

# ENCYCLOPEDIA OF ENDOCRINOLOGY

*by*

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## SECTION I

*Classified Index of the Steroid Hormones and Related Compounds*

## VOLUME IV

**Etiocholane,  
9-Epietiocholane  
Synoptic charts,  
References**

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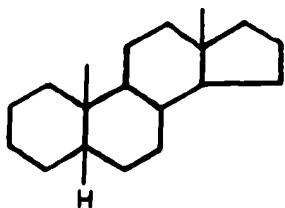
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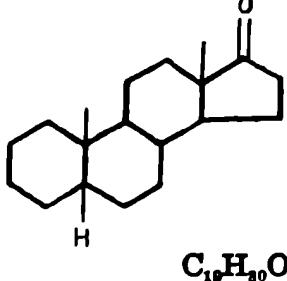
**HANS SELYE**

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**ETIOCHOLANE****ISOLATION:****STRUCTURE AND SYNTHESIS:****M.P.: 78-80°: (1)****PHARMACOLOGY:****REMARKS:****DERIVATIVES:****REFERENCES:**

1. 32388

**ETIOCHOLANE-17-ONE****ISOLATION:****STRUCTURE AND SYNTHESIS:** (1)

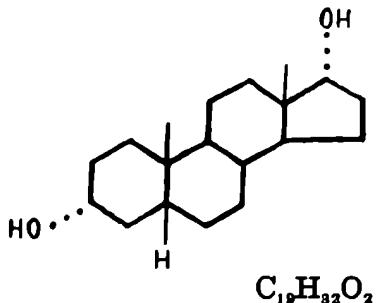
M.P.: 105°: (1,2)

**PHARMACOLOGY:****REMARKS:****DERIVATIVES:**

Semicarb. 265°: (2)

**REFERENCES:**

1. 32388
2. A58554

**ETIOCHOLANE-3( $\alpha$ ),17( $\alpha$ )-DIOL**

ISOLATION: Ur. (♂ Human): (2)

STRUCTURE AND SYNTHESIS: (1,2,3,4,5)

Microbial Synthesis: (3)

M.P.: 232° (u): (2)

231°: (4,5)

236-6.5°: (1)

231° (u): (3)

 $[\alpha]_D^{20} = + 26.5^\circ$  (alc.): (2) $[\alpha]_D^{21} = + 24.8^\circ \pm 1.5^\circ$  (alc.): (1,3)

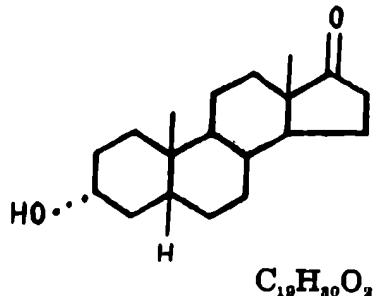
PHARMACOLOGY: Folliculoid: 1: "very act." preliminary report-M (3).

Testoid: 63: 100 $\gamma$  inact.-C (6); 80: 2 mg. inact.- M (6).**REMARKS:****DERIVATIVES:**

Diac. 124.5-5.5°: (2,3)

**REFERENCES:**

1. 68624
2. 69138
3. A15414
4. 72722
5. 75059
6. 63734

**ETIOCHOLANE-3( $\alpha$ )-OL-17-ONE**

**ISOLATION:** Ur. ( $\delta$  Human): (2,4,13)  
 Ur. ( $\varphi$  Human with Ad. tumor): (3,5,14)  
 Ur. ( $\varphi/c$  Human): (10,11)  
 Ur. ( $\delta/c$  Human): (15)  
 Ur. ( $\varphi$  Human): (12)  
 Ur. (Human with breast cancer): (16)

**STRUCTURE AND SYNTHESIS:** (1,2,3,5,10)

**M.P.:** 144-7°: (10)  
 147-8°: (5)  
 148-9°: (3)  
 140° (needles), and 152-3° (platelets): (2,8)  
 150-1°: (13)

$[\alpha]_D = +100^\circ$  (alc.): (2)  
 $[\alpha]_{5461} = +130^\circ$  (alc.): (2)

**PHARMACOLOGY:**

**Testoid:** **29**: inact. up to 1 mg./day-C (7,8); **80**: 2 mg. inact.-M (17); **63**: 100 $\gamma$  inact.-C (17).

**Folliculoid:** **55**: act.? -R (6).

**Anesthetic:** **11**: U. = 12 mg.-R (6).

**REMARKS:** Not ppt. with digitonin (3).

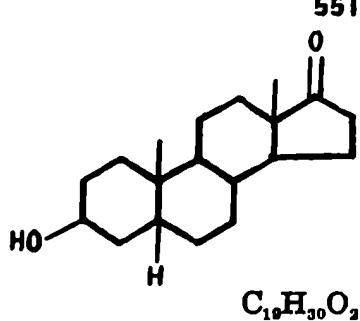
**DERIVATIVES:**

Bz. 163-4.5°: (2,4,5,10,11,13).  
 3-ac.-semicarb. 245-8°: (1); 254-5°: (8)  
 Ac. 95-6°: (3,4,5,11)  
 Semicarb. 241-4°: (9); 264-5°: (18)

**REFERENCES:**

1. 71854
2. 76320
3. 73562
4. A35277
5. 81144
6. A38744
7. 56241
8. 30098
9. 83007
10. 76419
11. 80929
12. 76319
13. A36219
14. A35703
15. A33793
16. A57666
17. 63734
18. A8294

# ETIOCHOLANE-3(β)-OL-17-ONE



**ISOLATION:** Ur. (♂ Human): (absent 2)  
 Ur. (♀ Human): (absent 8)  
 Ur. (cancerous Human): (absent 8)

## STRUCTURE AND SYNTHESIS: (1,3,9)

M.P.: 115-7°: (9)  
 117-9°: (15)  
 152-4°: (3)  
 151-2°: (6,7)  
 150-2°: (5)

$[\alpha]_D^{20} = +88.8^\circ \pm 2^\circ$  (alc.): (3)

## PHARMACOLOGY:

**Testoid:** **29**: 1 mg./day inact.-C (5,6); **80**: 1 mg. inact.-M (14); **63**: 100 $\gamma$  inact.-C (14).  
**Folliculoid:** **55**: 10 mg. inact.-R (12); **128A**: no *metrotropic* act. and no *anti-castration* cell act. with 10 mg. of ac.-R (13).  
**Luteoid:** **46**: 50 mg. of free cpd. and ac. inact.-Rb. (10).  
**Anesthetic:** **11**: U. = 12 mg. of free cpd.; > 20 mg. of ac.-R (4,11); **127**: U. = 1.1 mg. of free cpd.; 1.2 mg. of ac.-Fish (11).

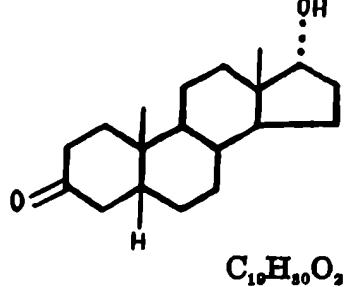
**REMARKS:** Two polymorphic modifications m.p. 117° and m.p. 151-2° (15).

## DERIVATIVES:

Ac. 157-9°; $[\alpha]_D^{17} = +82^\circ \pm 2^\circ$ (acetone): (3)	1. 71854
Ac.-semicarb. { 248-50°: (3,6)	2. A35788
{ 236-40° (u): (1)	3. 81694
Ac.-oxime      188-9° (u): (1)	4. A36744
Semicarb.      { 253°: (7)	5. 56241
{ 244°: (9,15)	6. 30098

## REFERENCES:

1. 71854
2. A35788
3. 81694
4. A36744
5. 56241
6. 30098
7. 83007
8. 80906
9. 83173
10. A56335
11. A38070
12. A37486
13. A56752
14. 63734
15. 78415

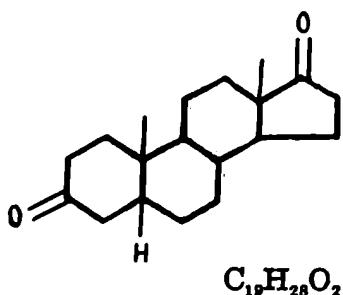
**ETIOCHOLANE-3-ONE-17( $\alpha$ )-OL****ISOLATION:****STRUCTURE AND SYNTHESIS:** (1,2,3)**M.P.:** 139-40°: (1,2,3) $[\alpha]_D^{20} = + 32.7^\circ$  (alc.): (2)**PHARMACOLOGY:****REMARKS:****DERIVATIVES:**

Ac.       $143^\circ$      $[\alpha]_D^{20} = + 27.1^\circ$  (alc.): (2)  
 Oxime     $211-2^\circ$ :     (1)

**REFERENCES:**

1. 69138
2. A15414
3. 78415

## ETIOCHOLANE-3,17-DIONE



## ISOLATION:

## STRUCTURE AND SYNTHESIS: (1,2,3,4)

Microbial Synthesis: (1)

M.P.: 128°: (4)

132-4°: (3)

131-2° (u): (1)

 $[\alpha]_D^{21} = +115.2^\circ$  (alc.): (4) $[\alpha]_D^{17} = +110.5^\circ \pm 3^\circ$  (alc.): (3) $[\alpha]_D^{18} = +113^\circ$  (alc.): (1)

## PHARMACOLOGY:

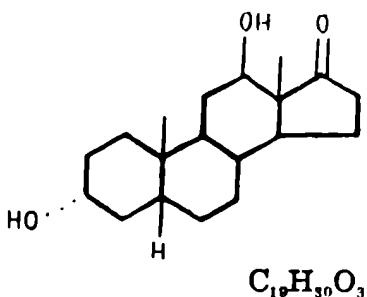
## REMARKS:

## DERIVATIVES:

4-Br. 195° (u): (1)

## REFERENCES:

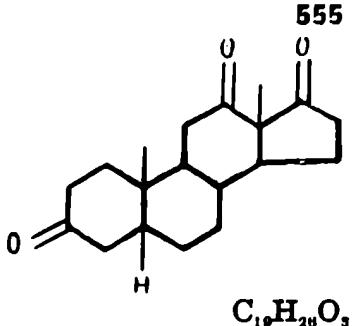
1. A15413
2. 72722
3. 81694
4. 69138

**ETIOCHOLANE-3( $\alpha$ ),12( $\beta$ )-DIOL-17-ONE****ISOLATION:****STRUCTURE AND SYNTHESIS:** (1)**M.P.:****PHARMACOLOGY:****REMARKS:****DERIVATIVES:**

Diac. 205-6°: (1)

**REFERENCES:**

1. A37849

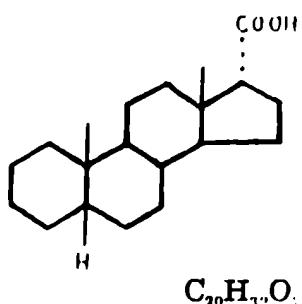
**ETIOCHOLANE-3,12,17-TRIONE****ISOLATION:****STRUCTURE AND SYNTHESIS:** (1,2,3)**M.P.:****PHARMACOLOGY:**

**REMARKS:** Cpd. m.p. 189-91°;  $[\alpha]_{D}^{25} = +235^\circ \pm 2.5^\circ$  (alc.) to which this structure had been assigned (1) was probably impure 17( $\alpha$ )-[1-ketoethyl]-etiocholane-3,12-dione (2).

**DERIVATIVES:****REFERENCES:**

1. 72173
2. 78852
3. A37849

**17(α)-CARBOXY-ETIOCHOLANE**  
**(Etiocholanic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2)

M.P.:  $219^\circ$ : (2)  
 $220\text{-}2^\circ$ : (3)

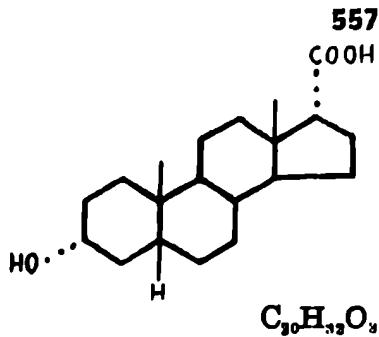
**PHARMACOLOGY:**

**REMARKS:**

**DERIVATIVES:**

		(1,2)	REFERENCES:
Me. ester	$97\text{-}100^\circ$ :	(1,2)	1. 78851
Et. ester	$\left\{ \begin{array}{l} 78\text{-}9^\circ; \\ 77.5\text{-}8.5^\circ; \end{array} \right.$	$[\alpha]_{5461} = +49.5^\circ$ (pyridine): (2)	2. A58554
		$[\alpha]_{5461} = +52.5^\circ$ (pyridine): (4)	3. A54647
			4. A58552

**17( $\alpha$ )-CARBOXY-ETIOCHOLANE-3( $\alpha$ )-OL  
(Etiolithocholic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2,3,4,5)

M.P.: 274-6°: (1,4,6)  
270-2°: (3)

$[\alpha]_D^{18} = +50^\circ \pm 2^\circ$  (dioxane): (4)

**PHARMACOLOGY:**

**REMARKS:** Not ppt. with digitonin (5)

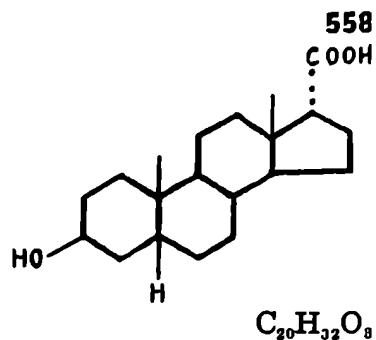
**DERIVATIVES:**

Me. ester	143-4°:	(1,4)
Ac.	{ 230-2°: (4,6,7); $[\alpha]_D = +81^\circ$ ( $\text{CHCl}_3$ ): 226-9°; $[\alpha]_{5461}^{25} = +86.4^\circ \pm 3^\circ$ (alc.):	(7) (3)
Ac.-me. ester	113-9°:	(4)
Ac.-acid Cl	(not characterized):	(5)

**REFERENCES:**

1. A54647
2. 79003
3. A58405
4. A58406
5. 78851
6. 75893
7. 83012

**17( $\alpha$ )-CARBOXY-ETIOCHOLANE-3( $\beta$ )-OL  
( $3\beta$ -hydroxy-etiocholanic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2)

M.P.: 220-5°: (1)  
226-8°: (2)  
224-6°: (3)

$[\alpha]_D = + 36.8^\circ$  ( $\text{CHCl}_3$ ): (2)

**PHARMACOLOGY:**

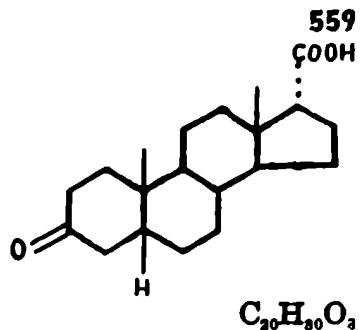
**REMARKS:** Ppt. with digitonin (1); changes from rosettes to granules at 200° (1).

**DERIVATIVES:**

Me. ester	129-31°:	(2,3)	1. 78851
Me. ester	133-5°; $\{ [\alpha]_D^{15} = + 57^\circ \pm 4^\circ$ (acetone) : (1)		2. 83012
	$[\alpha]_{5461}^{15} = + 68^\circ \pm 3^\circ$ (acetone) : (1)		3. 83559
Ac.-me. ester	125-6°; $\{ [\alpha]_D^{15} = + 54^\circ \pm 3^\circ$ (acetone) : (1)		4. A58440
Ac.	$\{ 162-74^\circ:$	(1)	
	$\{ 177-9^\circ:$	(4)	
Ac.-acid Cl.	(not characterized) :	(1,4)	

**REFERENCES:**

**17( $\alpha$ )-CARBOXY-ETIOCHOLANE-3-ONE  
(3-keto-etiocholanic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2,3)

**M.P.: 246-9°:** (2,3)

**PHARMACOLOGY:**

**REMARKS:**

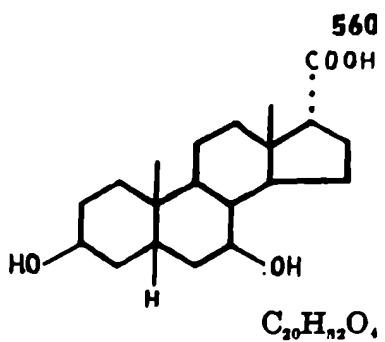
**DERIVATIVES:**

Me. ester { 145-7°: (1)  
              148-9°: (2)  
4-Br.        190-2°: (4)

**REFERENCES:**

1. 78851
2. A54647
3. 75893
4. A58405

**17( $\alpha$ )-CARBOXY-ETIOCHOLANE-3( $\beta$ ),7( $\beta$ )-DIOL  
(3,7-dihydroxy-etiocholane-17-acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.: 165-6°:** (1)

**PHARMACOLOGY:**

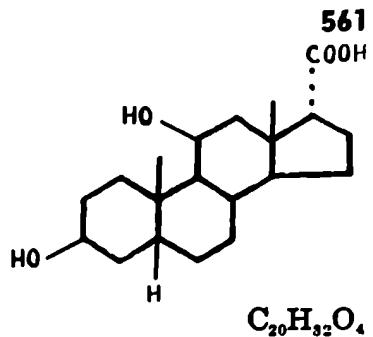
**REMARKS:**

**DERIVATIVES:**

**REFERENCES:**

1. A37850

**17( $\alpha$ )-CARBOXY-ETIOCHOLANE-3( $\beta$ ),11( $\beta$ )-DIOL  
(3,11-dihydroxy-etiocholanic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 280-6°: (1)

**PHARMACOLOGY:**

**REMARKS:** Position of -OH at C<sub>11</sub> uncertain (1).

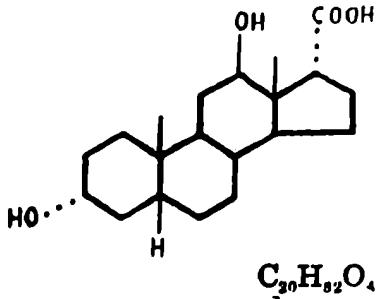
**DERIVATIVES:**

Me. ester 180-3°: (1)

**REFERENCES:**

1. A15677

**17( $\alpha$ )-CARBOXY-ETIOCHOLANE-3( $\alpha$ ),12( $\beta$ )-DIOL  
 (3( $\alpha$ ),12( $\beta$ )-dihydroxy-etiocholanic acid; etiodesoxy-cholic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2)

M.P.: 283-6°: (2)

$[\alpha]_{D}^{25} = +102^\circ \pm 1.5^\circ$  (alc.?): (2)

**PHARMACOLOGY:**

**REMARKS:**

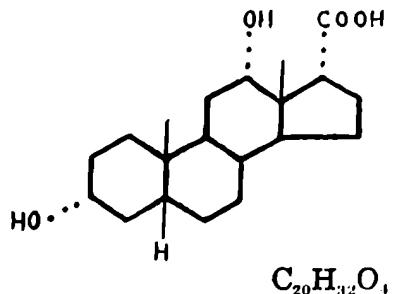
**DERIVATIVES:**

Diac. 196-8°: (1)  
 12-ac. 260-1°: (1)

**REFERENCES:**

1. 78852
2. 72173

**17(α)-CARBOXY-ETIOCHOLANE-3(α),12(α)-DIOL.**  
**(12-epi-etiohydroxy-cholic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:**

**PHARMACOLOGY:**

**REMARKS:**

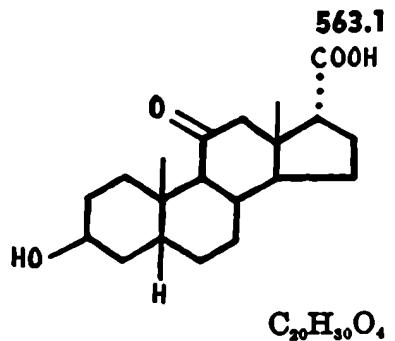
**DERIVATIVES:**

Me. ester       $176-8^\circ$ ;  $[\alpha]_{D}^{24} = +38.9^\circ \pm 3^\circ$  (me. alc.) : (1)  
 $[\alpha]_{5461}^{26} = +49.4^\circ \pm 2.4^\circ$  (alc.) : (1)  
 Me. ester-3-bz.  $136-8^\circ$ ;  $[\alpha]_{5461}^{26} = +62^\circ \pm 3^\circ$ : (1)

**REFERENCES:**

1. A58592

**17( $\alpha$ )-CARBOXY-ETIOCHOLANE-3( $\beta$ )-OL-11-ONE  
( $3\beta$ -hydroxy-11-keto-etio-cholanic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:** 204-7°: (1)

**PHARMACOLOGY:**

**REMARKS:**

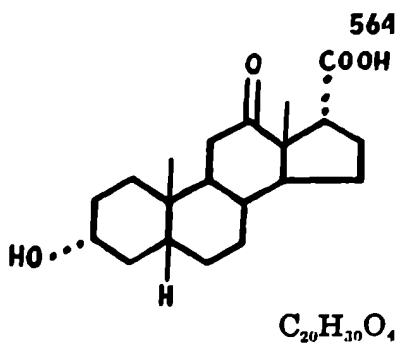
**DERIVATIVES:**

Me. ester	170-4°: (1)
Ac.	112° + 173-6°: (1)
Ac.-me. ester	129-31°: (1)

**REFERENCES:**

1. 84184

**17( $\alpha$ )-CARBOXY-ETIOCHOLANE-3( $\alpha$ )-OL-12-ONE  
(3-hydroxy-12-keto-etio-cholic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 213-5°: (1)

$[\alpha]_D = +127.2^\circ$  (dioxane): (1)

**PHARMACOLOGY:**

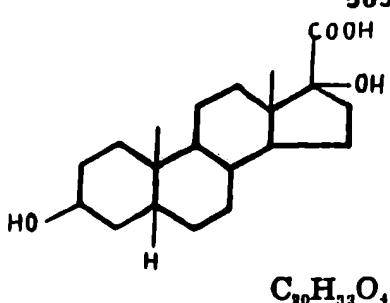
**REMARKS:**

**DERIVATIVES:**

Ac. 205-6°: (1)

**REFERENCES:**

1. 84133

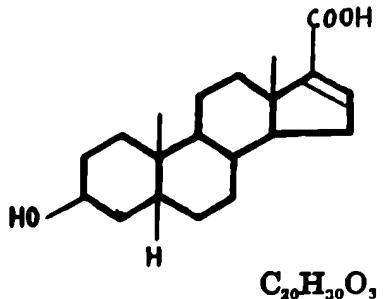
**17( )-CARBOXY-ETIOCHOLANE-3( $\beta$ ),17( )-DIOL****ISOLATION:****STRUCTURE AND SYNTHESIS:** (1)**M.P.:****PHARMACOLOGY:****REMARKS:****DERIVATIVES:**

5-Cl-3,17-diac.-amide 200°: (1)

**REFERENCES:**

1. 75751

**17-CARBOXY- $\Delta^{16}$ -ETIOCHOLENE-3( $\beta$ )-OL  
 (3( $\beta$ )-hydroxy-etio-16-cholenic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:** 254-6°: (1)

**PHARMACOLOGY:**

**REMARKS:**

**DERIVATIVES:**

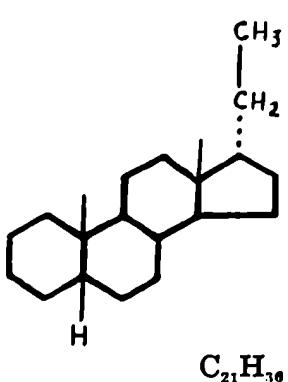
Me. ester 150-2°: (1)

**REFERENCES:**

- 1. 83559

**17( $\alpha$ )-ETHYL-ETIOCHOLANE  
(Pregnane)**

ISOLATION:



STRUCTURE AND SYNTHESIS: (1,2,3)

M.P.: 78°: (1)  
83.5°: (2)  
82-3°: (3)

$[\alpha]_D^{21} = +20^\circ$  ( $CHCl_3$ ): (3)

PHARMACOLOGY:

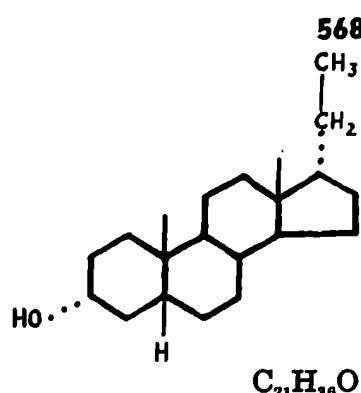
REMARKS:

DERIVATIVES:

REFERENCES:

1. 72920
2. 2486
3. 72132

**17( $\alpha$ )-ETHYL-ETIOCHOLANE-3( $\alpha$ )-OL  
(*epi*-pregnanol-3)**



**ISOLATION:** Ur. (preg. human) : (1,4)

**STRUCTURE AND SYNTHESIS:** (1,2,3,4).

**M.P.:** 146°: (1,2)  
148°: (3,4)

**PHARMACOLOGY:**

**REMARKS:**

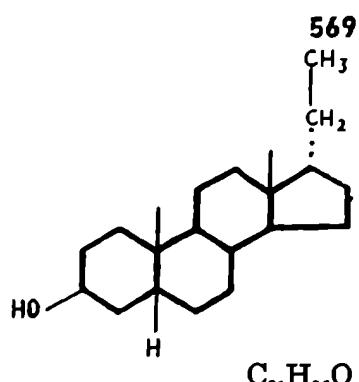
**DERIVATIVES:**

Ac. 106°: (3)

**REFERENCES:**

1. 73720
2. 75179
3. 72928
4. 82124

**17( $\alpha$ )-ETHYL-ETIOCHOLANE-3( $\beta$ )-OL  
(pregnane-3( $\beta$ )-ol)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.: 144°:** (1)

**PHARMACOLOGY:**

**REMARKS:**

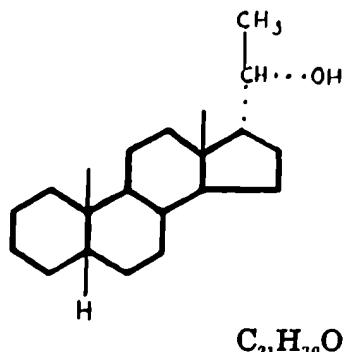
**DERIVATIVES:**

Ac. 87°: (1)

**REFERENCES:**

1. 72928

**17( $\alpha$ )-[1( $\alpha$ )-HYDROXYETHYL]-ETIOCHOLANE  
(pregnane-20 $\alpha$ -ol)**



ISOLATION:

STRUCTURE AND SYNTHESIS: (1)

M.P.: 146°: (1)

PHARMACOLOGY:

REMARKS:

DERIVATIVES:

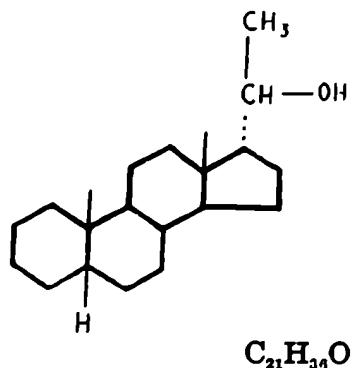
Ac. 130°: (1)

REFERENCES:

1. 75328

**17( $\alpha$ )-[1( $\beta$ )-HYDROXYETHYL]-ETIOCHOLANE  
(pregnane-20( $\beta$ )-ol)**

ISOLATION:



STRUCTURE AND SYNTHESIS:

M.P.:

PHARMACOLOGY:

REMARKS: Difficulty in crystallizing free cpd. (1)

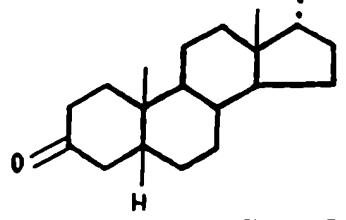
DERIVATIVES:

Ac. 85°: (1)

REFERENCES:

1. 75328

**17( $\alpha$ )-ETHYL-ETIOCHOLANE-3-ONE  
(pregnane-3-one)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2)

**M.P.:** 111°: (1)  
115°: (2)

**PHARMACOLOGY:**

**REMARKS:**

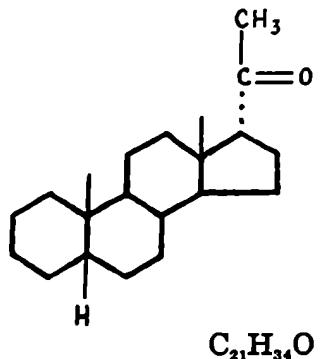
**DERIVATIVES:**

4-Br.	137°: (1)
4-pyridinium-Br.	235°: (1)
2:4-dinitrophenylhydrazone	163°: (2)
Semicarb.	133°: (2)

**REFERENCES:**

1. 75179
2. 72928

**17( $\alpha$ )-[1-KETOETHYL]-ETIOCHOLANE  
(pregnanone-20)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2,3,4)

M.P.: 115-6°: (1,2)

**PHARMACOLOGY:**

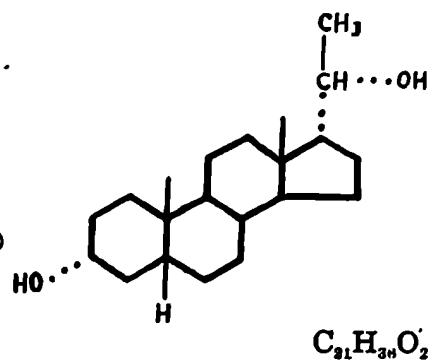
**REMARKS:**

**DERIVATIVES:**

Semicarb.	237°:	(1,3)	1. 75328
2:4-dinitrophenylhydrazone	240°:	(1)	2. 80068
17 <sup>a</sup> -Cl.	$[\alpha]_D^{25} = +125^\circ$ ( $\text{CHCl}_3$ ): (5)		3. 2480
17 <sup>a</sup> -diazoo	(not characterized):	(5)	4. A58554 5. A58440

**REFERENCES:**

**17( $\alpha$ )-[1( $\alpha$ )-HYDROXYETHYL]-ETIOCHOLANE-3( $\alpha$ )-OL.  
(Pregnandiol; 3(trans)-dihydroxy-pregnane)**



**ISOLATION:** Ur. (preg. human):

(3,4,6,13,14,35,40,52)

Ur. (preg. cow):

(11)

Ur. (preg. mare):

(45,47,51)

Ur. (preg. sow):

(absent 33)

Ur. (preg. monkey):

(26)

Ur. (preg. human as Na. glucuronide): (18,19,20)

Ur. (bull):

(12)

Ur. (ox):

(absent 31)

Ur. (♀ human as Na. glucuronide): (50)

Ur. (♀ /c human):

(48)

Ur. (♂ human):

(49)

Ur. (♀ human with breast cancer): (41)

**STRUCTURE AND SYNTHESIS:** (1,2,7,8,9,15,16)

**M.P.:** 234.5° (u): (3,8,9)

237.7.5°: (6)

$[\alpha]_D^{20} = + 27.4^\circ$  (alc.) ;  $[\alpha]_{5461}^{20} = + 30.4^\circ$  (alc.) : (6)

235.7°: (26)

240°: (10,12)

242°: (11,16)

237.9°: (1,7,32)

243.4°: (46)

**PHARMACOLOGY:**

**Luteoid:** **49:** Up to 70 mg. of free cpd. and 50 mg. of diac. inact.-Rb. (21,44); **46:** 50 mg. inact.-Rb. (5); **27:** 0.8 mg. inact.-G (25); **36A:** 150 mg. inact.-Rb. (22); **136:** 100 mg. inact.-G (22); "Diac." increases *metrotropic* act. of estrone-R (34).

**Corticoid:** **84:** up to 10 mg./day inact.-R (23).

**Folliculoid:** **5?**: 10 mg. inact.-M (22); **4:** up to 0.26 mg. inact.-M (3); **55:** up to 20 mg. of free cpd. or Na. glucuronide inact.-R (30,38); **128C:** 10 mg./day inact.-R (38); **2:** 0.6 mg. of diac. act.-M (34); **39B:** at 1 mg. slight *metrotropic* act. if any.-R (34); **58:** slight act. at 0.5 mg./day of diac.-R (34); **60:** act. < pregnanolone < pregnanedione-B (27); **20:** slight act.-R (34); **38:** 3-9 mg. exhibits no mitogenic act. on vag.-R (36); **133B:** no *anti-Leydig* cell act.-R (39); **128A:** no *metrotropic* act. and no *anti-castration* cell act. at 2 mg.-R (42); "enhances estrogen and progestin metabolism"-Woman (24).

**Testoid:** **75:** 0.5 mg./day of diac. slight act. if any-R (34); **133A:** 10 mg./day inact.-R (39).

**Anti-folliculoid:** **120?**: "no mucification"-M (22); **38:** 3-9 mg. inhibits vag. cornification caused by 10-50 $\gamma$  of estrone-R (36); **129:** Hyp. 9( $\pm 1$ )%/10 mg., Ad. 2( $\pm 5$ )%/10 mg., Te. 22( $\pm 7$ )%/10 mg.-R (43).

**Gonadotropic:** **21:** 10 mg. of free cpd. or ac. inact.-X (29); **126:** up to 30 mg. inact.-R (22,34).

**Anesthetic:** **11:** U. > 20 mg. of free cpd. or Na. glucuronide-R (17,30); **127:** U. = 1 mg.-Fish (17); **127:** 7 mg. of Na. glucuronide inact.-Fish (43).

**REMARKS:**

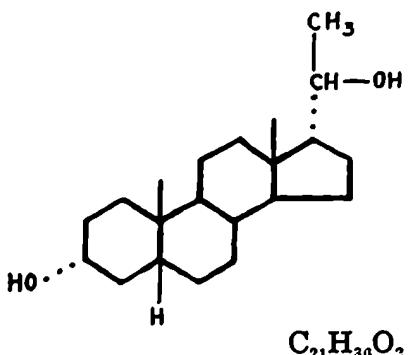
## DERIVATIVES:

Glucuronide	179-80°:	(18)
Na.-glucuronide	268-71°:	(6,18,19,20)
Diac.	{ 181.5-2.5°; $[\alpha]_D^{20} = + 35^\circ$ (benzene);	
	{ $[\alpha]_{Mn}^{20} = + 42.5^\circ$ (benzene);	(3,6,10,12,16,18)
3-ac.	174-5.5°:	(37)
3-ac.-17'-tosylate	112-5°:	(37)

## REFERENCES:

- |           |            |            |            |            |
|-----------|------------|------------|------------|------------|
| 1. 77854  | 12. 73730  | 23. 75903  | 34. 71505  | 45. A58407 |
| 2. 78242  | 13. 22385  | 24. 81127  | 35. 22385  | 46. 31041  |
| 3. 2896   | 14. 1605   | 25. A7923  | 36. 72400  | 47. 70091  |
| 4. 2664   | 15. 8041   | 26. 83271  | 37. A37545 | 48. 80929  |
| 5. A56335 | 16. 80869  | 27. A30097 | 38. A37486 | 49. A36219 |
| 6. 67685  | 17. A38070 | 28. 27944  | 39. A38086 | 50. A19782 |
| 7. 70092  | 18. 64401  | 29. 75731  | 40. A54805 | 51. 76880  |
| 8. 71854  | 19. 67194  | 30. A36744 | 41. A57666 | 52. 2486   |
| 9. A16456 | 20. A8587  | 31. 75573  | 42. A56752 |            |
| 10. 75328 | 21. 29442  | 32. 78240  | 43. 100000 |            |
| 11. 72929 | 22. 3859   | 33. 77851  | 44. 33809  |            |

**17( $\alpha$ )-[1( $\beta$ )-HYDROXYETHYL]-ETIOCHOLANE-3( $\alpha$ )-OL  
(pregnane-3( $\alpha$ ),20( $\beta$ )-diol)**



ISOLATION: Ur. (ox): (absent 5)

STRUCTURE AND SYNTHESIS: (1,2)

M.P.: 228°: (1)  
231°: (2,3)  
232-4°: (4)

PHARMACOLOGY:

REMARKS:

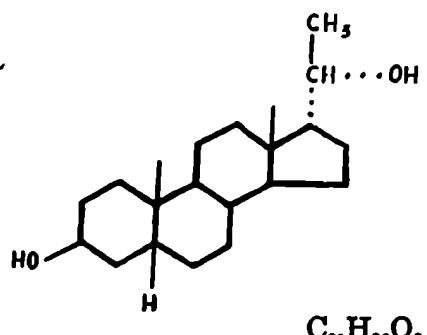
DERIVATIVES:

Diac. 110°: (3,4)

REFERENCES:

1. 75181
2. 80909
3. 70092
4. 78240
5. 75573

**17( $\alpha$ )-[1( $\alpha$ )-HYDROXYETHYL]-ETIOCHOLANE-3( $\beta$ )-OL  
(*n*-pregnanediol)**



**ISOLATION:** Ur. (ox): (absent 5)

**STRUCTURE AND SYNTHESIS:** (1,2,3)

**M.P.:** 182°: (1)  
189-90.5° (u): (2,4)

$[\alpha]_D^{23} = +44.6^\circ \pm 4.5^\circ$  (alc.): (2)

**PHARMACOLOGY:** Testoid: 63: 500 $\gamma$  inact.-C (4).

**REMARKS:**

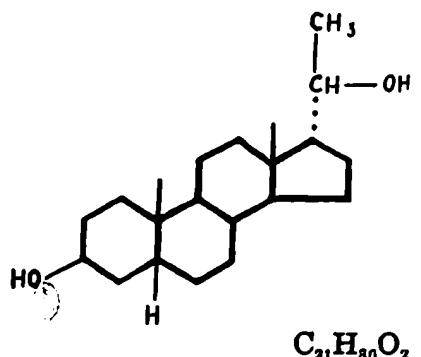
**DERIVATIVES:**

17 <sup>1</sup> -ac.	147.5°:	(1)
Diac.	141°:	(1,3)
Digitonide	195-209° (u):	(2)

**REFERENCES:**

1. 70092
2. A16456
3. 78240
4. 71854
5. 75573

**17( $\alpha$ )-[1( $\beta$ )-HYDROXYETHYL]-ETIOCHOLANE-3( $\beta$ )-OL  
(iso-pregnaneol)**



ISOLATION: Ur. (ox): (absent 3)

STRUCTURE AND SYNTHESIS: (1,2,4)

M.P.: 178°: (1)

173.5°: (4)

174°: (2)

PHARMACOLOGY:

REMARKS: Ppt. with digitonin (2).

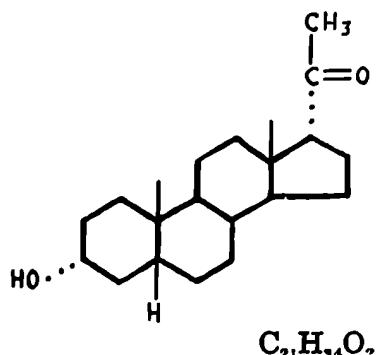
DERIVATIVES:

Diac. 111°: (2)

REFERENCES:

1. 75181
2. 78240
3. 75573
4. 70095

**17(α)-[1-KETOETHYL]-ETIOCHOLANE-3(α)-OL  
(epi-pregnanolone)**



ISOLATION: Ur. (preg. human) : (9,10)  
Ur. (preg. sow) : (2)

STRUCTURE AND SYNTHESIS: (1,2,3,4,6,9,12,13)

M.P.: 136°: (9)

134° and 148°: (5)

149°: (1)

144°: (2)

145-7°: (6)

148-9° (u) : (3,4)

$[\alpha]_D^{10} = +113.8^\circ \pm 1.2^\circ$  (alc.) : (3,4)

$[\alpha]_{5461}^{25} = +129^\circ \pm 3^\circ$  (alc.) : (13)

PHARMACOLOGY: Testoid: 63: 500 $\gamma$  inact.-C (3).

Folliculoid: 60: "pregnanolone" less act. than pregnanediol-B (8).

REMARKS:

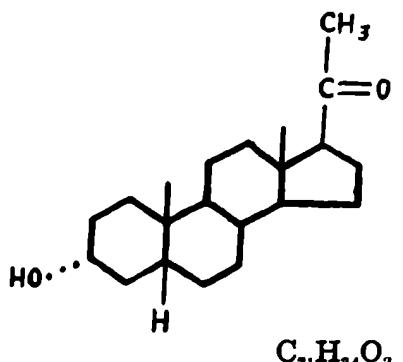
DERIVATIVES:

2:4-dinitrophenylhydrazone	229°:	(5)
Ac.	{ 99° (u); $[\alpha]_D^{20} = +123.7^\circ$ (alc.) : (3,12)	
	{ 112°: (1,4,6)	
Semicarb.	248°: (1,9)	
17 <sup>2</sup> -diazo.	174-8° (crude) : (7)	
3-ac.-17 <sup>2</sup> -diazo	{ 76-84°: (7)	
	{ 140-2°; $[\alpha]_D = +189^\circ$ ( $\text{CHCl}_3$ ) : (11)	
17 <sup>2</sup> -Cl.	95-100°: (7)	
Oxime	224-6° (u) : (3,4)	

REFERENCES:

1. 70093
2. 77851
3. 71854
4. A18456
5. 72028
6. 80969
7. 78851
8. A30097
9. 70096
10. 73729
11. 83012
12. A56972
13. A58405

**17( $\beta$ )-[1-KETOETHYL]-ETIOCHOLANE-3( $\alpha$ )-OL.  
(17-Iso-epi-pregnanolone)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 82-6° + 116-9°: (1)

**PHARMACOLOGY:**

**REMARKS:** Structure uncertain (1).

**DERIVATIVES:**

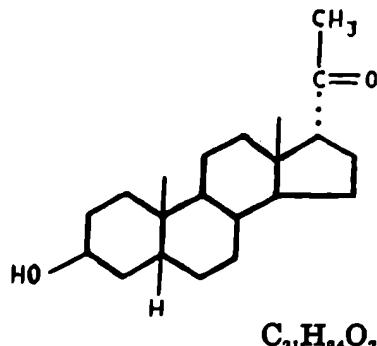
Oxime 170-2°: (1)

4-Br. 56-60°: (1)

**REFERENCES:**

1. A16456

**17( $\alpha$ )-[1-KETOETHYL]-ETIOCHOLANE-3( $\beta$ )-OL.  
(*n*-pregnanolone)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2,3)

M.P.: 149°: (1)  
142-3° (u): (2,3)  
144-6°: (4,5)

$[\alpha]_D^{20} = +101.6^\circ \pm 1.4^\circ$  (alc.): (2,3)

**PHARMACOLOGY:** Testoid: 63: 500 $\gamma$  inact.-C (2).

**REMARKS:**

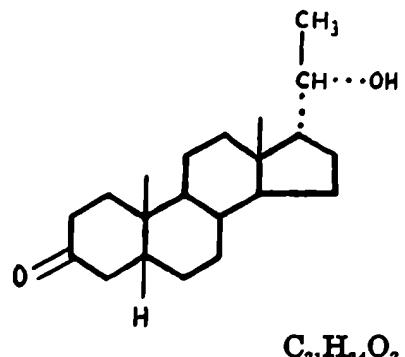
**DERIVATIVES:**

Ac.	121°; $[\alpha]_D^{20} = +86^\circ$ (alc.):	(1,2,3,4,5,7)
Semicarb.	245°:	(1)
Digitonide	199-208° (u):	(2,3)
17 <sup>2</sup> -diazo	128-32°:	(6)
Ac.-17 <sup>2</sup> -diazo	non-crystalline:	(6,9)
Oxime	179°:	(2,3)
17-Br.	169-71°:	(4)
Ac.-17-Br.	152-4°:	(4)
17,17 <sup>2</sup> -dibr.	190-2°:	(5)
Ac.-17,17 <sup>2</sup> -dibr.	190-1°:	(5)
Ac.-17 <sup>2</sup> -Br.	{ 145-7°: 139-41°; $[\alpha]_D^{20} = +100^\circ \pm 5^\circ$ ( $\text{CHCl}_3$ ):	(5) (9)
17 <sup>2</sup> -Br.	127-8°:	(5)
Ac.-5,6,17,17 <sup>2</sup> -tetra-Br.	172°:	(8)
Ac.-17 <sup>2</sup> -Cl.	115-6°:	(9)

**REFERENCES:**

1. 70093
2. 71854
3. A16456
4. 82782
5. 82779
6. 78851
7. 78241
8. 83173
9. A58440

**17( $\alpha$ )-[1( $\alpha$ )-HYDROXYETHYL]-ETIOCHOLANE-3-ONE  
(pregnane-3-one-20( $\alpha$ )-ol)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2,4)

**M.P.:** 152°: (1,2,3)

**PHARMACOLOGY:** Luteoid: 49: 9 mg. inact.-Rb. (2).

**REMARKS:**

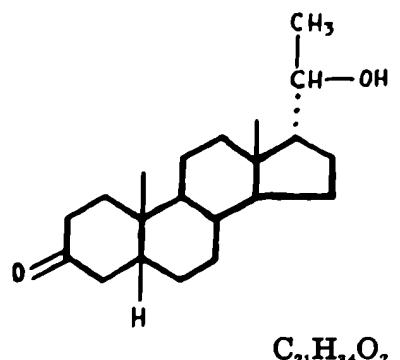
**DERIVATIVES:**

Ac.	144.5° (u): (1,2,3)
Ac.-semicarb. (crude)	202-4°: (4)
Semicarb.	203-4°: (3)
4-Br.	185°: (5)
Ac.-4-Br.	167.5°: (6)

**REFERENCES:**

1. 70092
2. 29442
3. 32395
4. 75328
5. 32393
6. 32390

**17( $\alpha$ )-[1( $\beta$ )-HYDROXYETHYL]-ETIOCHOLANE-3-ONE  
(pregnane-3-one-20( $\beta$ )-ol)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:** 172°: (1)

**PHARMACOLOGY:**

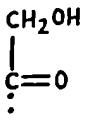
**REMARKS:**

**DERIVATIVES:**

Semicarb. 245°: (1)

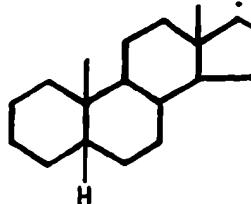
**REFERENCES:**

1. 70092



**17( $\alpha$ )-[1-KETO-2-HYDROXYETHYL]-ETIOCHOLANE  
(pregnane-20-one-21-ol)**

ISOLATION:



STRUCTURE AND SYNTHESIS: (1)

M.P.:

PHARMACOLOGY:

REMARKS:

**DERIVATIVES**

Bz. 158-9°;  $[\alpha]_{D}^{25} = +113^\circ \pm 2^\circ$  ( $\text{CHCl}_3$ ): (1)

**REFERENCES:**

1. A58440

**17( $\alpha$ )-[1-KETOETHYL]-ETIOCHOLANE-3-ONE  
(pregnanedione; dihydroprogesterone)**



ISOLATION: Ur. (preg. mare) : (9)

STRUCTURE AND SYNTHESIS: (1,3,4,7,9,24)

M.P.: 123°: (3,24)  
118-20°: (7,9,14)  
118°: (9)  
117.5-9° (1)  
120°: (2)

PHARMACOLOGY:

Luteoid: **49**: up to 50 mg. inact.-Rb. (6,15); **46**: 50 mg. inact.-Rb. (21); **27**: up to 0.8 mg. inact.-G (8).

