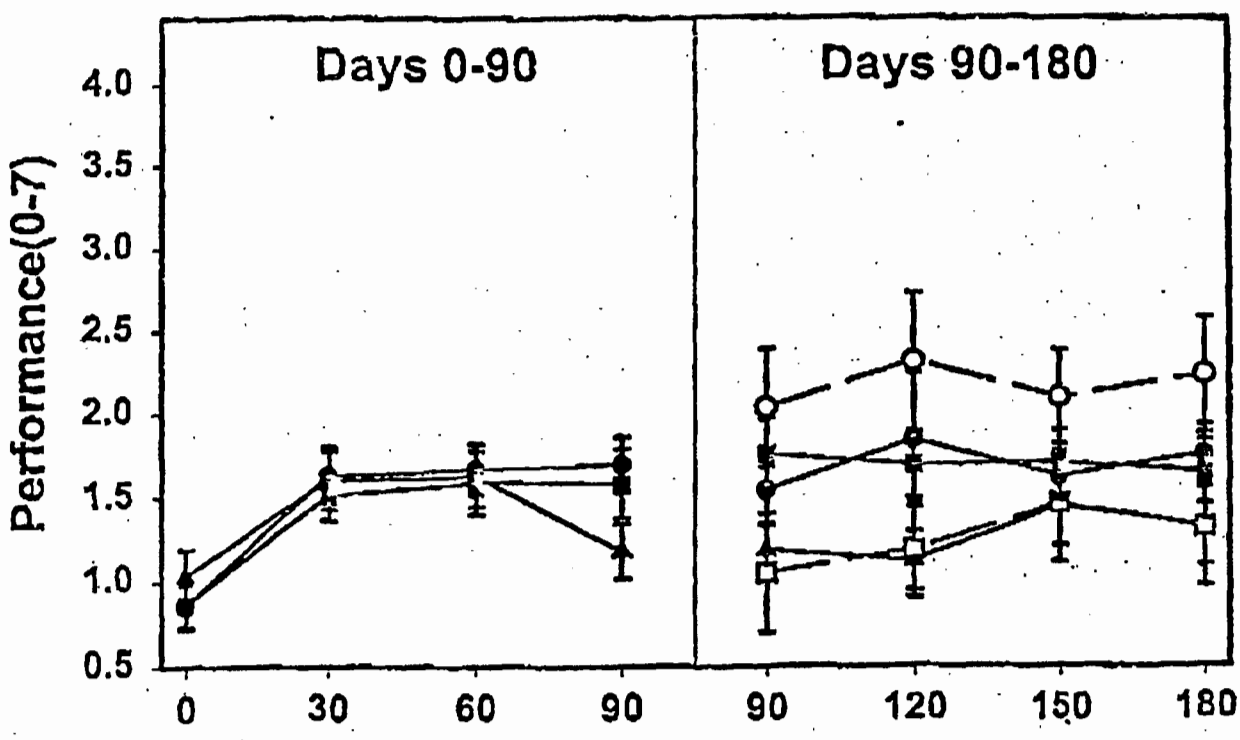


FIG. 29 (b)

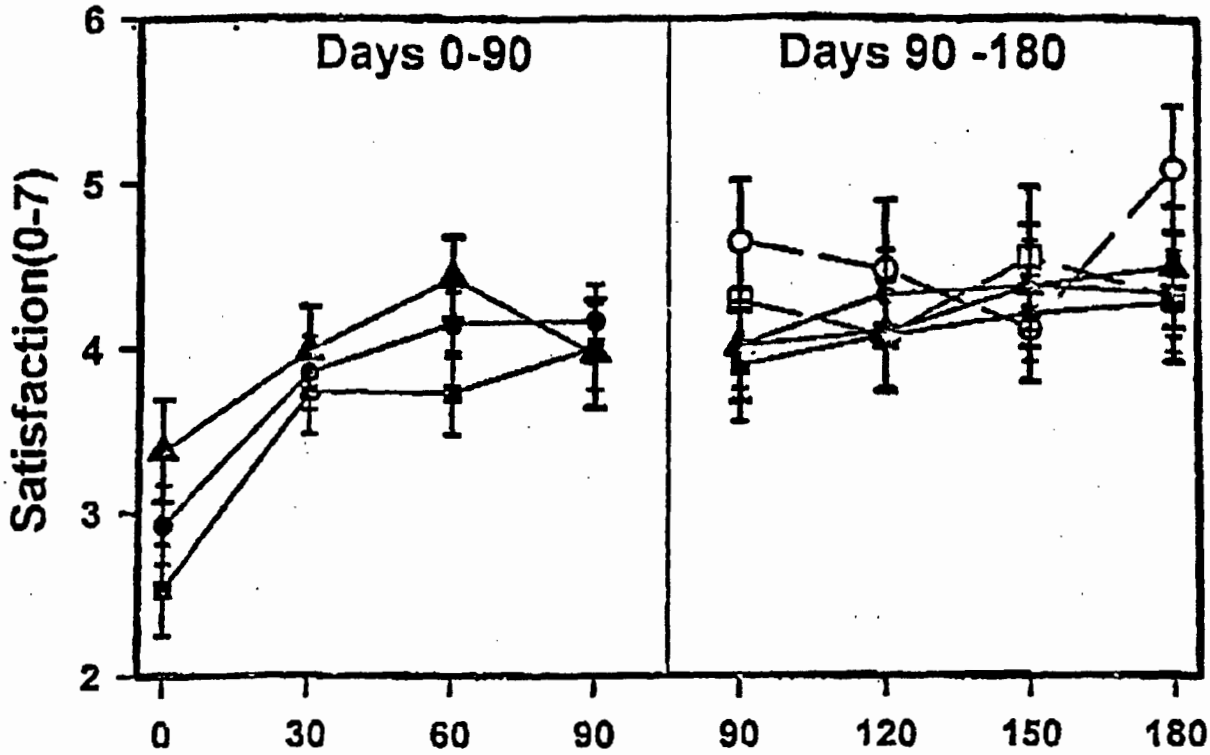


FIG. 29 (c)