Folliculoid: **128C**: 10 mg./day inact.-R (16); **55**: inact.-R (13); **133B**: no anti-Leydig cell act.-R (20);  
**71**: 3 mg./day inact.-R (12); **128A**, **132**: no anti-castration cell act. up to 10 mg.-R (23).

Testoid: **133A**: 10 mg./day inact.-R (20).

Corticoid: **53A**: inact.-R (13).

Anti-folliculoid: **129**: 10 mg./day inact.-R (17).

Gonadotropic: **21**: dose ? inact.-X (11).

Anesthetic: **11**: U. = 0.8 mg.-R (13,18); **11**: 20 mg. of 4-Br. cpd. inact.-R (18); "does not influence the linguo-maxillary reflex"-R (22); **127**: U. = 0.05 mg.-Fish (18).

REMARKS: In urine probably artefact. (9).

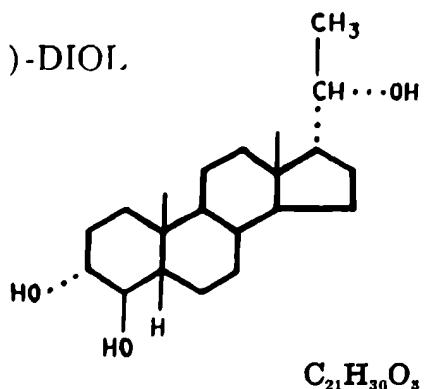
DERIVATIVES:

17 <sup>2</sup> -Cl.	185-9°:	(5)
Disemicarb.	244°:	(1)
4-Br.	172-81°: (22); 186-7°: (25)	
Dioxime	> 250°:	(24)

REFERENCES:

1. 78240
2. A16456
3. 22385
4. 8041
5. 78851
6. 29442
7. 81151
8. A7923
9. A17988
10. 27944
11. 75731
12. A36637
13. A36744
14. 82782
15. 71855
16. A37486
17. A37637
18. A38070
19. A38071
20. A38086
21. A56335
22. A56361
23. A37513
24. 2486
25. 32393

**17( $\alpha$ )-[1( $\alpha$ )-HYDROXYETHYL]-ETIOCHOLANE-3( $\alpha$ ),4( $\beta$ )-DIOL  
[pregnanetriol-3( $\alpha$ ),4( $\beta$ ),20( $\alpha$ )]**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:** 184°: (1)

**PHARMACOLOGY:**

**REMARKS:** Not ppt. with digitonin (1).

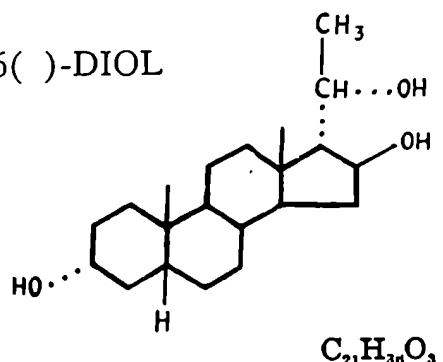
**DERIVATIVES:**

Triac. 181°: (1)

**REFERENCES:**

1. 77850

**17( $\alpha$ )-[1( $\alpha$ )-HYDROXYETHYL]-ETIOCHOLANE-3( $\alpha$ ),16( $\beta$ )-DIOL  
pregnane-3( $\alpha$ ),16( $\beta$ ),20-triol**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:** 206-7°: (1)

**PHARMACOLOGY:**

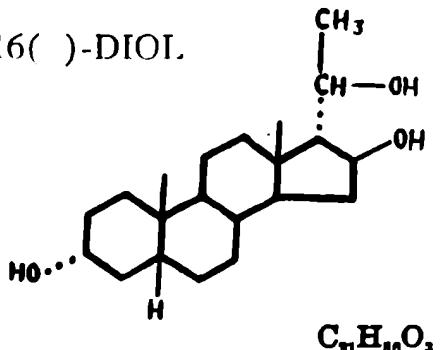
**REMARKS:**

**DERIVATIVES:**

Tribz. 153-5°: (1)

**REFERENCES:**

I 78242

**17( $\alpha$ )-[1( $\beta$ )-HYDROXYETHYL]-ETIOCHOLANE-3( $\alpha$ ).16( $\beta$ )-DIOL.****ISOLATION:****STRUCTURE AND SYNTHESIS:** (1)

**M.P.:** 203-6°: (1)

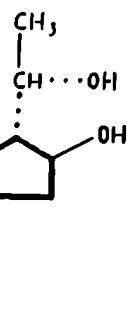
**PHARMACOLOGY:****REMARKS:****DERIVATIVES:**

Triac. 175-7°: (1)

**REFERENCES:**

1. 80968

**17( $\alpha$ )-[1( $\alpha$ )-HYDROXYETHYL]-ETIOCHOLANE-3( $\beta$ ).16( $\beta$ )-DIOL  
(pregnane-3 $\beta$ ,16,20-triol)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2,3,4,5)

M.P.: 221-2°: (4)  
223-6°: (1,2)  
227-8°: (3)

**PHARMACOLOGY:**

**REMARKS:**

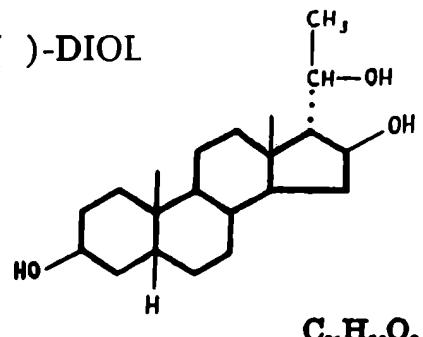
**DERIVATIVES:**

Tribz. 185-7°: (1)  
Triac. 108-11°: (1)

**REFERENCES:**

1. 78242
2. 80965
3. 79005
4. 83069
5. 80968

**17( $\alpha$ )-[1( $\beta$ )-HYDROXYETHYL]-ETIOCHOLANE-3( $\beta$ ),16( $\beta$ )-DIOL  
 (pregnane-3( $\beta$ ),16,20( $\beta$ )-triol)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:** 236-40°: (1)

**PHARMACOLOGY:**

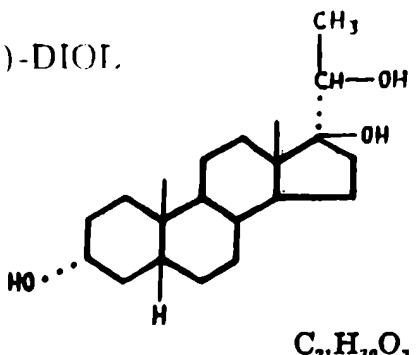
**REMARKS:**

**DERIVATIVES:**

Triac. 145-8°: (1)

**REFERENCES:**

1. 80968

**17( $\alpha$ )-[1( $\beta$ )-HYDROXYETHYL]-ETIOCHOLANE-3( $\alpha$ ),17( $\beta$ )-DIOL.**

**ISOLATION:** Ur. ( $\delta$  human): (3)  
Ur. ( $\delta$  human with Ad. tumor): (1,2)

**STRUCTURE AND SYNTHESIS:** (2,3)

**M.P.:** 245-7°: (1)  
243-4°: (2,3)

**PHARMACOLOGY:**

**REMARKS:** Not ppt. with digitonin (1).

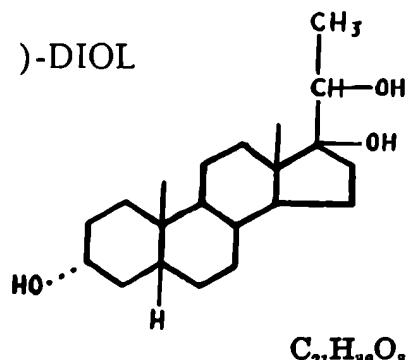
**DERIVATIVES:**

3,17<sup>2</sup>-diac. 136.5°: (2); 150-1°: (1)

**REFERENCES:**

1. 73562
2. A8294
3. 68093

**17(α)-[1(β)-HYDROXYETHYL]-ETIOCHOLANE-3(α),17(β)-DIOL**  
**(pregnane-3(α),17,20-triol)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:** 215-8°: (1)

**PHARMACOLOGY:**

**REMARKS:** Not identical with 17(α)-[1(β)-hydroxyethyl]-etiocholane-3(α),17(β)-diol of m.p. 245-7° (1).

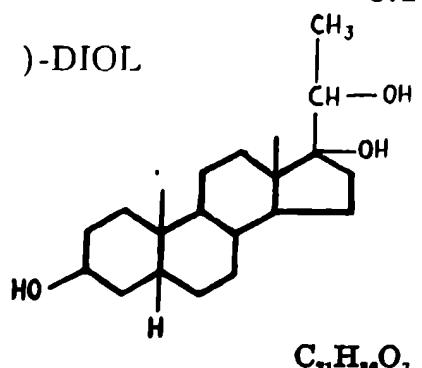
**DERIVATIVES:**

17,17<sup>1</sup>-diac. 193-6°: (1)

**REFERENCES:**

1. A37545

**17( )-[1( )-HYDROXYETHYL]-ETIOCHOLANE-3( $\beta$ ).17( )-DIOL  
 (pregnane-3( $\beta$ ),17( ),20( )-triol)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:** 210-2°: (1)

**PHARMACOLOGY:**

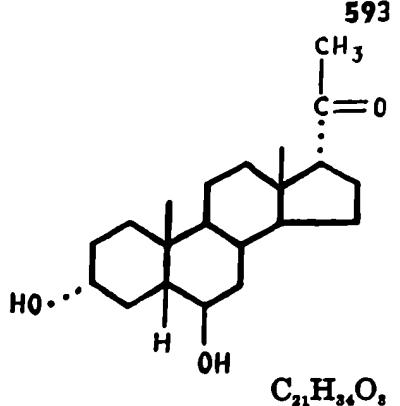
**REMARKS:** May be corresponding 17-ethylandrostan derivative (1).

**DERIVATIVES:**

**REFERENCES:**

1. 73562

**17( $\alpha$ )-[1-KETOETHYL]-ETIOCHOLANE-3( $\alpha$ ),6( $\beta$ )-DIOL  
[6-hydroxy-pregnanol (3)-one (20)]**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 198°: (1)

$[\alpha]_D = + 6.52^\circ$  (alc.): (1)

**PHARMACOLOGY:**

**REMARKS:**

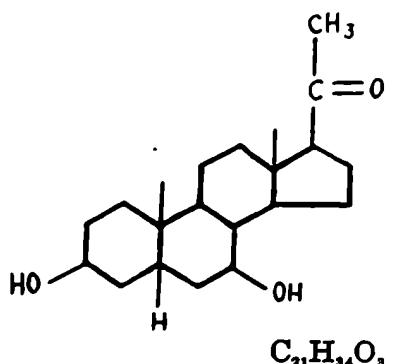
**DERIVATIVES:**

Diac. 100°: (2)

**REFERENCES:**

1. A37848
2. 77857

**17( )-[1-KETOETHYL]-ETIOCHOLANE-3( ),7( )-DIOL  
(7-hydroxy-pregnanolone)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 170-2° (+H<sub>2</sub>O): (1)

**PHARMACOLOGY:**

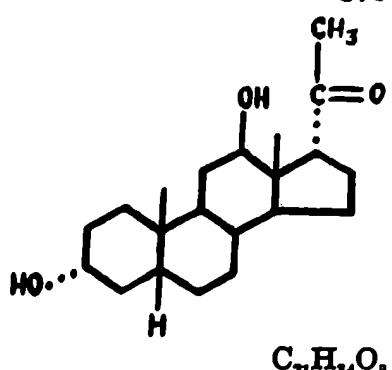
**REMARKS:**

**DERIVATIVES:**

Diac.-semicarb. 271-2°: (1)

**REFERENCES:**

1. A37850

**17(α)-[1-KETOETHYL]-ETIOCHOLANE-3(α),12(β)-DIOL****ISOLATION:****STRUCTURE AND SYNTHESIS:** (1,2)

M.P.: 166-8°: (2)

165-6°: (1)

 $[\alpha]_{5461}^{25} = +165^\circ \pm 5^\circ$  (alc.): (1)**PHARMACOLOGY:****REMARKS:****DERIVATIVES:**

12-ac. 208-10°;  $[\alpha]_D^{17} = +151^\circ \pm 6^\circ$  (acetone);  
 $[\alpha]_{5461}^{17} = +192.6^\circ \pm 3^\circ$  (acetone): (2,5)

Diac. 212-2.5°;  $[\alpha]_{5461}^{25} = +190^\circ \pm 2.5^\circ$  (alc.): (1,2,3)

Diac.-17<sup>2</sup>-diazo oil: (4)

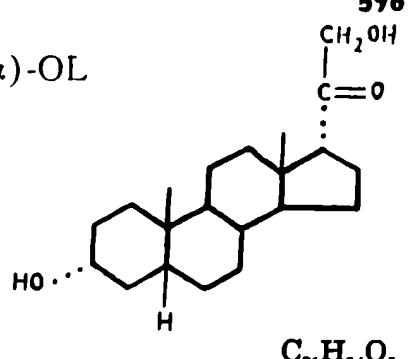
17<sup>2</sup>-diazo crude: (4)

12-ac.-17<sup>2</sup>-diazo crude: (4)

**REFERENCES:**

1. 72173
2. 78852
3. A34407
4. 84187
5. 84186

**17( $\alpha$ )-[1-KETO-2-HYDROXYETHYL]-ETIOCHOLANE-3( $\alpha$ )-OL  
(pregnane-3( $\alpha$ ),21-diol-20-one)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:**

**PHARMACOLOGY:**

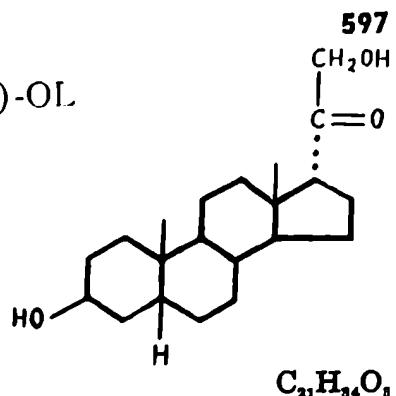
**REMARKS:**

**DERIVATIVES:**

17<sup>2</sup>-ac. 179.5-81°;  $\left\{ \begin{array}{l} [\alpha]_D^{18} = +109.4^\circ \pm 2^\circ (\text{CHCl}_3) \\ [\alpha]_{5461}^{18} = +136^\circ \pm 2^\circ (\text{CHCl}_3) \end{array} \right. : \quad (1)$   
Diac. 86-8°;  $[\alpha]_D = +106^\circ (\text{CHCl}_3) : \quad (2)$

**REFERENCES:**

1. 78851
2. 83012

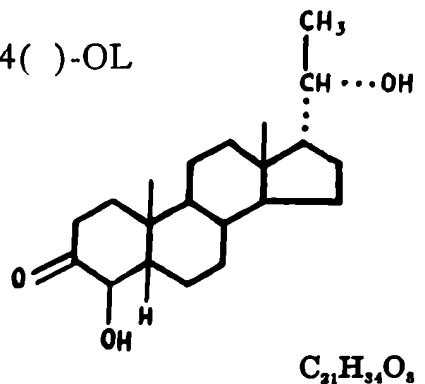
**17( $\alpha$ )-[1-KETO-2-HYDROXYETHYL]-ETIOCHOLANE-3( $\beta$ )-OL****ISOLATION:****STRUCTURE AND SYNTHESIS:** (1,2)**M.P.:****PHARMACOLOGY:****REMARKS:****DERIVATIVES:**

$17^2\text{-ac.}$	$\left\{ \begin{array}{l} 121\text{-}3^\circ: \\ 119\text{-}23^\circ + 136\text{-}8^\circ: \end{array} \right.$	(2) (1)
Diac.	$\left\{ \begin{array}{l} 145\text{-}6^\circ: \\ 111\text{-}2^\circ; [\alpha]_D^{27} = + 91^\circ \pm 4^\circ (\text{CHCl}_3) : \end{array} \right.$	(2) (3)

**REFERENCES:**

1. 78851
2. 82779
3. A58440

**17( $\alpha$ )-[1( $\alpha$ )-HYDROXYETHYL]-ETIOCHOLANE-3-ONE-4( $\beta$ )-OL  
 (pregnaneol-4,20( $\alpha$ )-one-3)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:**

**PHARMACOLOGY:**

**REMARKS:**

**DERIVATIVES:**

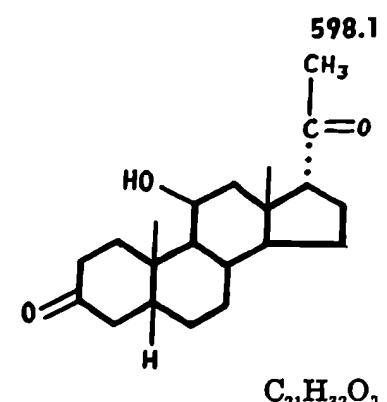
Diac.  $247^\circ$ : (1)

**REFERENCES:**

1. 70095

**17( $\alpha$ )-[1-KETOETHYL]-ETIOCHOLANE-3-ONE-11( $\beta$ )-OL  
[Pregnanol-(11)-dione-(3,20)]**

598.1



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:**

**PHARMACOLOGY:**

**REMARKS:**

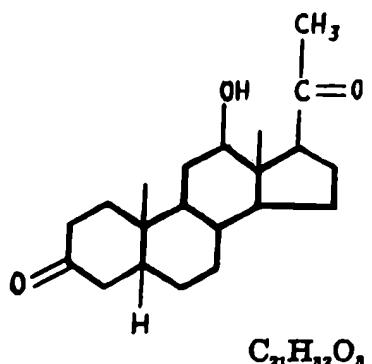
**DERIVATIVES:**

12-Br. 238-45°: (1)

**REFERENCES:**

1. 84185

**17( )-[1-KETOETHYL]-ETIOCHOLANE-3-ONE-12( )-OL  
(12-hydroxy-pregnandione-(8,20))**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2,4)

M.P.: 182-4°: (2,4)

$[\alpha]_D^{17} = +135^\circ \pm 2.5^\circ$  (alc.) : (2)  
 $[\alpha]_{5461}^{17} = +164^\circ \pm 2.5^\circ$  (alc.) : (2)

**PHARMACOLOGY:**

**REMARKS:** 12-ac. exists in two crystal forms (1).

**DERIVATIVES:**

Ac.	$\left\{ \begin{array}{l} 180^\circ: \\ 121-2^\circ; [\alpha]_D^{16} = +141^\circ \pm 3^\circ \text{ (acetone)}: \\ 132-4^\circ: \end{array} \right.$	(1) (2,3)
Bz.	$166-7^\circ; [\alpha]_D^{14} = +92.6^\circ \pm 1^\circ \text{ (acetone)}: (4)$	

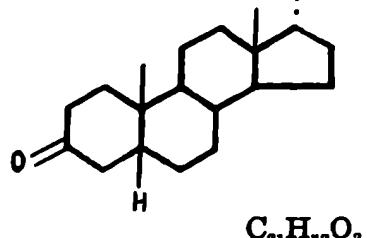
**REFERENCES:**

1. 78852
2. 81151
3. A36511
4. 84185

**17(α)-[1-KETO-2-HYDROXYETHYL]-ETIOCHOLANE-3-ONE**



**ISOLATION:**



**STRUCTURE AND SYNTHESIS:** (1,2)

**M.P.:**

**PHARMACOLOGY:** Corticoid: 53: 2 mg./day of ac. inact.-R (2).

**REMARKS:**

**DERIVATIVES:**

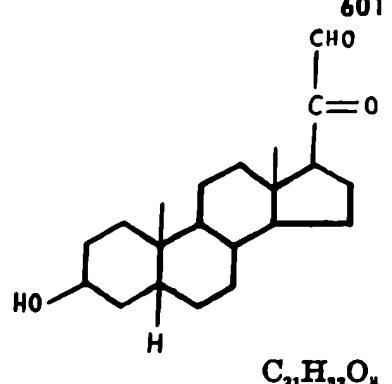
Ac.       $\left\{ \begin{array}{l} [α]_{D}^{21} = +108^\circ \pm 2^\circ (\text{CHCl}_3) : (2) \\ 153.4^\circ; \quad \left\{ \begin{array}{l} [α]_{D}^{17} = +109^\circ \pm 4^\circ (\text{acetone}) ; \\ 150.1^\circ; \quad \left\{ \begin{array}{l} [α]_{D}^{17} = +130^\circ \pm 4^\circ (\text{acetone}) : (1) \\ [α]_{5461}^{17} \end{array} \right. \end{array} \right. \end{array} \right.$

4-Br.    165-72°: (1)

**REFERENCES:**

1. 78851
2. 79622

**17( )-[1-KETO-2-ALDOETHYL]-ETIOCHOLANE-3( $\beta$ )-OL  
(3-hydroxy-etiocholyl-glyoxal)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 295-302°: (1)

**PHARMACOLOGY:**

**REMARKS:** Isomer of Testalolone (1).

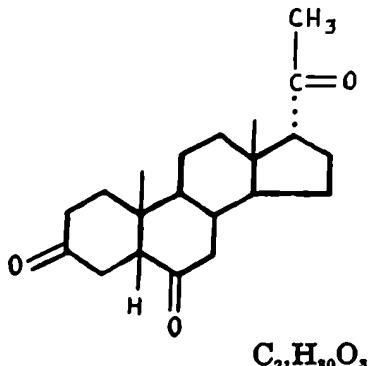
**DERIVATIVES:**

Dioxime 227-40°: (1)

**REFERENCES:**

1. A16345

**17( $\alpha$ )-[1-KETOETHYL]-ETIOCHOLANE-3,6-DIONE  
(pregnane-3,6,20-trione)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:** 226.5-30°: (1)

**PHARMACOLOGY:**

**REMARKS:** May be androstane series (1).

**DERIVATIVES:**

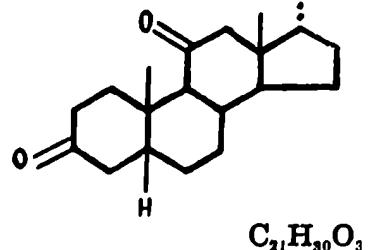
**REFERENCES:**

1. 78099

**17( $\alpha$ )-[1-KETOETHYL]-ETIOCHOLANE-3,11-DIONE  
[Pregnane-3,11,20-trione]**

602.1  
 $\text{CH}_3$   
 $\text{C}=\text{O}$

**ISOLATION:**



**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:** 154-6°: (1)

$[\alpha]_D^{20} = +119.5^\circ \pm 2^\circ$  (acetone) : (1)

**PHARMACOLOGY:**

**REMARKS:**

**DERIVATIVES:**

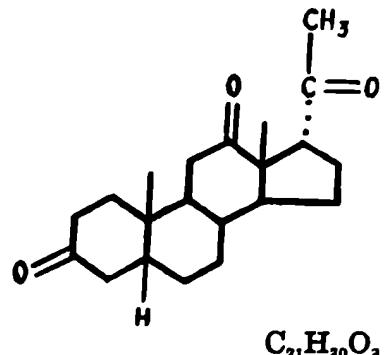
12-Br. 176-84°: (1)

4-Br. 158-60°: (1)

**REFERENCES:**

1. 84185

**17( $\alpha$ )-[1-KETOETHYL]-ETIOCHOLANE-3,12-DIONE  
(pregnanetrione)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2)

M.P.: 201-2°: (1)  
189-91°: (2)

$$\left\{ \begin{array}{ll} [\alpha]_{D}^{17} = +182^\circ \pm 7^\circ \text{ (acetone)} & (1) \\ [\alpha]_{5461}^{17} = +218.6^\circ \pm 8^\circ \text{ (acetone)} & (1) \\ [\alpha]_{5461}^{25} = +235^\circ \pm 2.5^\circ \text{ (alc.)} & (2) \end{array} \right.$$

**PHARMACOLOGY:** Anesthetic: **11**: U. = > 10 mg.-R (3); **127**: U. = 1.8 mg.-Fish (3).  
Luteoid: **46**: 50 mg. inact.-Rb. (3).

**REMARKS:** (1) shows that cpd. prepared by (2) who assigned it the structure of etiocholane-3,12, 17-trione, was probably impure sample of this cpd.

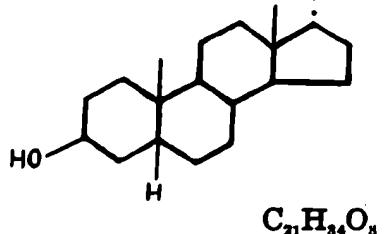
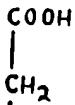
**DERIVATIVES:**

**REFERENCES:**

1. 78852
2. 72173
3. 100000

**17( $\alpha$ )-CARBOXYMETHYL-ETIOCHOLANE-3( $\beta$ )-OL  
( $3\beta$ -hydroxy pregnanolic acid)**

**604**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.: 219-21°:** (1)

**PHARMACOLOGY:**

**REMARKS:**

**DERIVATIVES:**

**REFERENCES:**

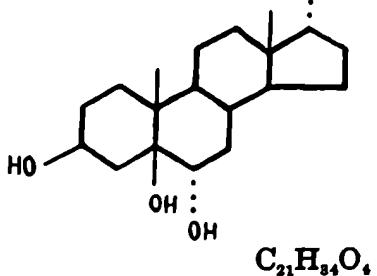
1. 83007

**17( $\alpha$ )-[1-KETOETHYL]-ETIOCHOLANE-3( $\beta$ ),5( ),6( $\alpha$ )-TRIOL  
(pregnane-20-one-3( $\beta$ ),5,6(trans)-triol)**

**605**

CH<sub>3</sub>

C=O



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2,3)

**M.P.:** 250-3°: (1)

256-8°: (3)

**PHARMACOLOGY:**

**REMARKS:** C<sub>6</sub> configuration uncertain (2,3).

**DERIVATIVES:**

6-ac. 247-8.5°;  $[\alpha]_D^{23} = + 8^\circ$  (acetone): (1)

3,6-diac. 217-9°;  $[\alpha]_D^{18} = - 2^\circ$  (acetone): (1,2,3)

**REFERENCES:**

1. 81867

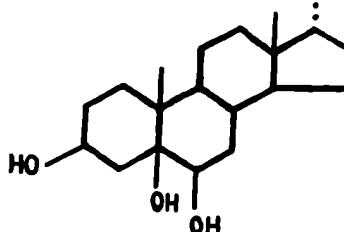
2. 78699

3. 78698

**17( $\alpha$ )-[1-KETOETHYL]-ETIOCHOLANE-3( $\beta$ ),5( $\beta$ ),6( $\beta$ )-TRIOL**

606  
CH<sub>3</sub>  
C=O

**ISOLATION:**



C<sub>21</sub>H<sub>34</sub>O<sub>3</sub>

**STRUCTURE AND SYNTHESIS:** (1,2)

**M.P.:** 231-2.5°: (2)

$[\alpha]_D^{20} = + 59.8^\circ$  (me. alc.): (2)

**PHARMACOLOGY:**

**REMARKS:** C<sub>6</sub> configuration uncertain (2).

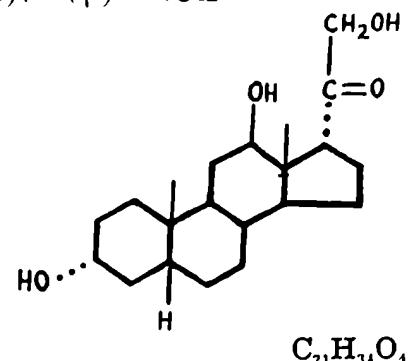
**DERIVATIVES:**

3,6-diac.      252°;     $[\alpha]_D^{17.5} = + 56.6^\circ$ : (2)  
3-ac.            226-8°:                                         (1)  
3-ac.-oxime    221-3°:                                         (1)

**REFERENCES:**

1. 81156
2. 78698

**17(α)-[1-KETO-2-HYDROXYETHYL]-ETIOCHOLANE-3(α),12(β)-DIOL**  
**[Pregnanetriol-(3 $\alpha$ ,12 $\beta$ ,21)-one-(20)]**



ISOLATION:

STRUCTURE AND SYNTHESIS: (1)

M.P.:

PHARMACOLOGY:

REMARKS:

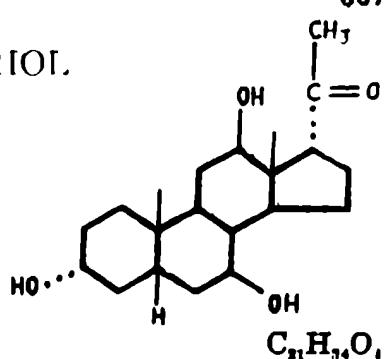
**DERIVATIVES:**

17 $^2$ -ac.	94-110° + 149.5-50.5°; [α] <sub>D</sub> <sup>18</sup> = + 139.7° ± 4° (acetone); (1)	
12,17 $^2$ -diac.	72-95° and 156-80°; [α] <sub>D</sub> <sup>19</sup> = + 150.7° ± 2° (acetone); (1)	
Triac.	114-5°;	(1)

**REFERENCES:**

1. 84187

**17( $\alpha$ )-[1-KETOETHYL]-ETIOCHOLANE-3( $\alpha$ ),7( $\beta$ ),12( $\beta$ )-TRIOL.  
(pregnane-3( $\alpha$ ),7( $\beta$ ),12( $\beta$ )-triol-20-one)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 120-7° (+H<sub>2</sub>O): (1)

$[\alpha]_D^{18} = +107.8^\circ$  (alc.): (1)

**PHARMACOLOGY:**

**REMARKS:**

**DERIVATIVES:**

Triac. 134-5°;  $[\alpha]_D^{10} = +120.7^\circ$  (alc.): (1)  
3-ac. 149-51°: (2)  
12-ac. 230-3°;  $[\alpha]_D^{27} = +81.6^\circ$  (acetone): (2)

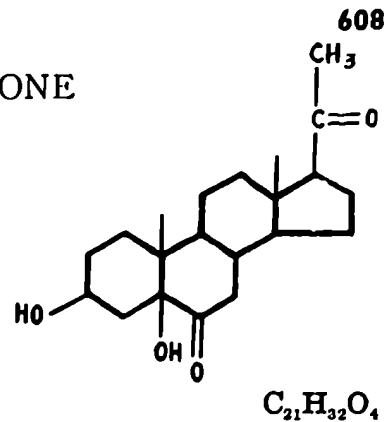
**REFERENCES:**

1. A1913
2. A54241

**17( )-[1-KETOETHYL]-ETIOCHOLANE-3( $\beta$ ),5( $\beta$ )-DIOL-6-ONE**

**608**

**ISOLATION:**



**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:**

**PHARMACOLOGY:**

**REMARKS:**

**DERIVATIVES:**

3-ac.                222.5-4°: (1)  
Dioxime-3-ac.    262-4°: (1)

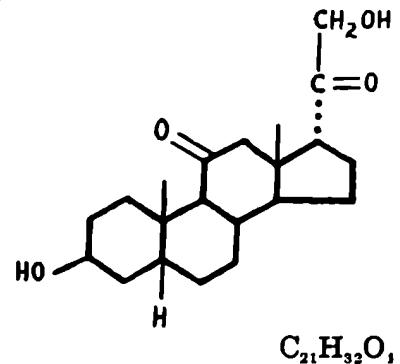
**REFERENCES:**

1. 81156

**17( $\alpha$ )-[1-KETO-2-HYDROXYETHYL]-ETIOCHOLANE-3( $\beta$ )-OL-11-ONE  
 [Pregnane-diol-(3 $\beta$ ,21)-dione-(11,20)]**

ISOLATION:

STRUCTURE AND SYNTHESIS: (1)



M.P.:

PHARMACOLOGY:

REMARKS:

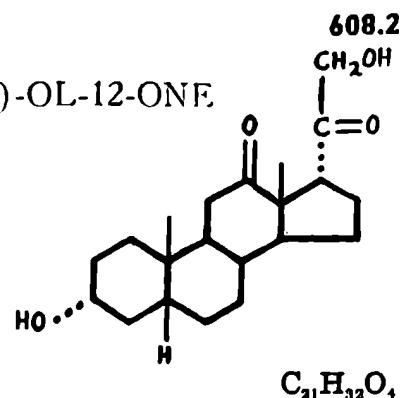
DERIVATIVES:

17<sup>2</sup>-ac. 178-81°: (1)  
 Diac. 169-71°: (1)

REFERENCES:

1. 84184

**17( $\alpha$ )-[1-KETO-2-HYDROXYETHYL]-ETIOCHOLANE-3( $\alpha$ )-OL-12-ONE  
[Pregnane-diol-(3 $\alpha$ ,21)-dione-(12,20)]**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:**

**PHARMACOLOGY:**

**REMARKS:**

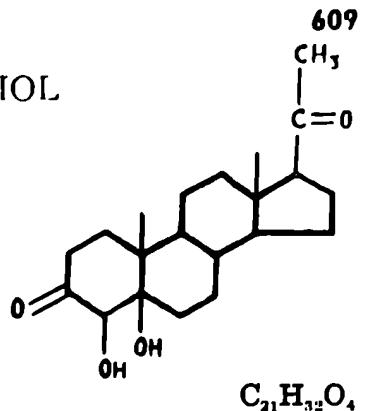
**DERIVATIVES:**

17<sup>2</sup>-ac. 149-51°;  $[\alpha]_D^{10} = +157.6^\circ \pm 3^\circ$  (acetone): (1)

**REFERENCES:**

1. 84187

**17( )-[1-KETOETHYL]- ETIOCHOLANE-3-ONE-4( ).5( )-DIOL**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:** 249-50°: (1)

$[\alpha]_D^{21} = +104.5^\circ$  (CHCl<sub>3</sub>): (1)

**PHARMACOLOGY:** Luteoid: **49**: 3 mg. inact.-R (1).

Testoid: **63**: 300 $\gamma$ /day inact.-C (1).

Folliculoid: **7**: 2 mg./day inact.-R (1).

**REMARKS:** C<sub>5</sub> configuration uncertain (1).

**DERIVATIVES:**

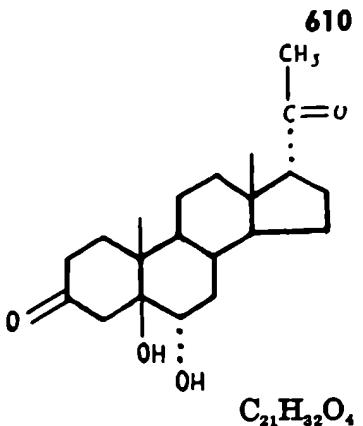
4-ac. 223-5° (u): (1)

**REFERENCES:**

1. 72717

**17( $\alpha$ )-[1-KETOETHYL]-ETIOCHOLANE-3-ONE-5,6( $\alpha$ )-DIOL  
(pregnane 3,20-dione-5,6(trans)-diol)**

**610**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:**

**PHARMACOLOGY:** Luteoid: **46**: 7 mg. of 6-ac. inact.-Rb. (3).

Anesthetic: **11**: U. > 20 mg. of 6-ac.-R (2).

**REMARKS:** C<sub>6</sub> configuration uncertain (1).

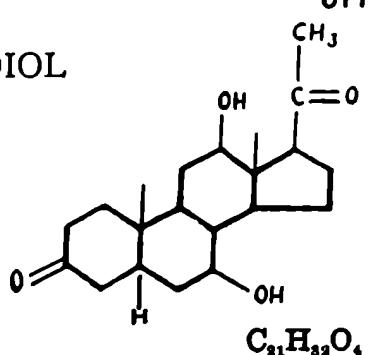
**DERIVATIVES:**

6-ac. { 216.5-7.5° (prisms); 215-8° (needles);  
218-21° (plates);  $[\alpha]_{D}^{24} = + 20.5^\circ$  (acetone); (1)  
218-9°: (2)

**REFERENCES:**

1. 81807
2. A38070
3. A50335

**17( )-[1-KETOETHYL]-ETIOCHOLANE-3-ONE-7( ),12( $\beta$ )-DIOL  
 (pregnane-7,12-diol-3,20-dione)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:**

**PHARMACOLOGY:**

**REMARKS:**

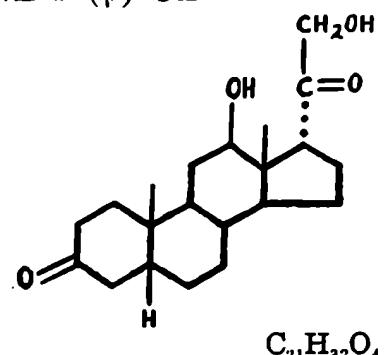
**DERIVATIVES:**

Diac.      256-62°;  $[\alpha]_D^{24} = +113.7^\circ$  ( $\text{CHCl}_3$ ): (1)  
 4-Br.-diac. 210-8° (crude): (1)

**REFERENCES:**

1. A54241

**17( $\alpha$ )-[1-KETO-2-HYDROXYETHYL]-ETIOCHOLANE-3-ONE-12( $\beta$ )-OL  
 [Pregnane-diol-(12 $\beta$ ,21)-dione-(3,20)]**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:**

**PHARMACOLOGY:**

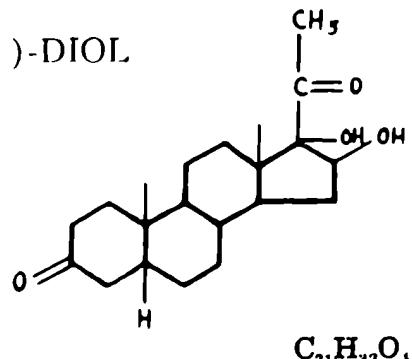
**REMARKS:**

**DERIVATIVES:**

17 $\alpha$ -ac. 190-2°;  $[\alpha]_D^{14} = +146.3 \pm 3^\circ$  (acetone): (1)  
 Diac. 120-2°;  $[\alpha]_D^{17} = +142.4^\circ \pm 4^\circ$  ( $\text{CHCl}_3$ ): (1)

**REFERENCES:**

1. 81187

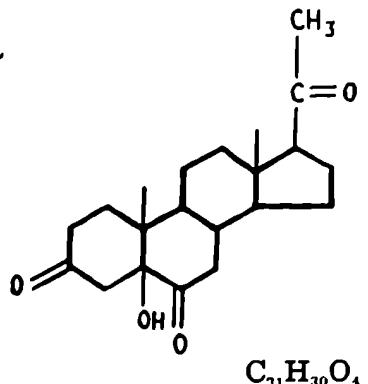
**17( )-[1-KETOETHYL]-ETIOCHOLANE-3-ONE-16( ),17( )-DIOL****ISOLATION:****STRUCTURE AND SYNTHESIS:** (1)

M.P.: 156°: (1)

**PHARMACOLOGY:****REMARKS:****DERIVATIVES:****REFERENCES:**

1. A34047

**17( )-[1-KETOETHYL]-ETIOCHOLANE-3,6-DIONE-5( )-OL  
(pregnane-3,6,20-trione-5( $\beta$ )-ol)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2,3)

M.P.: 268.5-9.5°: (3)  
262-4° (1,4)

**PHARMACOLOGY:** Luteoid: **46**: 2 mg inact.-Rb. (5).  
Anesthetic: **11**: 5 mg. inact.-R (4).

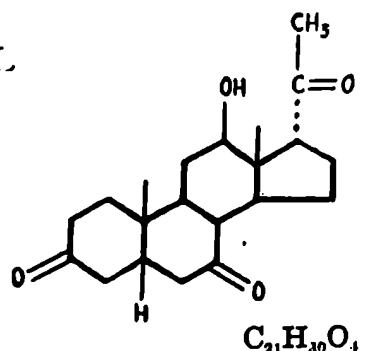
**REMARKS:**  $\text{C}_6$  configuration uncertain (1,3).

**DERIVATIVES:**

**REFERENCES:**

1. 81867
2. 78699
3. 78698
4. A38070
5. A56335

**17(α)-[1-KETOETHYL]-ETIOCHOLANE-3,7-DIONE-12(β)-OL**  
 (pregnane-3,7,20-trione-12-ol)



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:**

**PHARMACOLOGY:**

**REMARKS:**

**DERIVATIVES:**

Ac. 160.5-3.5°;  $[\alpha]_D^{20} = +125.9^\circ$  (acetone) : (1)

**REFERENCES:**

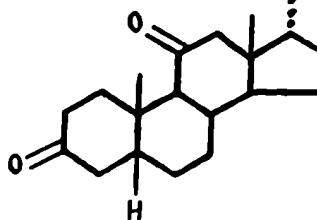
1. A54241

**17( $\alpha$ )-[1-KETO-2-HYDROXYETHYL]-ETIOCHOLANE-3,11-DIONE  
[Pregnanol-(21)-trione-(3,11,20)]**

614.1

CH<sub>2</sub>OH

C=O



C<sub>21</sub>H<sub>30</sub>O<sub>4</sub>

**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:**

**PHARMACOLOGY:**

**REMARKS:**

**DERIVATIVES:**

Ac. 153-5°;  $[\alpha]_D^{22} = +107.2^\circ \pm 4^\circ$  (acetone): (1)  
4-Br.-ac. 180-5°: (1)

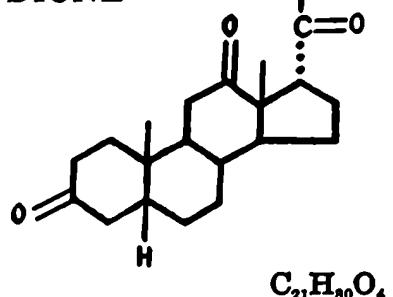
**REFERENCES:**

1. 84184

**17(α)-[1-KETO-2-HYDROXYETHYL]-ETIOCHOLANE-3,12-DIONE**  
[Pregnanol-(21)-trione-(3,12,20)]

614.2

CH<sub>2</sub>OH



C<sub>21</sub>H<sub>30</sub>O<sub>4</sub>

**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:**

**PHARMACOLOGY:**

**REMARKS:**

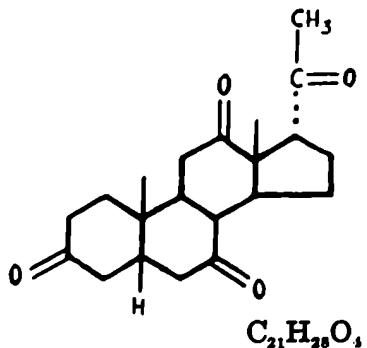
**DERIVATIVES:**

Ac. 189-91°; [α]<sub>D</sub><sup>17</sup> = + 153° ± 3° (acetone) : (1)

**REFERENCES:**

1. 84187

**17(α)-[1-KETOETHYL]-ETIOCHOLANE-3,7,12-TRIONE  
(pregnane-3,7,12,20-tetraone)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 238-42°: (1)

$[\alpha]_D^{20} = +76.3^\circ$  (acetone): (1)

**PHARMACOLOGY:**

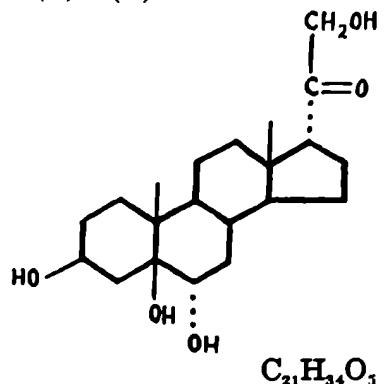
**REMARKS:**

**DERIVATIVES:**

**REFERENCES:**

1. A54241

**17( $\alpha$ )-[1-KETO-2-HYDROXYETHYL]-ETIOCHOLANE-3( $\beta$ ),5( $\beta$ ),6( $\alpha$ )-TRIOL  
(pregnane-3( $\beta$ ),5,6(trans)-21-tetraol-20-one)**



ISOLATION:

STRUCTURE AND SYNTHESIS: (1)

M.P.:

PHARMACOLOGY:

REMARKS: C<sub>s</sub> configuration uncertain (1).

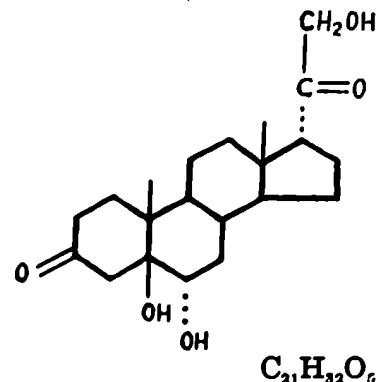
DERIVATIVES:

3,6,17<sup>2</sup>-triac. 176-7.5°;  $[\alpha]_D^{20} = +3.5^\circ$  (acetone) : (1)  
6,17<sup>2</sup>-diac. 118-26°;  $[\alpha]_D^{20} = +16.7^\circ$  (acetone) : (1)

REFERENCES:

1. A36674

**17( $\alpha$ )-[1-KETO-2-HYDROXYETHYL]-ETIOCHOLANE-3-ONE-5( $\beta$ ),6( $\alpha$ )-DIOL  
(pregnane-3,20-dione-5,6(trans),21-triol)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:**

**PHARMACOLOGY:**

**REMARKS:** C<sub>s</sub> configuration uncertain (1).

**DERIVATIVES:**

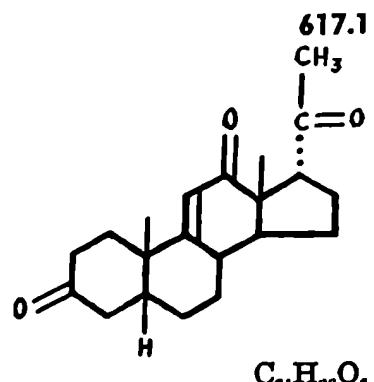
6,17<sup>2</sup>-diac. 163.5-4.5°;  $[\alpha]_{\text{D}}^{20} = + 21.5^\circ$  (acetone) : (1)

**REFERENCES:**

1. A36674

**17( $\alpha$ )-[1-KETOETHYL]- $\Delta^9$ -ETIOCHOLENE-3,12-DIONE  
[Pregnene-(9)-trione-(3,12,20)]**

ISOLATION:



STRUCTURE AND SYNTHESIS: (1)

M.P.: 184-6°: (1)

PHARMACOLOGY:

REMARKS:

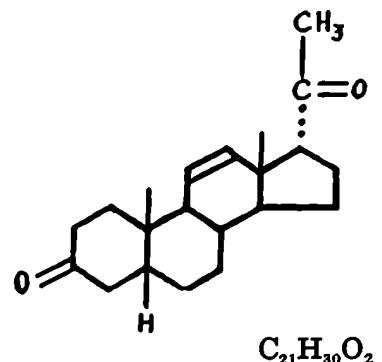
DERIVATIVES:

REFERENCES:

1. 84185

617.2

**17(α)-[1-KETOETHYL]- $\Delta^{11}$ -ETIOCHOLENE-3-ONE  
[Pregnene-(11)-dione-(3,20)]**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 132-3°: (1)

$[\alpha]_{D}^{18} = +84.7^\circ \pm 3^\circ$  (acetone): (1)  
 $[\alpha]_{5461}^{18} = +104^\circ \pm 3^\circ$  (acetone): (1)

**PHARMACOLOGY:**

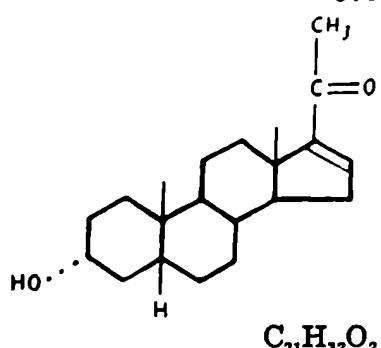
**REMARKS:**

**DERIVATIVES:**

**REFERENCES:**

1. 84185

**17-[1-KETOETHYL]- $\Delta^{16}$ -ETIOCHOLENE-3( $\alpha$ )-OL  
 $(\Delta^{16}\text{-pregnene-3}(\alpha)\text{-ol-20-one})$**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.: 194-6°:** (1)

**PHARMACOLOGY:**

**REMARKS:**

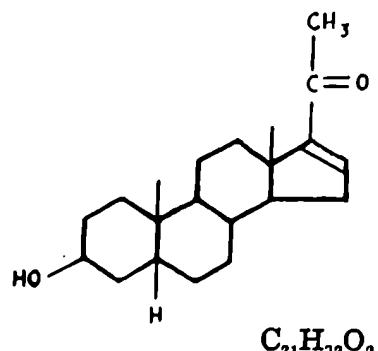
**DERIVATIVES:**

**Ac.** 96-9°: (1)

**REFERENCES:**

1. 80960

**17-[1-KETOETHYL]- $\Delta^{10}$ -ETIOCHOLENE-3( $\beta$ )-OL  
(16-pregnene-3( $\beta$ )-ol-20-one)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,3,6)

M.P.: 188-90°: (1)

180-3°: (3)

170-1°: (6)

**PHARMACOLOGY:** **Folliculoid:** 55: 20 mg. of ac. inact.-R (2).

**Anesthetic:** 11: 20 mg. of ac. inact.-R (2).

**REMARKS:** Cpd. of m.p. 207-9°, previously obtained, contains alc. of crystallization (5).

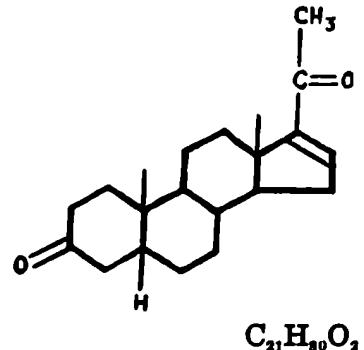
**DERIVATIVES:**

- |                            |                 |
|----------------------------|-----------------|
| Ac.                        | 144-6°: (3,5,6) |
| Ac.-semicarb.              | 250-2°: (5)     |
| Semicarb.                  | 240°: (5)       |
| 17 <sup>2</sup> -Br.-3-ac. | 151-4°: (4)     |
| 17 <sup>2</sup> -Br.       | 155-7°: (4)     |

**REFERENCES:**

1. 80969
2. A36744
3. 82785
4. 82779
5. 78241
6. 82782

**17-[1-KETOETHYL]- $\Delta^{16}$ -ETIOCHOLENE-3-ONE  
(16-pregnene-3,20-dione;  $\Delta^{16}$ -iso-progesterone)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2,3,4,5)

M.P.: 200-1°: (4)  
200-2°: (1,5)  
198-200°: (7)

**PHARMACOLOGY:** Luteoid: 46: 50 mg. inact.-Rb. (9).

**Folliculoid:** 55: 20 mg. inact.-R (6); 128C: 10 mg./day act.? -R (8); 128A: no *metrotropic* act. and no *anti-castration* cell act. at 2 mg.-R (11).

**Anesthetic:** 11: U. > 20 mg.-R (6); 127: U. = 0.5 mg.-Fish (10).

**REMARKS:**

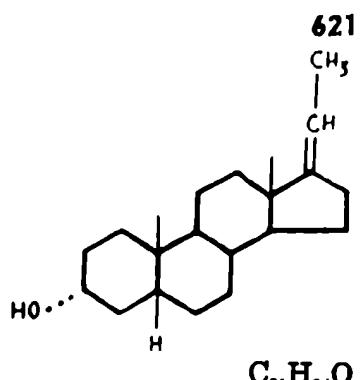
**DERIVATIVES:**

Disemicarb. 310°: (1)

**REFERENCES:**

1. 78240
2. 78241
3. A34047
4. 80968
5. 80069
6. A36744
7. 82782
8. A37486
9. A56335
10. A38070
11. A56752

**17-ETHYLIDENE-ETIOCHOLANE-3( $\alpha$ )-OL  
 $(\Delta^{17}\text{-pregnenol-}3\alpha)$**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:** 118-20°: (1)

**PHARMACOLOGY:**

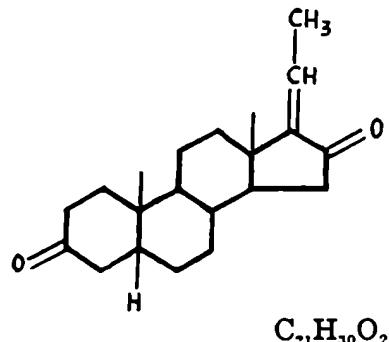
**REMARKS:**

**DERIVATIVES:**

**REFERENCES:**

1. A37545

**17-ETHYLIDENE-ETIOCHOLANE-3,16-DIONE**  
*(Δ<sup>17</sup>-pregnene-3,16-dione)*



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 179-82°: (1)

**PHARMACOLOGY:**

**REMARKS:** Structure uncertain (1).

**DERIVATIVES**

**REFERENCES:**

1 79006

**17-CARBOXYETHYLENE-ETIOCHOLANE-3( $\beta$ )-OL  
 $(3\beta$ -hydroxy- $\Delta^{17}$ -pregnenoic acid)**

**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:** 257-8°: (1)

**PHARMACOLOGY:**

**REMARKS:**

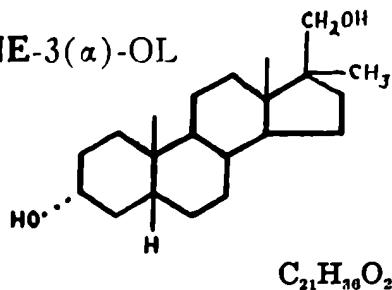
**DERIVATIVES:**

Ac. 209-12° (+H<sub>2</sub>O): (1)

**REFERENCES:**

1. 83007

**17(α)-METHYL-17(β)-HYDROXYMETHYL-ETIOCHOLANE-3(α)-OL  
 (17-methyl-21-nor-pregnane-3(α),20-diol)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:**

**PHARMACOLOGY:**

**REMARKS:**

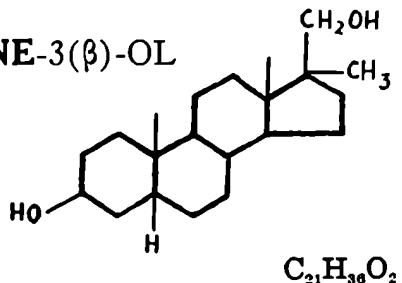
**DERIVATIVES:**

Diac. 123-5° + 156°: (1)

**REFERENCES:**

1. 82780

**17( )-METHYL-17( )-HYDROXYMETHYL-ETIOCHOLANE-3( $\beta$ )-OL  
 (17-methyl-21-nor-pregnandiol-3 $\beta$ ,20)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 124°: (1)

**PHARMACOLOGY:**

**REMARKS:**

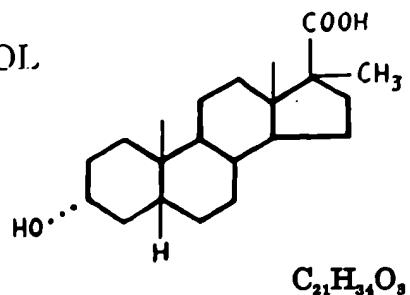
**DERIVATIVES:**

Diac. 94-5°: (1)

**REFERENCES:**

1. 82780

**17( )-METHYL-17( )-CARBOXY-ETIOCHOLANE-3( $\alpha$ )-OL  
 (3( $\alpha$ )-hydroxy-17-methyl-etiocholanic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:**

**PHARMACOLOGY:**

**REMARKS:**

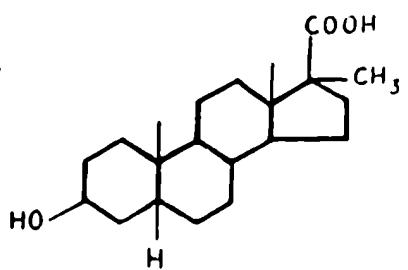
**DERIVATIVES:**

Me. ester-3-ac. 130-1°: (1)  
 Me. ester 152-3°: (1)

**REFERENCES:**

1. 82780

**17( )-METHYL-17( )-CARBOXY-ETIOCHOLANE-3( $\beta$ )-OL  
 ( $3\beta$ -hydroxy-17-methyl-etiocholanic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 222-4°: (1)

**PHARMACOLOGY:**

**REMARKS:**

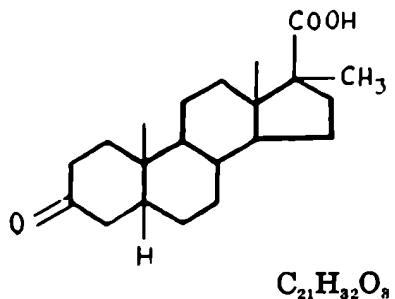
**DERIVATIVES:**

Me. ester	124-6° and 143-5°:	(1)
Ac.	220-2°:	(1)
3-ac.-me. ester	136-8°:	(1)

**REFERENCES:**

1. 82780

**17( )-METHYL-17-CARBOXY-ETIOCHOLANE-3-ONE**  
**(3-keto-17-methyl-etiocholanic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 224-6°: (1)

**PHARMACOLOGY:**

**REMARKS:**

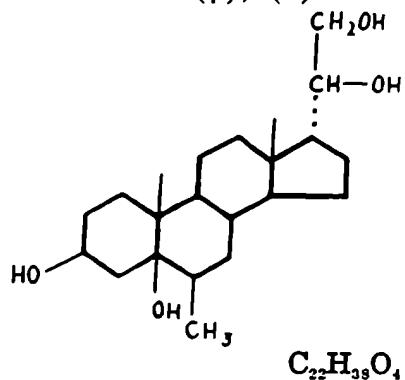
**DERIVATIVES:**

Me. ester 103-5°: (1)

**REFERENCES:**

1. 82780

**6( )-METHYL-17(  $\alpha$  )-[1( )-2-DIHYDROXYETHYL]-ETIOCHOLANE-3( $\beta$ ),5( )-DIOL  
(6-methyl-pregnane-3( $\beta$ ),5,20,21-tetraol)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 229-30°: (1)

$[\alpha]_D^{20.5} = -24.0^\circ$  (methanol): (1)

**PHARMACOLOGY:**

**REMARKS:** C<sub>6</sub> configuration uncertain (1).

**DERIVATIVES:**

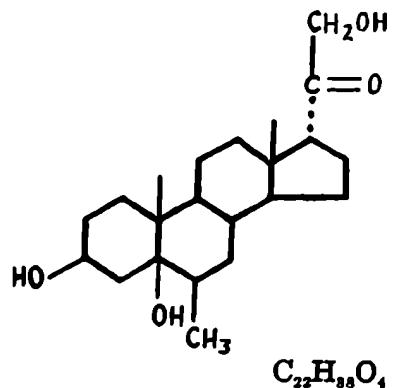
17<sup>a</sup>-ac. 177.5-80°;  $[\alpha]_D^{20} = +15^\circ$  (methanol): (1)  
3,17<sup>a</sup>-diac. 183-5.5°: (1)

**REFERENCES:**

1. 83077

630

**6( )-METHYL-17( $\alpha$ )-[1-KETO-2-HYDROXYETHYL]-  
ETIOCHOLANE-3( $\beta$ ).5( )-DIOL  
(6-methylpregnane-3( $\beta$ ),5,21-triol-20-one)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:**

**PHARMACOLOGY:**

**REMARKS:** C<sub>6</sub> configuration uncertain (1).

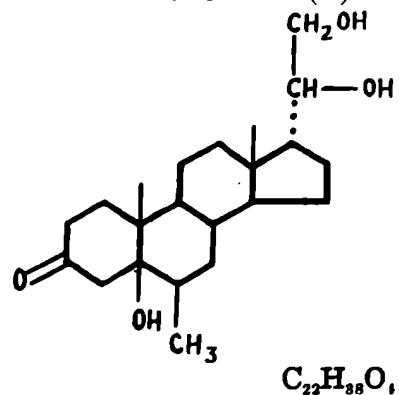
**DERIVATIVES:**

3,17<sup>2</sup>-diac. (resinous): (1)

**REFERENCES:**

- 1. 83977

**6( )-METHYL-17(  $\alpha$  )-[1( )-2-DIHYDROXYETHYL]-ETIOCHOLANE-3-ONE-5( )-OL  
 (6-methylpregnane-3-one-5,20,21-triol)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:**

**PHARMACOLOGY:**

**REMARKS:**

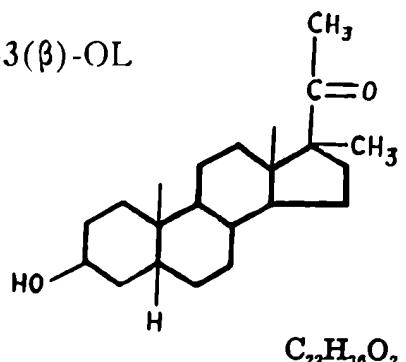
**DERIVATIVES:**

$17^1,17^2$ -diac. ca. 205-10° (impure) : (1)

**REFERENCES:**

1. S3977

**17( )-METHYL-17( )-[1-KETOETHYL]-ETIOCHOLANE-3( $\beta$ )-OL  
 (17-methylpregnane-3( $\beta$ )-ol-20-one)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:** 169-71° and 180-7°: (1)

**PHARMACOLOGY:**

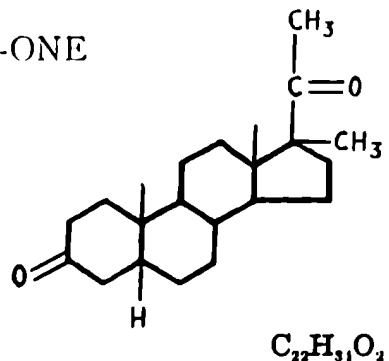
**REMARKS:** Polymorphic modifications (1).

**DERIVATIVES:**

**REFERENCES:**

1. 83172

**17( )-METHYL-17( )-[1-KETOETHYL]-ETIOCHOLANE-3-ONE  
(17-methyl-pregnane-3,20)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:** 131-4°: (1)

**PHARMACOLOGY:**

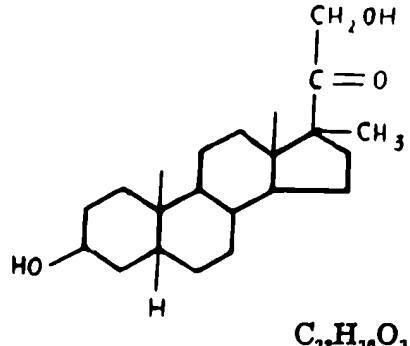
**REMARKS:**

**DERIVATIVES:**

**REFERENCES:**

1. 83172

**17(α)-METHYL-17(β)-[1-KETO-2-HYDROXYETHYL]-ETIOCHOLANE-3(β)-OL  
 (21-hydroxy-17-methyl-pregnane-3(β)-ol-20-one)**



ISOLATION:

STRUCTURE AND SYNTHESIS: (1)

M.P.: 140-2°: (1)

PHARMACOLOGY:

REMARKS:

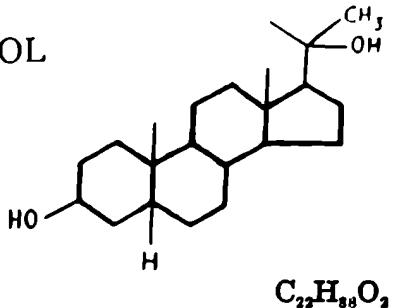
DERIVATIVES:

REFERENCES:

1. 83172

**17( )-[1( )-HYDROXYISOPROPYL]-ETIOCHOLANE-3( $\beta$ )-OL**

**635**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2)

**M.P.:** 168-71° (u) : (1,2)

$[\alpha]_D^{20} = + 16.5^\circ \pm 2.1^\circ$  (alc.) : (1,2)

**PHARMACOLOGY:**

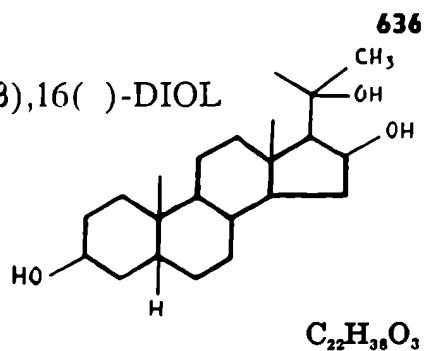
**REMARKS:**

**DERIVATIVES:**

**REFERENCES:**

1. 71854
2. A16456

**17( )-[1( )-HYDROXYISOPROPYL]-ETIOCHOLANE-3( $\beta$ ),16( )-DIOL  
(20-methyl-pregnane-3( $\beta$ ),16,20-triol)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 234-6°: (1)

**PHARMACOLOGY:**

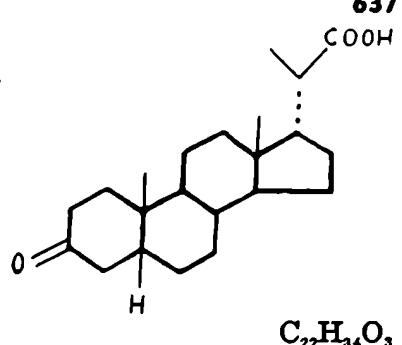
**REMARKS:**

**DERIVATIVES:**

**REFERENCES:**

1. 82786

**17( $\alpha$ )-[1( $\beta$ )-CARBOXYETHYL]-ETIOCHOLANE-3-ONE  
 (3-keto-bisnor-cholanic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 184° (u): (1)

$[\alpha]_D^{20} = + 4.55^\circ$  ( $\text{CHCl}_3$ ): (1)

**PHARMACOLOGY:**

**REMARKS:**

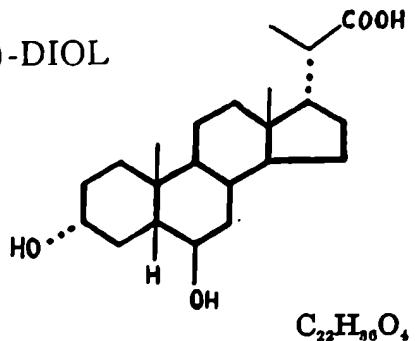
**DERIVATIVES:**

4-Br. 221° (u): (1)

**REFERENCES:**

1. 53439

**17( $\alpha$ )-[1( $\beta$ )-CARBOXYETHYL]-ETIOCHOLANE-3( $\alpha$ ),6( $\beta$ )-DIOL  
 (bisnor-hyodesoxycholic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 238°: (1)  
 240°: (2)

$[\alpha]_D^{15} = -12.9^\circ$  (alc.): (1)

**PHARMACOLOGY:**

**REMARKS:**

**DERIVATIVES:**

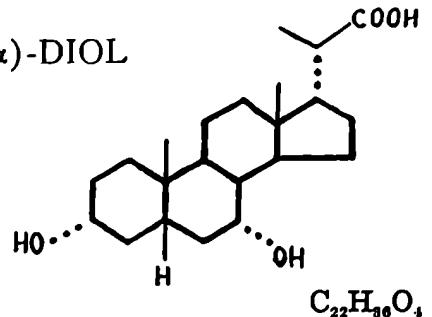
Diacetyl	amorphous:	(1)
Me. ester	137°: (1); 146°: (2)	
Diet. carbinol	195°:	(1)

**REFERENCES:**

1. A37848
2. 77857

**17( $\alpha$ )-[1( $\beta$ )-CARBOXYETHYL]-ETIOCHOLANE-3( $\alpha$ ),7( $\alpha$ )-DIOL  
(bisnor-chenodesoxycholic acid)**

639



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 269-70°: (1)

$[\alpha]_D = -18.9^\circ$  (alc.): (1)

**PHARMACOLOGY:**

**REMARKS:**

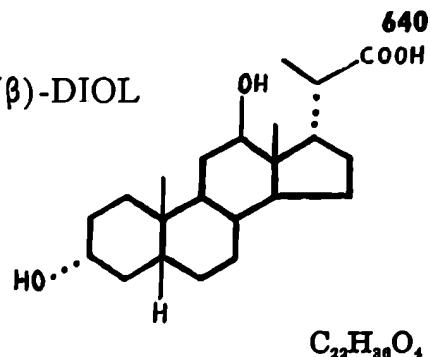
**DERIVATIVES:**

Diet. carbinol 160-1°: (1)  
Diac. 226-7°: (1)  
Me. ester 173-4°: (1)

**REFERENCES:**

1. A37850

**17( $\alpha$ )-[1( $\beta$ )-CARBOXYETHYL]-ETIOCHOLANE-3( $\alpha$ ),12( $\beta$ )-DIOL  
(bisnor-desoxycholic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2)

M.P.: 195-202° + 236-8° (+H<sub>2</sub>O) : (2)  
235-7° (+alc.) : (1)

$[\alpha]_{D}^{25} = +35.8^\circ \pm 5^\circ$  (alc.) : (2)  
 $[\alpha]_{D}^{20} = +53^\circ$  (alc.) : (1)

**PHARMACOLOGY:** Luteoid: **46**: 50 mg. inact.-Rb. (3).

Anti-folliculoid: **129**: 1 mg. inact.-R (3).

Testoid: **132**: 10 mg. inact.-R (3).

Anesthetic: **11**: 20 mg. inact. (toxic)-R (3); **127**: 7.0 mg. inact.-Fish (3).

**REMARKS:**

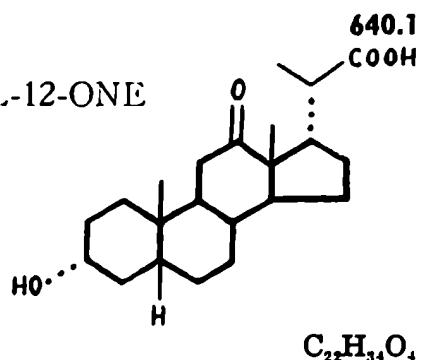
**DERIVATIVES:**

Me. ester      167° :  
Diac.            185-6° :  
3-½ succinate 234-5°;  $[\alpha]_D = +33.9^\circ$  (dioxane) : (5)

**REFERENCES:**

- (1,4) 1. A37849
- (4) 2. 72173
- 3. 100000
- 4. A34407
- 5. S4133

**17( $\alpha$ )-[1( $\beta$ )-CARBOXYETHYL]-ETIOCHOLANE-3( $\alpha$ )-OL-12-ONE  
(3-hydroxy-12-keto-bisnor-cholanic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 298-9°: (1)

$[\alpha]_D = + 84.6^\circ$  (dioxane): (1)

**PHARMACOLOGY:**

**REMARKS:**

**DERIVATIVES:**

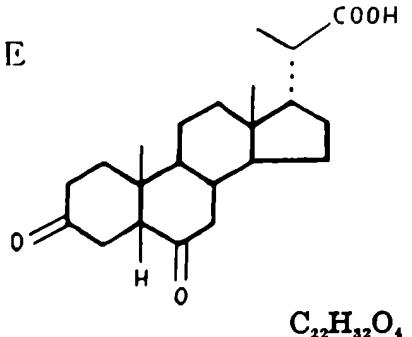
½ succinate 252-4°: (1)  
Ac. 246-7°;  $[\alpha]_D = + 65.9^\circ$ : (1)  
Semicarb. 210-3°: (1)

**REFERENCES:**

1. 84133

**17( $\alpha$ )-[1( $\beta$ )-CARBOXYETHYL]-ETIOCHOLANE-3,6-DIONE  
(3,6-diketo-bisnor-cholanic acid)**

641



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:** 185°: (1)

**PHARMACOLOGY:**

**REMARKS:**

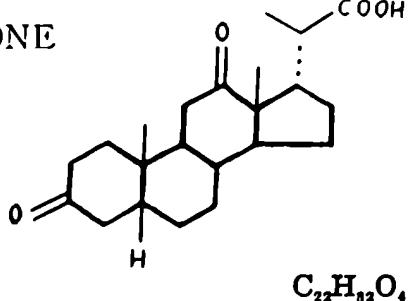
**DERIVATIVES:**

Me. ester 170°: (1)

**REFERENCES:**

1. 78243

**17(α)-[1(β)-CARBOXYETHYL]-ETIOCHOLANE-3,12-DIONE**  
**(dehydro-bisnor-desoxycholic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 275-6°: (1)

$[\alpha]_{5461}^{25} = +98^\circ \pm 5^\circ$  (alc.): (1)

**PHARMACOLOGY:**

**REMARKS:**

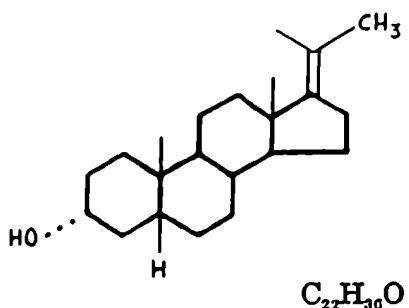
**DERIVATIVES:**

**REFERENCES:**

1. 72173

**643**

**17-PROPYLIDENE-ETIOCHOLANE-3( $\alpha$ )-OL  
(20-methyl- $\Delta^{17}$ -pregnenol-3( $\alpha$ ))**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2)

M.P.: 164-5.5°: (1,2)

$[\alpha]_D^{20} = +45^\circ$  (alc.): (1,2)

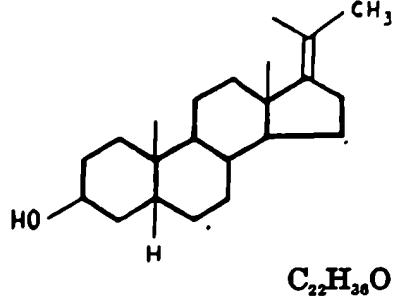
**PHARMACOLOGY:**

**REMARKS:**

**DERIVATIVES:**

**REFERENCES:**

1. 71854
2. A10456

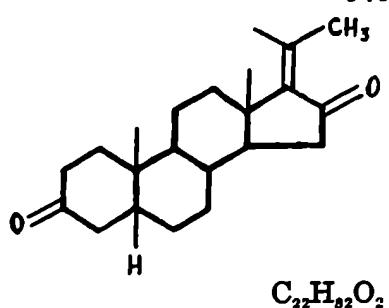
**17-ISOPROPYLIDENE-ETIOCHOLANE-3(β)-OL****ISOLATION:****STRUCTURE AND SYNTHESIS:** (1,2)

M.P.: 141-2° (u) : (1,2)

 $[\alpha]_D^{20} = +14.8^\circ \pm 1.8^\circ$  (alc.) : (1,2)**PHARMACOLOGY:****REMARKS:****DERIVATIVES:****REFERENCES:**

1. 71854
2. A16456

**17-ISOPROPYLIDENE-ETIOCHOLANE-3,16-DIONE  
(20-methyl-17,20-pregnane-3,16-dione)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 193-5°: (1)

**PHARMACOLOGY:**

**REMARKS:**

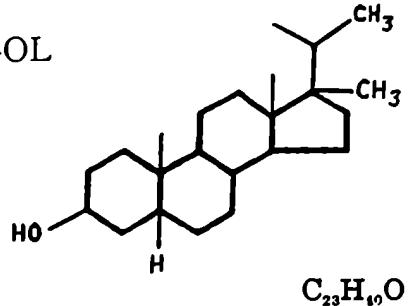
**DERIVATIVES:**

**REFERENCES:**

1. 82786

**17( )-METHYL-17( )-ISOPROPYL-ETIOCHOLANE-3( $\beta$ )-OL  
(17,20-dimethyl-pregnane-3( $\beta$ )-ol)**

**646**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.: 176-7°:** (1)

**PHARMACOLOGY:**

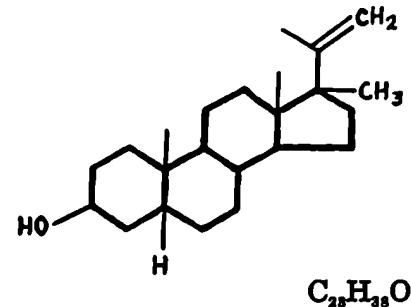
**REMARKS:**

**DERIVATIVES:**

**REFERENCES:**

1. 83172

**17( )-METHYL-17( )-[1( )-METHYLETHENYL]-ETIOCHOLANE-3( $\beta$ )-OL  
 (20-methylene-17-methyl-pregnane-3( $\beta$ )-ol)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:** 167-8°: (1)

**PHARMACOLOGY:**

**REMARKS:**

**DERIVATIVES:**

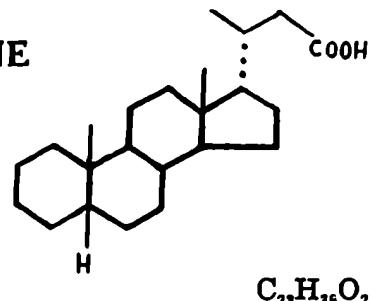
Ac. 136-8°: (1)

**REFERENCES:**

1. 83172

**17(α)-[1(β)-METHYL-2-CARBOXYETHYL]-ETIOCHOLANE**  
**(nor-cholic acid)**

648



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2,3)

M.P.: 177° (+ acetic acid): (3)  
174-5°: (2)

**PHARMACOLOGY:**

**REMARKS:**

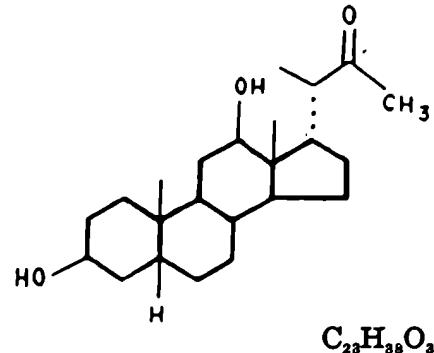
**DERIVATIVES:**

Me. ester 74°: (1)  
Et. ester 66-7°: (1)

**REFERENCES:**

1. A58554
2. A58555
3. A58556

**17( $\alpha$ )-[1( $\beta$ )-METHYL-2-KETOPROPYL]-ETIOCHOLANE-3( $\beta$ ),12( $\beta$ )-DIOL  
 (ternor-cholanyl-methyl-ketone)**



ISOLATION:

STRUCTURE AND SYNTHESIS:

M.P.:

PHARMACOLOGY:

REMARKS:

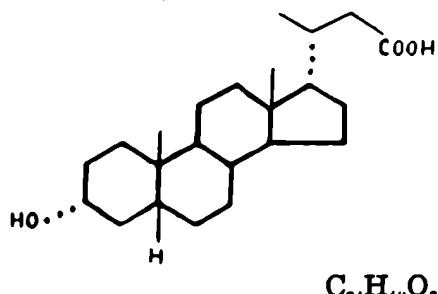
DERIVATIVES:

Diac. 148-50°: (1)

REFERENCES:

1. A37849

**17( $\alpha$ )-[1( $\beta$ )-METHYL-2-CARBOXYETHYL]-ETIOCHOLANE-3( $\alpha$ )-OL  
 (Nor-lithocholic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2,3)

M.P.: 183-3.5°: (1)

181-2°: (2)

186-7°: (3)

**PHARMACOLOGY:**

**REMARKS:**

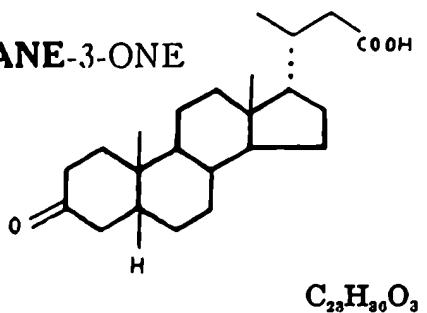
**DERIVATIVES:**

**REFERENCES:**

1. 84133
2. A58537
3. A58406

**17(α)-[1(β)-METHYL-2-CARBOXYETHYL]-ETIOCHOLANE-3-ONE**  
**(3-keto-nor-cholanic acid; dehydro-nor-lithocholic acid)**

650



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.: 179-80°:** (1)

**PHARMACOLOGY:**

**REMARKS:**

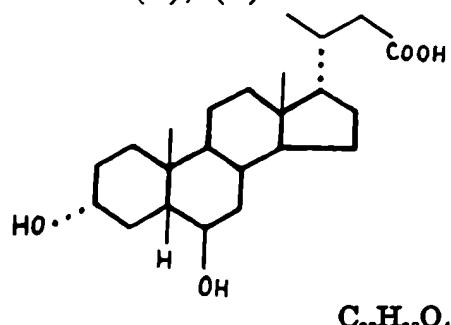
**DERIVATIVES:**

Me.ester 90°: (1)  
Semicarb. 208-10°: (1)

**REFERENCES:**

1. A58537

**17( $\alpha$ )-[1( $\beta$ )-METHYL-2-CARBOXYETHYL]-ETIOCHOLANE-3( $\alpha$ ),6( $\beta$ )-DIOL  
(nor-hyodesoxycholic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2)

**M.P.:** 209°: (1)  
198°: (2)

$[\alpha]_D^{20} = +6.3^\circ$  (alc.): (1)

**PHARMACOLOGY:**

**REMARKS:**

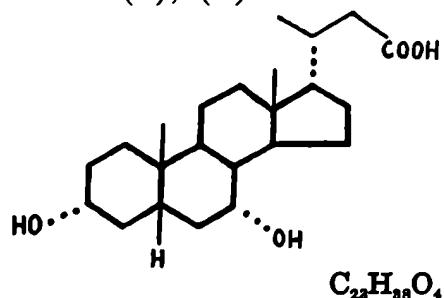
**DERIVATIVES:**

Me. ester 115°: (1); (+ 1 benzene) 95°: (2)  
Diac. 140°: (1)

**REFERENCES:**

1. A37848
2. 77857

**17( $\alpha$ )-[1( $\beta$ )-METHYL-2-CARBOXYETHYL]-ETIOCHOLANE-3( $\alpha$ ),7( $\alpha$ )-DIOL**  
 (nor-chenodesoxycholic acid; dihydroxy-norcholanic acid;  
 $\beta$ -phocal-cholic acid)



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:** 197-8°: (1)

$[\alpha]_D = +8^\circ$  (alc.): (1)

**PHARMACOLOGY:**

**REMARKS:**

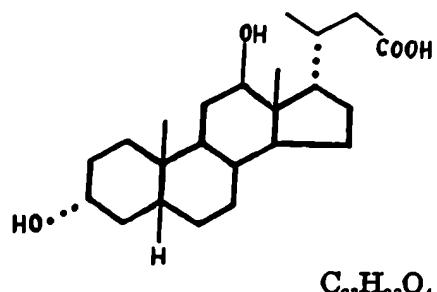
**DERIVATIVES:**

Diac.                    213-4°: (1)  
 Me. ester ( $+1/2 H_2O$ )    85-7°: (1)

**REFERENCES:**

1. A37850

**17( $\alpha$ )-[1( $\beta$ )-METHYL-2-CARBOXYETHYL]-ETIOCHOLANE-3( $\alpha$ ),12( $\beta$ )-DIOL  
(nor-desoxycholic acid; 3,12-dihydroxy-nor-cholic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2,3)

M.P.: 140-5° + 206-10° (+ acetone): (1)  
211-2°: (3)

$[\alpha]_{D}^{25} = +62^\circ \pm 2.5^\circ$  (alc.): (1)  
 $[\alpha]_{D}^{20} = +57.7^\circ$  (alc.): (3)

**PHARMACOLOGY:** Luteoid: 46: 50 mg. inact.-Rb. (4).

Anti-folliculoid: 129: 1 mg. inact.-R (4).

Testoid: 132: 10 mg. inact.-R (4).

Anesthetic: 11: 20 mg. inact. (toxic)-R (4); 127: 7 mg. inact.-Fish (4).