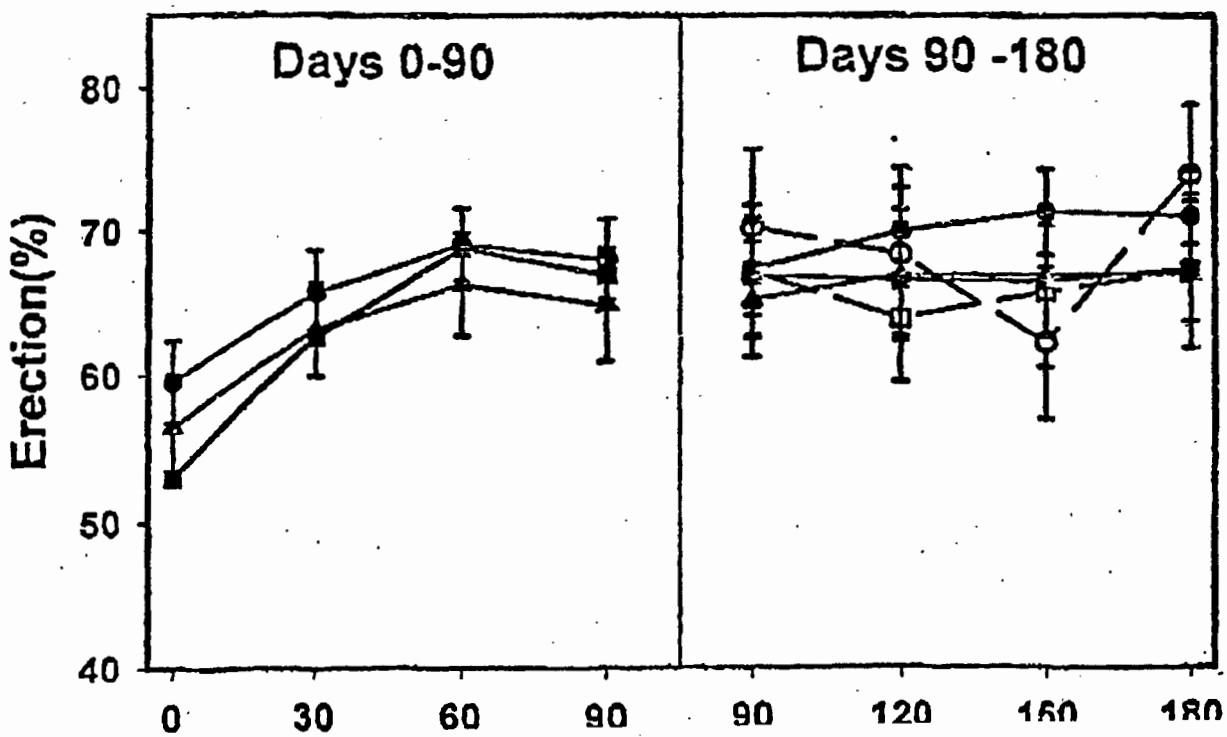


FIG. 30 (a)