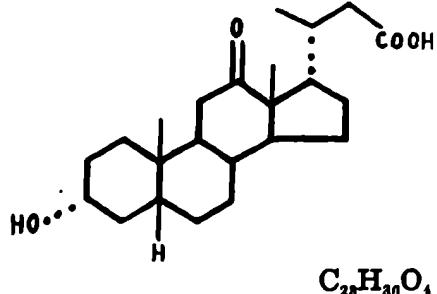
**REMARKS:**

**DERIVATIVES:**

Me. ester	{ 164-5.5°: (2) 110-2°: (3)	(2) (3)	1. 72173 2. A34407
Diac.	207.5-9.5°: (2,3)	(2,3)	3. A37849
Me. ester-diac.	157-9°: (2,3)	(2,3)	4. 100000
3-½ succinate	241-2°; $[\alpha]_D = +54.8^\circ$ : (5)		5. 84133

**REFERENCES:**

**17( $\alpha$ )-[1( $\beta$ )-METHYL-2-CARBOXYETHYL]-ETIOCHOLANE-3( $\alpha$ )-OL-12-ONE  
 (3( $\alpha$ )-hydroxy-12-keto-nor-cholanic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 250-1°: (1)

$[\alpha]_D = + 69.7^\circ$  (dioxane) : (1)

**PHARMACOLOGY:**

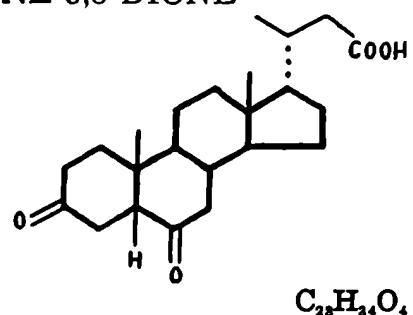
**REMARKS:**

**DERIVATIVES:**

1/2 succinate	257-8°:	(1) 1. 84133
Ac.	207.8-9.5°; $[\alpha]_D = + 99.7^\circ$ :	(1)
Semicarb.	ca. 250-75°:	(1)

**REFERENCES:**

**17( $\alpha$ )-[1( $\beta$ )-METHYL-2-CARBOXYETHYL]-ETIOCHOLANE-3,6-DIONE  
 (dehydro-nor-hyodesoxycholic acid; 3,6-diketo-nor-cholanic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 211°: (1)

**PHARMACOLOGY:**

**REMARKS:**

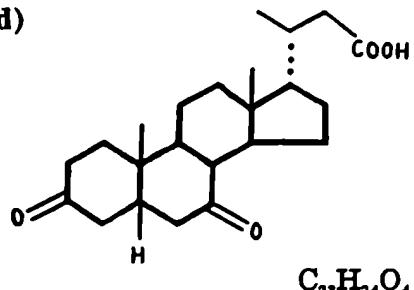
**DERIVATIVES:**

Me. ester (+  $\frac{1}{2}$  H<sub>2</sub>O) 115°: (1)  
 Et. ester 124°: (1)

**REFERENCES:**

1. A37848

**17( $\alpha$ )-[1( $\beta$ )-METHYL-2-CARBOXYETHYL]-ETIOCHOLANE-3,7-DIONE  
 (dehydro-nor-chenedesoxycholic acid; 3,7-diketo-nor-cholanic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:** 201-2°: (1)

**PHARMACOLOGY:**

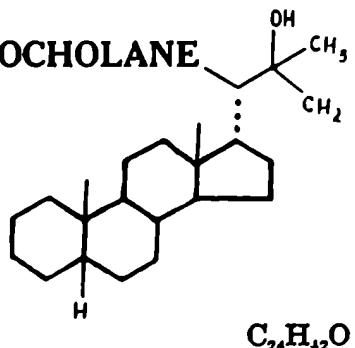
**REMARKS:**

**DERIVATIVES:**

**REFERENCES:**

1. A37850

**17( $\alpha$ )-[1( $\beta$ ),2( $\beta$ )-DIMETHYL-2( $\beta$ )-HYDROXYPROPYL]-ETIOCHOLANE  
 (Ternor-cholyl-demethyl carbinol)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.: 159-60°:** (1)

**PHARMACOLOGY:**

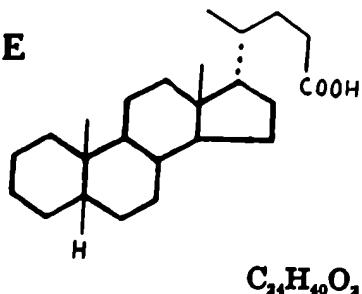
**REMARKS:**

**DERIVATIVES:**

**REFERENCES:**

1. A58554

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]-ETIOCHOLANE  
(cholanic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2,5,6)

**M.P.:** 164°: (2,6)

$[\alpha]_D^{20} = +21.6^\circ$ : (5)  
 $[\alpha]_D^{20} = +20.3^\circ$  ( $CHCl_3$ ): (2)

**PHARMACOLOGY:**

**REMARKS:**

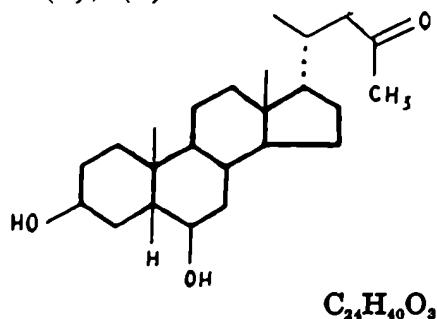
**DERIVATIVES:**

Me. ester	91°: (4); 86-7°; $[\alpha]_D^{11} = +24.6^\circ$ (acetone): (1)	(1)
Et. ester	93-4°: (3); b.p.: 273°/12 mm.; $[\alpha]_D^{10} = +21^\circ$ : (5)	(5)
Propyl ester	56-7°: (3)	(3)
n-butyl ester	53°: (3)	(3)
Acid Cl.	128°: (3)	(3)
Amide	75°: (3)	(3)
11,12-di-Br.-me. ester	102-3°: (1)	(1)
2,3(cis)-di-Br.	171°: (7)	(7)
2,3(trans)-di-Br.	233°: (7)	(7)
3,4-di-Br.	238°: (7)	(7)
2,3,11,12-tetra-Br.	183-4°: (7)	(7)
3,4,11,12-tetra-Br.	236-7°: (7)	(7)
3,?,11,12-tetra-Br.-me. ester	179-81°: (8); 172°: (4)	(4)
3,?,6,7,11,12-hexa-Br.-me. ester	158-60°: (4)	(4)

**REFERENCES:**

1. 83509
2. A58546
3. A58549
4. A58548
5. A58547
6. A58440
7. A58550
8. A58551

**17(α)-[1( )-METHYL-3-KETOBUTYL]-ETIOCHOLANE-3( ),6( )-DIOL  
(3,6-dihydroxy-bisnor-cholanyl)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 236° (+H<sub>2</sub>O) : (1)

$[\alpha]_D^{28} = -3.2^\circ$  (alc.) : (1)

**PHARMACOLOGY:**

**REMARKS:**

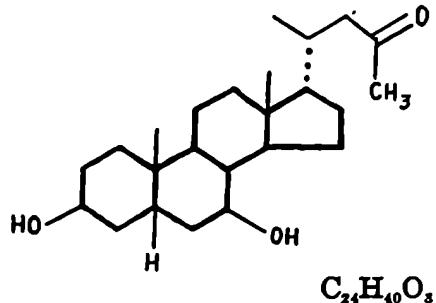
**DERIVATIVES:**

Diac. 178° : (1)

**REFERENCES:**

1. A37848

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-KETOBUTYL]-ETIOCHOLANE-3( $\beta$ ),7( $\beta$ )-DIOL  
 (bisnor-chenodesoxycholyl-methyl-ketone)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 160-1°: (1)

$[\alpha]_D = +3.5^\circ$  (alc.): (1)

**PHARMACOLOGY:**

**REMARKS:**

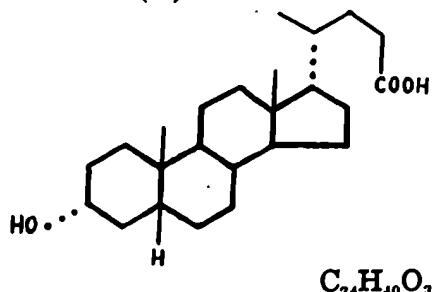
**DERIVATIVES:**

Diac. 189-90°: (1)

**REFERENCES:**

1. A37850

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]-ETIOCHOLANE-3( $\alpha$ )-OL  
 (lithocholic acid;  $\alpha$ -hydroxy-cholanic acid)**



ISOLATION: Gallstone (pig): (7)  
 Bile (ox): (2)  
 Bile (human): (6)

STRUCTURE AND SYNTHESIS: (1,2,3,8)

M.P.: 186°: (2)  
 184°: (5)

$[\alpha]_D^{10} = +23.3^\circ$  (alc.): (2)  
 $[\alpha]_D = +33.7^\circ$  ( ): (3)

**PHARMACOLOGY:**

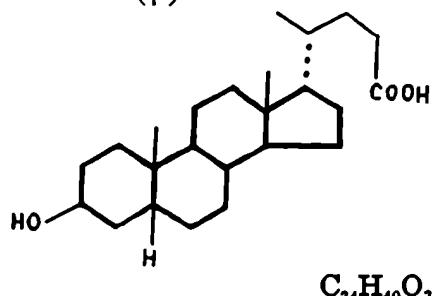
**REMARKS:**

**DERIVATIVES:**

Me. ester	130°:	(3)	1. 83468
Me. ester (+½ Me. OH)	125-7°; (anhydrous) 90-3°:(4)	(4)	2. A58558
Ac.-me. ester	129-30°:	(1)	3. A58560
Et. ester	92-3°:	(4)	4. A58537
Benzyl ester (+H <sub>2</sub> O)	145-8°:	(4)	5. 71842
Ac.	169°:	(4)	6. A58550
Ac.-et. ester	90-1°:	(4)	7. A58557
Et.-succinate	147°:	(9)	8. A58572
			9. A58570

**REFERENCES:**

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]-ETIOCHOLANE-3( $\beta$ )-OL  
 $(\beta$ -hydroxy-cholanic acid)**



**ISOLATION:**

M.P.: 176-7°: (1)  
 178°: (2)

$[\alpha]_D = + 25.85^\circ$  (alc.): (1)  
 $[\alpha]_D = + 25^\circ$ : (2)

**PHARMACOLOGY:**

**REMARKS:**

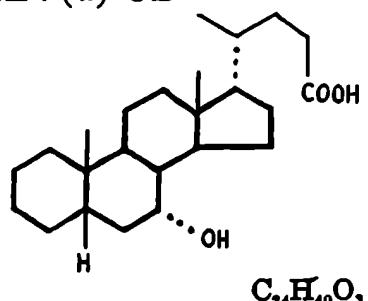
**DERIVATIVES:**

Me. ester	$\{$	113-4.5°: (1)
	$\}$	115-6°: (2)
Ae.		183-5°: (1)

**REFERENCES:**

1. A58568
2. A58569

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]-ETIOCHOLANE-7( $\alpha$ )-OL  
 (7-hydroxy-cholanic-acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2,3)

M.P.: 96-102° (+H<sub>2</sub>O): (1)  
 97°: (2)

**PHARMACOLOGY:**

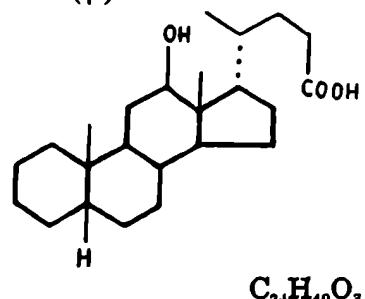
**REMARKS:**

**DERIVATIVES:**

**REFERENCES:**

1. A58571
2. A58548
3. A58588

**17( $\alpha$ )-[1( $\beta$ )METHYL-3-CARBOXYPROPYL]-ETIOCHOLANE-12( $\beta$ )-OL  
 (12 $\beta$ -hydroxy-cholanic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2)

**M.P.:** 234°: (2)

**PHARMACOLOGY:**

**REMARKS:**

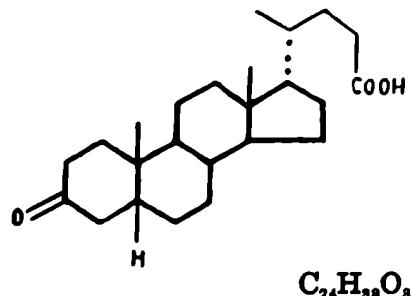
**DERIVATIVES:**

Me. ester 120-1°: (1,2)  
 Et. ester 136°: (2)  
 Lactone 236°: (2)

**REFERENCES:**

1. 83509
2. A58602

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]-ETIOCHOLANE-3-ONE  
(3-keto-cholanic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2,3,4,5,6)

**M.P.:** 140-1°: (4,5,6)

**PHARMACOLOGY:**

**REMARKS:**

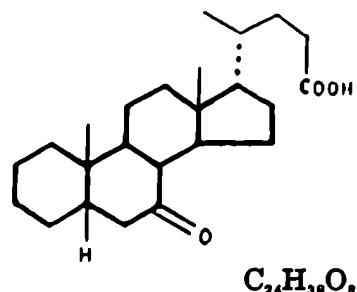
**DERIVATIVES:**

Me. ester	116-7°:	(1,2,5)
Me. ester-oxime	148°:	(5)
Semicarb.	231-2°: (6); 230°: (3)	
4-Br.	179°:	(7)

**REFERENCES:**

1. 83508
2. A50869
3. A58570
4. A58558
5. A58560
6. A58568
7. A58573

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]-ETIOCHOLANE-7-ONE  
(7-keto-cholanic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2)

**M.P.:** 148°: (1,2)  
149-50°: (3)

**PHARMACOLOGY:**

**REMARKS:**

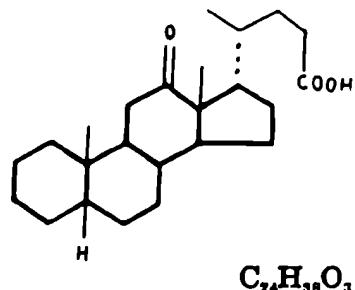
**DERIVATIVES:**

Me. ester 78°: (3)  
Oxime 240°: (3)  
6-Br. ca. 170-8°: (2)

**REFERENCES:**

1. A58571
2. A58548
3. A58589

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]-ETIOCHOLANE-12-ONE  
(12-keto-cholic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2,3,4,5,6)

**M.P.:** 183°: (1,2)  
186-7°: (3,4)  
180°: (5)  
185°: (6)

**PHARMACOLOGY:**

**REMARKS:**

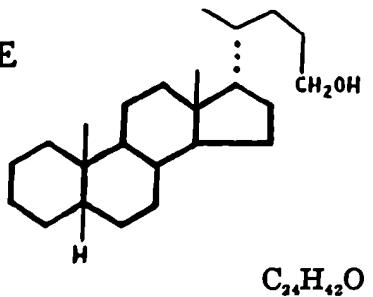
**DERIVATIVES:**

Me. ester	104-5°: (5)
Et. ester	95°: (1)
Oxime	245°: (6)
3,3'-di-Cl.	(7)
11-Br.	187-8°: (8,9)

**REFERENCES:**

1. A58547
2. A58558
3. A58602
4. A58548
5. A58589
6. A58603
7. A58605
8. A58606
9. A58580

**17( $\alpha$ )-[1( $\beta$ )-METHYL-4-HYDROXYBUTYL]-ETIOCHOLANE  
(Cholane-24-ol)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 105°: (1)

**PHARMACOLOGY:**

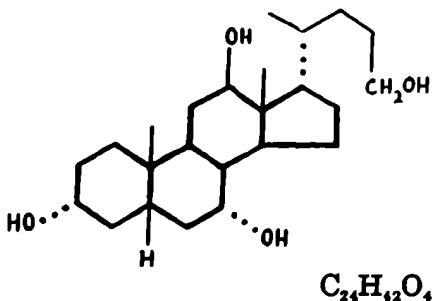
**REMARKS:**

**DERIVATIVES:**

**REFERENCES:**

1. A58753

**17( $\alpha$ )-[1( $\beta$ )-METHYL-4-HYDROXYBUTYL]-  
ETIOCHOLANE-3( $\alpha$ ),7( $\alpha$ ),12( $\beta$ )-TRIOL  
(Cholane-3( $\alpha$ ),7( $\alpha$ ),12( $\beta$ ),24-tetrol)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 227°: (1)

**PHARMACOLOGY:**

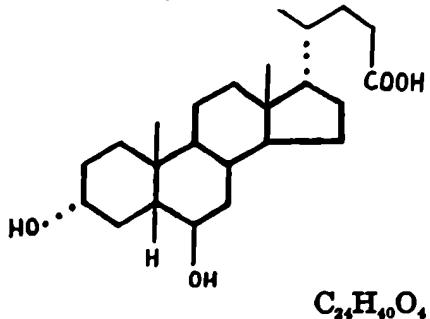
**REMARKS:**

**DERIVATIVES:**

**REFERENCES:**

1. A58753

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]-ETIOCHOLANE-3( $\alpha$ ),6( $\beta$ )-DIOL  
(hyodesoxycholic acid)**



ISOLATION: Bile (pig): (2,5)

STRUCTURE AND SYNTHESIS: (1,2,3,4,5)

M.P.: 196-7°: (2)

**PHARMACOLOGY:**

**REMARKS:**

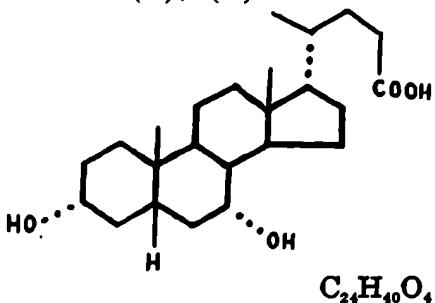
**DERIVATIVES:**

Diac.	106°: (2)
Diac.-me. ester	100°: (3)
Me. ester	86°: (4)

**REFERENCES:**

1. A37848
2. A58704
3. A58807
4. 77857
5. A58587

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]-ETIOCHOLANE-3( $\alpha$ ),7( $\alpha$ )-DIOL  
(cheno-desoxy-cholic acid; anthropo-desoxy-cholic acid)**



ISOLATION:	Bile (goose):	(2)
	Bile (human):	(4)
	Bile (pig):	(3)
	Bile (ox):	(5)
	Bile (fowl):	(7,8)
	Bile (kurodai fish):	(6)
	Bile (various other animals):	(12,13)

STRUCTURE AND SYNTHESIS: (1,9,10).

M.P.: 105-10°: (4)

$[\alpha]_D^{23} = +11.1^\circ$  (alc.): (4)

$[\alpha]_D^{22} = +10.2^\circ$  (alc.): (3)

PHARMACOLOGY:

REMARKS: Configuration of hydroxyls established (9,10).

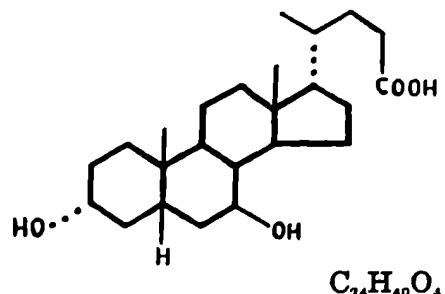
DERIVATIVES:

Diac.	230°:	(11)
Diac.-me. ester	128°:	(11)
Di-formate	137° + 172°: (4); 184°: (11)	(11)
Di-formate-me. ester	56-8°:	(11)
7-formate	147-9°:	(11)

REFERENCES:

1. A37850
2. A58608
3. A37844
4. A58009
5. A58610
6. A58579
7. A58578
8. A58575
9. A58588
10. A58589
11. A58577
12. A57628
13. A58590

**17(α)-[1( )-METHYL-3-CARBOXYPROPYL]-ETIOCHOLANE-3(α),7(β)-DIOL  
(Urso-desoxy-cholic acid)**



ISOLATION: Bile (bear): (2,3)

STRUCTURE AND SYNTHESIS: (1,2,4)

M.P.: 198°: (2)  
198-200°: (1)

$[\alpha]_D^{13} = + 44.5^\circ$ : (1)

PHARMACOLOGY:

REMARKS: Configuration of hydroxyls established (4).

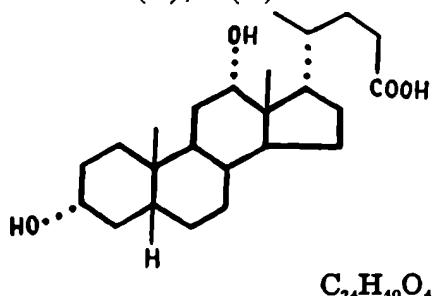
DERIVATIVES:

Diac.	98-102°:	(1)
Glyco acid (+H <sub>2</sub> O)	232°; $[\alpha]_D^{20} = + 51.3^\circ$ :	(3)
7-formate	135°:	(5)

REFERENCES:

1. A58612
2. A58611
3. A58593
4. A58589
5. A58577

**17(α)-[1( )-METHYL-3-CARBOXYPROPYL]-ETIOCHOLANE-3(α),12(α)-DIOL  
(12-epi-desoxycholic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 186-8°: (1)

$[\alpha]_D^{17.5} = + 38.4^\circ \pm 2^\circ$  (dioxane) : (1)

**PHARMACOLOGY:**

**REMARKS:**

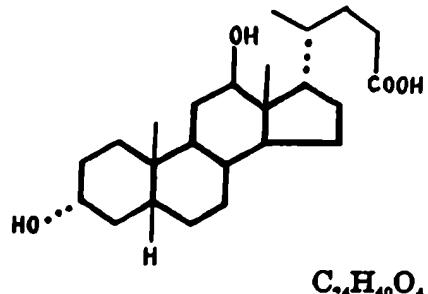
**DERIVATIVES:**

12-ac.-me. ester	not crystalline:	(1)
12-ac.	not crystalline:	(1)
Diac.-me. ester	not crystalline; $[\alpha]_D^{17} = + 56.8^\circ \pm 2^\circ$ (acetone): (1)	
Me. ester	not crystalline; $[\alpha]_D^{17.5} = + 43.6^\circ$ (acetone): (1)	

**REFERENCES:**

1 83507

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]-ETIOCHOLANE-3( $\alpha$ ),12( $\beta$ )-DIOL  
(desoxycholic acid)**



ISOLATION: Bile (numerous animals): (6,16).

STRUCTURE AND SYNTHESIS: (1,2,3,5,8)

M.P.: 172°: (7)  
176-7°: (3)  
141-3° (+acetic acid): (8)

$[\alpha]_D^{20} = +57^\circ$  (alc.): (7)  
 $[\alpha]_D^{19} = +47.7^\circ \pm 2^\circ$  (dioxane): (3)  
 $[\alpha]_D^{17.5} = +52.8^\circ + 2^\circ$  (alc.): (3)  
 $[\alpha]_D^{20} = +49.3^\circ$  (alc.): (8)

PHARMACOLOGY:

REMARKS: Detailed study of optic rotation in various solvents (15).

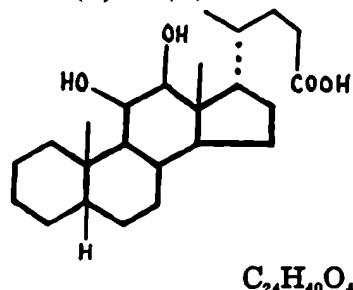
DERIVATIVES:

Me. ester	80-1°; $[\alpha]_D^{16} = +55.8^\circ \pm 1^\circ$ (acetone):	(2,3,4)
3-ac.-me. ester	128-8.5°; $[\alpha]_D^{20} = +65.9^\circ \pm 1^\circ$ (acetone):	(3)
Diac.-me. ester	118-9°:	(3,4)
12-ac.-me. ester	not crystalline:	(3)
12-ac.	174-5°:	(9)
Et. ester	81°; $[\alpha]_D^{20} = +49.7^\circ$ (alc.):	(7)
Hydrazide	208°:	(10)
Di-formate	193°:	(11)
Amide	162-86°: (12); 188-9°: (18); (+ $3H_2O$ ) 220°:	(17)
Me. amide	168°:	(12)
Dime.-amide	203°:	(12)
3-tosylate-me. ester	148°:	(13)
3-bz.-me. ester (+ $\frac{1}{2}$ et. ether):		(14)
Dibz.-me. ester	145-6°:	(14)
Anhydride	275-80°:	(11)
Diac.	118°:	(19)
Glyco acid (+ $H_2O$ )	{ 107° and 186-7°: 187-8°; $[\alpha]_D = +48.7^\circ$ (alc.):	(18) (10)
3- $\frac{1}{2}$ succinate-dime. ester	98-100°:	(20)
3- $\frac{1}{2}$ succinate	231-2°; $[\alpha]_D = +51.5^\circ$ (dioxane):	(20)

REFERENCES:

1. A37849
2. 83507
3. 83469
4. 83468
5. A58546
6. A57628
7. A58703
8. A58604
9. A54740
10. A58613
11. A58614
12. A58615
13. A58580
14. A58405
15. A58591
16. A58590
17. A58616
18. A58594
19. A58548
20. 84133

**17(α)-[1( )-METHYL-3-CARBOXYPROPYL]-ETIOCHOLANE-11( ),12( )-DIOL  
(11,12-dihydroxy-cholanic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2)

M.P.: 204-8°: (1)  
211-4°: (2)

$[\alpha]_D^{11} = +3.2^\circ \pm 1^\circ$  (dioxane): (2)

**PHARMACOLOGY:**

**REMARKS:** Me. ester has two crystal modifications (2).

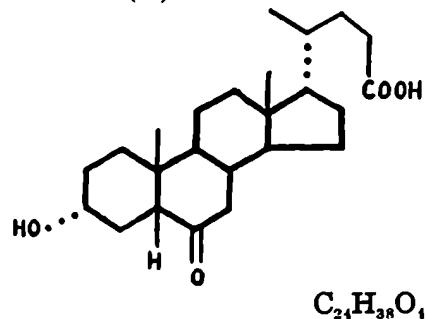
**DERIVATIVES:**

Me. ester	83-5° and 102-4°; $[\alpha]_D^{10} = +11^\circ$ (me. alc.);	(2)
Diac.-me. ester	108-10°; $[\alpha]_D^{13} = +1.5^\circ \pm 1^\circ$ (acetone);	(2)
Lactone	240-2°; $[\alpha]_D^{17} = -41.8^\circ \pm 2^\circ$ (benzol);	(2)

**REFERENCES:**

- 1. 83171
- 2. 83509

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]-ETIOCHOLANE-3( $\alpha$ )-OL-6-ONE  
(3( $\alpha$ )-hydroxy-6-keto-cholanic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 160-2° (+Me. OH): (1)  
159-60° (+Et. OH): (1)  
170-3°: (1)

**PHARMACOLOGY:**

**REMARKS:**

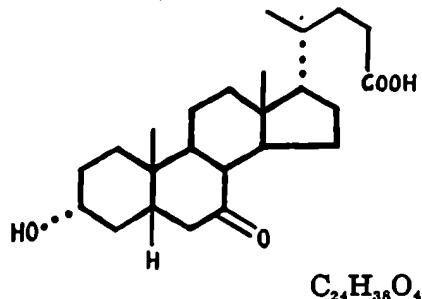
**DERIVATIVES:**

Me. ester	140-2°: (2)
Br.	193°: (2)
Br.-me. ester	180-9°: (2)
Di-Br.	175°: (2)
Di-Br.-me. ester	130°: (2)

**REFERENCES:**

1. A58595
2. A58506

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]-ETIOCHOLANE-3( $\alpha$ )-OL-7-ONE  
 (3( $\alpha$ )-hydroxy-7-keto-cholanic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2)

M.P.: 203°: (1)

$[\alpha]_D = - 27.6^\circ$ : (1)

**PHARMACOLOGY:**

**REMARKS:**

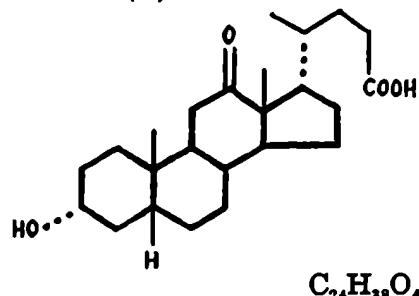
**DERIVATIVES:**

Ac. 142°: (1)

**REFERENCES:**

- 1 A58589
- 2 A37844

**17(α)-[1( )-METHYL-3-CARBOXYPROPYL]-ETIOCHOLANE-3(α)-OL-12-ONE  
(3(α)-hydroxy-12-keto-cholanic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2,3,4,5,6,7,8,9,10,11)

M.P.: 160-1°: (1,2,3,7)  
105° + 115-8° + 155-60°: (4)  
164-5°: (11,12,13)

$[\alpha]_D^{20} = +119.9^\circ$  (alc.): (4)  
 $[\alpha]_D^{20} = +110^\circ$  (dioxane): (13)  
 $[\alpha]_D = +86^\circ$  (dioxane): (12)

**PHARMACOLOGY:**

**REMARKS:** Not ppt. with digitonin (11).

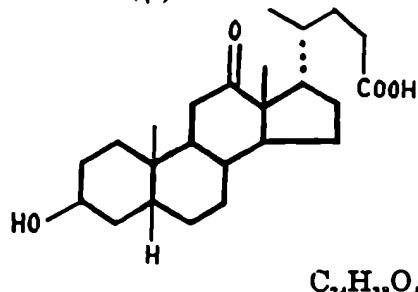
**DERIVATIVES:**

Me. ester	$\left\{ \begin{array}{l} 110-1.5^\circ; [\alpha]_D^{14.5} = +96.5^\circ \text{ (acetone)}: \\ 143^\circ: \\ 106-8^\circ: \end{array} \right.$	(1) (10) (11)
3-ac.-me. ester	$\left\{ \begin{array}{l} 153.5-4.5^\circ; [\alpha]_D^{21} = +104.8^\circ \text{ (acetone)}: \\ 197^\circ: \end{array} \right.$	(1) (10)
Et. ester	131-2°; (3); 133°:	(2)
Ac.	195°; (7); 197°:	(5)
Ac.-semicarb.	194-5°:	(5)
Semicarb.	233-4°:	(7)
Et.-succinate	170°; $[\alpha]_D = +96.3^\circ$ (alc.):	(8)
3-bz.-me. ester	94-5°:	(9)
3-bz.-me. ester-semicarb.	160-2°:	(9)
11-Br.	not characterized:	(7,10)
3-ac.-11-Br.	139°:	(8)
Me. ac.	148-50°:	(12)
1,6-succinate	242-4°:	(12)

**REFERENCES:**

1. 83469
2. A58547
3. A58617
4. A58500
5. A58600
6. A57405
7. 71842
8. A58570
9. A58405
10. A58507
11. A58598
12. 84133
13. A58821

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]-ETIOCHOLANE-3( $\beta$ )-OL-12-ONE  
 (3( $\beta$ )-hydroxy-21-keto-cholanic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2,3)

M.P.: 122-5° ( $+H_2O$ ): (3)  
 224-5°: (2)

$[\alpha]_D^{20} = +100^\circ$  (alc.): (3)

**PHARMACOLOGY:**

**REMARKS:**

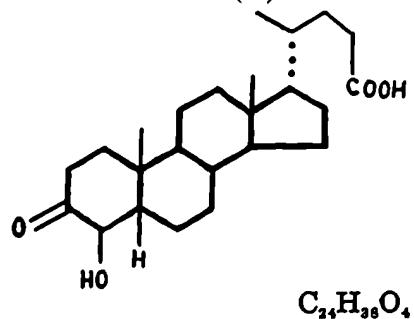
**DERIVATIVES:**

Ae.	175-9°: (3)
Me ester-oxime	95-100°: (3)
Me ester	126-8°: (2)

**REFERENCES:**

- 1 71512
- 2 A58508
- 3 A51740

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]-ETIOCHOLANE-3-ONE-4( $\beta$ )-OL  
 (3-keto-4-hydroxy-cholanic acid)**



ISOLATION:

STRUCTURE AND SYNTHESIS: (1)

M.P.: 186°: (1)

PHARMACOLOGY:

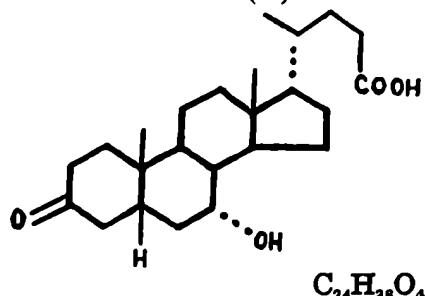
REMARKS:

DERIVATIVES:

REFERENCES:

1. A58573

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]-ETIOCHOLANE-3-ONE-7( $\alpha$ )-OL  
 (3-keto-7( $\alpha$ )-hydroxy-cholanic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:** 96°: (1)

**PHARMACOLOGY:**

**REMARKS:**

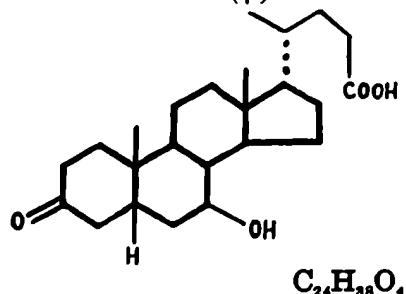
**DERIVATIVES:**

Formate · 188-9°: (1)

**REFERENCES:**

1. A58577

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]-ETIOCHOLANE-3-ONE-7( $\beta$ )-OL  
 (3-keto-7( $\beta$ )-hydroxy-cholanic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.: 115-7°:** (1)

**PHARMACOLOGY:**

**REMARKS:**

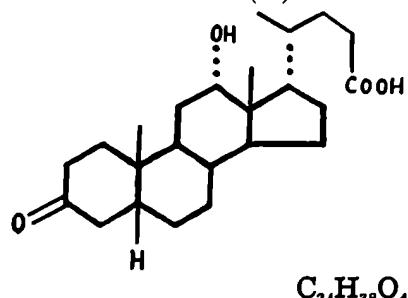
**DERIVATIVES:**

Formate 126-9°: (1)

**REFERENCES:**

1. A58577

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]-ETIOCHOLANE-3-ONE-12( $\alpha$ )-OL  
 (3-keto-12( $\alpha$ )-hydroxy-cholanic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:**

**PHARMACOLOGY:**

**REMARKS:** Free cpd. not crystalline (1).

**DERIVATIVES:**

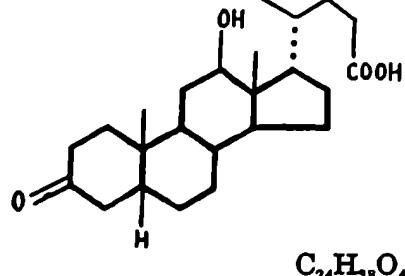
Me. ester      not crystalline:

Ac.-me. ester  $109-11^\circ$ ;  $[\alpha]_D^{10} = +44.1^\circ \pm 2^\circ$  (acetone): (1)

**REFERENCES:**

(1) 1. 83507

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]-ETIOCHOLANE-3-ONE-12( $\beta$ )-OL  
(3-keto-12( $\beta$ )-hydroxy-cholanic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2)

M.P.: 100-10°: (1)  
112-20°: (2)

$[\alpha]_D^{20} = + 48^\circ$ : (2)

**PHARMACOLOGY:**

**REMARKS:**

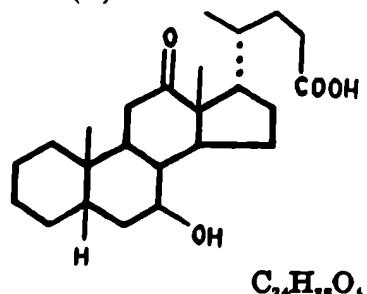
**DERIVATIVES:**

Ac.	95-6°:	(2)
Me. ester	144-5°; $[\alpha]_D^{15} = + 50.5^\circ \pm 1.5^\circ$ (acetone):	(1,2)
Ac.-me. ester	122-3°; $[\alpha]_D^{21} = + 82.7^\circ \pm 2^\circ$ (acetone):	(1,3,4)

**REFERENCES:**

1. 83508
2. A54740
3. 83507
4. 83469

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]-ETIOCHOLANE-7( $\beta$ )-OL-12-ONE  
 (7( $\beta$ )-hydroxy-12-keto-cholanic acid)**



ISOLATION:

STRUCTURE AND SYNTHESIS: (1)

M.P.: 176°: (1)

PHARMACOLOGY:

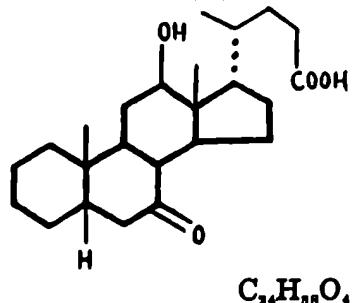
REMARKS:

DERIVATIVES:

REFERENCES:

1. A58571

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]-ETIOCHOLANE-7-ONE-12( $\beta$ )-OL  
 (7-keto-12-hydroxy-cholanic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:** 178°: (1)

**PHARMACOLOGY:**

**REMARKS:**

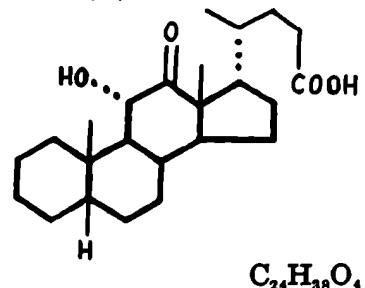
**DERIVATIVES:**

Lactone 217°: (1)

**REFERENCES:**

1. A58571

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]-ETIOCHOLANE-11( $\alpha$ )-OL-12-ONE  
 (11( $\alpha$ )-hydroxy-12-keto-cholanic acid)**



ISOLATION:

STRUCTURE AND SYNTHESIS: (1)

M.P.: 175-6°: (1)

PHARMACOLOGY:

REMARKS:

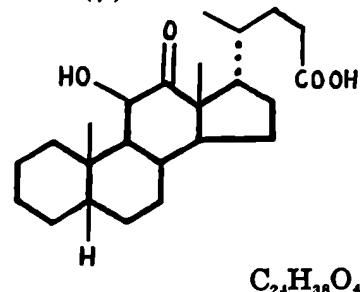
DERIVATIVES:

Me. ester 72-4°;  $[\alpha]_D^{28} = + 54.6^\circ \pm 1^\circ$  (me. alc.): (1)

REFERENCES:

1. A58580

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]-ETIOCHOLANE-11( $\beta$ )-OL-12-ONE  
 (11( $\beta$ )-hydroxy-12-keto-cholanic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2,3)

M.P.: 145-6°: (3)  
 132-4°: (4) .

**PHARMACOLOGY:**

**REMARKS:**

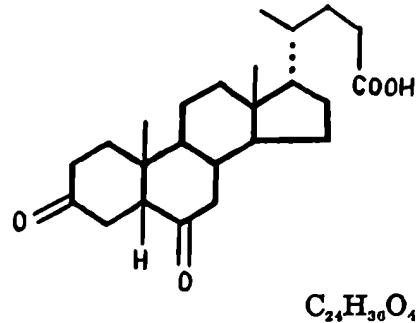
**DERIVATIVES:**

Mc. ester 106-7°;  $[\alpha]_D^{28} = + 58.5^\circ \pm 1^\circ$  (me. alc.): (1,2,3)

**REFERENCES:**

1. 83500
2. A57493
3. A58580
4. A58606

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]-ETIOCHOLANE-3,6-DIONE  
(3,6-diketo-cholanic acid;  $\alpha$ -dehydro-hydesoxycholic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2)

M.P.: 161.5-2° (+H<sub>2</sub>O) : (1)  
203-4°: (2)

$[\alpha]_D^{15} = -65.9^\circ$  (alc.) : (2)

**PHARMACOLOGY:**

**REMARKS:** Cpd. m.p. 203-4° impure (2).

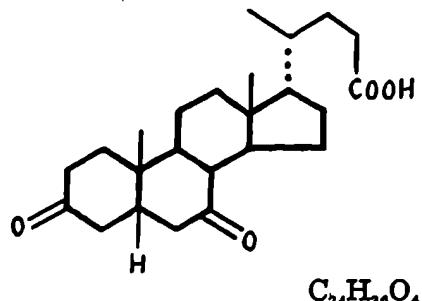
**DERIVATIVES:**

Me. ester 139°;  $[\alpha]_D^{15} = -68.7^\circ$  (me. alc.) : (2)  
Et. ester 140°: (1)

**REFERENCES:**

1. A58704
2. A58607

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]-ETIOCHOLANE-3,7-DIONE  
 (3,7-diketo-cholanic acid; Urso-dehydro-desoxycholic acid;  
 cheno-dehydro-desoxycholic acid)**



ISOLATION: Bile (Kuradai fish): (1)

STRUCTURE AND SYNTHESIS: (1)

M.P.: 153°: (2)  
 158°: (3)  
 161°: (4,5)

$[\alpha]_D = -33.6^\circ$ : (5)  
 $[\alpha]_D = -27.4^\circ$ : (1)

**PHARMACOLOGY:**

**REMARKS:**

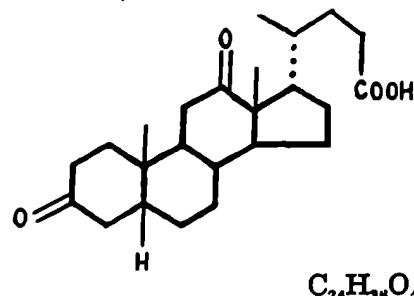
**DERIVATIVES:**

Me. ester	161-2°:	(2)
Et. ester	133°:	(2)
3-semicarb.	200°: (6); 205°: (5)	
Disemicarb.	> 290°:	(5)

**REFERENCES:**

1. A58579
2. A58009
3. A58589
4. A58612
5. A58611
6. A58559

**17(α)-[1( )-METHYL-3-CARBOXYPROPYL]-ETIOCHOLANE-3,12-DIONE  
(3,12-diketo-cholic acid; dehydro-desoxycholic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2,3,4,5,6,7)

M.P.: 187°: (3,4)

$[\alpha]_D = + 92.1^\circ$ : (7)

188-9°: (5,6)

186-8°: (11)

**PHARMACOLOGY:**

**REMARKS:**

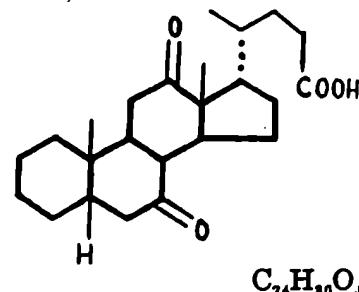
**DERIVATIVES:**

Me. ester	$\left\{ \begin{array}{l} 133.5^\circ; [\alpha]_D^{18} = + 90.9^\circ \pm 4^\circ \text{ (acetone)} : \\ 130^\circ: \end{array} \right.$	(1,2) (8.9)
Et. ester	108°:	(8)
Dioxime	184-7°:	(5)
Iso-dioxime	196-7°:	(5)
4-Br. (+½ acetic acid)	172°:	(10)
Di-Br. (+½ acetic acid)	160-5°:	(10)
Tri-Br. (+½ acetic acid)	212-3°; anhydrous 184°:	(4)
Iso-tri-Br. (+½ acetic acid)	215°:	(4)

**REFERENCES:**

1. 83507
2. 93469
3. A58547
4. A58610
5. A58722
6. A58803
7. A58703
8. A58724
9. A58723
10. A58725
11. A58598

**17(α)-[1( )-METHYL-3-CARBOXYPROPYL]-ETIOCHOLANE-7,12-DIONE  
(7,12-diketo-cholanic acid; dehydro-iso-desoxycholic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2,3,4,5)

M.P.: 176°: (1)

171-2°: (2)

175-7°: (3)

**PHARMACOLOGY:**

**REMARKS:**

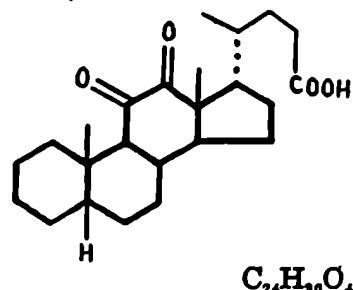
**DERIVATIVES:**

Disemicarb.	215°: (4)
Et. ester	{ 152-3°: (1,5) } 162°: (3)
Et. ester-dioxime	242°: (1)
Dioxime	273°: (6)
11:11'-di-Br.	183-5°: (7)

**REFERENCES:**

1. A58549
2. A58726
3. A58571
4. A58570
5. A58547
6. A58706
7. A58606

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]-ETIOCHOLANE-11,12-DIONE  
 (11,12-diketo-cholanic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2,3,4)

**M.P.: 166-8°:** (1)

**PHARMACOLOGY:**

**REMARKS:**

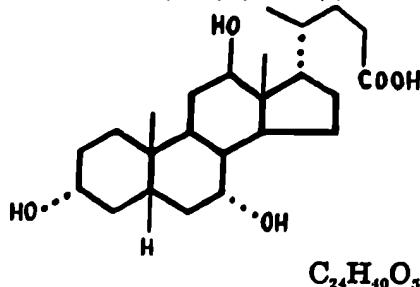
**DERIVATIVES:**

12-oxime	220-2°: (1)
9-Br.	238°: (1)
Iso-9-Br.	130-3°: (2)
Me. ester	102-3°: (3)
12-semicarb.	240-2°: (4)
9-nitro	196-8°: (1)

**REFERENCES:**

1. A58606
2. A58727
3. A58580
4. A58707

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]-ETIOCHOLANE-3( $\alpha$ ),7( $\alpha$ ),12( $\beta$ )-TRIOL  
(Cholic acid)**



**ISOLATION:** Bile of most vertebrates: (10,11)

**STRUCTURE AND SYNTHESIS:** (1,2,3,4,5)

**M.P.:** 196°: (1)

$[\alpha]_D^{20} = +36^\circ$ : (1)

**PHARMACOLOGY:**

**REMARKS:**

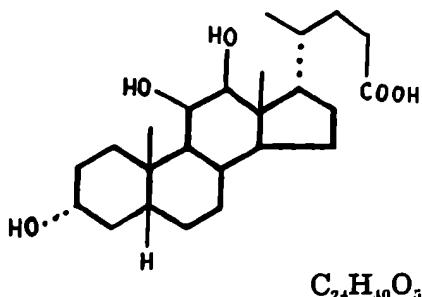
**DERIVATIVES:**

Me. ester	152°:	(2)
3,7-diac.	257°:	(3)
7-ac.	oil:	(3)
7-ac.-me.ester	181°:	(3)
3,7-diac.-me. ester	180-1°:	(4)
Amide (+3H <sub>2</sub> O)	136° + 228°:	(5)
Me. amide	186°:	(5)
Benzyl-amide	240°:	(5)
Et. amide	144°:	(5)
7,12-diac.	{ 203-4°: 204-5°; $[\alpha]_D^{28} = +71^\circ$ (me. alc.):	(6) (7)
Triac.-me. ester	94°; $[\alpha]_D = +78^\circ$ (me. alc.):	(3,8)
Triformate	206-7°:	(9)

**REFERENCES:**

1. A58604
2. A58729
3. A58548
4. A58728
5. A58615
6. A37851
7. A58730
8. A58749
9. A58709
10. A57628
11. A58590

**17( $\alpha$ )-[ $\beta$ ( $\beta$ )-METHYL-3-CARBOXYPROPYL]-  
ETIOCHOLANE-3( $\alpha$ ),11( $\beta$ ),12( $\beta$ )-TRIOL  
(3( $\alpha$ ),11,12-trihydroxy-cholanic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:** 136°: (1)

**PHARMACOLOGY:**

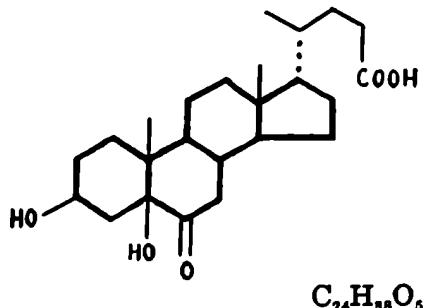
**REMARKS:**

**DERIVATIVES:**

**REFERENCES:**

1. 83171

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]-  
ETIOCHOLANE-3( $\beta$ ),5( $\beta$ )-DIOL-6-ONE  
(3( $\beta$ ),5( $\beta$ )-dihydroxy-6-keto-cholanic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 278-9°: (1)

$[\alpha]_D^{10} = -38^\circ$  (alc.): (1)

**PHARMACOLOGY:**

**REMARKS:**

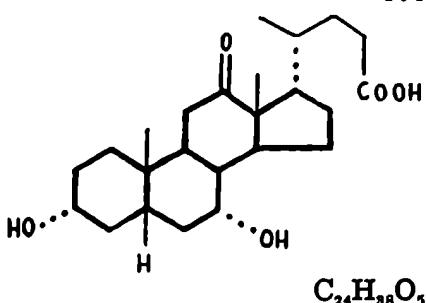
**DERIVATIVES:**

Diac.-me. ester 172-3°: (1)  
Semicarb. 267-9°: (1)  
3-ac.-me. ester 203-4°: (1)

**REFERENCES:**

1. A58708

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]-  
ETIOCHOLANE-3( $\alpha$ ),7( $\alpha$ )-DIOL-12-ONE  
(3( $\alpha$ ),7( $\alpha$ )-dihydroxy-12-keto-cholanic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2)

M.P.: 218: (1)  
219-20°: (2)

$[\alpha]_D^{20} = +73^\circ$  (alc.): (2)

**PHARMACOLOGY:**

**REMARKS:**

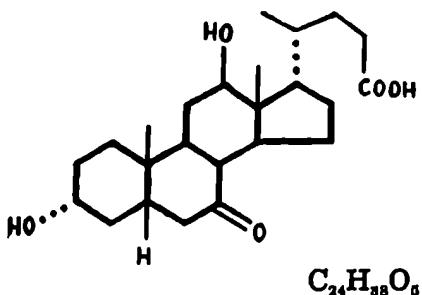
**DERIVATIVES:**

Me. ester	160°: (2)
Me. ester-oxime	111-2°: (2)
Diac.	221-2°: (1)
7-ac.	239°: (1)
7-ac.-me. ester	184°: (1)

**REFERENCES:**

1. A58548
2. A58604

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]-  
ETIOCHOLANE-3( $\alpha$ )-12( $\beta$ )-DIOL-7-ONE  
(3( $\alpha$ ),12( $\beta$ )-dihydroxy-7-keto-cholanic acid)**



ISOLATION:

STRUCTURE AND SYNTHESIS: (1)

M.P.:

PHARMACOLOGY:

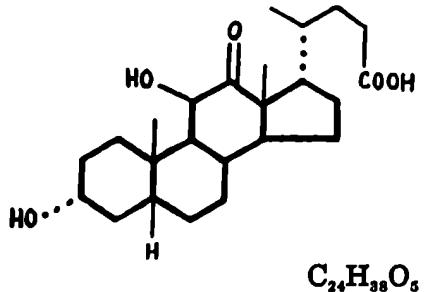
REMARKS:

DERIVATIVES:

REFERENCES:

1. A58574

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]-  
ETIOCHOLANE-3( $\alpha$ ),11( $\beta$ )-DIOL-12-ONE  
(3( $\alpha$ ),11-dihydroxy-12-keto-cholanic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2,3)

M.P.: 196°: (3)  
205°: (2)

$[\alpha]_D^{27} = +67.1^\circ$  (alc.): (2)

**PHARMACOLOGY:**

**REMARKS:**

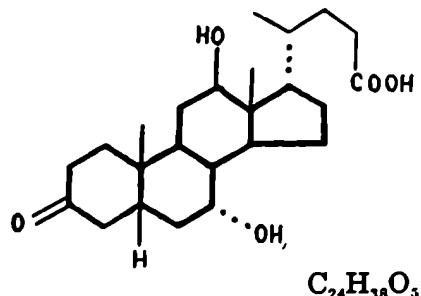
**DERIVATIVES:**

3-ac.	268°:	(3)
Me. ester	157°:	(2)
½ succinate	194-6°:	(2)
Diformate	146-8°:	(2)

**REFERENCES:**

1. 83171
2. A57495
3. 71842

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]-  
ETIOCHOLANE-3-ONE-7( $\alpha$ ),12( $\beta$ )-DIOL  
(3-keto-7( $\alpha$ ),12( $\beta$ )-dihydroxy-cholanic acid)**



ISOLATION:

STRUCTURE AND SYNTHESIS: (1)

M.P.: 121-3°: (1)

PHARMACOLOGY:

REMARKS:

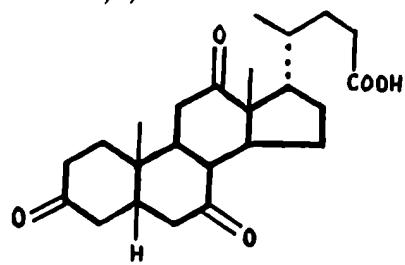
DERIVATIVES:

Diac. 197-8°: (1)

REFERENCES:

1. A37851

**17(α)-[1( )-METHYL-3-CARBOXYPROPYL]-ETIOCHOLANE-3,7,12-TRIONE  
(Dehydrocholic acid)**



**ISOLATION:**

STRUCTURE AND SYNTHESIS: (1,2)

M.P.: 236-7°: (1)

237°: (2)

239°: (6)

[α]<sub>D</sub> = + 26°: (3)

**PHARMACOLOGY:**

**REMARKS:**

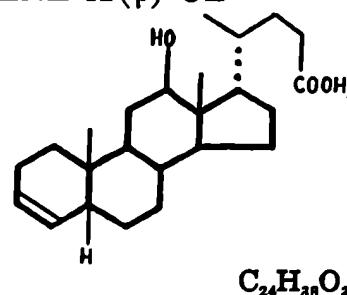
**DERIVATIVES:**

Me. ester	241-2°: (4,6)
Trioxime-me. ester	265-6°: (2)
Et. ester	221°: (5)
4-Br.	182-3°: (7)
4-Br.-et. ester	192°: (7)
α-di-Br. (+acetic acid)	200°: (7)
α-di-Br. (+alc.)	206°: (7)
α-di-Br. (+½ ether)	174°: (7)
β-di-Br. (+acetic acid)	265-6°: (7)
Tri.-Br.	202-3°: (7)
Tetra-Br.	213°: (7)
Penta-Br.	192°: (7)

**REFERENCES:**

1. A58547
2. A58605
3. A58722
4. A58731
5. A58549
6. A58710
7. A58610

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]- $\Delta^3$ -ETIOCHOLENE-12( $\beta$ )-OL  
 $(\Delta^3$ -12( $\beta$ )-hydroxy-cholenic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:**

**PHARMACOLOGY:**

**REMARKS:**

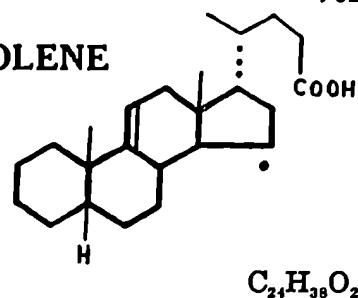
**DERIVATIVES:**

Me. ester 110-1°: (1)

**REFERENCES:**

1. A58580

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]- $\Delta^{9:11}$ -ETIOCHOLENE  
 ( $\Delta^{9:11}$ -cholenic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 154-5°: (1)

**PHARMACOLOGY:**

**REMARKS:**

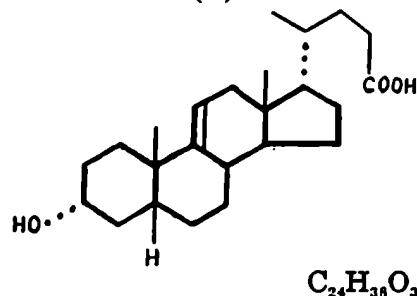
**DERIVATIVES:**

Me. ester 85-6°: (1)

**REFERENCES:**

1. A58741

**17(α)-[1( )-METHYL-3-CARBOXYPROPYL]-Δ<sup>9:11</sup>-ETIOCHOLENE-3(α)-OL**  
 ( $\Delta^{9:11}$ -3(α)-hydroxy-cholenic acid)



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.: 183-4°:** (1)

$[\alpha]_D^{25} = + 27^\circ$  (alc.) : (1)

**PHARMACOLOGY:**

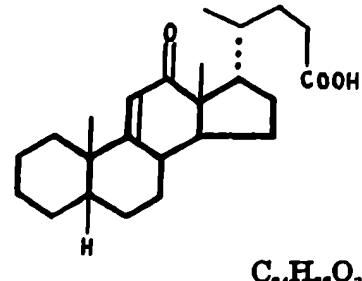
**REMARKS:**

**DERIVATIVES:**

**REFERENCES:**

1. A58597

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]- $\Delta^{9:11}$ -ETIOCHOLENE-12-ONE  
 ( $\Delta^{9:11}$ -12-keto-cholenic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2)

**M.P.:** 164-6°: (1)

**PHARMACOLOGY:**

**REMARKS:**

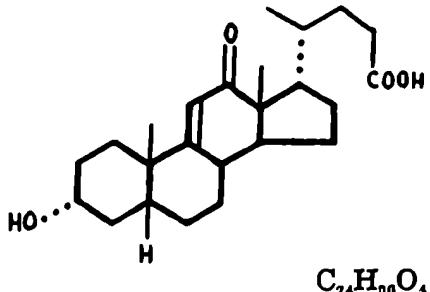
**DERIVATIVES:**

Me. ester      92-3°;       $[\alpha]_D^{20} = +86.9^\circ \pm 1.5^\circ$  (me. alc.): (1)  
 Semicarb.      227-30°:      (2)

**REFERENCES:**

1. A58580
2. A58741

**17(α)-[1( )-METHYL-3-CARBOXYPROPYL]-Δ<sup>9:11</sup>-ETIOCHOLENE-3(α)-OL-12-ONE  
(Δ<sup>9:11</sup>-8(α)-hydroxy-12-keto-cholenic acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 172-3°: (1)

**PHARMACOLOGY:**

**REMARKS:**

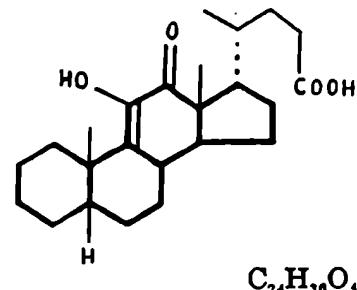
**DERIVATIVES:**

Semicarb. 221°: (1)  
Ac. 201°: (2)

**REFERENCES:**

1. A58597
2. A57405

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]- $\Delta^{9:11}$ -ETIOCHOLENE-11-OL-12-ONE  
 ( $\Delta^{9:11}$ -11-hydroxy-12-keto-cholenic acid)**



ISOLATION:

STRUCTURE AND SYNTHESIS: (1)

M.P.:

PHARMACOLOGY:

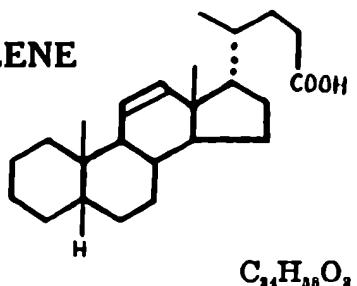
REMARKS:

DERIVATIVES:

REFERENCES:

1. A58707

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]- $\Delta^{11}$ -ETIOCHOLENE  
(Cholene-(11)-acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:** 133-5°: (1)

**PHARMACOLOGY:**

**REMARKS:**

**DERIVATIVES:**

Mc. ester

57-9°;  $[\alpha]_D^{12} = +34.1^\circ \pm 2^\circ$  (acetone): (1)

**REFERENCES:**

1. 83500

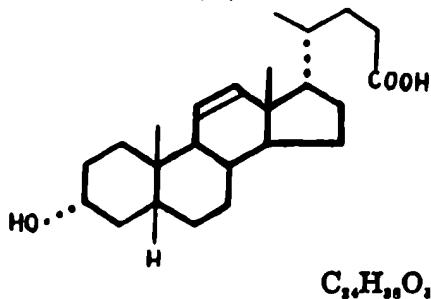
11( $\beta$ ):12( $\beta$ )-oxide

155-7°: (1)

11( $\beta$ ):12( $\beta$ )-oxide-me. ester

96-7°;  $[\alpha]_D^{17} = +29.4^\circ \pm 2^\circ$  (acetone): (1)

**17(α)-[1(β)-METHYL-3-CARBOXYPROPYL]-Δ<sup>11</sup>-ETIOCHOLENE-3(α)-OL  
(3α-hydroxy-cholene-(11)-acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.: 165-6°:** (1)

$[\alpha]_D^{11} = +33.2^\circ \pm 3^\circ$  (alc.) : (1)

$[\alpha]_D^{12} = +32.8^\circ \pm 3^\circ$  (dioxane) : (1)

**PHARMACOLOGY:**

**REMARKS:**

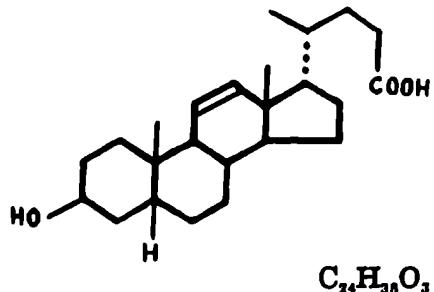
**DERIVATIVES:**

Me. ester	101-2°; $[\alpha]_D^{15} = +41.5^\circ \pm 2^\circ$ (me. alc.) :	(1)
Ac.-me. ester	116-7°; $[\alpha]_D^{14} = +52.2^\circ \pm 2^\circ$ (acetone) :	(1)
Me. ester-11(β):12(β)-oxide	96-8°; $[\alpha]_D^{23} = +35.7^\circ$ (acetone) :	(1)
Me. ester-11(β):12(β)-oxide-ac.	140-2°; $[\alpha]_D^{14} = +52.8^\circ \pm 2^\circ$ (acetone) :	(1)

**REFERENCES:**

1. 83468

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]- $\Delta^{11}$ -ETIOCHOLENE-3( $\beta$ )-OL  
 (3 $\beta$ -hydroxy-cholene-(11)-acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 128°: (1)  
 77-9° (+H<sub>2</sub>O): (1)

$[\alpha]_D^{20} = +27.8^\circ \pm 2^\circ$  (dioxane): (1)

**PHARMACOLOGY:**

**REMARKS:**

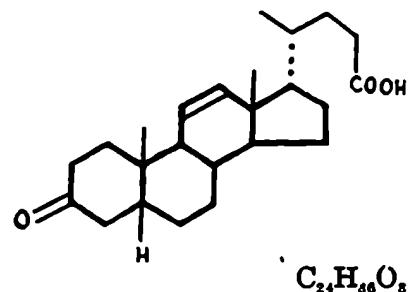
**DERIVATIVES:**

Me. ester	109-10°; $[\alpha]_D^{17} = +38.3^\circ \pm 2^\circ$ (me. alc.): (1)	
Ac.-me. ester	147-9°; $[\alpha]_D^{17} = +28.1^\circ \pm 3^\circ$ (acetone): (1)	
Me. ester-11( $\beta$ ):12( $\beta$ )-oxide	114-5°; $[\alpha]_D^{17} = +27.1^\circ \pm 2^\circ$ (acetone): (1)	
Ac.-me. ester-11( $\beta$ ):12( $\beta$ )-oxide	150-2°; $[\alpha]_D^{16} = +31.2^\circ \pm 2^\circ$ (acetone): (1)	

**REFERENCES:**

1. 83468

**17( $\alpha$ )-[1( $\beta$ )-METHYL-3-CARBOXYPROPYL]- $\Delta^{11}$ -ETIOCHOLENE-3-ONE  
 (3-keto-cholene-(11)-acid)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 150-2°: (1)

$[\alpha]_D^{12} = +41.2^\circ \pm 2^\circ$  (acetone): (1)

**PHARMACOLOGY:**

**REMARKS:**

**DERIVATIVES:**

Me. ester  $125.5-6^\circ$ ;  $[\alpha]_D^{14} = +36.9^\circ \pm 2^\circ$  (acetone): (1,2)

Semicarb.-me. ester  $196^\circ$ : (1)

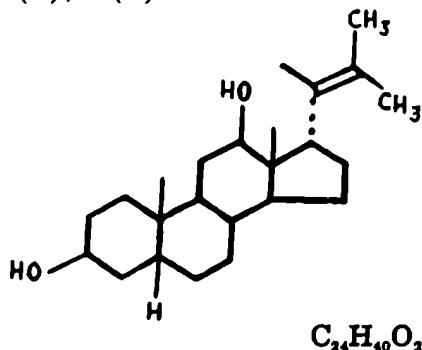
Me. ester-11( $\beta$ ):12( $\beta$ )-oxide  $116-8^\circ$ ;  $[\alpha]_D^{22} = +32.7^\circ \pm 2^\circ$  (acetone): (2)

**REFERENCES:**

1. 83508

2. 83408

**17( $\alpha$ )-[1,2-DIMETHYL-1-PROPYENYL]-ETIOCHOLANE-3( $\beta$ ),12( $\beta$ )-DIOL  
(22-methyl-3,12-dihydroxy-nor-cholene)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:** 206°: (1)

**PHARMACOLOGY:**

**REMARKS:**

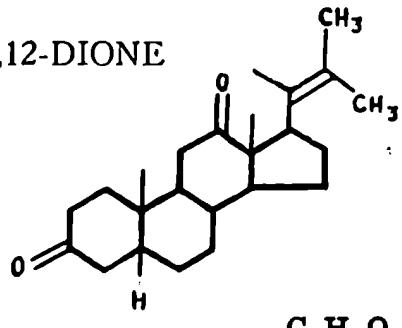
**DERIVATIVES:**

Diac. 166°: (1)

**REFERENCES:**

1. A37840

**17( )-[1,2-DIMETHYL-1-PROPYNYL]-ETIOCHOLANE-3,12-DIONE  
(22-methyl-3,12-diketo-nor-cholene)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:** 181-2°; (1)

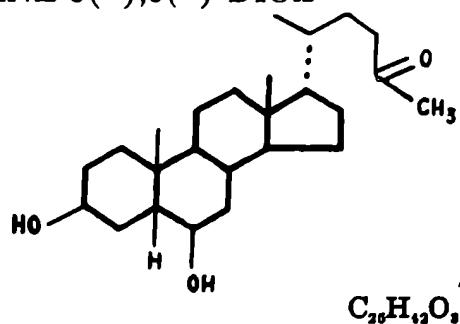
**PHARMACOLOGY:** Folliculoid: Test ?: no *metrotropic* or vag. act.-M (1).

**REMARKS:**

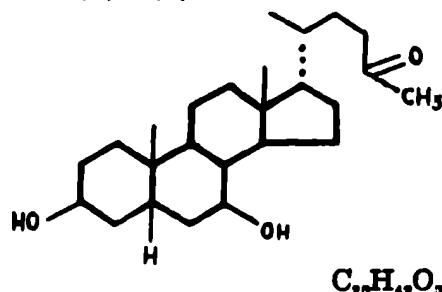
**DERIVATIVES:**

**REFERENCES:**

1. A37849

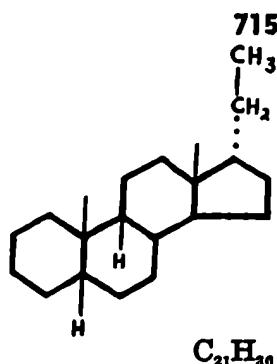
**17(α)-[1( )-METHYL-4-KETOPENTYL]-ETIOCHOLANE-3( ),6( )-DIOL****ISOLATION:****STRUCTURE AND SYNTHESIS:** (1)M.P.: 183° ( $\frac{1}{2}\text{H}_2\text{O}$ ): (1) $[\alpha]_D^{25} = +19.8^\circ$  (alc.): (1)**PHARMACOLOGY:****REMARKS:****DERIVATIVES:****REFERENCES:**

1. A37848

**17(α)-[1( )-METHYL-4-KETOPENTYL]-ETIOCHOLANE-3( ),7( )-DIOL****ISOLATION:****STRUCTURE AND SYNTHESIS:** (1)**M.P.: 175-6°:** (1) **$[\alpha]_D = +9^\circ$  (alc.):** (1)**PHARMACOLOGY:****REMARKS:****DERIVATIVES:**Diac.  $132-3^\circ$ : (1)**REFERENCES:**

1. A37850

17( $\alpha$ )-ETHYL-9-EPIETIOCHOLANE  
(Urane)



ISOLATION:

STRUCTURE AND SYNTHESIS: (1)

M.P.: 128°: (1)

PHARMACOLOGY:

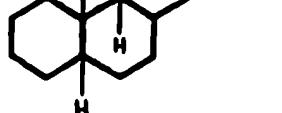
REMARKS: Structure provisional.

DERIVATIVES:

REFERENCES:

1. 72108

**17( $\alpha$ )-ETHYL-9-EPIETIOCHOLANE-11( $\beta$ )-OL  
(Urane-11-ol)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:** ca. 110°: (1)

**PHARMACOLOGY:**

**REMARKS:**

**DERIVATIVES:**

Ac. 140-2°: (1)

**REFERENCES:**

1. 76882

**17( $\alpha$ )-ETHYL-9-EPIETIOCHOLANE-11-ONE  
(Urane-11-one)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:** 135-6.5°: (1)

**PHARMACOLOGY:**

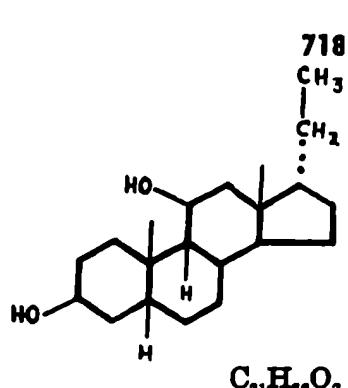
**REMARKS:**

**DERIVATIVES:**

**REFERENCES:**

1. 76882

**17( $\alpha$ )-ETHYL-9-EPIETIOCHOLANE-3( $\beta$ ),11( $\beta$ )-DIOL  
(Urane-3( $\beta$ ),11( $\beta$ )-diol)**



ISOLATION Ur. (preg. mare): (1,2)

STRUCTURE AND SYNTHESIS: (1,2,3)

M.P.: 210°: (1)  
214° (3)

PHARMACOLOGY:

REMARKS: Ppt. with digitonin (1).

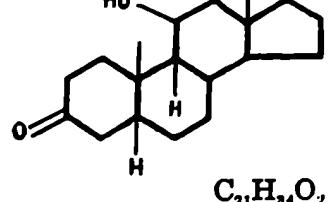
DERIVATIVES:

Diac. 160°: (1)

REFERENCES:

1. A17989
2. 76880
3. A17991

**17( $\alpha$ )-ETHYL-9-EPIETIOCHOLANE-3-ONE-11( $\beta$ )-OL  
(Urane-3-one-11( $\beta$ )-ol)**



ISOLATION: Ur. (preg. mare) : (1,2)

STRUCTURE AND SYNTHESIS: (1,2,3)

M.P.: 165°: (2)  
169.5-71: (3)

PHARMACOLOGY:

REMARKS:

DERIVATIVES:

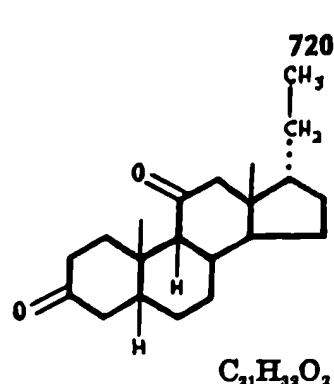
Semicarb. 251-3°: (2,3)  
Ac. 195-7°: (3)

REFERENCES:

1. A30607
2. A17088
3. 70882

**17(α)-ETHYL-9-EPIETIOCHOLANE-3,11-DIONE**  
**(Urane-3,11-dione)**

720



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1,2)

**M.P.: 177.5°:** (1,2)

**PHARMACOLOGY:**

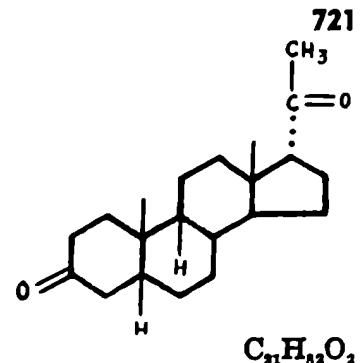
**REMARKS:**

**DERIVATIVES:**

Mono-semicarb.	245°: (1)	1. A17989
Mono-2:4-dinitrophenylhydrazone	200°: (1)	2. A17988
4?-Br.	202-3°: (3)	3. 76882

**REFERENCES:**

**17( $\alpha$ )-[1-KETOETHYL]-9-EPIETIOCHOLANE-3-ONE  
(Urane-3,20-dione)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:** 182°: (1)

**PHARMACOLOGY:**

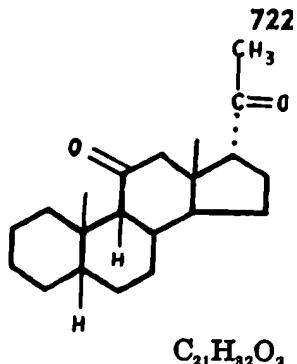
**REMARKS:**

**DERIVATIVES:**

**REFERENCES:**

1. 72108

**17( $\alpha$ )-[1-KETOETHYL]-9-EPIETIOCHOLANE-11-ONE  
(Urane-11,20-dione)**



ISOLATION:

STRUCTURE AND SYNTHESIS: (1)

M.P.: 199-201°: (1)

PHARMACOLOGY:

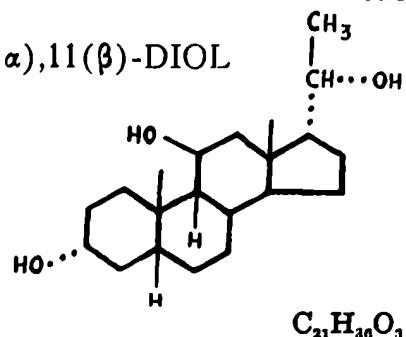
REMARKS:

DERIVATIVES:

REFERENCES:

1. 76882

**17( $\alpha$ )-[1( $\alpha$ )-HYDROXYETHYL]-9-EPIETIOCHOLANE-3( $\alpha$ ),11( $\beta$ )-DIOL  
(Urane-3( $\alpha$ ),11( $\beta$ ),20( $\alpha$ )-triol)**



ISOLATION: Ur. (preg. mare): (2,4)  
Ur. (preg. human): (4)  
Ur. (stallion): (1)

STRUCTURE AND SYNTHESIS: (1,2,3)

M.P.: 295°: (1)  
295-300°: (2)

PHARMACOLOGY:

REMARKS: Originally present in Ur. as 3( $\alpha$ ) cpd., epimerized during isolation (1); Configuration established (3).

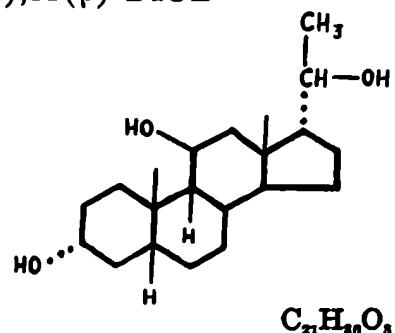
DERIVATIVES:

Triac. { 140-5°: (1)  
{ 136° (u): (2)

REFERENCES:

1. A17987
2. 71510
3. A17991
4. 72108

**17( $\alpha$ )-[1( $\beta$ )-HYDROXYETHYL]-9-EPIETIOCHOLANE-3( $\alpha$ ),11( $\beta$ )-DIOL  
 (Urane-3( $\alpha$ ),11( $\beta$ ),20( $\beta$ )-triol)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:** 255°: (1)

**PHARMACOLOGY:**

**REMARKS:** Not ppt. with digitonin (1).

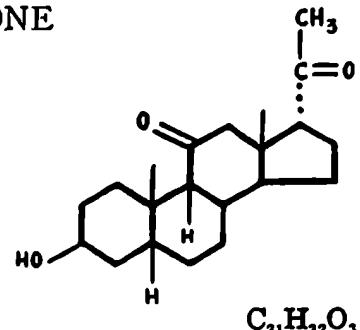
**DERIVATIVES:**

Triac. 192°: (1)

**REFERENCES:**

1. A17991

**17( $\alpha$ )-[1-KETOETHYL]-9-EPIETIOCHOLANE-3( $\beta$ )-OL-11-ONE  
 (Urane-3( $\beta$ )-ol-11,20-dione)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:** 225°: (1)

**PHARMACOLOGY:**

**REMARKS:** Ppt. with digitonin (1).

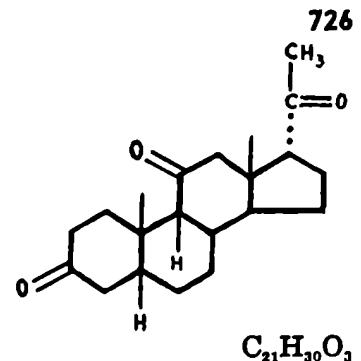
**DERIVATIVES:**

Ac. 250°: (1)

**REFERENCES:**

1. A17091

**17( $\alpha$ )-[1-KETOETHYL]-9-EPIETIOCHOLANE-3,11-DIONE  
(Urane-3,11,20-trione)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

M.P.: 247°: (2)  
245° (u): (1)

**PHARMACOLOGY:**

**REMARKS:**

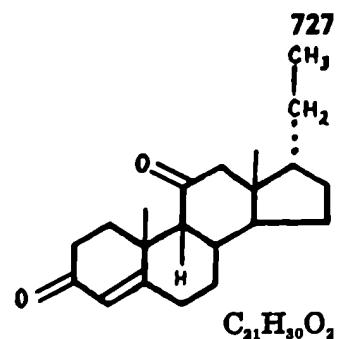
**DERIVATIVES:**

Bis-2:4-dinitrophenylhydrazone	236°: (1)
Disemicarb.	> 325°: (1)
Mono-Br.	204°: (1)

**REFERENCES:**

1. 72108
2. A17987

**17( $\alpha$ )-ETHYL- $\Delta^4$ -9-EPIETIOCHOLENE-3,11-DIONE  
 $(\Delta^4$ -Urene-3,11-dione)**



**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:** 168-70°: (1)

**PHARMACOLOGY:**

**REMARKS:** Position of double bond uncertain (1).

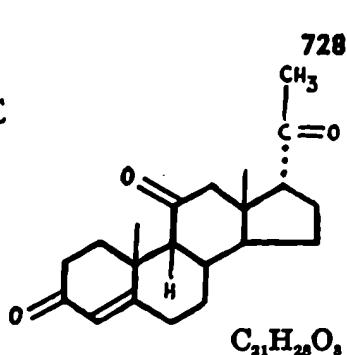
**DERIVATIVES:**

**REFERENCES:**

1. 76882

**17( $\alpha$ )-[1-KETOETHYL]- $\Delta^4$ -9-EPIETIOCHOLENE-3,11-DIONE  
( $\Delta^4$ -Urene-3,11,20-trione)**

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**ISOLATION:**

**STRUCTURE AND SYNTHESIS:** (1)

**M.P.:** 196°: (1)  
219° (+H<sub>2</sub>O): (1)

**PHARMACOLOGY:**

**REMARKS:**

**DERIVATIVES:**

**REFERENCES:**

1. 72108



# **SYNOPTIC CHARTS**

## Synoptic charts of naturally-occurring steroids of the "Hormone group" ( $C_{17}-C_{24}$ )

In the following charts the naturally-occurring steroids of the "hormone group" are enumerated. In each case the full systematic name is given as well as other commonly used designations. For details concerning the isolation of any one compound the reader is referred to the corresponding page in the index (see column "Cpd. No."). It will be kept in mind that only

substances actually prepared in crystalline form are considered here. Indirect demonstration of substances by methods of bioassay or analytical chemistry (colorimetric tests etc.) will be dealt with in later sections of this Encyclopedia together with evidence concerning isolation of steroids following exogenous administration of such compounds.

### I. Steroids Isolated From the ADRENAL

CPD. NO.	SYSTEMATIC NAME IN TERMINOLOGY OF THIS INDEX	OTHER NAMES
37	$\Delta^{1,3,5,17}$ -estratriene-3-ol-17-one	Estrone
149	androstane-3( $\beta$ ),11( $\alpha$ )-diol-17-one	Reichstein's mono-ketone m.p.: 236°
179	$\Delta^4$ -androstene-3,17-dione	
187	$\Delta^4$ -androstene-3,11,17-trione	Adrenosterone
283	17( $\alpha$ )-[1-ketoethyl]-androstane-3( $\beta$ )-ol	Wintersteiner's cpd. "A", allo-pregnanolone
301	17( $\alpha$ )-[1( $\alpha$ )-hydroxyethyl]-androstane-3( $\beta$ ),17( $\beta$ )-diol	Reichstein's cpd. "O"
302	17( $\alpha$ )-[1( $\beta$ )-hydroxyethyl]-androstane-3( $\beta$ ),17( $\beta$ )-diol	Reichstein's cpd. "J"
304	17( $\alpha$ )-[1-ketoethyl]-androstane-3( $\beta$ ),17( $\beta$ )-diol	Reichstein's cpd. "L"; Wintersteiner's cpd. "G".
320	17( $\alpha$ )-[1( $\beta$ ),2-dihydroxyethyl]-androstane-3( $\beta$ ),17( $\beta$ )-diol	Reichstein's cpd. "K".
321	17( $\alpha$ )-[1-keto-2-hydroxyethyl]-androstane-3( $\beta$ ),11( $\alpha$ )-diol	Reichstein's cpd. "R".
323	17( $\alpha$ )-[1-keto-2-hydroxyethyl]-androstane-3( $\beta$ ),17( $\beta$ )-diol	Reichstein's cpd. "P".
326	17( $\alpha$ )-[1-keto-2-hydroxyethyl]-androstane-3( $\beta$ )-ol-11-one	Reichstein's cpd. "N"; Kendall's cpd. "H".
331	17( $\alpha$ )-[1( $\beta$ ),2-dihydroxyethyl]-androstane-3( $\beta$ ),11( $\beta$ ),17( $\beta$ )-triol	Reichstein's cpd. "A"; Kendall's cpd. "D"; Wintersteiner's cpd. "A".
333	17( $\alpha$ )-[1-keto-2-hydroxyethyl]-androstane-3( $\alpha$ ),11( $\beta$ ),17( $\beta$ )-triol	Reichstein's cpd. "C"; Kendall's cpd. "C"; Wintersteiner's cpd. "D".
334	17( $\alpha$ )-[1-keto-2-hydroxyethyl]-androstane-3( $\beta$ ),11( $\beta$ ),17( $\beta$ )-triol	Reichstein's cpd. "V".
336	17( $\alpha$ )-[1-keto-2-hydroxyethyl]-androstane-3( $\beta$ ),17( $\beta$ )-diol-11-one	Reichstein's cpd. "D"; Kendall's cpd. "G"; Wintersteiner's cpd. "B".
344	17( $\alpha$ )-[1-ketoethyl]- $\Delta^4$ -androstene-3-one	Progesterone
352	17( $\alpha$ )-[1-ketoethyl]- $\Delta^4$ -androstene-3-one-17( $\beta$ )-ol	17( $\beta$ )-hydroxy-progesterone
354	17( $\alpha$ )-[1-keto-2-hydroxyethyl]- $\Delta^4$ -androstene-3-one	Desoxycorticosterone, Reichstein's cpd. "Q"; Kendall's desoxy cpd. "B".
369	17( $\alpha$ )-[1( $\beta$ ),2-dihydroxyethyl]- $\Delta^4$ -androstene-3,11-dione	Reichstein's cpd. "T".
370	17( $\alpha$ )-[1-keto-2-hydroxyethyl]- $\Delta^4$ -androstene-3-one-11( $\beta$ )-ol	Corticosterone; Reichstein's cpd. "H"; Kendall's cpd. "B".
371	17( $\alpha$ )-[1-keto-2-hydroxyethyl]- $\Delta^4$ -androstene-3-one-17( $\beta$ )-ol	Reichstein's cpd. "S".
373	17( $\alpha$ )-[1-keto-2-hydroxyethyl]- $\Delta^4$ -androstene-3,11-dione	Dehydro-corticosterone; Kendall's cpd. "A".
Ref. No. A37539	$\alpha, \beta$ -Unsaturated ketone ( $C_{21}H_{28-O}$ ) constitution unknown	
375	17( $\alpha$ )[1( $\beta$ ),2-dihydroxyethyl]- $\Delta^4$ -androstene-3-one-11( $\beta$ ),17( $\beta$ )-diol	Reichstein's cpd. "E".
376	17( $\alpha$ )-[1-keto-2-hydroxyethyl]- $\Delta^4$ -androstene-3-one-11( $\beta$ ),17( $\beta$ )-diol	17-hydroxy-corticosterone; Reichstein's cpd. "M"; Kendall's cpd. "F".
377	17( $\alpha$ )[1( $\beta$ ),2-dihydroxyethyl]- $\Delta^4$ -androstene-3,11-dione-17( $\beta$ )-ol	Reichstein's cpd. "U".
378	17( $\alpha$ )-[1-keto-2-hydroxyethyl]- $\Delta^4$ -androstene-3,11-dione-17( $\beta$ )-ol	Reichstein's cpd. "Fa"; Kendall's cpd. "E"; Wintersteiner's cpd. "F".

### II. Steroids Isolated From the TESTIS

34	$\Delta^{1,3,5,17}$ -estratriene-3,17( $\alpha$ )-diol	$\alpha$ -estradiol
37	$\Delta^{1,3,5,17}$ -estratriene-3-ol-17-one	Estrone
143	Androstane-3,17-dione	
177	$\Delta^4$ -androstene-3-one-17( $\alpha$ )-ol	Testosterone
312	17( $\beta$ )-[1-keto-2-aldoethyl]-androstane-3( $\beta$ )-ol	Testalolone

### III. Steroids Isolated From the OVARY

34	$\Delta^{1,3,5,17}$ -estratriene-3,17( $\alpha$ )-diol	$\alpha$ -estradiol
283	17( $\alpha$ )-[1-ketoethyl]-androstane-3( $\beta$ )-ol	Wintersteiner's cpd. "A"; Allopregnanolone
344	17( $\alpha$ )-[1-ketoethyl]- $\Delta^4$ -androstene-3-one	Progesterone

#### IV. Steroids Isolated From URINE

CPD. NO.	SYSTEMATIC NAME IN TERMINOLOGY OF THIS INDEX	OTHER NAMES
24	Estrane-3( ),17( $\alpha$ )-diol	Octahydro-estrone; Estranediol B
25	Estrane-3( ),17( $\beta$ )-diol	Estranediol A
34	$\Delta^{1,3,5,10}$ -estratriene-3,17( $\alpha$ )-diol	$\alpha$ -estradiol
36	$\Delta^{1,3,5,10}$ -estratriene-3,17( $\beta$ )-diol	$\beta$ -estradiol
37	$\Delta^{1,3,5,10}$ -estratriene-3-ol-17-one	Estrone
37	$\Delta^{1,3,5,10}$ -estratriene-3-ol-17-one-Na. sulphate	Estrone as Na. sulphate
40	$\Delta^{1,3,5,10}$ -estratriene-3,16( ),17( $\beta$ )-triol	Estriol
40	$\Delta^{1,3,5,10}$ -estratriene-3,16( ),17( $\beta$ )-triol-Na glucuronide	Estriol as Na. glucuronide
52	$\Delta^{1,3,5,10}$ -estratriene-3( $\beta$ )-ol-17-one	
56	$\Delta^{1,3,5,10}$ -estratetraene-3-ol-17-one	Equillin
56	An isomer of above	Hippulin
67	$\Delta^{1,3,5,10,14}$ -estrapentaene-3,17( $\beta$ )-diol	17 $\beta$ -dihydro-equilenin
69	$\Delta^{1,3,5,10,14}$ -estrapentaene-3-ol-17-one	Equilenin
72	$\Delta^{1,3,5,10,14}$ -estrapentaene-11,17-dione	3-desoxy-11-keto-equilenin
138	Androstane-3( $\beta$ )-ol-15-one	
139	Androstane-3( $\alpha$ )-ol-17-one	Androsterone, cis-androsterone
139	Androstane-3( $\alpha$ )-ol-17-one-Na. sulphate	Androsterone as Na. sulphate
140	Androstane-3( $\beta$ )-ol-17-one	Iso-androsterone, Trans-androsterone
168	$\Delta^4$ -androstene-17-one	
190	$\Delta^4$ -androstene-17-one	
195	$\Delta^4$ -androstene-3( $\beta$ )-ol-17-one	Dehydro-Iso-androsterone
204.1	$\Delta^{11}$ -androstene-3( $\alpha$ )-ol-17-one	

Ref. No.