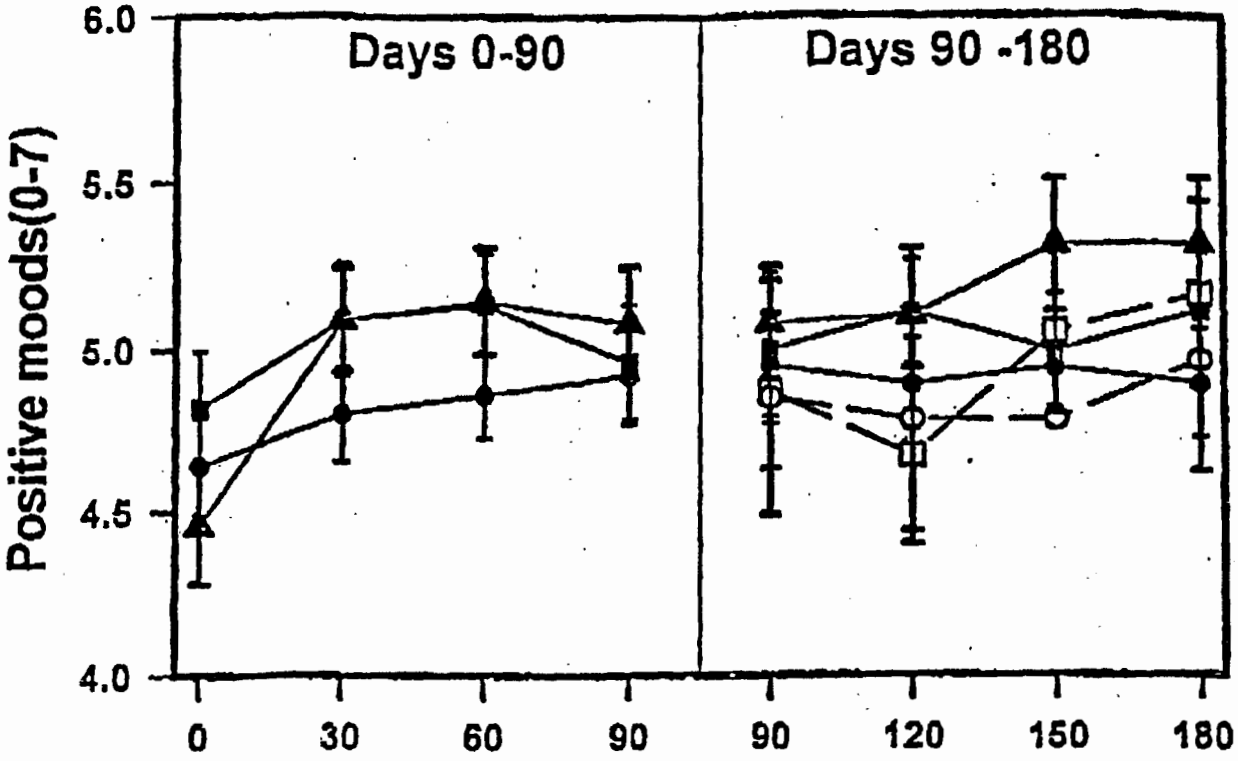


FIG. 30 (b)

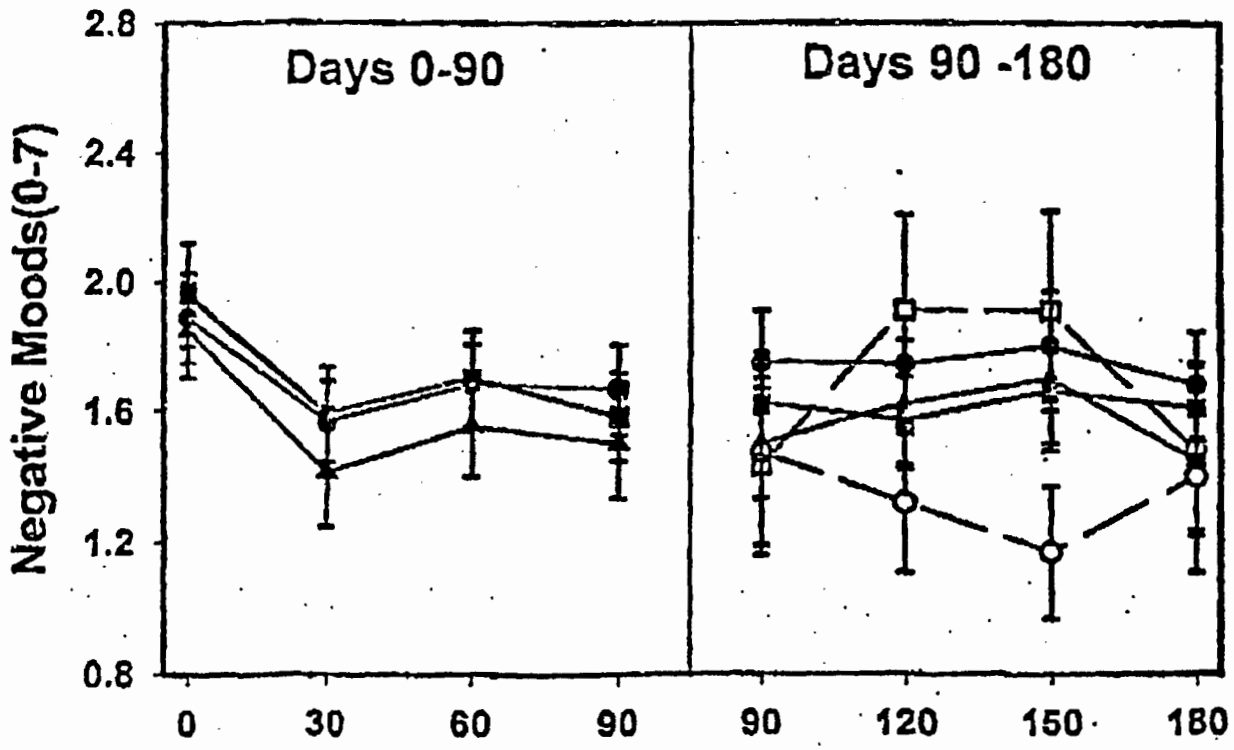


FIG. 31 (a)