8294	$\Delta^4$ -androstene-3,16,17-triol	
210	$\Delta^{1,4}$ -androstadiene-17-one	
278	17( $\alpha$ )-[1( $\alpha$ )-hydroxyethyl]-androstane-3( $\alpha$ )-ol	Epi-allo-pregnane-diol
280	17( $\alpha$ )-[1( $\alpha$ )-hydroxyethyl]-androstane-3( $\beta$ )-ol	Allo-pregnane-3( $\beta$ ),20( $\alpha$ )-diol
282	17( $\alpha$ )-[1-ketoethyl]-androstane-3( $\alpha$ )-ol	Epi-allo-pregnanolone
283	17( $\alpha$ )-[1-ketoethyl]-androstane-3( $\beta$ )-ol	Wintersteiner's Cpd. "A"; Allo-pregnanolone
290	17( $\alpha$ )-[1-ketoethyl]-androstane-3-one	Allo-pregnannedione
295	17( $\alpha$ )-[1( )-hydroxyethyl]-androstane-3( $\alpha$ ),16( )-diol	Pregnanetriol "B"
316	17( )-[1( ),2-dihydroxyethyl]-androstane-3( $\beta$ ),11( )-diol	Allo-pregnane-3( $\beta$ ),11,20,21-tetrol
381	17( $\alpha$ )-[1( $\alpha$ )-hydroxyethyl]- $\Delta^4$ -androstene-3( $\beta$ )-ol	$\Delta^4$ -pregnene-3( $\beta$ ),20( $\alpha$ )-diol
549	Etiocholane-3( $\alpha$ ),17( $\alpha$ )-diol	
550	Etiocholane-3( $\alpha$ )-ol-17-one	Etiocholanolone
551	Etiocholane-3( $\beta$ )-ol-17-one	
569	17( $\alpha$ )-Ethyl-etiocholane-3( $\alpha$ )-ol	Epi-pregnol-3
574	17( $\alpha$ )-[1( $\alpha$ )-hydroxyethyl]-etiocholane-3( $\alpha$ )-ol	Pregnanediol
574	17( $\alpha$ )-[1( $\alpha$ )-hydroxyethyl]-etiocholane-3( $\alpha$ )-ol-Na. glucuronide	Pregnanediol as Na. glucuronide
578	17( $\alpha$ )-[1-ketoethyl]-etiocholane-3( $\alpha$ )-ol	Epi-pregnanolone
584	17( $\alpha$ )-[1-ketoethyl]-etiocholane-3-one	Pregnannedione
590	17( $\alpha$ )-[1( )-hydroxyethyl]-etiocholane-3( $\alpha$ ),17( $\beta$ )-diol	
715	17( $\alpha$ )-ethyl-9-epietiocholane-3( $\beta$ ),11( )-diol	Urine-3( $\beta$ ),11( )-diol
719	17( $\alpha$ )-ethyl-9-epietiocholane-3-one-11( )-ol	Urine-3-one-11( )-ol
723	17( $\alpha$ )-[1( $\alpha$ )-hydroxyethyl]-9-epietiocholane-3( $\alpha$ ),11( $\beta$ )-diol	Urine-3( $\alpha$ ),11( $\beta$ ),20( $\alpha$ )-triol; Pregnanetriol "A"

#### V. Steroids Isolated From the PLACENTA

34	$\Delta^{1,3,5,10}$ -estratriene-3,17( $\alpha$ )-diol	$\alpha$ -estradiol
37	$\Delta^{1,3,5,10}$ -estratriene-3-ol-17-one	Estrone
40	$\Delta^{1,3,5,10}$ -estratriene-3,16( ),17( $\beta$ )-triol	Estriol

#### VI. Steroids Isolated From VARIOUS OTHER SOURCES

CPD. NO.	SYSTEMATIC NAME IN TERMINOLOGY OF THIS INDEX	OTHER NAMES
37	Palm kernels $\Delta^{1,3,5,10}$ -estratriene-3-ol-17-one	Estrone
40	Pussy-willows $\Delta^{1,3,5,10}$ -estratriene-3,16( ),17( $\beta$ )-triol	Estriol
265	Coffee Dihydroxy-ketone ( $C_nH_xO_3$ ) of unknown constitution	Cafestrol

## Synoptic charts of pharmacological activities of steroids

The following charts list the independent pharmacological activities of steroids as determined by various bioassay methods. Separate charts have been prepared for the most generally accepted bioassay methods, the compounds being arranged in decreasing order of activity. In the case of tables listing two types of activities, the arrangement is in decreasing order of one of these. In some instances a number of different tests based on approximately the same criteria had to be pooled for presentation in a single chart because only few compounds were assayed with any one method. In every table the inactive compounds are listed in the order in which they appear in the index. This sequence of enumeration has also been adopted in the master chart, which summarizes the results obtained with all steroids assayed for any type of hormonal activity.

The lengthy chemical designations are frequently omitted in favor of the shorter trivial names; providing that the latter are not ambiguous. However, should there be any doubt concerning the identity of a cpd. the reader is referred to the corresponding page in the index (see column "Cpd. No."). There he will also find the references from which the activity rating were calculated.

### FOLLICULOID ACTIVITY

Based on results obtained with various vaginal cornification tests in which the threshold dose is expressed in estrone or estradiol equivalents. Values originally expressed in comparison with the activity of estrone were, for the sake of uniformity, converted into estradiol equivalents although such extrapolations obviously introduced a fairly wide margin of error.

Cpd. No.	Test No.	Name	Activity taking $\alpha$ -Estradiol as Unit
34	23	$\alpha$ -estradiol	1
34	23	$\alpha$ -estradiol 3-pr.	1
96	14A	17-ethynyl-dihydro-equillin	1
95	14A	17-ethynyl-estradiol	1
34	23	$\alpha$ -estradiol 3-ac.	1
34	23	$\alpha$ -estradiol 17-n-butyrate	1
34	23	$\alpha$ -estradiol 17-n-valerate	1
34	23	$\alpha$ -estradiol 17-iso-butyrate	1
34	23	$\alpha$ -estradiol 17-ac.	1
34	23	$\alpha$ -estradiol 17-pr.	1
34	23	$\alpha$ -estradiol 3-n-butyrate	1
34	23	$\alpha$ -estradiol 3-n-valerate	1
34	23	$\alpha$ -estradiol 3-n-hexanoate	1
34	23	$\alpha$ -estradiol diac.	1
34	23	$\alpha$ -estradiol 3-ac.-17-pr.	1
34	23	$\alpha$ -estradiol 3-bz.	1
85	:	17-me.-estradiol	"ca. as act."
37	8	Estrone glucoside	"somewhat less act."
37	23	Estrone	ca. 1/2
37	23	Estrone ac.	1/2
37	23	Estrone pr.	1/2
34	23	$\alpha$ -estradiol 3-n-octanoate	1/2
34	23	$\alpha$ -estradiol 17-n-octanoate	1/2
34	23	$\alpha$ -estradiol 17-me.-carb.	1/2
34	23	$\alpha$ -estradiol 17-n-hexanoate	1/2
34	23	$\alpha$ -estradiol 17-et.-carb.	1/2
34	23	$\alpha$ -estradiol dpr.	1/2
35	1	8-epi-estradiol	1/3
55	22, 14A	17( $\alpha$ )-dihydro-equillin	ca. 1/3
42	:	6-keto- $\alpha$ -estradiol	1/4
37	23	Estrone n-valerate	1/4
37	23	Estrone iso-butyrate	1/4
37	23	Estrone n-butyrate	1/4
34	23	$\alpha$ -estradiol 3,17-diet.-carb.	1/4
34	8	$\alpha$ -estradiol glucoside	1/4-1/6
34	23	$\alpha$ -estradiol 3-n-decanoate	1/5
34	:	$\alpha$ -estradiol 17-me. ether	ca. 1/2-1/10
94	14A	17-ethenyl-estradiol	1/5-1/6
55	14A	17( $\alpha$ )-dihydro-equillin bz.	1/5-1/8
35	1	8-epi-estradiol 3-bz.	1/5-1/8
37	23	Estrone bz.	1/8
34	23	$\alpha$ -estradiol 17-bz.	1/8
34	23	$\alpha$ -estradiol 17-n-decanoate	1/9
34	23	$\alpha$ -estradiol di-n-butyrate	1/9
40	5	Estriol	ca. 1/10
37	23	Estrone n-hexanoate	1/10
34	23	$\alpha$ -estradiol 3-bz.-17-pr.	1/10
34	23	$\alpha$ -estradiol 3-bz.-17-ac.	1/10

Cpd. No.	Test No.	Name	Activity taking $\alpha$ -Estradiol as Unit
37	?	Estrone $\beta$ -naphtoate	1/2-1/20
37	23	Estrone n-octanoate	1/12
56	14A, 12, 14	Equillin	ca. 1/12
37	5	Estrone pyridinium sulphate ester	1/10-1/20
34	23	$\alpha$ -estradiol di-iso-butyrate	1/5
37	23	Estrone n-decanoate	1/18
34	23	$\alpha$ -estradiol 3-stearate	1/18
34	23	$\alpha$ -estradiol 3-palmitate	1/18
34	23	$\alpha$ -estradiol di-n-valerate	1/18
39	1	8-epi-estrone	1/20
34	23	$\alpha$ -estradiol di-n-hexanoate	1/20
34	23	$\alpha$ -estradiol 17-bz.-3-ac.	1/20
34	23	$\alpha$ -estradiol 3-bz.-17-n-butyrate	1/22
34	23	$\alpha$ -estradiol di-n-octanoate	1/25
57	1	Iso-equillin A	ca. 1/30
39	1	8-epi-estrone 3-bz.	1/30
34	?	$\alpha$ -estradiol di-me. ether	1/10-1/50
34	?	$\alpha$ -estradiol 3-me. ether (Na derivative)	1/10-1/50
40	5	Estriol triac.	1/20-1/50
54	3	$\delta$ -iso-equillin	1/40
36	1	$\beta$ -estradiol	1/40
34	23	$\alpha$ -estradiol 3-bz.-17-n-valerate	1/42
97	14A	17-ethynyl-dihydro-equillin	1/50
37	?	Estrone p-amino-phenyl ether	1/20-1/100
102	23	D-homo- $\alpha$ -estradiol	ca. 1/60
103	23	D-homo- $\beta$ -estradiol	ca. 1/60
104	23	D-homo-estrone	ca. 1/60
34	23	$\alpha$ -estradiol di-n-decanoate	1/62
34	23	$\alpha$ -estradiol dipalmitate	1/68
37	2	17-bz.-3-pr.	1/70
37	?, 5	Estrone Cl-formate	1/50-1/100
218	?	Estrone me. ether	1/50-1/100
3	3-carboxy-androstan-17-one (free cpd. and ethyl ether)	ca. 1/10-1/100	
37	?	3-hydroxy-19-ethyl-17-equilenone (dl- $\beta$ -form)	1/80
76	5	Formyl-estradiol	1/100
37	23	Estrone laurate	1/100
37	5	Estrone quinidine-sulphate ester	ca. 1/100
37	5	Estrone Na sulphate ester	ca. 1/100
14A	14A	Equilenin	1/150-1/200
98	?	3-hydroxy-19-ethyl-17-equilenone (dl- $\beta$ -form)	1/50-1/250
34	23	$\alpha$ -estradiol 17-bz.-3-n-butyrate	1/112
67	1	$\beta$ -17-dihydro-equilenin	1/120
40	4	Estriol Na glucuronide	1/50-1/300
69	?	Equilenin (d form)	1/60-1/300
14A	14A	$\alpha$ -dihydro-equilenin	1/200
68	14A	Estrone palmitate	1/220
37	23	Estrone stearate	1/220
48	23	3-epi-hexahydro-equilenin	ca. 1/300
11	23	15-methyl - $\Delta^{1,3,6,10,15}$ - nor-estratetraene-3-ol-17-one	1/300
16	23	17-methyl - $\Delta^{1,3,6,10,14}$ - nor-estratetraene-3-ol-15-one	1/300

Cpd. No.	Test No.	Name	Activity taking $\alpha$ -Estradiol as Unit
34	23	$\alpha$ -estradiol dibz.	1/362
34	?	$\alpha$ -estradiol 17-p-toluene sulphate	1/100-1/1000
40	10	Estriol	1/200-1/1000
87	?	3-hydroxy - 19 - methyl-17-equilenone (dl $\beta$ -form)	1/200-1/1000
50	23	$\Delta^{14,15}$ - estratriene - 3( $\beta$ ),17( $\alpha$ )-diol	ca. 1/600
49	?	$\Delta^{14,15}$ - estratriene - 3( $\alpha$ ),17( $\beta$ )-diol	ca. 1/600
77	5	Formyl-estrone	1/1000
98	?	3-hydroxy-19-ethyl-17-equilenone (dl $\alpha$ -form)	1/500-1/2500
38	?	Estrone-a	1/500-1/2500
44	?	7-keto-estrone	1/600-1/3000
41	?	7( )-hydroxy-estrone	1/600-1/3000
69	1	Equilenin (1 form)	1/800-1/4000
70	?	14-epi-equilenin	1/1000-1/5000
37	?	Estrone phenyl ether-p-azocasein	1/1600-1/8300

Based on results obtained with various qualitative vaginal cornification tests, preference being given to tests 62, 55 and 128C. The doses indicated are those with which positive or negative results were obtained.

Cpd. No.	Test No.	Name	Active Dose
164	62	Hetero- $\Delta^1$ -androstene-3-one-17( )-ol	200 $\gamma$
192	62	$\Delta^1$ -androstene-3( $\beta$ ),17( $\alpha$ )-diol	200 $\gamma$
441	62	Ethynyl- $\Delta^1$ -androstenediol monoac.	200 $\gamma$
244	39A	Methyl-testosterone	0.2-1.5 mg.
165	62	Hetero- $\Delta^1$ -androstene-3,17-dione	400 $\gamma$
181	62	16-hydroxy-testosterone	1 mg.
184	62	6-keto-testosterone ac.	1 mg.
186	62	$\Delta^1$ -androstene-3,6,17-trione	1 mg.
195	7	$\Delta^1$ -androstene-3( $\beta$ )-ol-17-one	1 mg.
201	62	$\Delta^1$ -androstene-3( $\beta$ ),16,17-triol	1 mg.
217	62	$\Delta^1$ -androstadiene-3( $\beta$ ),17( $\alpha$ )-diol diac.	1 mg.
359	62	6-keto-progesterone	1 mg.
383	105	$\Delta^1$ -pregnenolone	1 mg.
544	128C	17a( $\alpha$ )-methyl- $\Delta^1$ -D-homo-androstene - 3( $\beta$ ),17a( $\beta$ )-diol-17-one	1 mg.
133	39	Androstane-3( $\alpha$ ),17( $\alpha$ )-diol	1-2.5 mg.
175	62	$\Delta^1$ -androstene - 3( $\beta$ ),17( $\alpha$ )-diol	2 mg.
393	55, 128C	$\Delta^1$ -pregnene-3( $\beta$ ),17( $\alpha$ )-diol-20-one	2 mg.
440	58, 39B	Ethynyl-testosterone	2 mg.
265	62	Cafestrol	2.5 mg.
177	118	Testosterone pr.	3 mg.
179	39B	$\Delta^1$ -androstene-3,17-dione	4 mg.
433	55	Vinyl-androstene-3( $\beta$ ),17( $\alpha$ )-diol	5-10 mg.
139	58	Cis-androsterone	10 mg.
395	128C, 55	Acetoxy-pregnenolone	10 mg.
425	55	Vinyl-testosterone	10 mg.
496	128C	21-ethyl-progesterone	10 mg.
283	55	Allo-pregnanolone	12 mg.
223	39A	Methyl - dihydro - testosterone	act. dose?
255	23	17( $\beta$ )-methyl- $\Delta^1$ -androstene-3( $\beta$ ),17( $\alpha$ )-diol	act. dose?
378	55	17-hydroxy-11-dehydro-corticosterone	act. dose?
304	55	Allo-pregnane - 3( $\beta$ ),17( $\beta$ )-diol-20-one	5 mg. act. questionable
		Inact. at:	
37	?	Estrone diethyl-amino-ethyl-ether	1 mg.

Cpd. No.	Test No.	Name	Inact. at:
45	1	Equillin-glycol	500 $\gamma$
53	?	6-hydroxy-1,2,3,4 - tetrahydro-17-equilenone	1 mg.
65	7	17-equilenone ( $\alpha$ and $\beta$ forms)	500 $\gamma$
71	1	6-hydroxy-17-equilenone ( $\alpha$ and $\beta$ forms)	500 $\gamma$
74	9	1-methyl-estradiol	1 mg.
87	?	3-hydroxy-19-methyl-17-equilenone (dl $\alpha$ form)	1 mg.
88	?	6-hydroxy-19-methyl-17-equilenone ( $\alpha$ and $\beta$ forms)	1 mg.
93	14A	Dihydroxy-ethenyl-estradiol	10 $\gamma$
100	?	3-hydroxy-19-n-propyl-17-equilenone (dl $\beta$ form)	1 mg.
107	?	6-hydroxy-D-homo-17a-equilenone ( $\alpha$ or $\beta$ form)	1 mg.
159	63	Androstane-3-one-4,5,17( $\alpha$ )-triol ac.	200 $\gamma$
180	23	$\Delta^1$ -androstene-6,17-dione	200 $\gamma$
187	?	Adrenosterone	10 $\gamma$
188	—	$\Delta^1$ -androstene-3( $\beta$ )-ol	"practically inact."
202	62	$\Delta^1$ -androstene - 3( $\beta$ ),17( $\alpha$ )-diol-7-one diac.	2 mg.
210	2	$\Delta^{1,4}$ -androstadiene-17-one	1 mg.
212	62	$\Delta^{1,4}$ -androstadiene-17-one-17( $\alpha$ )-ol	2 mg.
213	23	$\Delta^{1,4}$ -androstadiene-3-one-17( $\alpha$ )-ol	2 mg.
214	23	$\Delta^{1,4}$ -androstadiene - 3,17 - dione	2 mg.
281	128C	Allo-pregnane - 3( $\beta$ ),20( $\beta$ )-diol	5 mg.
290	128C	Allo-pregnane-3-one	8 mg.
380	62	17-ethyl-androstenediol	2 mg.
385	62	$\Delta^1$ -17-ethyl-testosterone	1 mg.
419	62	16-dehydro-progesterone	1 mg.
427	55, 128C	$\Delta^{1,10}$ -pregnadiene-3( $\beta$ )-ol-20-one	20 mg.
427	55, 128C	$\Delta^{1,10}$ -pregnadiene-3( $\beta$ )-ol-20-one ac.	20 mg.
453	62	17( )-[2( ),3-dihydroxypropyl]- $\Delta^1$ -androstene-3-one-17( $\beta$ )-ol	1 mg.
455	62	Trihydroxy-propyl-testosterone	1 mg.
463	62	17-allyl-testosterone	1 mg.
467	62	Allyl-androstenediol	1 mg.
469	62	17-[2-propenylidene]- $\Delta^1$ -androstene-3-one	1 mg.
515	—	Epi-nor-cholestane-3-ol-25-one	—
516	1	Nor-cholestane-3,25-dione	—
517	128C, 55	$\Delta^1$ -nor-cholestane-3,25-dione	10 mg.
522	55	Stigmasterol	40 mg.
574	128C	Pregnanediol	10 mg.
584	128C	Pregnandiol	10 mg.
619	55	$\Delta^{10}$ -pregnene-3-ol-20-one ac.	20 mg.
620	55	$\Delta^{10}$ -iso-progesterone	20 mg.
712	?	22-methyl-3,12-diketo-nor-cholesterol	—

Based on results obtained with the metrotropic test 3 (s.c. injection on 3 successive days in immature mouse).

Cpd. No.	Name	Activity taking $\alpha$ -estradiol as the Unit
34	$\alpha$ -estradiol	1
55	17( $\alpha$ )-dihydro-equillin	2/3
34	$\alpha$ -estradiol-3-bz.	2/3
56	Equillin	1/2.7
34	$\alpha$ -estradiol diac.	1/2.7
57	Estrone	1/3
34	$\alpha$ -estradiol dipr.	1/4.3
40	Estriol	1/7.5
36	$\beta$ -estradiol-3-bz.	1/20
67	17( $\beta$ )-dihydro-equillin	1/50
36	$\beta$ -estradiol	1/50

Cpd. No.	Name	Activity taking $\alpha$ -estradiol as the Unit
36	$\beta$ -estradiol diac.	1/3000
177	Testosterone pr.	1/4300
177	Testosterone	1/10,000
344	Progesterone	1/15,000
139	Androsterone	1/30,000
195	$\Delta^4$ -androstene-3( $\beta$ )-ol-17-one	1/30,000

Based on results obtained with the metrotropic test 128A (s.c. injection on 10 successive days in ♀/c rat).

Cpd. No.	Name	Dose	Uterine Wt. Increase in % of Control
95	Ethynodiol- $\alpha$ -estradiol	0.1 $\gamma$	437
34	$\alpha$ -Estradiol	0.1 $\gamma$	63
37	Estrone	0.1 $\gamma$	40
177	Testosterone pr.	1 mg.	737
177	Testosterone	1 mg.	559
244	Methyl-testosterone	1 mg.	404
192	$\Delta^4$ -androstene-3( $\beta$ ),17( $\alpha$ )-diol	2 mg.	503
440	Ethynodiol-testosterone	2 mg.	337
195	$\Delta^4$ -androstene-3( $\beta$ )-ol-17-one	2 mg.	155
179	$\Delta^4$ -androstene-3,17-dione	2 mg.	111
344	Progesterone	2 mg.	107
354	Desoxycorticosterone ac.	2 mg.	44
395	Acetoxypregnanolone	10 mg.	40
383	$\Delta^4$ -pregnenolone	10 mg.	67
139	Androsterone	1 mg.	inact.
125	Androstanone	2 mg.	inact.
620	$\Delta^{14}$ -pregnene-3,20-dione	2 mg.	inact.
427	$\Delta^{14}$ -pregnadiene-3( $\beta$ )-ol-20-one ac.	2 mg.	inact.
178	Cis-testosterone	2 mg.	inact.
551	Etiolane-3( $\beta$ )-ol-17-one ac.	10 mg.	inact.

Based on results obtained with the metrotropic test 24 (s.c. injection of 50 $\gamma$  of cpds. in ♂/c).

The data obtained with this test are listed on the index pages according to the "efficiency co-efficient" of the compounds which takes both the intensity and the duration of their action into consideration. In this chart, however, the maximum uterine wt. increase is used as an indicator of activity since for many compounds "efficiency co-efficients" have not been published. It will be noted that all compounds listed below are derivatives of  $\alpha$ -estradiol (cpd. 34) or estrone (cpd. 37).

Compound	Maximum Uterine Wt. Increase in % of Control
$\alpha$ -Estradiol 3-n-decanoate	380
$\alpha$ -Estradiol 3-stearate	370
$\alpha$ -Estradiol 3-palmitate	360
$\alpha$ -Estradiol 3-bz.-17-n-valerate	340
$\alpha$ -Estradiol 17-n-hexanoate	230
$\alpha$ -Estradiol 17-n-decanoate	320
$\alpha$ -Estradiol 3-bz.-17-n-butyrate	320
$\alpha$ -Estradiol di-n-hexanoate	320
$\alpha$ -Estradiol 17-bz.	310
$\alpha$ -Estradiol 17-bz.-3-pr.	310
$\alpha$ -Estradiol 17-n-valerate	300
$\alpha$ -Estradiol di-pr.	300
$\alpha$ -Estradiol 17-bz.-3-ac.	300
$\alpha$ -Estradiol di-n-decanoate	300
$\alpha$ -Estradiol 3-bz.-17-pr.	300
$\alpha$ -Estradiol di-n-butyrate	300
$\alpha$ -Estradiol 17-n-octanoate	290
$\alpha$ -Estradiol di-n-octanoate	290
$\alpha$ -Estradiol 17-bz.-3-n-butyrate	280
$\alpha$ -Estradiol 3-bz.-17-ac.	280
$\alpha$ -Estradiol di-palmitate	280
$\alpha$ -Estradiol di-n-valerate	270
$\alpha$ -Estradiol 3-n-octanone	250
$\alpha$ -Estradiol di-iso-butyrate	250
$\alpha$ -Estradiol 17-n-butyrate	240
$\alpha$ -Estradiol 17-iso-butyrate	220
$\alpha$ -Estradiol 3,17-diet.-carb.	220
$\alpha$ -Estradiol 3-ac.-17-pr.	220
$\alpha$ -Estradiol diac.	206
Estrone n-octanoate	200

Cpd. No.	Name	Dose + Response
	$\alpha$ -Estradiol 17-pr.	200
	$\alpha$ -Estradiol 3-bz.	200
	$\alpha$ -Estradiol 17-eth.-carb.	180
	$\alpha$ -Estradiol 3-n-hexanoate	180
	Estrone n-hexanoate	174
	Estrone bz.	160
	$\alpha$ -Estradiol 17-me.-carb.	160
	$\alpha$ -Estradiol 3-n-valerate	160
	Estrone n-decanoate	156
	$\alpha$ -Estradiol 17-ac.	150
	Estrone n-valerate	150
	Estrone iso-butyrate	140
	Estrone n-butyrate	130
	$\alpha$ -Estradiol 3-n-butyrate	120
	Estrone laurate	120
	$\alpha$ -Estradiol 3-pr.	110
	$\alpha$ -Estradiol dibz.	100
	Estrone pr.	100
	$\alpha$ -Estradiol	100
	Estrone ac.	90
	$\alpha$ -Estradiol 3-ac.	80
	Estrone	70

Based on results obtained with the anti-castration cell tests 128A, 132 and 142 (s.c. injection in ♂/c and ♀/c rat).

Cpd. No.	Name	Response/Dose
95	17-ethynodiol- $\alpha$ -estradiol	++/0.1 $\gamma$
34	$\alpha$ -estradiol	0-+/0.1 $\gamma$
37	Estrone	0-+++/0.1 $\gamma$
143	Androstanone-3,17-dione	++/0.5 mg.
177	Testosterone pr.	++/+1 mg.
221	"Methyl-androstanediol"	++/0.7 mg.
244	17-methyl-testosterone	++/1 mg.
177	Testosterone	++/1-2 mg.
192	$\Delta^4$ -androstene-3( $\beta$ ),17( $\alpha$ )-diol	++-+++/2 mg.
440	Ethynodiol-testosterone	++/2 mg.
195	$\Delta^4$ -androstene-3( $\beta$ )-ol-17-one	++/2 mg.
179	$\Delta^4$ -androstene-3,17-dione	0-+/2 mg.
344	Progesterone	+++/10 mg.
354	Desoxycorticosterone ac.	0-++/10 mg.
223	17( $\beta$ )-methyl-androstanone-3-one	0-++/10 mg.
	17( $\alpha$ )-ol	0-+/0.7 mg.
139	Androsterone	0-+/2 mg.
178	Cis-testosterone	0-+/2 mg.
193	$\Delta^4$ -androstene-3( $\beta$ ),17( $\beta$ )-diol	0-+/10 mg.
383	$\Delta^4$ -pregnenolone	10 mg.
395	Acetoxypregnanolone	10 mg.
193	"Androstanone-diol"	Inactive at: 10 mg.
574	Pregnanediol	2 mg.
584	Pregnanedione	10 mg.

## TESTOID ACTIVITY

Based on results obtained with various capon tests in which the results were expressed in I.U. (preference given to test 29).

Cpd. No.	Name	$\gamma$ /I.U.
223	17( $\beta$ )-methyl-androstanone-3-one-17( $\alpha$ )-ol	15
177	Testosterone	ca. 15
177	Testosterone formate	20
177	Testosterone ac.	20
177	Testosterone pr.	20
141	Androstanone-3-one-17( $\alpha$ )-ol	20
527	D-homo-dihydro-testosterone	ca. 25
183	Androstanone-3( $\alpha$ ),17( $\alpha$ )-diol	20-25
141	Androstanone-3-one-17( $\alpha$ )-ol formate	25-30
141	Androstanone-3-one-17( $\alpha$ )-ol ac.	25-30
141	Androstanone-3-one-17( $\alpha$ )-ol pr.	25-30
133	Androstanone-3( $\alpha$ ),17( $\alpha$ )-diol ac.	25-30
244	Methyl-testosterone	25-30
177	Testosterone chloro ac.	25-30
133	Androstanone-3( $\alpha$ ),17( $\alpha$ )-diol diac.	30
177	Testosterone me.-carb.	30-40
177	Testosterone phenyl-carb.	30-40
221	17( $\beta$ )-methyl-androstanone-3( $\alpha$ ),17( $\alpha$ )-diol	35

Cpd. No.	Name	$\gamma$ /I.U.
191	$\Delta^4$ -androstene-3( $\alpha$ ),17( $\alpha$ )-diol	ca. 35
177	Testosterone diac.	35
133	Androstan-3( $\alpha$ ),17( $\alpha$ )-diol-3-pr.	35-40
177	Testosterone 3-ac-17-pr.	40
177	Testosterone dipr.	45
275	17( $\beta$ )-ethylandrostan-3( $\alpha$ ),17( $\alpha$ )-diol	ca. 50
133	Androstan-3( $\alpha$ ),17( $\alpha$ )-diol-3-n-butylate	50
285	17( $\beta$ )-ethyl-androstan-3-one-17( $\alpha$ )-ol	45-70
177	Testosterone-n-butyrate	60
133	Androstan-3( $\alpha$ ),17( $\alpha$ )-diol-3-mono-succinate	ca. 60
177	Testosterone-chloro carb.	60-70
141	Androstan-3-one-17( $\alpha$ )-ol-n-butyrate	60-70
177	Testosterone-iso-butyrate	70
177	Testosterone $\beta$ -diol-amino-et. carb. · HCl	80-100
526	D-homoandrostan-3( $\beta$ )-ol-17a-one	90-100
177	Testosterone et. carb.	100
139	Androsterone	100
139	Androsterone 1/2 succinate	100
194	$\Delta^4$ -androstene-3( $\alpha$ )-ol-17-one	ca. 100
133	Androstan-3( $\alpha$ ),17( $\alpha$ )-diol dipr.	100
525	D-homo-cis-androsterone	"less act. than trans isomer"
179	$\Delta^4$ -androstene-3,17-dione	120
143	Androstan-3,17-dione	120-130
139	Androsterone ac.	130
177	Testosterone n-propyl carb.	150
177	Testosterone benzyl carb.	150
179	$\Delta^4$ -androstene-3,17-dione enol ac.	150-180
177	Testosterone n-valerate	200
177	Testosterone $\alpha$ -dime-amino pr.	200
177	Testosterone 3-ac-17-n-butyrate	200
213	$\Delta^{4,5}$ -androstadiene-3-one-17( $\alpha$ )-ol	ca. 200
213	$\Delta^{4,5}$ -androstadiene-3-one-17( $\alpha$ )-ol pr.	ca. 200
141	Androstan-3-one-17( $\alpha$ )-ol-n-valerate	200
195	$\Delta^4$ -androstene-3( $\beta$ )-ol-17-one	200
179	$\Delta^4$ -androstene-3,17-dione enol bz.	200-300
177	Testosterone iso-valerate	250
180	$\Delta^4$ -androstene-6,17-dione	ca. 250
176	$\Delta^4$ -androstene-3( $\beta$ )-ol-17-one	ca. 280
198	$\Delta^4$ -androstene-3,17-dione	> 300
142	Androstan-3-one-17( $\beta$ )-ol	ca. 300
177	Testosterone $\alpha$ -bromo pr.	300
133	Androstan-3( $\alpha$ ),17( $\alpha$ )-diol 3-bz.	300
133	Androstan-3( $\alpha$ ),17( $\alpha$ )-diol disuccinate	ca. 300
177	Testosterone caprinate	350
134	Androstan-3( $\alpha$ ),17( $\beta$ )-diol	ca. 350
210	$\Delta^{4,5}$ -androstadiene-17-one	350-400
178	Cis-testosterone	400
178	Cis-testosterone ac.	450-500
177	Testosterone phenyl-ac.	500
222	17( $\beta$ )-methyl-androstan-3( $\beta$ ),17( $\alpha$ )-diol	ca. 500
213	$\Delta^{4,5}$ -androstadiene-3-one-17( $\alpha$ )-ol bz.	ca. 500
102	$\Delta^4$ -androstene-3( $\beta$ ),17( $\alpha$ )-diol	500
102	$\Delta^4$ -androstene-3( $\beta$ ),17( $\alpha$ )-diol diac.	500
135	Androstan-3( $\beta$ ),17( $\alpha$ )-diol	500-550
255	17( $\beta$ )-methyl- $\Delta^4$ -androstene-3( $\beta$ ),17( $\alpha$ )-diol	500-600
380	17( $\beta$ )-ethyl- $\Delta^4$ -androstene-3( $\beta$ ),17( $\alpha$ )-diol	500-570
276	17( $\beta$ )-ethyl-androstan-3( $\beta$ ),17( $\alpha$ )-diol	550
140	Iso-androsterone	ca. 690
132	Androstan-17-one-3( $\alpha$ )-Cl.	750
178	Cis-testosterone bz.	850-1000
103	$\Delta^4$ -androstene-3( $\beta$ ),17( $\beta$ )-diol	ca. 1000
126	Androstan-3( $\alpha$ )-ol 17-aminc	1000
240	20-nor-progesterone	1000
177	Testosterone palmitate	1000
177	Testosterone stearate	1000
177	Testosterone bz.	1000
177	Testosterone crotonate	1000
142	Androstan-3-one-17( $\beta$ )-ol bz.	ca. 1000
133	Androstan-3( $\alpha$ ),17( $\alpha$ )-diol 3-palmitate	> 1000
133	Androstan-3( $\alpha$ ),17( $\alpha$ )-diol 17-bz.	> 1000
188	$\Delta^4$ -androstene-3( $\beta$ )-ol 17-amine	1430
214	$\Delta^{4,5}$ -androstadiene-3,17-dione	1000-2500
515	Epi-nor-cholestane-3-ol-25-one	3000

Cpd. No.	Name	$\gamma$ /I.U.
440	Ethylyn-testosterone	ca. 6000 Inactive at:
132	Androstan-17-one-3( $\beta$ )-Cl.	2 mg.
177	Testosterone urethane and n-propylurethane	1 mg.
218	3( $\beta$ )-carboxy-androstan-17-one	2 mg.
257	17( $\alpha$ )-methyl- $\Delta^4$ -androstene-3( $\alpha$ )-ol	2 mg.
266	3( $\beta$ ),17( $\beta$ )-dimethyl-androstan-3( $\beta$ ),17( $\alpha$ )-diol	500 <sup>y</sup>
352	17( $\beta$ )-hydroxy-progesterone	200 <sup>y</sup>
354	Desoxycorticosterone ac.	1-4 mg.
516	Nor-cholestane-3,25-dione	?
519	$\Delta^4$ -Nor-cholestene-3-trans-ol-25-one	?
551	Etioloholane-3( $\beta$ )-ol-17-one	1 mg.

Based on results obtained with test 31 (local application to capon's comb).

Cpd. No.	Name	$\gamma$ /U.
177	Testosterone	0.4
244	17-methyl-testosterone	0.5
179	$\Delta^4$ -androstene-3,17-dione	0.5
133	Androstan-3( $\alpha$ ),17( $\alpha$ )-diol	0.7
139	Androsterone	0.7
156	Androstan-3,11,17-trione	2
195	$\Delta^4$ -androstene-3( $\beta$ )-ol-17-one	> 2
187	Adrenosterone	3.5
135	Androstan-3( $\beta$ ),17( $\alpha$ )-diol	4
149	Androstan-3( $\beta$ ),11( $\beta$ )-diol-17-one	ca. 20
195	$\Delta^4$ -androstene-3( $\beta$ )-ol-17-one glucuronic acid	77 Inact. at:
378	17-hydroxy-11-dehydro-corticosterone	25
244	12-methyl-testosterone triacetyl glucuronide	50

Based on results obtained with test 63 (local application to capon's comb).

Cpd. No.	Name	$\gamma$ /U.
179	$\Delta^4$ -androstene-3,17-dione	0.2-1
133	Androstan-3( $\alpha$ ),17( $\alpha$ )-diol	0.6-1
177	Testosterone	1-2
175	$\Delta^4$ -androstene-3( $\beta$ ),17( $\alpha$ )-diol	1.5
139	Androsterone	2
165	Hetero- $\Delta^4$ -androstene-3,17-dione	2.5
135	Androstan-3( $\beta$ ),17( $\alpha$ )-diol	4-10
140	Iso-androsterone	15-20
419	16-dehydro-progesterone	ca. 30
217	$\Delta^{4,5}$ -androstadiene-3( $\beta$ ),17( $\alpha$ )-diol diac.	50
209	$\Delta^{4,5}$ -androstadiene-17( $\alpha$ )-ol	100
164	Hetero- $\Delta^4$ -androstene-3-one-17( $\alpha$ )-ol	100
181	$\Delta^4$ -androstene-3-one-16,17( $\alpha$ )-diol	300 Inact. at:
159	Androstan-3-one-4( $\alpha$ ),5( $\beta$ ),17( $\alpha$ )-triol ac.	200
200	$\Delta^4$ -androstene-3( $\beta$ ),7( $\beta$ ),17( $\alpha$ )-triol	100
201	$\Delta^4$ -androstene-3( $\beta$ ),16( $\beta$ ),17( $\beta$ )-triol	100
202	$\Delta^4$ -androstene-3( $\beta$ ),17( $\alpha$ )-diol-7-one diac.	100
212	$\Delta^{4,5}$ -androstadiene-7-one-17( $\alpha$ )-ol	100
312	Testolalone, cpd. "A"	?
453	17( $\beta$ )-[2( $\beta$ )-3-dihydroxypropyl]- $\Delta^4$ -androstene-3-one-17( $\alpha$ )-ol	500
455	Trihydroxy-propyl-testosterone	500
463	17-allyl-testosterone	500
467	Allyl- $\Delta^4$ -androstene-3( $\beta$ ),17( $\alpha$ )-diol	500
469	17-[2-propenylidene]- $\Delta^4$ -androstene-3-one	500
549	Etioloholane-3( $\alpha$ ),17( $\alpha$ )-diol	100
576	Pregnane-3( $\beta$ ),20( $\alpha$ )-diol	500
578	17( $\alpha$ )-[1-ketoethyl]-etioloholane-3( $\alpha$ )-ol	500
580	17( $\alpha$ )-[1-ketoethyl]-etioloholane-3( $\beta$ )-ol	500
609	17( $\beta$ )-[1-ketoethyl]-etioloholane-3-one-4( $\beta$ ),5( $\beta$ )-diol	300

Based on results obtained with test 32A (parenteral injection to capon).

Cpd. No.	Name	γ/U.
177	Testosterone	ca. 30
183	Androstan-3(α),17(α)-diol	45-50
177	Testosterone ac.	50
141	Androstan-3-one-17(α)-ol	50
133	Androstan-3(α),17(α)-diol ac.	50-60
183	Androstan-3(α),17(α)-diol diac.	60-70
196	Δ <sup>4</sup> -testosterone ac.	125
342	Ethyl-testosterone	> 150
139	Androsterone ac.	150-170
189	Androsterone	150-200
175	Δ <sup>4</sup> -androstan-3(β),17(α)-diol	150-200
179	Δ <sup>4</sup> -androstane-3,17-dione	200
143	Androstan-3,17-dione	250-400
165	Δ <sup>4</sup> -androstane-3,17-dione	ca. 400
198	Δ <sup>4</sup> -androstane-3,17-dione	< 500
335	Δ <sup>4</sup> -pregnene-3-one-17(α)-ol	500
185	Δ <sup>4</sup> -androstane-3(β)-ol-17-one	ca. 600
185	Δ <sup>4</sup> -androstane-3(β)-ol-17-one ac.	ca. 600
139	Androsterone oxime	> 900
135	Androstan-3(β),17(α)-diol	1000-1500
195	Δ <sup>4</sup> -androstane-3(β)-ol-17-one bz.	1200
192	Δ <sup>4</sup> -androstane-3(β),17(α)-diol	1300
140	Iso-androsterone	1400
330	Δ <sup>4</sup> -pregnene-3(β),17(α)-diol	1500
184	6-keto-testosterone ac.	4 mg.
186	Δ <sup>4</sup> -androstane-3,6,17-trione	4 mg.
202	Δ <sup>4</sup> -androstane-3(β),17(α)-diol-7-one diac.	2 mg.
212	Δ <sup>4</sup> -androstadiene-7-one-17(α)-ol	2 mg.
282	17(α)-[1-ketoethyl]-androstane-3(α)-ol	2 mg.
419	16-dehydro-progesterone	3 mg.
426	Δ <sup>4</sup> -pregnadiene-3(β),20(β)-diol	?
440	Ethynodiol-17 <sup>β</sup> -testosterone	2 mg.
441	17(β)-ethynodiol-17 <sup>β</sup> -testosterone - 3(β),17(α)-diol monoac.	1 mg.
479	Δ <sup>4</sup> -3-keto-bisnor-cholenic acid	6 mg.

Based on results obtained with test 132 (stimulation of accessory genital organs in ♂/c rats).

Cpd. No.	Name	Dose	% Increase over Controls S.Ves. Pta.
223	17(β)-methyl-androstane-3-one-17(α)-ol	2 mg.	4266 1377
177	Testosterone pr.	2 mg.	3116 983
255	17(β)-methyl-Δ <sup>4</sup> -androstene-3(β),17(α)-diol	2 mg.	3000 950
244	Methyl-testosterone	2 mg.	2620 855
177	Testosterone	2 mg.	2133 850
222	17(β)-methyl-androstane-3(β),17(α)-diol	2 mg.	2266 927
192	Δ <sup>4</sup> -androstene-3(β),17(α)-diol	2 mg.	1033 628
179	Δ <sup>4</sup> -androstane-3,17-dione	2 mg.	750 666
440	Ethynodiol-17 <sup>β</sup> -testosterone	2 mg.	432 250
192	Δ <sup>4</sup> -androstene-3(β),17(α)-diol dpr.	2 mg.	417 394
139	Androsterone	100γ	40 244
844	Progesterone	10 mg.	0 211
193	Δ <sup>4</sup> -androstene-3(β),17(β)-diol	10 mg.	0 172
193	Δ <sup>4</sup> -androstene-3(β),17(β)-diol monopr.	10 mg.	0 172
193	Δ <sup>4</sup> -androstene-3(β),17(β)-diol dpr.	10 mg.	0 167
854	Desoxycorticosterone ac.	10 mg.	0 0
640	Bisnor-desoxycholic acid	10 mg.	0 0
520	Cholesterol	10 mg.	0 0
510	Δ <sup>4</sup> -3-hydroxy-cholenic acid	10 mg.	0 0
485	Δ <sup>4</sup> -3-hydroxy-bisnor-cholenic acid	10 mg.	0 0

Based on results obtained with test 45 (wt. increase of accessory sex organs in ♂/c rat following 10 daily s.c. injections). In the case of inact. cpds. results obtained with other similar tests are also included.

Cpd. No.	Name	Dose in γ	% Increase over Controls S.Ves. Pta.
177	Testosterone pr.	50	1500 530
177	Testosterone ac.	50	1450 480
177	Testosterone formate	50	1430 425
177	Testosterone n-butyrate	50	1200 100
177	Testosterone n-valerate	50	770 250
177	Testosterone diac.	50	540 180
177	Testosterone iso-butyrate	50	360 120
244	Methyl-testosterone	50	290 105
223	17(β)-methyl-androstane-3-one-17(α)-ol	50	170 75
527	D-homoandrostan-3-one-17a-( )-ol	"more act. than dihydro-testosterone and testosterone"	
177	Testosterone	50	200 53
141	Androstan-3-one-17(α)-ol	50	157 63
221	17-methyl-androstan-3(α),17(α)-diol	50	150 45
177	Testosterone caprinate	50	0 0
179	Δ <sup>4</sup> -androstene-3,17-dione	50	107 28
177	Testosterone bz.	50	21 0
133	Androstan-3(α),17(α)-diol	100	210 0
275	17(β)-ethyl-androstan-3(α),17(α)-diol	100	43 58
179	Δ <sup>4</sup> -androstene-3,17-dione enol ac.	200	150 40
255	Methyl-Δ <sup>4</sup> -androstene-3(β),17(α)-diol	200	150 75
342	Ethyl-testosterone	200	145 —
143	Androstan-3,17-dione	200	107 56
191	Δ <sup>4</sup> -androstene-3(α),17(α)-diol	200	80 62
222	17(β)-methyl-androstan-3(β),17(α)-diol	200	71 51
155	Androstan-3(β),17(α)-diol	200	50 200
139	Androsterone	200	43 28
285	17(β)-ethyl-androstan-3-one-17(α)-ol	200	29 28
380	17(β)-ethyl-Δ <sup>4</sup> -androstene-3(β),17(α)-diol	200	43 16
192	Δ <sup>4</sup> -androstene-3(β),17(α)-diol	200	36 14
194	Δ <sup>4</sup> -androstene-3(α)-ol-17-one	200	29 28
176	17(β)-ethyl-androstan-3(β),17(α)-diol	500	75 28
177	Testosterone palmitate	500	57 0
177	Testosterone stearate	500	36 0
139	Androsterone n-butyrate	500	14 12
195	Δ <sup>4</sup> -androstene-3(β)-ol-17-one ac.	1000	57 40
		2000	160 67
197	Δ <sup>4</sup> -androstene-7-one-17(α)-ol	"Slight act."	
126	Androstan-3(α)-ol 17-amine	"slightly act."	
188	Δ <sup>4</sup> -androstene-3(β)-ol	500 "almost inact."	
213	Δ <sup>4</sup> -androstadiene-3-one-17(α)-ol	"very slight act."	
134	Androstan-3(α),17(β)-diol	1000 0 0	
139	Androsterone ac	500 0 25	
139	Androsterone bz.	500 500 9	
140	Iso-androsterone	1000 0 0	
142	Androstan-3-one-17(β)-ol	1000-2000 0 0	
176	Δ <sup>4</sup> -androstene-3(β)-ol-17-one	500 0 0	
178	Cis-testosterone	1000 0 0	
179	Δ <sup>4</sup> -androstene-3,17-dione enol bz.	200 0 0	
193	Δ <sup>4</sup> -androstene-3(β),17(β)-diol	2000 0 0	
195	Δ <sup>4</sup> -androstene-3(β)-ol-17-one	500 0 0	
245	17(α)-[hydroxymethyl]-Δ <sup>4</sup> -androstene-3-one	100 0 0	
257	17(α)-[hydroxymethyl]-Δ <sup>4</sup> -androstene-3( )-ol	1000 0 0	
354	Desoxycorticosterone ac.	2000 0 0	
Ref. No. A37539	α,β-unsaturated ketone C <sub>m</sub> H <sub>n</sub> O <sub>x</sub> (from adrenal cortex)	2000 0 0	
Based on results obtained with test 33 (s. ves. stimulation in immature rat following 8 daily s.c. injections).			
Cpd. No.	Name	γ/U.	
177	Testosterone ac.	ca. 25	
141	Androstan-3-one-17(α)-ol	50	
196	Δ <sup>4</sup> -testosterone ac.	50	
177	Testosterone	100	
385	17(β)-ethyl-Δ <sup>4</sup> -androstene-3-one-17(α)-ol	200	

Cpd. No.	Name	γ/U.
133	Androstane-3(α),17(α)-diol	300
179	Δ <sup>4</sup> -androstene-3,17-dione	500
143	Androstane-3,17-dione	700
192	Δ <sup>4</sup> -androstene-3(β),17(α)-diol	ca. 700
175	Δ <sup>4</sup> -androstene-3(β),17(α)-diol	750
135	Androstane-3(β),17(α)-diol	750-1300
139	Androsterone	1000
198	Δ <sup>4</sup> -androstene-3,17-dione	1500
255	Δ <sup>4</sup> -methyl-androstene-3(β),17(α)-diol	2000
195	Δ <sup>4</sup> -androstene-3(β)-ol-17-one	3000
140	Iso-androsterone	4000
	Inactive at:	
181	Δ <sup>4</sup> -androstene-3-one-16( ),17(α)-diol	1000γ
184	6-keto-testosterone ac.	2000γ
186	Δ <sup>4</sup> -androstene-3,6,17-trione	2000γ
202	Δ <sup>4</sup> -androstene-3(β),17(α)-diol-7-one diac.	3000γ
212	Δ <sup>4</sup> -androstanediol-7-one-17(α)-ol	3000γ
282	17(α)-[1-ketoethyl]-androstane-3(α)-ol	1000-3000γ

### LUTEOID ACTIVITY

Based on results obtained with various modifications of the progestational proliferation test in the rabbit.

Cpd. No.	Name	Mg./I.U.
344	Progesterone	1
418.1	11-dehydro-progesterone	< 2
416	6-dehydro-progesterone	ca. 3
418	9-dehydro-progesterone	ca. 8
354	Desoxycorticosterone ac.	10
440	Ethynodiol-testosterone	10
451	21-methyl-progesterone	ca. 10
349	6(α)-hydroxy-progesterone ac.	ca. 10
425	Vinyl-testosterone	< 20
496	21-ethyl-progesterone	4-40
244	Methyl-testosterone	30
255	17(β)-methyl-Δ <sup>4</sup> -androstene-3(β),17(α)-diol	30
285	17(β)-ethyl-androstane-3-one-17(α)-ol	ca. 40
221	"Methyl-androstanediol (cis)"	20-40
222	17(β)-methyl-androstane-3(β),7(α)-diol	50
223	17(β)-methyl-androstane-3-one-17(α)-ol	50
177	Testosterone pr.	50
542	17(β)-methyl-Δ <sup>4</sup> -D-homoandrostene-3,17-dione-17a(α)-ol	ca. 60
128	Androstane-17(α)-ol	80
441	Ethynodiol	< 100
383	Δ <sup>4</sup> -pregnenolone	40-100
419	16-dehydro-progesterone	> 100
143	Androstane-3,17-dione	80-200
177	Testosterone	140-200
179	Δ <sup>4</sup> -androstene-3,17-dione	140-200
395	Acetoxy-pregnenolone	> 200
246	20-nor-progesterone	> 200
351	12-hydroxy-progesterone	> 200
275	"Ethynodiol (cis)"	dose ? act.
349	6(α)-hydroxy-progesterone ac.	act. ? at 5
192	Δ <sup>4</sup> -androstene-3(β),17(α)-diol	act. ? at 50
135	Androstane-3(β),17(α)-diol	act. ? at 50
378	17-hydroxy-11-dehydro-corticosterone	act. ? at 2
	17-hydroxy-11-dehydro-corticosterone	Inact. at:
34	α-estradiol	0.5
126	Androstane	50
133	Dihydro-androsterone	20
130	Cis-androsterone	50
140	Iso-androsterone	50
178	Cis-testosterone (free cpd., pr. and ac.)	50
182	Δ <sup>4</sup> -androstene-3,17-dione-6(α)-ol ac.	50
192	Δ <sup>4</sup> -androstene-3(β),17(α)-diol dlpr.	50
193	Δ <sup>4</sup> -androstene-3(β),17(β)-diol (free cpd., 17-pr. and 3,17 dlpr.)	50
195	Δ <sup>4</sup> -androstene-3(β)-ol-17-one (free cpd. and ac.)	50
283	Allo-pregnanolone	10
340	Δ <sup>4</sup> -pregnenc-20-one	0.75
343	Dihydro-progesterone (free cpd. and ac.)	1
345	Iso-progesterone	0.9
350	11-hydroxy-progesterone	2
352	17-hydroxy-progesterone	5

Cpd. No.	Name	Inact. at:
359	6-keto-progesterone	5
305	17(β)-pregnenetriolone	15
373	Dehydro-corticosterone	1
380	17-ethyl-androstanediol	20
385	Δ <sup>4</sup> -17-ethyl-testosterone	7.5
380	Δ <sup>4</sup> -iso-progesterone	2
408	Δ <sup>4</sup> -allo-pregnenc-3,20-dione	5
419	16-dehydro-progesterone	5
420	Δ <sup>4,11</sup> -pregnadienone-3:17:17'-oxide (B-isomeride)	40
427	Δ <sup>4,11</sup> -pregnadien-3(β)-ol-20-one ac.	50
443	17(β)-ethynyl-Δ <sup>4,11</sup> -androstanediene-3-one	10
452	17-[2-ketopropyl]-Δ <sup>4</sup> -androstene-3-one	20
470	Δ <sup>4</sup> -3-keto-bisnor-cholenic acid	25
409	17(α)-[1-methyl-2-ketopropyl]-Δ <sup>4</sup> -androstene-3-one	30
515	Epi-nor-cholestane-3-ol-25-one	?
516	Nor-cholestane-3,25-dione	?
517	Δ <sup>4</sup> -nor-cholestene-3,25-dione	50
519	Δ <sup>4</sup> -nor-cholestene-3-trans-ol-25-one	50
520	Cholesterol	50
542	17a(β)-methyl-Δ <sup>4</sup> -D-homoandrostene-3,17-dione-17a(α)-ol	20
544	17a-methyl-Δ <sup>4</sup> -D-homoandrostene-3(β),17a( )-ol-17-one	10
545	Isomer of 544	5
551	Etiocholane-3(β)-ol-17-one (free cpd. and ac.)	50
574	Pregnadiol	50
581	Pregnane-3-one-20(α)-ol	9
584	Pregnandiolone	50
603	Pregnane-3,12,20-trione	50
609	17( )-[1-ketoethyl]-etiocholane-3-one-4( ),5( )-diol	3
610	Pregnane-3,20-dione-5,8(α)-diol-6 ac.	7
614	Pregnane-3,6,20-trione-5(β)-ol	2
620	Δ <sup>4</sup> -iso-progesterone	50
653	Nor-desoxycholic acid	50

### CORTICOID ACTIVITY

Based on results obtained with tests 61 and 82 (maintenance of adrenalectomized dogs).

Cpd. No.	Name	Unit
354	Desoxycorticosterone	5γ
354	Desoxycorticosterone ac.	15γ
370	Corticosterone	ca. 60γ
373	Dehydro-corticosterone	ca. 60γ
375	Δ <sup>4</sup> -pregnene-11(β),17(β),20( ),21-tetrol-3-one	ca. 500γ
378	17-hydroxy-11-dehydro-corticosterone	500γ
376	17-hydroxy-corticosterone	ca. 1 mg.
542	17a(β)-methyl-Δ <sup>4</sup> -D-homoandrostene-3,17-dione-17a(α)-ol	1 mg.
397	21-hydroxy-pregnenolone ac.	ca. 1 mg.
370	Corticosterone butyrate	2-3 mg.
370	Corticosterone ac.	2-3 mg.
	Inact. at:	
304	Allo-pregnane-3(β),17(β)-diol-20-one	50γ
320	Allo-pregnane-3(β),17(β),20(β),21-tetrol	?
331	Allo-pregnane-3(β),11(β),17(β),20,21-pentol	40γ
333	Allo-pregnane-3(α),11( ),17(β),21-tetrol-20-one	?
336	Allo-pregnane-3(β),17(β),21-triol-11,20-dione	40γ
344	Progesterone	12 mg.
370	Corticosterone bz.	6 mg.

Based on results obtained with test 79 (life maintenance in adrenalectomized rats).

Cpd. No.	Name	Mg./U.
370	Corticosterone-diethyl ac.	25
370	Corticosterone butyrate	17.5
370	Corticosterone heptoate	< 15
370	Corticosterone caproate	12.5
370	Corticosterone 1/2 succinate	12

Cpd. No.	Name	Mg./U.
370	Corticosterone pr.	12
370	Corticosterone bz.	< 12
370	Corticosterone ac.	< 8
370	Corticosterone palmitate	< 8
370	Corticosterone	6
370	Corticosterone Na 1/2 succinate	< 6
333	Allo-pregnane-3(α),11( ),17(β),21-tetrol-20-one	3-4
373	Dehydro-corticosterone	3-4
378	17-hydroxy-11-dehydro-corticosterone	1-2
376	17-hydroxy-corticosterone	1-2
336	Allo-pregnane-3(β),17(β),21-triol-11,20-dione	Inact.

Based on results with life-maintenance tests other than those considered in the previous tables.

Cpd. No.	Test No.	Name	Dose/Day
354	47C	Desoxycorticosterone ac.	60γ
354	47C	Desoxycorticosterone Na phosphate	60γ
354	?	Desoxycorticosterone glucoside	ca. 60γ
354	47C	Desoxycorticosterone	> 60γ
395	47C, 53B	21-hydroxy-pregnenolone	ca. 0.5 mg.
344	53B	Progesterone	1-4 mg.
187	?	Andrenosterone	act. ?
			Inactive at:
93	15	Dihydro-ethenyl-estradiol	5 mg.
177	53A	Testosterone	up to 5 mg.
177	53A	Testosterone ac.	up to 5 mg.
177	53A	Testosterone pr.	up to 5 mg.
194	53A	Dehydro-androsterone	3 mg.
210	53A	Δ¹-androstanediene-17-one	1 mg.
278	53A	Epi-allo-pregnanediol	up to 15 mg.
310	53A	Allo-pregnanediol-3,20-dione-21-ol ac.	2 mg.
355	53A	17-iso-desoxycorticosterone ac.	1 mg.
373	53A	Dehydro-corticosterone	0.5 mg.
383	53A	Pregnenolone	2 mg.
417	53A	6-dehydro-desoxycorticosterone ac.	1 mg.
440	53A	Ethylyn-testosterone	10 mg.
453	15	17( )-[2( ),3-dihydroxypropyl]-Δ¹-androstene-3-one-17-ol	5 mg.
455	15	Trihydroxy-propyl-testosterone	5 mg.
500	53A	Δ¹-23-hydroxy-nor-cholene-3,22-dione ac.	2 mg.
574	84	Pregnanediol	10 mg.
584	53A	Pregnandiolone	?
600	53A	Etiocanolane-3,20-dione-21-ol ac.	2 mg.
A37539	?	α,β-unsaturated ketone C <sub>n</sub> H <sub>2n</sub> O, from adrenal cortex	0.25 mg.

Based on results obtained with test 47A and B (work performance under influence of repeated faradic stimuli in adrenalectomized rats).

Cpd. No.	Name	Mg./Day
376	17-hydroxy-corticosterone	0.03-0.08
373	Dehydro-corticosterone	0.12
378	17-hydroxy-11-dehydro-corticosterone	0.125
370	Corticosterone	0.12-0.25
354	Desoxycorticosterone	1-5
354	Desoxycorticosterone ac.	1-5
371	11-desoxy-17-hydroxy-corticosterone	2
328	Allo-pregnane-3,20-dione-11-21-diol	"50 < corticosterone"
		Inact. at:
34	α-estradiol bz.	10
326	Allo-pregnane - 3(β),21 - diol - 11,20-	

Cpd. No.	Name	Inact. at:
337	dione	?
337	Allo-pregnane - 3,11,20 - trione-17,21-diol	25
344	Progesterone	45
349	6(α)-hydroxy-progesterone	2
352	17(β)-hydroxy-progesterone	3
367	6(α)-hydroxy-11-desoxycorticosterone diac.	2
440	Ethylyn-testosterone	20
542	17a(β)-methyl-Δ¹-D-homoandrostene-3,17-dione-17a(α)-ol	10

Based on results obtained with test 52 (work performance under influence of short faradic stimuli).

Cpd. No.	Name	Unit
354	Desoxycorticosterone ac.	80γ
354	Desoxycorticosterone	> 80γ
370	Corticosterone	ca. 0.5 mg.
371	11-desoxy-17-hydroxy-corticosterone ac.	ca. 1 mg.
376	17-hydroxy-corticosterone	1.5 mg.
378	17-hydroxy-11-dehydro-corticosterone	2 mg.
361	Δ¹-3-ketoandrostenyl-glyoxal-17-ac.	2.5 mg.
379.1	Pregnene-(4)-ol-(21)-trione-(3,12-20)	2.5 mg.
	Inact. at:	
302	Allo-pregnane-3(β),17(β),20(β)-triol	dose ?
320	Allo-pregnane-3(β),17(β),20(β),21-tetrol	dose ?
333	Allo-pregnane-3(α),11( ),17(β),21-tetrol-20-one	dose ?
336	Allo-pregnane-3(β),17(β),21-triol-11,20-dione	dose ?
347	Δ¹-pregnene-3-one-20(α),21-diol	2 mg.
368.1	Pregnene-(4)-diol-(12β,21)-dione-(3,20) ac.	0.5 mg.
368.1	Pregnene-(4)-diol-(12β,21)-dione-(3,20) diac.	3 mg.
375	Δ¹-pregnene-11(β),17(β),20( ),21-tetrol-3-one	0.4 mg.

Based on results obtained with test 146 (anti-insulin effect of corticoids in adrenalectomized rats).

Cpd. No.	Name	Activity
370	Corticosterone ac.	+++
376	17-hydroxy-corticosterone	+++
378	17-hydroxy-11-dehydro-corticosterone	+++
370	Corticosterone	++
354	Desoxycorticosterone ac.	±
354	Desoxycorticosterone	±
371	11-desoxy-17-hydroxy-corticosterone ac.	±
244	Methyl-testosterone	±
34	α-estradiol	0
255	"Methyl-trans-androstenediol"	0
344	Progesterone	0
368.1	Pregnene-(4)-diol-(12β,21)-dione-(3,20) diac.	0
440	Ethylyn-testosterone	0
441	Ethylyn-Δ¹-androstenediol-3,17	0

## SPERMATOGENIC ACTIVITY

Based on results obtained with test 129 (maintenance of testis weight in estradiol-treated rats).

Cpd. No.	Name	% Increase in Testis Wt. over Control
192	Δ¹-androsten-3(β),17(α)-diol	52/0.5 mg.
255	17(β)-methyl-Δ¹-androsten-3(β),17(α)-diol	54/1 mg.
195	Δ¹-androsten-3(β)-ol-17-one	58/2 mg.
179	Δ¹-androsten-3,17-dione	68.3/10 mg.
244	Methyl-testosterone	66/10 mg.
177	Testosterone	65/10 mg.
383	Δ¹-pregnandiolone	62/10 mg.
192	Δ¹-androsten-3(β),17(α)-diol diph.	44/10 mg.
344	Progesterone	42/10 mg.

Cpd. No.	Name	Inactive at:
440	Ethynyl-testosterone	10 mg.
584	Pregnanedione	10 mg.
354	Desoxycorticosterone ac.	10 mg.
395	Acetoxy-pregnolone	10 mg.
522	Stigmasterol	10 mg.
521	Cholestenone	10 mg.
193	$\Delta^4$ -androstene-3( $\beta$ ),17( $\beta$ )-diol	10 mg.
193	$\Delta^4$ -androstene-3( $\beta$ ),17( $\beta$ )-diol 17-pr.	1 mg.
193	$\Delta^4$ -androstene-3( $\beta$ ),17( $\beta$ )-diol dpr.	1 mg.
178	Cis-testosterone	10 mg.
178	Cis-testosterone ac.	1 mg.
178	Cis-testosterone pr.	1 mg.
574	Pregnanediol	10 mg.
653	Nor-desoxycholic acid	1 mg.
640	Bisnor-desoxycholic acid	1 mg.
520	Cholesterol	10 mg.

Based on results obtained with test 125 (increase in testis weight in hypophysectomized rats following injection of a daily dose of 2 mg.).

Cpd. No.	Name	% Increase in Testis Wt. over Controls
244	Methyl-testosterone	143
192	$\Delta^4$ -androstene-3( $\beta$ ),17( $\alpha$ )-diol	133
255	17( $\beta$ )-methyl- $\Delta^4$ -androstene-3( $\beta$ ),17( $\alpha$ )-diol	119
177	Testosterone	106
344	Progesterone	75
354	Desoxycorticosterone ac.	0
440	Ethynyl-testosterone	0

Based on results obtained with test 198A (increase in testis weight in hypophysectomized rats following injection of a daily dose of 1 mg.).

Cpd. No.	Name	% Increase in Testis Wt. over Controls
143	Androstane-3,17-dione	300
179	$\Delta^4$ -androstene-3,17-dione	280
195	$\Delta^4$ -androstene-3( $\beta$ )-ol-17-one	240
193?	"Androstenediol (cis)"	240
189	Androsterone	240
177	Testosterone	130
192?	"Androstenediol (trans)"	43
37	Estrone	0

### ANESTHETIC ACTIVITY

Based on results obtained with test 11 and 127 (anesthesia in rat and fish respectively).

#### I. Cpd.s tested in fish and rat.

Cpd. No.	Name	Mg./U. Fish	Rat
584	Pregnanedione	0.05	0.8
344	Progesterone	0.25	2
496	21-ethyl-progesterone	0.25	< 5
130	Androsterone	0.25	4.5
354	Desoxycorticosterone ac.	0.5	1
620	$\Delta^{10}$ -pregnene-3,20-dione	0.5	> 20
193	$\Delta^4$ -androstene-3( $\beta$ ),17( $\beta$ )-diol	0.8	15
574	Pregnanediol	1	> 20
419	16-dehydro-progesterone	1	> 20
223	17( $\beta$ )-methyl-androstane-3-one-17( $\alpha$ )-ol	1	6
95	Ethynyl-estradiol	1	10
551	Etiocolane-3( $\beta$ )-ol-17-one	1.1	12
551	Etiocolane-3( $\beta$ )-ol-17-one ac.	1.2	> 20
433	Vinyl-androstene-3( $\beta$ ),17( $\alpha$ )-diol	1.5	10

Cpd. No.	Name	Mg./U. Fish	Rat
178	Cis-testosterone	1.2	10
178	Cis-testosterone ac.	1.2	15
425	Vinyl-testosterone	1.5	10
195	$\Delta^4$ -androstene-3( $\beta$ )-ol-17-one	1.5	20 Inact.
179	$\Delta^4$ -androstene-3,17-dione	1.5	10
192	$\Delta^4$ -androstene-3( $\beta$ ),17( $\alpha$ )-diol	1.5	> 20
603	Pregnane-3,12,20-trione	1.8	> 10
177	Testosterone	2	7
193	Androstane-3( $\alpha$ ),17( $\alpha$ )-diol	2	ca. 10
195	$\Delta^4$ -androstene-3( $\beta$ )-ol-17-one ac.	2	20 Inact.
34	$\alpha$ -estradiol	2	> 20
244	Methyl-testosterone	2.5	8
178	Cis-testosterone pr.	3	> 20
177	Testosterone pr.	5	
383	$\Delta^4$ -pregnenolone	6	12
192	$\Delta^4$ -androstene - 3( $\beta$ ),17( $\alpha$ )-diol dpr.	> 7	> 20
193	$\Delta^4$ -androstene - 3( $\beta$ ),17( $\beta$ )-diol 17-pr.	> 7	20
255	17( $\beta$ )-methyl- $\Delta^4$ -androstene-3( $\beta$ ),17( $\alpha$ )-diol	> 7	20
37	Estrone	> 7	> 20
395	Acetoxy-pregnolone	7	4
440	Ethynyl-testosterone	> 7	20
255	17( $\beta$ )-methyl-androstane-3( $\beta$ ),17( $\alpha$ )-diol	> 7	20
195	Androstane-3( $\beta$ ),17( $\alpha$ )-diol	> 7	ca. 10
Inact. at:			
34	$\alpha$ -estradiol bz.	7	20 inact.
125	Androstane	7	10
193	$\Delta^4$ -androstene-3( $\beta$ ),17( $\beta$ )-diol dpr.	7	20 inact.
249	$\Delta^4$ -3-keto-etio-cholenic acid	7	20 inact.
326	17( $\alpha$ )-[1-keto-2-hydroxyethyl]-androstane-3( $\beta$ )-ol-11-one	3	7
373	Dehydro-corticosterone	1.5	3.5
378	17-hydroxy - 11 - dehydro-corticosterone	3.3	15
427	$\Delta^{10,16}$ -pregnadiene-3( $\beta$ )-ol-20-one ac.	7	> 20
Inact. at:			
485	$\Delta^4$ -3-hydroxy-bisnor-cholenic acid	7	20
510	$\Delta^4$ -3( $\beta$ )-hydroxy-cholenic acid	7	20
517	$\Delta^4$ -nor-cholestene-3,25-dione	7	20
519	$\Delta^4$ -nor-cholestene - 3 - trans-ol-25-one	7	20
520	Cholesterol	7	40
521	Cholestenone	7	40
522	Stigmasterol	7	40
640	Bisnor-desoxycholic acid	7	20
653	Nor-desoxycholic acid	7	20
Inact. at:			
II. Cpd.s tested in rat only.			
140	Iso-androsterone	—	4.5
544	17a( $\alpha$ )-methyl- $\Delta^4$ -D-homo-androstene-3( $\beta$ ),17a( $\beta$ )-diol-17-one	—	5
545	17a( $\beta$ )-methyl- $\Delta^4$ -D-homo-androstene-3( $\beta$ ),17a( $\alpha$ )-diol-17-one	—	5
349	6( $\alpha$ )-hydroxy-progesterone ac.	—	< 5
143	Androstane-3,17-dione	—	7.5
393	$\Delta^4$ -pregnene-3( $\beta$ ),17( $\alpha$ )-diol-20-one	—	10
550	Etiocolane-3( $\alpha$ )-ol-17-one	—	12
209	$\Delta^{10,16}$ -androstanediene-17( $\alpha$ )-ol	—	12
Inact. at:			
210	$\Delta^{10,16}$ -androstanediene-17-one	—	15
302	Allo-pregnane-3( $\beta$ ),17( $\beta$ ),20( $\beta$ )-triol	—	30
614	Pregnane-3,6,20-trione-5-ol	—	5
619	$\Delta^{10,16}$ -pregnene-3( $\beta$ )-ol-20-one ac.	—	20

**SYNOPTIC MASTER CHART SUMMARIZING RESULTS OBTAINED WITH ALL STEROIDS  
ASSAYED FOR ANY TYPE OF HORMONAL ACTIVITY**

This chart summarizes the independent hormonal activities of all biologically assayed steroids and their derivatives. Subordinate and potentially subordinate actions are not considered separately, except in the case of the corticoid effect whose two potentially subordinate components are so fundamentally different that it appeared unwarranted to list means of the two conjointly. In this instance the effect on life-maintenance in adrenalectomized animals and on salt metabolism are listed under the heading "salt" and that on carbohydrate metabolism under "CHO". The degree of potency is expressed in a scale of 0-3 in which 0 — inactive, ? — doubtful activity, 1 — threshold activity, 2 — moderate activity and 3 — strong activity. In the absence of more comparable data, activity ratings obtained by different technics had to be listed in many cases. Since this introduces a fairly wide margin of error, more precise designations would have been misleading. The purpose of the chart is merely to give a fair approximation of the pharmacological properties as estimated by the means of different tests. Furthermore, the blank spaces in the columns corresponding to a certain type of action will help to emphasize the lack of pertinent observations.

CPI. NO.	SYSTEMATIC AND (WHERE COMMONLY IN USE) TRIVIAL DESIGNATIONS	FOLLICULOID	TESTOID	LUTEOLID	CORTICOID		SPERMATOGENIC	RENOTROPIC	ANESTHETIC
					SALT	CHO			
11	15-methyl- $\Delta^{1,3,5,10,15}$ -noretinatetraene-3-ol-17-one	1							
16	17-methyl- $\Delta^{1,3,5,10,16}$ -noretinatetraene-3-ol-15-one	1							
32	$\Delta^1$ -estradiene-3( )-ol, (Dihydrodesoxoestrone)	0							
34	$\Delta^{1,3,5,10}$ -estratriene-3,17( $\alpha$ )-diol, ( $\alpha$ -estradiol)	3	0	0	0	0	0	0	1
34	" 3-acetate	3							
34	" 3-propionate	3							
34	" 3-n-butyrate	3							
34	" 3-n-valerate	3							
34	" 3-n-hexanoate	3							
34	" 3-n-octanoate	3							
34	" 3-n-decanoate	3							
34	" 3-stearate	2							
34	" 3-palmitate	2							
34	" 3-benzoate	3	0	0	0	0	0	0	0
34	" 17-acetate	3							
34	" 17-propionate	3							
34	" 17-n-butyrate	3							
34	" 17-iso-butyrate	3							
34	" 17-n-valerate	3							
34	" 17-n-hexanoate	3							
34	" 17-n-octanoate	3							
34	" 17-n-decanoate	3							
34	" 17-benzoate	3							
34	" 17-methyl carbonic acid ester	3							
34	" 17-ethyl carbonic acid ester	3							
34	" diacetate	3							
34	" dipropionate	3							0
34	" dl-n-butyrate	3							
34	" dl-isobutyrate	2							
34	" dl-n-valerate	2							
34	" dl-n-hexanoate	2							
34	" dl-n-octanoate	2							
34	" dl-n-decanoate	2							
34	" dipalmitate	2							
34	" dibenzoate	1							
34	" 3:17-dilethylcarbonic acid ester	3							
34	" 3-acetate-17-propionate	3							
34	" 3-benzoate-17-acetate	3							
34	" 3-benzoate-17-propionate	3							
34	" 3-benzoate-17-n-butyrate	2							
34	" 3-benzoate-17-n-valerate	2							
34	" 3-acetate-17-benzoate	2							

CPD. NO.	SYSTEMATIC AND (WHERE COMMONLY IN USE) TRIVIAL DESIGNATIONS	FOLLICULOID	TESTUD	LUTEINOID		SPEMMLATOGENIC	RENALTOPIA	ANESTHETIC
				LUTEINOID	CORTICOID			
34	$\Delta^{1,3,5:10}$ -estratriene-3,17(α)-diol, 3-propionate-17-benzoate	2						
34	" 3-n-butyrate-17-benzoate	2						
34	" 3-methyl ether	2						
34	" 17-methyl ether	3						
34	" dimethyl ether	2						
34	" 17-tosylate	1						
34	" glucoside	3						
34	" triacetylglucuronic acid	2						
34	" triacetylglucuronic acid methyl-ether-3 benzoate	2						
34	" 17-carbethoxy ester	3						
34	" 17-succinate	3						
34	" 17-sulphate	3						
34	" 17-phthalic acid ester	3						
34	" 17-diallylacetate	3						
34	" 17-stearate	2						
35	$\Delta^{1,3,5:10}$ -8-epiestratriene-3,17(α)-diol, (8-epi-estradiol)	3						
35	" 3-benzoate	3						
36	$\Delta^{1,3,5:10}$ -estratriene-3,17(β)-diol, (β-estradiol)	2						
36	" benzoate	2						
36	" diacetate	1						
37	$\Delta^{1,3,5:10}$ -estratriene-3-ol-17-one, (estrone)	3	0		0	0	0	1
37	" acetate	3						
37	" propionate	3						
37	" n-butyrate	3						
37	" iso-butyrate	3						
37	" n-valerate	3						
37	" n-hexanoate	3						
37	" n-octanoate	2						
37	" oxime	2						
37	" semicarbazone	0						
37	" sulphonic acid	0						
37	" sulphonic acid dimethyl ether	0						
37	" carbonic acid ester	3						
37	" ethyl carbonic acid ester	3						
37	" diallylacetate	3						
37	" n-decanoate	2						
37	" stearate	1						
37	" palmitate	1						
37	" laurate	2						
37	" benzoate	3						
37	" β naphthoate	3						
37	" chloro-formate	2						
37	" Na sulphate ester	2						
37	" pyridinium sulphate ester	2						
37	" quinidine sulphate ester	2						
37	" methyl ether	2						
37	" diethylaminoethyl ether	0						
37	" p-aminophenyl ether	2						
37	" phenylether-p-azocasein	1						
37	" glucoside	3						
38	$\Delta^{1,3,5:10}$ -Isoestratriene-3-ol-17-one, (estrone-a)	1						
38	$\Delta^{1,3,5:10}$ -8-epioestratriene-3-ol-17-one, (8-epi-estrone)	2						
39	" benzoate	2						
40	$\Delta^{1,3,5:10}$ -estratriene-3,16( ),17( )-triol, (estriol)	2					1	
40	" triacetate	2						
40	" Na-glucuronidate	2						
41	$\Delta^{1,3,5:10}$ -estratriene-3,7( )-diol-17-one, [7( )hydroxy-estrone]	1						
42	$\Delta^{1,3,5:10}$ -estratriene-3,17(α)-diol-6-one, (6-keto-α-estradiol)	3						
44	$\Delta^{1,3,5:10}$ -estratriene-3-ol-7,17-dione, (7-keto-estrone)	1						1
45	$\Delta^{1,3,5:10}$ -estratriene-3,7( ),8( )-triol-17-one, (equillin-glycol) diacetate	0	1					

CD. NO.	SYSTEMATIC AND (WHERE COMMONLY IN USE) TRIVIAL DESIGNATIONS	POLYCYCLIC TESTOSTERONE	LUPRONOID	COMPOUND		SPERMATOGENIC	RENOTROPIC	ANESTHETIC
				SALF	CHO			
48	$\Delta^{10,11}$ -estratriene-3( $\alpha$ ),17( $\alpha$ )-diol, (3-epi-hexahydro-equilenin)	1	0					
49	$\Delta^{10,11}$ -estratriene-3( $\alpha$ ),17( $\beta$ )-diol	1	0					
50	$\Delta^{10,11}$ -estratriene-3( $\beta$ ),17( $\alpha$ )-diol, (hexahydro-equilenin)	1	0					
53	$\Delta^{10,11}$ -estratriene-6-ol-17-one	0						
54	$\Delta^{10,11}$ -estratetraene-3-ol-17-one, ( $\Delta^4$ -isoequillin)	2						
55	$\Delta^{10,11}$ -estratetraene-3,17( $\alpha$ )-diol, (17( $\alpha$ )-dihydro-equillin)	3						
55	" benzoate	3						
56	$\Delta^{10,11}$ -estratetraene-3-ol-17-one, (equillin)	2					0	
56	$\Delta^{10,11}$ -estratetraene-3-ol-17-one, (hippulin)	2						
57	$\Delta^{10,11}$ -14-epiestratetraene-3-ol-17-one, (iso-equillin A)	2						
65	$\Delta^{10,11}$ -estrapentaene-17-one, (17-equilenone) $\alpha$ and $\beta$ forms	0						
66	$\Delta^{10,11}$ -estrapentaene-3,17( $\alpha$ )-diol, (17( $\alpha$ )-dihydro-equilenin)	1						
67	$\Delta^{10,11}$ -estrapentaene-3,17( $\beta$ )-diol, (17( $\beta$ )-dihydro-equilenin)	2					1	
69	$\Delta^{10,11}$ -estrapentaene-3-ol-17-one, (equilenin)	2					1	
69	" l-form	1						
69	" d-form	2						
70	$\Delta^{10,11,12,13}$ -14-epiestrapentacene-3-ol-17-one, (isoequilenin) dl-form	?						
70	$\Delta^{10,11,12,13}$ -14-epiestrapentacene-3-ol-17-one, (isoequilenin) d-form	?						
70	$\Delta^{10,11,12,13}$ -14-epiestrapentacene-3-ol-17-one, (isoequilenin) l-form	?						
71	$\Delta^{10,11,12,13}$ -estrapentaene-6-ol-17-one, (6-hydroxy-17-equilenone) dl $\beta$ -form	0						
71	$\Delta^{10,11,12,13}$ -estrapentaene-6-ol-17-one, (6-hydroxy-17-equilenone) dl $\alpha$ -form	0						
74	1-methyl- $\Delta^{1,2,3,10}$ -estratriene-3,17( $\alpha$ )-diol, (1-methyl-estradiol)	0						
76	16( )-formyl- $\Delta^{1,2,3,10}$ -estratriene-3,17( $\alpha$ )-diol, (formyl-estradiol)	2						
77	16( )-formyl- $\Delta^{1,2,3,10}$ -estratriene-3-ol-17-one, (formyl-estrone) me. ether	1						
85	17( $\beta$ )-methyl- $\Delta^{1,2,3,10}$ -estratriene-3,17( $\alpha$ )-diol, (17-methyl-estradiol)	3						
87	18( )-methyl- $\Delta^{1,2,3,10,17}$ -estrapentaene-3-ol-17-one, (3-hydroxy-10-methyl-17-equilenone) dl $\alpha$ -form	0						
87	18( )-methyl- $\Delta^{1,2,3,10,17}$ -estrapentaene-3-ol-17-one, (3-hydroxy-10-methyl-17-equilenone) dl $\beta$ -form	1						
88	18( )-methyl- $\Delta^{1,2,3,10,17}$ -estrapentaene-6-ol-17-one, (6-hydroxy-10-methyl-17-equilenone) dl $\alpha$ or $\beta$ form	0						
93	17( )-[1( ),2-dihydroxyethyl]- $\Delta^{1,2,3,10}$ -estratriene-3,17( $\alpha$ )-diol, (dlhydroxyethenyl-estradiol)	0				0		
94	17( $\beta$ )-ethenyl- $\Delta^{1,2,3,10}$ -estratriene-3,17( $\alpha$ )-diol, (17-ethenyl-estradiol)	3						
95	17( $\beta$ )-ethynyl- $\Delta^{1,2,3,10}$ -estratriene-3,17( $\alpha$ )-diol, (17-ethynyl-estradiol)	3					3	
96	17( $\beta$ )-ethynyl- $\Delta^{1,2,3,10,17}$ -estratetraene-3,17( $\alpha$ )-diol, (17-ethynyl-dlhydro-equillin)	3						
97	17( $\beta$ )-ethynyl- $\Delta^{1,2,3,10,17}$ -estrapentaene-3,17( $\alpha$ )-diol, (17-ethynyl-dlhydroequilenin)	2						
98	18-ethyl- $\Delta^{1,2,3,10,17}$ -estrapentaene-3-ol-17-one, (3-hydroxy-10-ethyl-17-equilenone) dl $\alpha$ -form	1						
98	18-ethyl- $\Delta^{1,2,3,10,17}$ -estrapentaene-3-ol-17-one, (3-hydroxy-10-ethyl-17-equilenone) dl $\beta$ -form	2						
100	18-propyl- $\Delta^{1,2,3,10,17}$ -estrapentaene-3-ol-17-one, (3-hydroxy-10-propyl-17-equilenone) dl $\beta$ -form	0						
102	$\Delta^{1,2,3,10}$ -D-homoestratriene-3,17a( $\alpha$ )-diol, (D-homo- $\alpha$ -estradiol)	2						
103	$\Delta^{1,2,3,10}$ -D-homoestratriene-3,17a( $\beta$ )-diol, (D-homo- $\beta$ -estradiol)	2						
104	$\Delta^{1,2,3,10}$ -D-homoestratriene-3-ol-17a-one, (D-homo-estrone)	2						
107	$\Delta^{1,2,3,10,17}$ -D-homoestrapentaene-6-ol-17a-one dl $\alpha$ -form, (6-hydroxy-D-homo-17a-equilenone)	0						
107	$\Delta^{1,2,3,10,17}$ -D-homoestrapentaene-6-ol-17a-one dl $\beta$ -form, (6-hydroxy-D-homo-17a-equilenone)	0						
123	I-androstane-6,17-dione	0						
125	Androstane, (etio-allo-cholane)	0	0					0
126	Androstane-3( $\alpha$ )-ol, 17-amine		1					
128	Androstane-17( $\alpha$ )-ol, (androstane-17 trans-ol)			1				
132	Androstane-17-one 3 $\beta$ -Chloro			0				
132	Androstane-17-one 3 $\alpha$ -Chloro			2				
132	Androstane-17-one 3 $\alpha$ -Bromo			0				
133	Androstane-3( $\alpha$ ),17( $\alpha$ )-diol, (dihydroandrosterone)	1	3	0				2
133	" 3-acetate			3				
133	" 3-propionate			3				
133	" 3-n-butyrate			3				
133	" 3-palmitate			1				

C.R. NO.	SYSTEMATIC AND (WHERE COMMONLY IN USE) TRIVIAL DESIGNATIONS	POLYCLOROID	TRICLOID	LUTETIUM	CHLOROCLOID		SFRMELATOGENIC	RENOTROPIC	ANESTHETIC
					SALT	CHO			
133	Androstane-3( $\alpha$ ),17( $\alpha$ )-diol, 3-monosuccinate		3						
133	" 3-benzoate		2						2
133	" 17-benzoate		1						
133	" diacetate		3						
133	" dipropionate		3						
133	" disuccinate		2						
134	Androstane-3( $\alpha$ ),17( $\beta$ )-diol, (3-cis-17-cis androstandiol)		1						
135	Androstane-3( $\beta$ ),17( $\alpha$ )-diol, (iso-androstanediol-trans)		2	1					1
139	Androstane-3( $\alpha$ )-ol-17-one, (androsterone)	1	3	0			3	3	
139	" acetate		2						
139	" propionate		1						
139	" n-butyrate		2						
139	" benzoate		0						
139	" oxime		1						
139	" Na succinate		3						
139	" ½ succinate		3						
140	Androstane-3( $\beta$ )-ol-17-one, (iso-androsterone)	1	0						3
141	Androstane-3-one-17( $\alpha$ )-ol, (trans-dihydrotestosterone)	3							
141	" formate		3						
141	" acetate		3						
141	" propionate		3						
141	" n-butyrate		3						
141	" n-valerate		2						
142	Androstane-3-one-17( $\beta$ )-ol, (cis-dihydrotestosterone)	2							
142	" benzoate		1						
143	Androstane-3,17-dione		2	1			3	2	
143	Androstane-3,17-dione 2-Bromo								0
149	Androstane-3( $\beta$ ),11( $\alpha$ )-diol-17-one, (Reichstein's monoketone 236°)		1						
156	Androstane-3,11,17-trione, (dihydro-adrenosterone)		2						
159	Androstane-3-one-4( $\beta$ ),5( $\beta$ ),17( $\alpha$ )-triol acetate	0	0						
164	hetero- $\Delta^4$ -androstene-3-one-17( $\alpha$ )-ol		1	2					
165	hetero- $\Delta^4$ -androstene-3,17-dione		1	0					
165	$\Delta^4$ -androstene-3,17-dione		0	2					
174	$\Delta^4$ -androstene-3( $\alpha$ ),17( $\alpha$ )-diol, (epi- $\Delta^4$ -androstenediol)		3						
175	$\Delta^4$ -androstene-3( $\beta$ ),17( $\alpha$ )-diol, (n- $\Delta^4$ -androstendiol)		1	3					
176	$\Delta^4$ -androstene-3( $\beta$ )-ol-17-one, ( $\Delta^4$ -dehydro-trans-androsterone)		2						
177	$\Delta^4$ -androstene-3-one-17( $\alpha$ )-ol, (testosterone)		3	1	0		2	3	2
177	" formate		3						
177	" acetate		3		0				
177	" propionate		1	3	2	0		3	2
177	" n-butyrate		3						
177	" iso-butyrate		3						
177	" n-valerate		3						
177	" iso-valerate		2						
177	" n-decanoate		3						
177	" palmitate		2						
177	" stearate		2						
177	" benzoate		2						
177	" enol-diacetate		0	3					
177	" enol-dipropionate		3						
177	" 3-enol-acetate-17-propionate		3						
177	" 3-enol-acetate-17-n-butyrate		2						
177	" oxime		2						
177	" chloro acetate		3						
177	" 3-enol-propionate-17-acetate		3						
177	" 3-enol-n-butyrate-17-acetate		3						
177	" 3-enol-benzoate-17-acetate		3						
177	" 3-enol-n-butyrate-17-propionate		3						
177	" 3-enol-acetate-17-iso-butyrate		3						
177	" 3-enol-propionate-17-iso-butyrate		3						