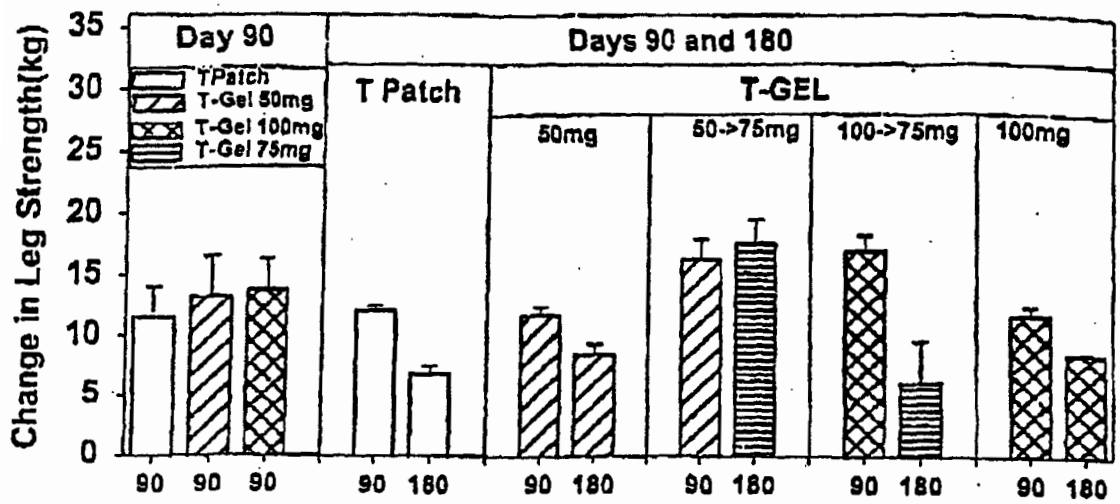


FIG. 31 (b)

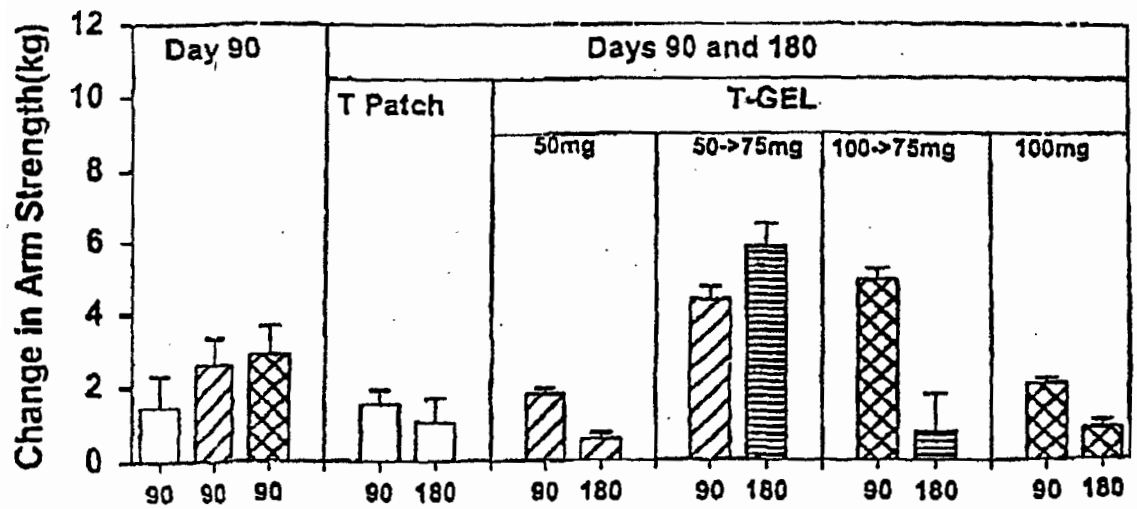


FIG. 32 (a)

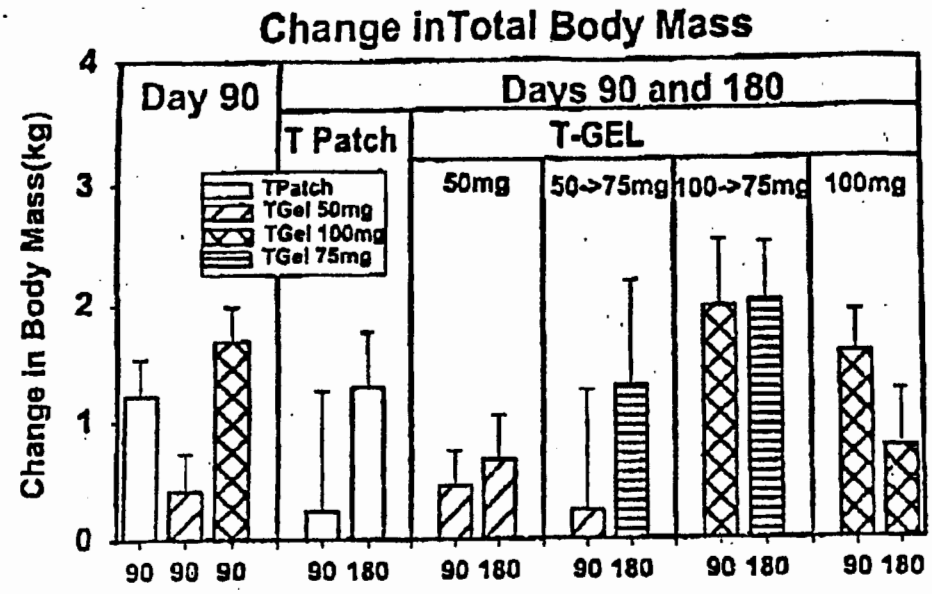


FIG. 32 (b)

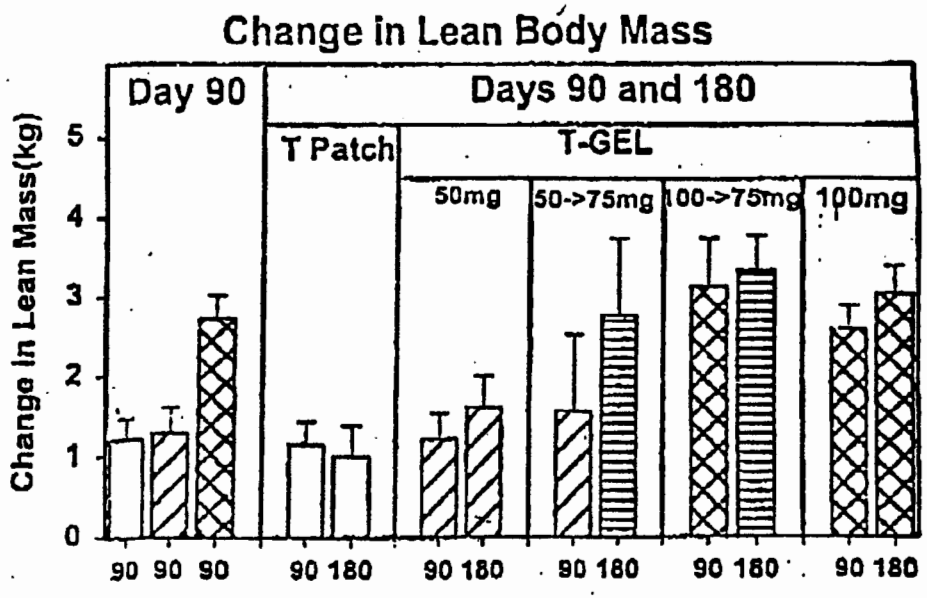


FIG. 32 (c)

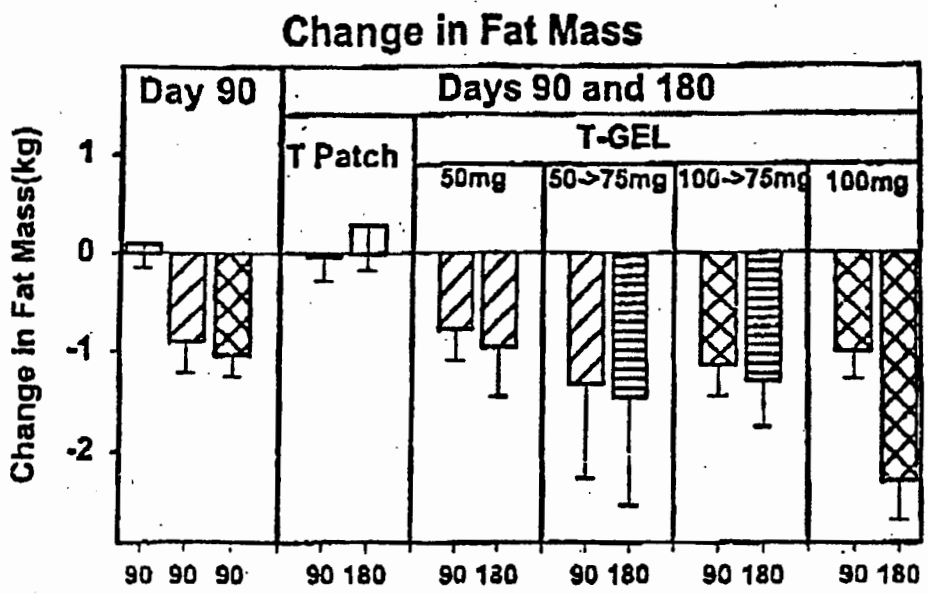


FIG. 32 (d)

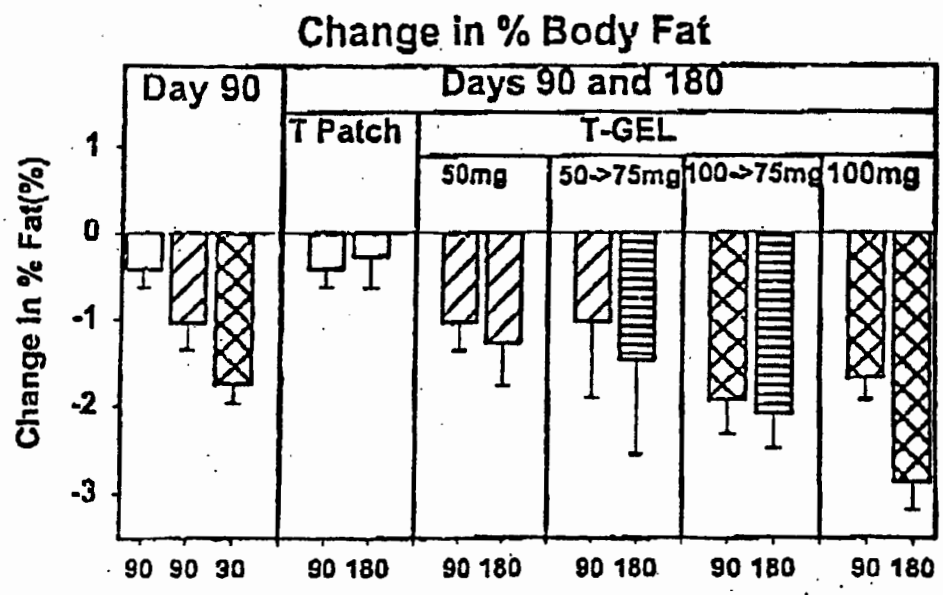


Figure 1: Flow Diagram of Subject Progress Through the Study

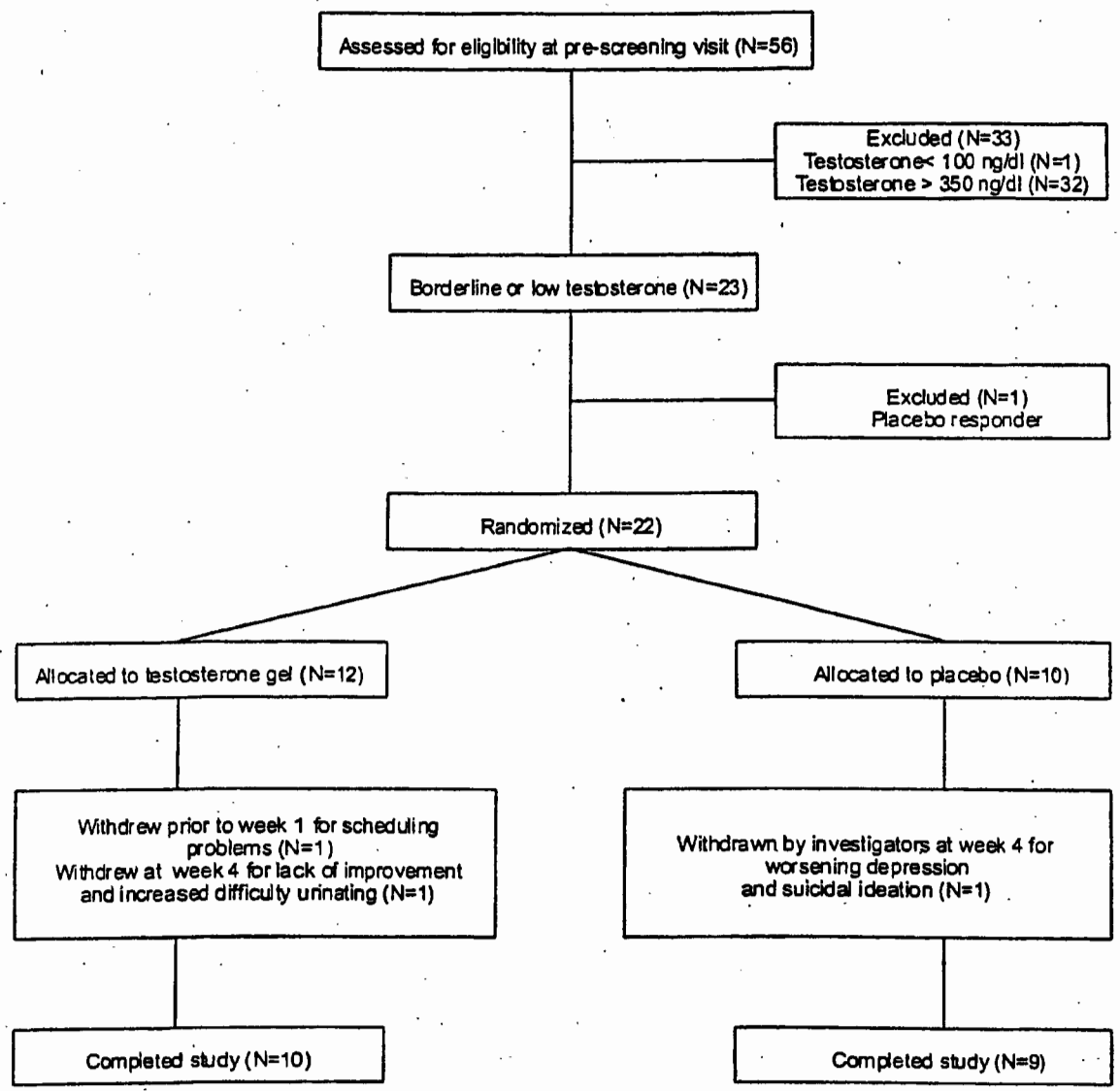


FIG. 33

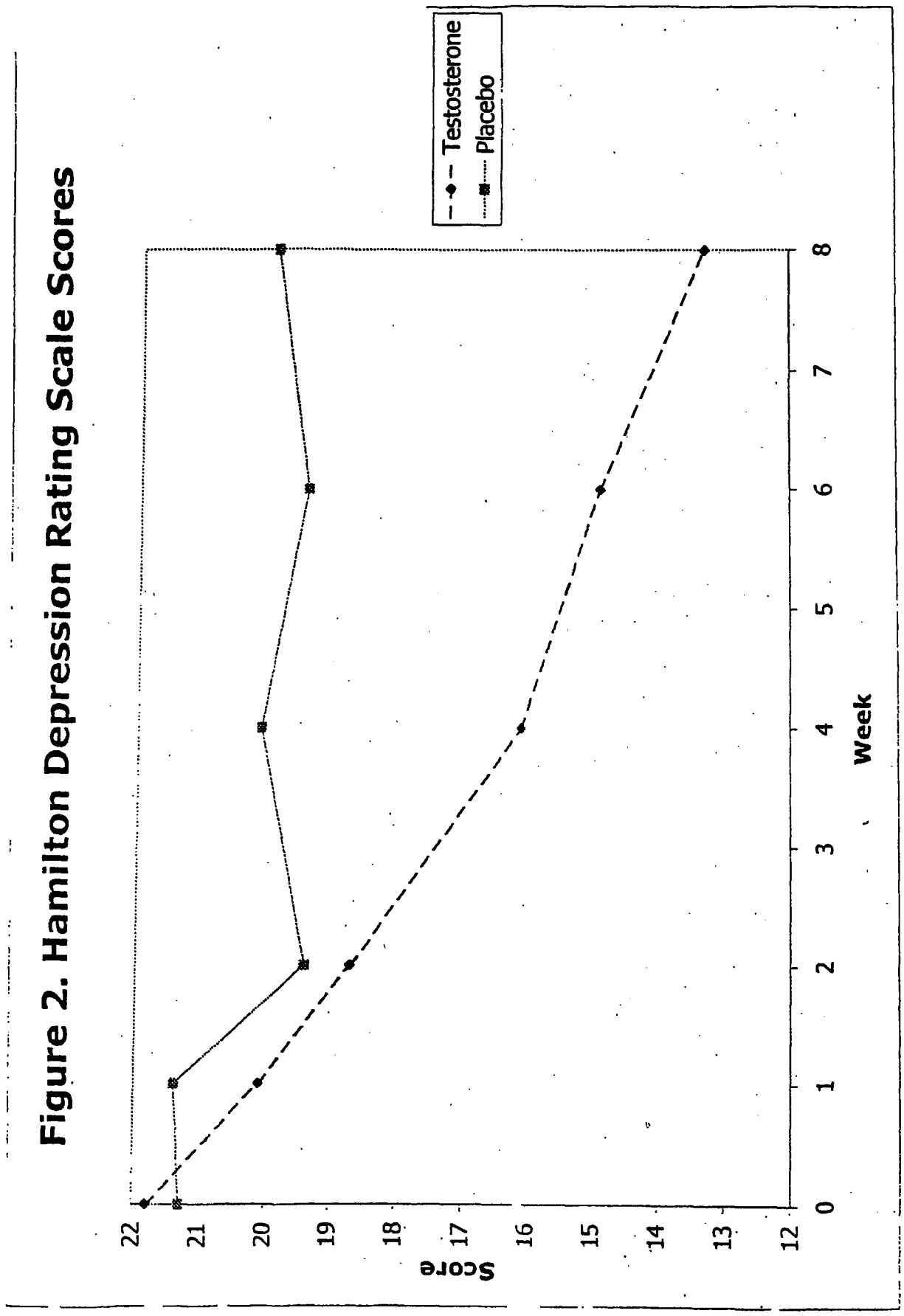

Figure 2. Hamilton Depression Rating Scale Scores
Testosterone
Placebo
Score
22
21
20
19
18
17
16
15
14
13
12
Week
0
1
2
3
4
5
6
7
8

FIG. 34

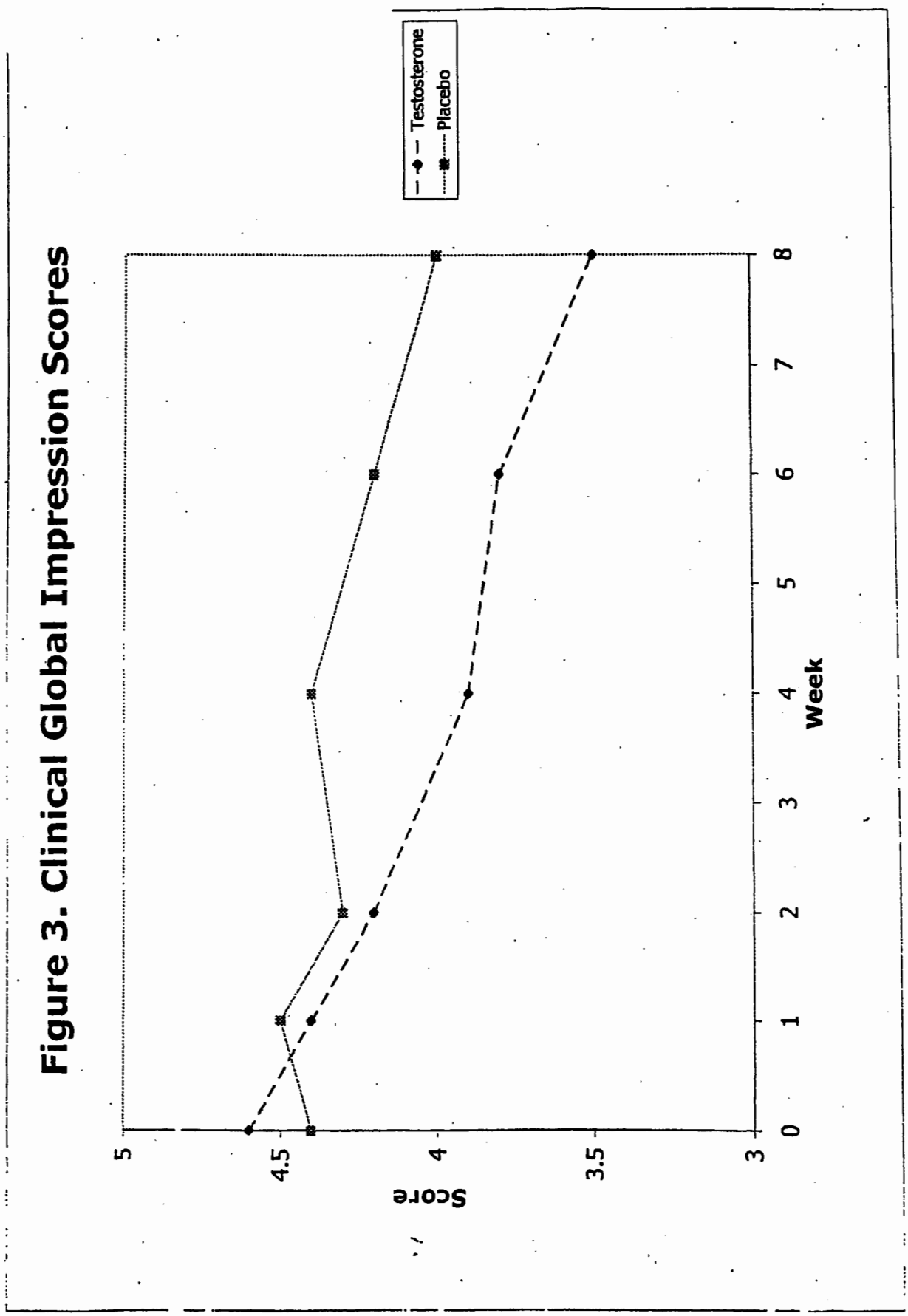

Figure 3. Clinical Global Impression Scores
Testosterone
Placebo
Score
5
4.5
4
3.5
3
Week
0
1
2
3
4
5
6
7
8

FIG. 35

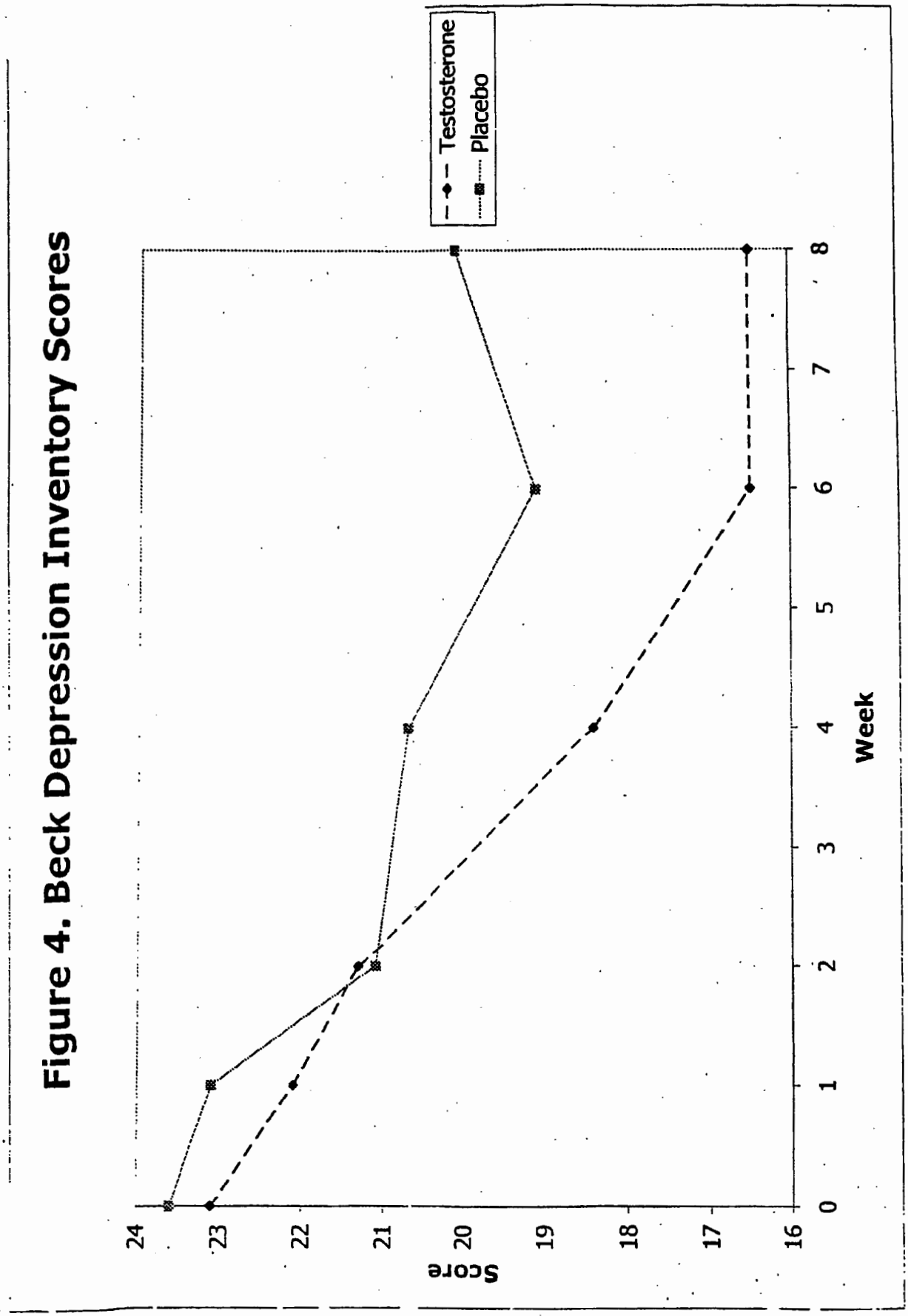

Figure 4. Beck Depression Inventory Scores
Testosterone
Placebo
Score
24
23
22
21
20
19
18
17
16
Week
0
1
2
3
4
5
6
7
8

FIG. 36