C.R. No.	SYSTEMATIC AND (WHERE COMMONLY IN USE) TRIVIAL DESIGNATIONS	POLYCYCLIC	TERPENOID	LIPOID	CORTICOIDS		SPLEROMATOCINIC	RENOTROPIC	ANESTHETIC
					SALT	CHO			
177	$\Delta^4$ -androstene-3-one-17( $\alpha$ )-ol, chloro-carbonate	3	-						
177	" methyl-carbonate	3							
177	" ethyl-carbonate	3							
177	" n-propyl-carbonate	3							
177	" phenyl-carbonate	3							
177	" benzyl-carbonate	3							
177	" $\beta$ -diethylaminoethyl-carbonate, HCl	3							
177	" urethane	0							
177	" n-propylurethane	0							
177	" $\alpha$ -bromo-propionate	2							
177	" $\alpha$ -dimethylamino-propionate	2							
177	" crotonate	1							
177	" phenyl acetate	2							
178	$\Delta^4$ -androstene-3-one-17( $\beta$ )-ol, (cis-testosterone)	2	0					2	
178	" acetate	2	0					2	
178	" propionate	0						1	
178	" benzoate	1							
179	$\Delta^4$ -androstene-3,17-dione	1	3	1			3	2	
179	" enol acetate	3							
179	" enol benzoate	1							
180	$\Delta^4$ -androstene-6,17-dione	0	2						
181	$\Delta^4$ -androstene-3-one-16( ),17( $\alpha$ )-diol	1	1						
182	$\Delta^4$ -androstene-3,17-dione-6( $\alpha$ )-ol acetate	1	0					1	
184	$\Delta^4$ -androstene-3,6-dione-17( $\alpha$ )-ol acetate	1	0						
185	$\Delta^4$ -androstene-3,16-dione-17( $\alpha$ )-ol					0			
186	$\Delta^4$ -androstene-3,6,17-trione	1	0						
187	$\Delta^4$ -androstene-3,11,17-trione (adrenosterone)	0	2			?			
188	$\Delta^4$ -androstene-3( $\beta$ )-ol	0	1						
188	$\Delta^4$ -androstene-3( $\beta$ )-ol-17-amine	1							
190	$\Delta^4$ -androstene-17-one-3-Chloro				0				
191	$\Delta^4$ -androstene-3( $\alpha$ ),17( $\alpha$ )-diol, (epiandrostenediol)	1	3						
192	$\Delta^4$ -androstene-3( $\beta$ ),17( $\alpha$ )-diol	1	2	1			3	2	
192	" diacetate	2							
192	" dipropionate	2	0				2	1	
193	$\Delta^4$ -androstene-3( $\beta$ ),17( $\beta$ )-diol	1	0				1	2	
193	" 17-propionate	1	0				0	1	
193	" dipropionate	1	0				0	0	
194	$\Delta^4$ -androstene-3( $\alpha$ )-ol-17-one (dehydroandrosterone)	1	3	0					
195	$\Delta^4$ -androstene-3( $\beta$ )-ol-17-one (dehydroisoandrosterone)	1	2	0			3	1	
195	" acetate	2	0						
195	" benzoate	1							
195	" glucuronide	1							
195	" 3-chloro				0				
195	" $\frac{1}{2}$ succinate							1	
196	$\Delta^4$ -androstene-3-one-17( $\alpha$ )-ol ( $\Delta^4$ -testosterone) acetate	3							
197	$\Delta^4$ -androstene-7-one-17( $\alpha$ )-ol	1							
198	$\Delta^4$ -androstene-3,17-dione	2							
200	$\Delta^4$ -androstene-3( $\beta$ ),7( ),17( $\alpha$ )-triol	0							
201	$\Delta^4$ -androstene-3( $\beta$ ),16( ),17( )-triol	1	0						
202	$\Delta^4$ -androstene-3( $\beta$ ),17( $\alpha$ )-diol-7-one diacetate	0	0						
207	$\Delta^{1,4}$ -androstadiene-3,17-dione	1							
209	$\Delta^{1,4}$ -androstadiene-17( $\alpha$ )-ol	2						2	
209	" acetate							0	
210	$\Delta^{1,4}$ -androstadiene-17-one	0	2			0		0	
212	$\Delta^{1,4}$ -androstadiene-7-one-17( $\alpha$ )-ol	0	0						
213	$\Delta^{1,4}$ -androstadiene-3-one-17( $\alpha$ )-ol ( $\Delta^4$ -dehydro-testosterone)	0	2						
213	" propionate	2							
213	" benzoate	2							
213	" acetate	2							
214	$\Delta^{1,4}$ -androstadiene-3,17-dione	0	1						

CPD. NO.	SYSTEMATIC AND (WHERE COMMONLY IN USE) TRIVIAL DESIGNATIONS	FOLLICULOID	TESTOID	LUTEINOID		CORTICOID	SPERMATOGENIC	RENOTROPIC	ANTINESTETIC
				LUTEINOID	SALT				
217	$\Delta^{14}$ -androstadiene-3( $\beta$ ),17( $\alpha$ )-diol diacetate	1	2						
218	3( $\beta$ )-carboxy-androstane-17-one, (3-Carboxyandrostanone)	2	0						
218	" ethyl ester	2	0						
221	17( $\beta$ )-methyl-androstane-3( $\alpha$ ),17( $\alpha$ )-diol	1	3	2					
222	17( $\beta$ )-methyl-androstane-3( $\beta$ ),17( $\alpha$ )-diol	2	2				3	1	
223	17( $\beta$ )-methyl-androstane-3-one-17( $\alpha$ )-ol, (17-methyl-dihydro-testosterone)	1	3	2					2
243	6( $\beta$ )-methyl- $\Delta^4$ -androstene-3,17-dione			3					
244	17( $\beta$ )-methyl- $\Delta^4$ -androstene-3-one-17( $\alpha$ )-ol, (17-methyl-testosterone)	1	3	2		?	3	3	2
244	" triacetyl glucuronic acid	0							
245	17( $\alpha$ )-[hydroxymethyl]- $\Delta^4$ -androstene-3-one, ( $\Delta^4$ -hydroxy-methylandrostene-3-one)			0					
246	17( $\alpha$ )-formyl- $\Delta^4$ -androstene-3-one, (20-nor-progesterone)	1	1						
249	17( $\alpha$ )-carboxy- $\Delta^4$ -androstene-3-one, ( $\Delta^4$ -3-keto-etiocholenic acid)								0
255	17( $\beta$ )-methyl- $\Delta^4$ -androstene-3( $\beta$ ),17( $\alpha$ )-diol (Methyl-trans-androstene-diol)	1	2	2		0	3	1	
257	17( $\alpha$ )-[1-hydroxymethyl]- $\Delta^4$ -androstene-3( $\beta$ )-ol			0					
265	Cafesterol	1	0						
265	Cafesterol acetate	0							
266	3( $\beta$ ),17( $\beta$ )-dimethyl-androstane-3( $\beta$ ),17( $\alpha$ )-diol			0					
268	17( $\alpha$ )-ethyl-androstane (allo-pregnane)	1							0
275	17( $\beta$ )-ethyl-androstane-3( $\alpha$ ),17( $\alpha$ )-diol, (cis-ethyl-androstandiol)	3	1						
276	17( $\beta$ )-ethyl-androstane-3( $\beta$ ),17( $\alpha$ )-diol	2							
278	17( $\alpha$ )-[1( $\alpha$ )-hydroxyethyl]-androstane-3( $\alpha$ )-ol, (epi-allo-pregnane-diol)	1		0					
281	17( $\alpha$ )-[1( $\beta$ )-hydroxyethyl]-androstane-3( $\beta$ )-ol, (allo-pregnane-3( $\beta$ ),20( $\beta$ )-diol)	0							1
282	17( $\alpha$ )-[1-ketoethyl]-androstane-3( $\alpha$ )-ol, (epi-allo-pregnanolone)	0							
283	17( $\alpha$ )-[1-ketoethyl]-androstane-3( $\beta$ )-ol, (allo-pregnanolone)	1	0						2
285	17( $\beta$ )-ethyl-androstane-3-one-17( $\alpha$ )-ol, (ethyl-dihydrotestosterone)	3	2						
290	17( $\alpha$ )-[1-ketoethyl]-androstane-3-one, (allo-pregnane-dione)	0							
290	" 2-bromo	?							0
302	17( $\alpha$ )-[1( $\beta$ )-hydroxyethyl]-androstane-3( $\beta$ ),17( $\beta$ )-diol, (Reichstein's cpd. "J")			0					0
304	17( $\alpha$ )-[1-ketoethyl]-androstane-3( $\beta$ ),17( $\beta$ )-diol, (Reichstein's cpd. "L")			0					
304	" diacetate	?							
304	" 3-acetate								0
310	17( $\alpha$ )-[1-keto-2-hydroxyethyl]-androstane-3-one acetate, (allo-pregnane-3,20-dione-21-ol)			0					
312	17( $\beta$ )-[1-keto-2-aldoethyl]-androstane-3( $\beta$ )-ol, (testalolone, cpd. "A")	0							
320	17( $\alpha$ )-[1( $\beta$ ),2-dihydroxyethyl]-androstane-3( $\beta$ ),17( $\beta$ )-diol (Reichstein's cpd. "K")			0	0				
326	17( $\alpha$ )-[1-keto-2-hydroxyethyl]-androstane-3( $\beta$ )-ol-11-one, (Reichstein's cpd. "N")			0	0	0			2
328	17( $\alpha$ )-[1-keto-2-hydroxyethyl]-androstane-3-one-11( $\beta$ )-ol, (dihydrocorticosterone)						1		
331	17( $\alpha$ )-[1( $\beta$ ),2-dihydroxyethyl]-androstane-3( $\beta$ ),11( $\beta$ ),17( $\beta$ )-triol, (Reichstein's cpd. "A")			0					
333	17( $\alpha$ )-[1-keto-2-hydroxyethyl]-androstane-3( $\alpha$ ),11( $\beta$ ),17( $\beta$ )-triol, (Reichstein's cpd. "C")				1				
336	17( $\alpha$ )-[1-keto-2-hydroxyethyl]-androstane-3( $\beta$ ),17( $\beta$ )-diol-11-one, (Reichstein's cpd. "D")			0					
337	17( $\alpha$ )-[1-keto-2-hydroxyethyl]-androstane-3,11-dione-17( $\beta$ )-ol					0			
338	17( $\alpha$ )-[1-ketoethyl]- $\Delta^4$ -androstene-3-one, ( $\Delta^4$ -allo-pregnene-3-20-dione)	2							
338	hetero-17( $\alpha$ )-[1-ketoethyl]- $\Delta^4$ -androstene-3-one, (hetero- $\Delta^4$ -allo-pregnenedione)	0							
340	17( $\alpha$ )-[1-ketoethyl]- $\Delta^4$ -androstene, ( $\Delta^4$ -pregnene-20-one)	0							
342	17( $\beta$ )-ethyl- $\Delta^4$ -androstene-3-one-17( $\alpha$ )-ol, (ethyl-testosterone)	3							
343	17( $\alpha$ )-[1( $\alpha$ )-hydroxyethyl]- $\Delta^4$ -androstene-3-one, (dihydro-progesterone) " acetate			0					
343	17( $\alpha$ )-[1-ketoethyl]- $\Delta^4$ -androstene-3-one, (progesterone)	1	1	3	1	0	2	1	3
344	" enol-acetate	0	3						
344	" enol-propionate		3						
344	" enol-n-butyrate		3						
344	17( $\beta$ )-[1-ketoethyl]- $\Delta^4$ -androstene-3-one, (iso-progesterone)			0					
345	17( $\beta$ )-[1-ketoethyl]- $\Delta^4$ -androstene-3-one				0				
347	17( $\beta$ )-[1( $\alpha$ ),2-dihydroxyethyl]- $\Delta^4$ -androstene-3-one								
340	17( $\alpha$ )-[1-ketoethyl]- $\Delta^4$ -androstene-3-one-6( $\alpha$ )-ol acetate, (6( $\alpha$ )-hydroxy progesterone)	1	1	0					3

CPP. NO.	SYSTEMATIC AND (WHERE COMMONLY IN USE) TRIVIAL DESIGNATIONS	FOLLICULAR	TESTOSTERONE	LUTEINOID	CORTICOID		SPEMANTOGENIC	RENOTROPIC	ANTIFERTILE
					SALT	GRO			
350	17( $\alpha$ )-[1-ketoethyl]- $\Delta^4$ -androstene-3-one-11( $\beta$ )-ol, (11-hydroxy-progesterone)		0						
351	17( $\alpha$ )-[1-ketoethyl]- $\Delta^4$ -androstene-3-one-12( $\beta$ )-ol, (12-hydroxy-progesterone)		1						
352	17( $\alpha$ )-[1-ketoethyl]- $\Delta^4$ -androstene-3-one-17( $\beta$ )-ol, (17( $\beta$ )-hydroxy-progesterone)	1	0	0	0				
353	17( $\beta$ )-[1-ketoethyl]- $\Delta^4$ -androstene-3-one-17( $\alpha$ )-ol, (17( $\alpha$ )-hydroxy-progesterone) acetate			1					
354	17( $\alpha$ )-[1-keto-2-hydroxyethyl]- $\Delta^4$ -androstene-3-one, (desoxycorticosterone, Reichstein's cpd. "Q")				3	1			
354	" acetate	1	0	2	3	1	0	1	3
354	" Na phosphate				3				
354	" glucoside				3				
355	17( $\beta$ )-[1-keto-2-hydroxyethyl]- $\Delta^4$ -androstene-3-one acetate, (17-iso-desoxycorticosterone)				0				
359	17( $\alpha$ )-[1-ketoethyl]- $\Delta^4$ -androstene-3,6-dione, (6-keto-progesterone)	1	0						
361	17( $\alpha$ )-[1-keto-2-aldoethyl]- $\Delta^4$ -androstene-3-one				1				
365	17( $\alpha$ )-[1( $\beta$ ),2-dihydroxyethyl]- $\Delta^4$ -androstene-3-one-17( $\beta$ )-ol, (17( $\beta$ )-pregnenetriolone)				0	0	0		
367	17( $\alpha$ )-[1-keto-2-hydroxyethyl]- $\Delta^4$ -androstene-3-one-6( $\alpha$ )-ol diacetate (6( $\alpha$ )-hydroxy-11-desoxycorticosterone)				2	0			
368.1	17( $\alpha$ )-[1-keto-2-hydroxyethyl]- $\Delta^4$ -androstene-3-one-12( $\beta$ )-ol acetate				0				
368.1	" diacetate				0	0			
370	17( $\alpha$ )-[1-keto-2-hydroxyethyl]- $\Delta^4$ -androstene-3-one-11( $\beta$ )-ol, (corticosterone)				3	3			
370	" acetate				3	3			
370	" propionate				3				
370	" butyrate				3				
370	" heptoate				3				
370	" n-hexanoate				3				
370	" palmitate				3				
370	" $\frac{1}{2}$ -succinate				3				
370	" Na $\frac{1}{2}$ -succinate				3				
370	" benzoate				2				
370	" diethyl acetate				3				
371	17( $\alpha$ )-[1-keto-2-hydroxyethyl]- $\Delta^4$ -androstene-3-one-17( $\beta$ )-ol, (Reichstein's cpd. "S", 11-desoxy-17-hydroxy-corticosterone)				1				
371	" acetate				2				
373	17( $\alpha$ )-[1-keto-2-hydroxyethyl]- $\Delta^4$ -androstene-3,11-dione (dehydro-corticosterone)	0	2	3					2
373.1	17( $\alpha$ )-[1-keto-2-hydroxyethyl]- $\Delta^4$ -androstene-3,12-dione acetate				?				
375	17( $\alpha$ )-[1( $\beta$ ),2-dihydroxyethyl]- $\Delta^4$ -androstene-3-one-11( $\beta$ ),17( $\beta$ )-diol (Reichstein's cpd. "E")				1				
376	17( $\alpha$ )-[1-keto-2-hydroxyethyl]- $\Delta^4$ -androstene-3-one-11( $\beta$ ),17( $\beta$ )-diol (17-hydroxy-corticosterone)				1	3			
378	17( $\alpha$ )-[1-keto-2-hydroxyethyl]- $\Delta^4$ -androstene-3,11-dione-17( $\beta$ )-ol (Kendall's cpd. "E", 17-hydroxy-11-dehydro-corticosterone)	1	0	?	1	3			2
378	" acetate				?	3			
380	17( $\beta$ )-ethyl- $\Delta^4$ -androstene-3( $\beta$ ),17( $\alpha$ )-diol (17-ethyl-androstendiol)	?	2	0					
383	17( $\alpha$ )-[1-ketoethyl]- $\Delta^4$ -androstene-3( $\beta$ )-ol (pregnenolone)	1	0	1	?		2		2
385	17( $\beta$ )-ethyl- $\Delta^4$ -androstene-3-one-17( $\alpha$ )-ol ( $\Delta^4$ -17-ethyl-testosterone)	?	2	0					
386	17( $\alpha$ )-[1-ketoethyl]- $\Delta^4$ -androstene-3-one ( $\Delta^4$ -iso-progesterone)				0				
393	17( $\alpha$ )-[1-ketoethyl]- $\Delta^4$ -androstene-3( $\beta$ ),17( $\alpha$ )-diol	1							2
395	17( $\alpha$ )-[1-keto-2-hydroxyethyl]- $\Delta^4$ -androstene-3( $\beta$ )-ol				1				
395	17-acetate	1	0	1	2	1	0		2
408	17-[1-ketoethyl]- $\Delta^4$ -androstene-3-one				0				
416	17( $\alpha$ )-[1-ketoethyl]- $\Delta^{4,10}$ -androstadiene-3-one (6-dehydroprogesterone)				3				
417	17( $\alpha$ )-[1-keto-2-hydroxymethyl]- $\Delta^{4,10}$ -androstadiene-3-one acetate (6-dehydrodesoxycorticosterone)				0				
417.1	17( $\alpha$ )-[1-ketoethyl]- $\Delta^{4,10}$ -androstadiene-3-one (9-dehydro-progesterone)				3				
418	17( $\alpha$ )-[1-ketoethyl]- $\Delta^{4,11}$ -androstadiene-3-one (11-dehydroprogesterone)				3				
419	17-[1-ketoethyl]- $\Delta^{4,10}$ -androstadiene-3-one (16-dehydroprogesterone)	0	1	1					2
420	17-ethyldene- $\Delta^4$ -androstene-3-one 17:17' oxide ( $\beta$ isomer)				0				
425	17( $\beta$ )-ethynyl- $\Delta^4$ -androstene-3-one-17( $\alpha$ )-ol (ethenyl-testosterone)	?		2					2
426	17-[1( $\beta$ )-hydroxyethyl]- $\Delta^{4,10}$ -androstadiene-3( $\beta$ )-ol			0					
427	17-[1-ketoethyl]- $\Delta^{4,10}$ -androstadiene-3( $\beta$ )-ol acetate	0		0					?
427	" acetate	0		0					0
433	17( $\beta$ )-ethenyl- $\Delta^4$ -androstene-3( $\beta$ ),17( $\alpha$ )-diol (ethenyl-androstendiol)	1							

C.R. NO.	SYSTEMATIC AND (WHERE COMMONLY IN USE) TRIVIAL DESIGNATIONS	POLYMER	TESTED	LITERATURE	COMPOUND		SPERMATOGENIC	RENAL	ANESTHETIC
					SALT	CHO			
440	17( $\beta$ )-ethynyl- $\Delta^4$ -androstene-3-one-17( $\alpha$ )-ol (ethynyl-testosterone)	1	1	2	0	0	0	0	1
441	17( $\beta$ )-ethynyl- $\Delta^4$ -androstene-3( $\beta$ ),17( $\alpha$ )-diol (ethynyl- $\Delta^4$ -androstendiol)			2		0			1
441	" acetate		1	0					
443	17-ethynyl- $\Delta^4,16$ -androstadiene-3-one				0				
451	17( )-[1-ketopropyl]- $\Delta^4$ -androstene-3-one (21-methyl-progesterone)				2				
452	17( )-[2-ketopropyl]- $\Delta^4$ -androstene-3-one				0				
453	17( )-[2( ),S-dihydroxypropyl]- $\Delta^4$ -androstene-3-one-17( )-ol		0	0		0			
455	17( )-[1( ),2( ),3-trihydroxypropyl]- $\Delta^4$ -androstene-3-one-17( )-ol (trihydroxy-propyl-testosterone)				0	0			
463	17( $\beta$ )-[2-propenyl]- $\Delta^4$ -androstene-3-one-17( $\alpha$ )-ol (17-allyl-testosterone)				0	0			
467	17( $\beta$ )-[2-propenyl]- $\Delta^4$ -androstene-3( $\beta$ ),17( $\alpha$ )-diol (allyl-androstenediol)				0	0			
469	17-[2-propenylidene]- $\Delta^4$ -androstene-3-one				0	0			
479	17( $\alpha$ )-[1-carboxyethyl]- $\Delta^4$ -androstene-3-one ( $\Delta^4$ -3-keto-bisnor-cholenic acid)				0	0			
485	17( $\alpha$ )-[1( )-carboxyethyl]- $\Delta^4$ -androstene-3( $\beta$ )-ol ( $\Delta^4$ -3-hydroxy-bisnor-cholenic acid)				0				0
496	17( $\alpha$ )-[1-ketobutyl]- $\Delta^4$ -androstene-3-one (21-ethyl-progesterone)	1		2					3
499	17( $\alpha$ )-[1( )-methyl-2-ketopropyl]- $\Delta^4$ -androstene-3-one			0					
500	17( $\alpha$ )-[1( )-methyl-2-keto-3-hydroxypropyl]- $\Delta^4$ -androstene-3-one ( $\Delta^4$ -23-hydroxy-nor-cholene-3,22-dione)					0			
510	17( $\alpha$ )-[1( )-methyl-3-carboxypropyl]- $\Delta^4$ -androstene-3( $\beta$ )-ol ( $\Delta^4$ -3( $\beta$ )-hydroxy-cholenic acid)				0				0
515	17( $\alpha$ )-[1( )-methyl-5-ketohexyl]-androstane-3( $\beta$ )-ol (epi-nor-cholestane-3-ol-25-one)		0	1	0				
516	17( $\alpha$ )-[1( )-methyl-5-ketohexyl]-androstane-3-one (nor-cholestane-3,25-dione)	0	0	0					
517	17( $\alpha$ )-[1( )-methyl-5-ketohexyl]- $\Delta^4$ -androstene-3-one ( $\Delta^4$ -nor-cholestene-3,25-dione)				0	0	0		0
519	17( $\alpha$ )-[1( )-methyl-5-ketohexyl]- $\Delta^4$ -androstene-3( $\beta$ )-ol ( $\Delta^4$ -nor-cholestene-3 trans-ol-25-one)				0	0			0
520	17( $\alpha$ )-[1( ),5( )-dimethylhexyl]- $\Delta^4$ -androstene-3( $\beta$ )-ol (cholesterol)	0	0	0	0	0	0	0	0
521	17( $\alpha$ )-[1( )-methylheptyl]- $\Delta^4$ -androstene-3-one (cholestенone)						0	0	
522	17( $\alpha$ )-[1( ),5-dimethyl-4( )-ethyl-2-hexenyl]- $\Delta^4$ -androstene-3( $\beta$ )-ol (stigmasterol)	0				0	0	0	0
525	D-homoandrostane-3( $\alpha$ )-ol-17a-one (d-homo-cis-androsterone)				2				
526	D-homoandrostane-3( $\beta$ )-ol-17a-one (d-homo-trans-androsterone)				3				
527	D-homoandrostane-3-one-17a( )-ol (d-homo-dihydro-testosterone)				3				
542	17a( $\beta$ )-methyl- $\Delta^4$ -D-homoandrostene-3,17-dione-17a( $\alpha$ )-ol					2	0		
544	17a( $\alpha$ )-methyl- $\Delta^4$ -D-homoandrostene-3( $\beta$ ),17a( $\beta$ )-diol-17-one	1		0					3
545	17a( $\beta$ )-methyl- $\Delta^4$ -D-homoandrostene-3( $\beta$ ),17a( $\alpha$ )-diol-17-one	1		0					3
549	etiocholane-3( $\alpha$ )-17( $\alpha$ )-diol				? 0				
550	etiocholane-3( $\alpha$ )-ol-17-one				? 0				2
551	etiocholane-3( $\beta$ )-ol-17-one				0 0 0				2
551	" acetate				0 0				1
574	17( $\alpha$ )-[1( $\alpha$ )-hydroxyethyl]-etiocholane-3( $\alpha$ )-ol (pregnanediol)	0	0	0	0	0	0	0	2
574	" Na-glucuronide	0							1
574	" diacetate	?	?	0					
576	17( $\alpha$ )-[1( $\alpha$ )-hydroxyethyl]-etiocholane-3( $\beta$ )-ol (n-pregnadiol)				0				
578	17( $\alpha$ )-[1-ketoethyl]-etiocholane-3( $\alpha$ )-ol (epi-pregnanolone)				0				
580	17( $\alpha$ )-[1-ketoethyl]-etiocholane-3( $\beta$ )-ol (n-pregnanolone)				0				
581	17( $\alpha$ )-[1( $\alpha$ )-hydroxyethyl]-etiocholane-3-one				0				
584	17( $\alpha$ )-[1-ketoethyl]-etiocholane-3-one (pregnanedione)	0	0	0	0	0	0	0	3
584	" 4-bromo								0
600	17( $\alpha$ )-[1-keto-2-hydroxyethyl]-etiocholane-3-one acetate					0			
603	17( $\alpha$ )-[1-ketoethyl]-etiocholane-3,12-dione (pregnanetriolone)				0				2
609	17( )-[1-ketoethyl]-etiocholane-3-one-4( ),5( )-diol	0	0	0					
610	17( $\alpha$ )-[1-ketoethyl]-etiocholane-3-one-5,6( $\alpha$ )-diol 6 acetate				0				1
613	17( )-[1-ketoethyl]-etiocholane-3,6-dione-5( )-ol				0				0
619	17( )-[1-ketoethyl]- $\Delta^{10}$ -etiocholane-3( $\beta$ )-ol acetate	0							0
620	17-[1-ketoethyl]- $\Delta^{10}$ -etiocholene-3-one ( $\Delta^{10}$ -Iso-progesterone)	0		0					2
640	17( $\alpha$ )-[1( $\alpha$ )-carboxyethyl]-etiocholane-3( $\alpha$ ),12( $\beta$ )-diol (bisanor desoxycholic acid)	0	0			0	0	0	0
653	17( $\alpha$ )-[1( $\alpha$ )-methyl-2-carboxyethyl]-etiocholane-3( $\alpha$ ),12( $\beta$ )-diol (Nor-desoxycholic acid)				0 0				0
712	17( )-[1,2-dimethyl-1-propenyl]-etiocholane-3,12-dione	0							

## DICTIONARY OF TESTS

As explained in the introduction, the main characteristics of every test quoted in the text are briefly outlined in this dictionary. Many authors described their technic so incompletely that the results are only of qualitative value. In some of these cases, however, the activity of several cpds. was compared using the same test although the procedure was not adequately characterized. In such instances the results may even have some quantitative significance. Yet in this Index assays performed with such tests are quoted only in connection with those activities of steroids concerning which more precise information is not available at present.

- F** 1. Allen + Dolsy test. ♀/c R — This test number is assigned when no details are given concerning the method of administration. In general it presumably refers to the original method used by Allen and Dolsy et al., i.e., 3 injections s.c. in oil at 4 hour intervals, the R.U. being the minimal effective dose which produces vaginal cornification (40808, 21268).
- F** 2. Modified Allen + Dolsy test (Dirscherl). ♀/c M - 4 or 5 s.c. injections in oil within 36 hours. Criterion: vaginal cornification (smears) (34803, A8219, 31517).
- F** 3. Metrotropic test. Immature albino M (8-8 g.) — 2 s.c. injections in 0.05 cc. of sesame oil daily on 3 successive days. 18 hours after the last injection the M are killed. Criterion: uterine wt. (A35939).
- F** 4. Modified Allen + Dolsy test (Marrian + Parkes). ♀/c M — 4 s.c. injections in aqueous or oil solution at 12 hour intervals. Criterion: cornified cells and complete absence of leucocytes in vaginal smear. U. = amount necessary to produce 50% response. (23810).
- F** 5. Modified Allen + Dolsy test (Butenandt). ♀/c M (ca. 20 g.) — 1 s.c. injection in sesame oil solution, (in the case of old castrates after priming with estrone). Criterion: vaginal cornification (smears) within 60 hours in 75-80% of the animals (2665, 55958, 31727).
- F** 6. Modified Allen + Dolsy test (MacCorquodale, Thayer + Dolsy). ♀/c R — 3 s.c. injections of aqueous solution at 4½ hour intervals. Criterion: vaginal cornification (smears) (64656).
- F** 7. Curtis + Dolsy test. Immature ♀ R (18 days old) — injections morning and night on 3 consecutive days. U. = minimal amount which causes vaginal opening within 10 days in 3 of 5 rats (ca. equivalent to 3 "spayed R.U."). (1928).
- F** 8. ♀/c R — 1 injection s.c. in sesame oil. Criterion: vaginal smears (31727).
- F** 9. ♀/c M or ♀/c R — 3 oral administrations within 24 hours. Criterion: vaginal cornification, (smears) (31727).
- F** 10. Kahnt + Dolsy test. Mature ♀/c R — after priming with folliculoids 3 s.c. injections within 24 hours. Vaginal smears taken 48, 52, 56 and 72 hours after the 1st injection. U. = smallest amount which produces vaginal cornification in 75% of the R (24003).
- An** 11. Anesthesia test. U. = minimal amount of a steroid required i.p. to cause loss of righting reflex in 4 of 6 R (40 g.) which have been partially hepatectomized 2 to 4 hours before the test (A36744).
- F** 12. Modified Allen + Dolsy test (David + de Jongh). ♀/c M or ♀/c R — 3 injections each in 0.1 cc. of oil within 36 hours. Crossing over of the unknown and an estrone-control group the next week with repetition of the test. Criterion: vaginal cornification (smears) (53758).
- F** 13. ♀/c R — injected twice daily during 14 or 28 days. Criterion: uterine wt. expressed in percentage of controls (53758).
- F** 14. A, B. ♀/c M and ♀/c R — 6 equal portions injected s.c. (A) or given per os (B) in 2 days in aqueous solution. Criterion: vaginal cornification (smears) (31727, 72048).
- C** 15. Adrenalectomized cat — Corticoid activity demonstrated by maintenance of life. U. = minimum dose required daily (divided into 2 doses) to maintain an adult adrenalectomized cat in good condition (without NaCl) (68670).
- F** 16. ♀/c M — 2 daily doses s.c. or per os. U. = amount required to produce 50% positive response (75101).
- F** 17A. Immature ♀ R — Same as test 7 except that 5 injections are given within 2 days. Criterion: vaginal opening (31727).
- F** 17B. Immature ♀ R and immature ♀/c R — 6 s.c. injections/week. Criterion: vaginal opening (A19002). (A19002).
- F** 18. ♂ G — bidayly injections in 0.5 cc. of oil for 2-3 weeks. Criterion: nipple growth (31727).
- F** 19. Immature ♂ R — injected twice daily for 3 weeks with oil or aqueous solutions. Criterion: decrease in testis wt. (31727).
- F** 20. ♂ R and ♂/c R — injections in oil or water given for varying periods of time. Criterion: the "paradoxical effect" (enlargement of the seminal vesicles due to proliferation of connective and muscle tissue) (31727).
- G** 21. Oviposition test. ♀ X — injections i.p. in peanut oil at 4.30 P.M. and results observed at 10 A.M. (75731).
- F** 22. Modified Allen + Dolsy (de Jongh, Kober + Laqueur). ♀/c M or ♀/c R — 3 s.c. injections within 24 hours. Vaginal smear taken each morning and evening on 3 consecutive days. U. = minimum dose which, within 72 hours, produces a practically leucocyte-free vaginal smear in 75% of the animals (31727, 2693, 71506).
- F** 23. ♀/c R (120 g.) — 1 s.c. injection daily for 2 days in 0.5 cc. sesame oil. Criterion: onset and duration of vaginal estrus (smears). Positive response: full estrus in 50% of the animals (A14800).
- F** 24. Immature ♀/c R (ca. 45 g.) 1 s.c. injection in 0.5 cc. sesame oil daily for 2 days. Criterion: uterine wt. (A14800).
- F** 25. ♀/c R — 3 intravaginal applications at 12 hour intervals. U. = amount necessary to produce full vaginal estrus (histology) in majority of the R (75616).
- F** 26. ♀/c R — 3 s.c. injections at 12 hour intervals. U. = amount necessary to produce full vaginal estrus (histology) in majority of the R (75616).
- L** 27. Sexual receptivity test. ♀/c G (virgin) — One week after ovariectomy, sensitization with estrone (4γ in 4 s.c. injections over 2 days) then s.c. administration of substance to be tested. Criterion: 10 hours after the injection, the G are examined for copulatory reflexes at 1-2 hour intervals (A7923).
- F** 28. Kahnt + Dolsy test. ♀/c M — After priming with estrone 3 s.c. injections of substance to be tested in 1 cc. sesame oil on 3 successive days. M may be used repeatedly at monthly intervals. Criterion: vaginal estrus (smears) (A692).
- T** 29. Tschopp test. C — s.c. administration of a compound in oil for 6 consecutive days. U. = minimal daily dose which, in a group of at least 5 Leghorn C, produces a minimum increase of 20% in the area of the comb (32022, 32862).
- F** 30. C — animals treated for 5 days with 0.4γ of testosterone applied to the combs. Simultaneously s.c. injection with substance to be tested. Criterion: Inhibition of comb growth, which is characteristic of folliculoids (measured by photoelectric method) (73572).
- T** 31. Dessau test. C — direct application in oil (or propylene glycol) to the comb once daily for 4 days. U. = amount which elicits the same response as 0.7γ androsterone (71314, 32860).
- T** 32A. Butenandt + Tscherning test. C (White Leghorn) — 1 s.c. injection in 1 cc. sesame oil daily for 2 days. U. = daily dose which in at least 3 animals

- produces an average increase of 20% in comb area on the 3rd or 4th day (30225).
- T 32B. Butenandt + Tschöring test.** C (White Leghorn) — same as 32A, but daily injections during 4 days. U. = daily amount necessary to determine average comb growth of 20% (30225, 32389).
- T 33. Butenandt test.** Immature R — injected s.c. for 8 days with a solution in 0.2 cc. sesame oil. Criteria: stimulation of seminal vesicles, prostate and penis as judged by wt. and histological structure. U. = daily amount necessary to restore to normal seminal vesicles (65960, A54752).
- T 34. ♂/c R** — Daily s.c. injection (for varying periods of time) with cpd. to be tested, then injection of colchicine on last day of experiment. Criteria: mitoses in seminal vesicles and prostate (79056).
- F 35. ♀/c M or immature R** were used, that is, tests 2 or 7 not stating which (71855).
- T 36. Callow + Parkes test.** C — Restoration of the comb one year after castration or maintenance of the same immediately after castration. Criterion: comb surface (52585).
- T 37A. Callow + Deanesly test.** Immature ♂/c R (40-50 g.) — used not less than 1 month after castration, and injected for 10 days. Criteria: wts. of the accessory sex organs after fixation (56092).
- F 37B. ♀/c R (40-50 g.)** — technic of administration as in test 37A but criterion: wt. and histology of ♀ accessory sex organs (A9263).
- F 38. Adult ♀/c R** — injected for 10 days. Criteria: mitoses, mucification and cornification of vaginal epithelium (72400).
- F 39A. Immature R and ♀/c R** — 2 s.c. injections in 2 days. Criteria: vaginal opening and cornification, uterine enlargement (55720).
- F 39B. Immature ♀/c R and ♀/c R** — same as 39A but injections given over varying periods of time (75107).
- T 40. ♂ R and ♂/c R** — injected twice daily with aqueous or oil solutions. Criteria: wts. of the sex organs (54550).
- T 41. Koch + Gallagher test.** C. — (Brown Leghorn) 5 daily injections in oil. U. = amount necessary to determine a 5 mm. increase in height + length of comb (2879, 67694).
- F 42. ♀ R** — daily parenteral administration for 20 days. Criterion: "estrus" (A57018).
- T 43. ♂/c R** — single s.o. injection in oil solution. Criterion: wt. of seminal vesicles and prostate (70023).
- T 44. ♂/c R (80 g.)** — s.o. injections for 6 days beginning one month after operation. R killed on 7th day. Criteria: wts. of secondary sex organs after fixation (A15269).
- T 45. ♂/c R (60-80 g.)** — 21 days after castration s.c. injections in 0.5-1.0 c.c. sesame oil daily for 10 days. Criterion: wt. of the secondary sex organs (56783).
- L 46. McPhail test.** Immature ♀ Rb (750-950 g.) — Following the injection of 150 I.U. of "estrin" over 6 days, the substance to be tested is administered intramuscularly in oil over 5 days. Criterion: glandular proliferation of the endometrium. U. = the amount of "progestin" which determines an average proliferation of 2 according to the McPhail scale (54458).
- C 47. A, B, C, D. Ingle test.** R-adrenalectomized (180 g.) — In 47A, 47B and 47C, the substance to be tested is administered twice daily s.c. in oil. In 47D one s.c. injection is given at beginning of stimulation and a second 6 hours later. In 47A R are subjected to work 1 hour after adrenalectomy. The gastrocnemius muscle is exposed under light phenobarbital anesthesia, weighted by 100 g. and stimulated by repeated faradic stimuli for 24 hours or until fatigue or death ensues. In 47B R are treated for 7 days after adrenalectomy, then tested as in 47A. In either case the muscular efficiency and increased survival are the criteria of activity. 47C. During the 7 day injection period of test 47B
- gain in body wt. (before work test) taken as criteron (44984, 67351, A37373).
- 47D.** Same as 47A but R are simultaneously nephrectomized and adrenalectomized. U. is defined as the work equivalent of two 0.2 mg. doses of Kendall's cpd. "E" = 17(α)-[1-keto-2-hydroxyethyl]-4'-androstene-3,11-dione-17(β)-ol (83871).
- L 48. Clauberg test.** Immature ♀ Rb — after priming with 8 daily injections of "10 M.U." of "estrin", 5 daily s.c. injections of substance to be tested. U. = total dose necessary to produce a "definite" pregestational transformation of the endometrium (2348, 2434).
- L 49. Butenandt, Westphal + Hohlweg test.** Immature ♀ Rb (750-1000 g.) — after priming with 6 daily injections of "25 M.U." of "estrin", 5 daily s.c. injections of substance to be tested. U. = total dose which produces "distinct" pregestational transformation of endometrium (29442).
- L 50. Immature Rb** — After priming with folliculoid, local application of 1 dose in 0.1 cc. oil into loop of uterus which is then tied off *in situ*. Criterion: pregestational proliferation (78850, 75634).
- F, T 51. ♀/c R** — castrated at 3-4 weeks of age and used 2-4 months later. Hormone administered twice daily in oil or 3 times daily in water for varying periods of time. Criterion: wts. and histology of endocrine glands and accessory sex organs (54550).
- C 52. Everse + de Fremery test.** R adrenalectomized — tied down under ether anesthesia so that only the left hind leg can move at the ankle joint. Short electrical stimulations are applied to this limb and tetanic contractions of the gastrocnemius muscle recorded. Criterion: improvement in the recovery of the fatigued muscle by 4 daily injections given prior to the test. U. = daily effective dose (8008, 7835, 75612).
- O 53A. Immature ♂ R (40-50 g.) adrenalectomized** — injected s.c. daily with oil solution. Duration of treatment not specified. Criterion: survival and body wt. increase (14882, 3013).
- C 53B. Same as 53A** but 2 daily injections for 14 days (A56191).
- L 54. Corner + Allen test.** Adult Rb ♀/c — in estrus, ovariectomized 18 hours after mating. Substance to be tested is then injected daily for 5 days. U. = minimum amount necessary to cause complete pregestational proliferation of the endometrium (= 1.25 mg. progesterone) (15981).
- F 55. Immature ♀ R** partially hepatectomized and given i.p. injection of steroids as in test 11. Criterion: opening and histological structure of vagina within 24 hours after injection (A36744).
- C 56. D adrenalectomized** — Criterion: return of the blood urea to normal. Probably identical with test 61 but details of procedure not mentioned (78133, 75678).
- T 57. Immature ♂/c R** — given 2 daily s.c. injections in oil solution or suspension, on 10 consecutive days beginning on day of operation. Criterion: wt. increase and histological changes in the accessory sex organs (A36744, A38071).
- F 58. Immature ♀/c R, ♀/c M or ♀ M** — substances administered per os or s.c. over 5 days. Criterion: vaginal smears, uterine wt. and histology (76246, 71505).
- T 59. Emmens test.** C (Brown Leghorn) — 3 day test. 1 administration daily by the i.m. (A), the oral (B) or the local (application to comb) (C) route. U. = amount required to produce average increase of 5 mm. in length + height, in the combs of a group of 5 capons (75101).
- F 60. Ovipositor test.** Bitterling — lengthening of the ovipositor after addition of substance to water in which the fish are kept (A30097, A36598).
- C 61. Swingle + Pfiffner test.** D-adrenalectomized U. = minimum daily dose per kilogram which, when given over a period of 7 days, maintains the blood urea and clinical state of the animal in normal condition (30068, 8463, 27701).
- F 62. Modified Allen + Dolsy test (Butenandt).** ♀/c

- M or ♀/c R — 2 s.c. injections in oil daily for 2 days. Criterion: vaginal cornification (smears) in 50-80% of the animals (60173, 70175).
- T 63. Fussganger test (modified by Voss). C — application of substance to comb. U. = daily amount which given in 0.1 cc. of oil during 5 consecutive days determines an average comb growth of 30% on the 7th day (A31730, A2569).
- T 64. ♂/c R (29 days old) — 10 s.c. injections in 0.2 cc. sesame oil. Criterion: wt. and histology of prostate and seminal vesicles (A34176).
- F 65A. + B. ♀/R (40 g.) — (65A) injected s.c. once daily for 3 days with an oil solution or (65B) treated per os with 2 daily administrations for 3 days. Killed 96-100 hours after initial injection. Criteria: vaginal smears of rats with patent vaginae, and histology of vagina, uterus and ovaries (A36620, A32790).
- F 66. ♀/c R (Virgin) — daily s.c. administration over a 30 day period of compound in oil solution. Injections started the day after ovariectomy. Criteria: vaginal smears. Histology of vagina, uterus and mammary glands, as well as anti-castration cell effect (38576).
- F 67. Nipple test. ♂G — Nipple stimulation upon daily local application of aqueous or oil solution (A15263).
- T 68. Greenwood test. C (Brown Leghorn) — daily injections in oil for 5 days. Comb response measured in terms of increase in maximum length + height (52576).
- T 69. Hypogonadal ♂ or ♂/c human — Parenteral or oral administration for varying length of time. Criteria: increase in libido and somatic signs of virilization (A32482, A9262, 76970).
- F 70. Immature ♀R and ♀/c R — injected s.c. daily with oil solution. Criterion: mammary gland growth (31727).
- F 71. ♀R and ♀/c R — 2 s.c. administrations in oil daily for 21 days. Criteria: Vaginal smears and histology of uterus and vagina (A9480).
- C 72. Adrenalectomized ferret — Operation in 2 stages. Maintained for several days with appetising diet, NaCl, NaHCO<sub>3</sub>, and cortical extract until the wounds are healed. Criterion: maintenance of life (A18259).
- F 73. C (Sebright) — Plumage in ♂ is hen-feathered. Castration causes appearance of ♂ feathering. Folliculoids induce reversal to ♀ type (i.e. the normal condition) (55720).
- L 74A. Hypogonadal, menopausal or ♀/c human. Priming with folliculoids then s.c. or oral administration of the substance to be tested. Criterion: pregestational changes (endometrial biopsy) (75105).
- F, L, T 74B. Same as 74A but no priming. Criteria: for luteoid act. endometrial changes; for folliculoid act. vaginal smears, endometrial changes or relief of menopausal symptoms; for testoid act. "virilization" e.g., growth of clitoris, deepening of voice, etc. (A30227).
- T 75. Immature ♂R — injected for 5 days with oil solution. Killed on the 6th day. Criterion: seminal vesicle wt. No other details given (71505).
- F 76. Immature ♀Rb — total dose injected s.c. in 5 daily injections. Criterion: wt. of uterus (69323).
- F 77. Immature ♀R — injected daily for various periods of time. Criteria: vaginal smears, opening and histology (69323).
- F 78. ♀/c G — injected daily for 10 days. Criteria: vaginal opening, smears and histology (60323).
- O 79. Cartland + Kulzenga test. Adrenalectomized ♂R — U. = "minimum daily dose of a substance which, administered by a single s.c. injection for 20 days to 4 week-old ♂R (50-60 g.) is enough to protect at least 80% of the R and produce an average growth of at least 20g/R/20 days". (A1735).
- T 80. Loewe and Voss test. ♂/c M — 5 injections in 3 days. Animals killed on the 4th day. Accessory sex organs weighed and histologically examined. Criterion: hyperplasia and hypertrophy of the epithelial cells of the seminal vesicles and prostate. U. = total amount so injected which has a "moderate" action on the seminal vesicle epithelium (2430, 2431, 1715, 63734).
- T, F 81. Chick embryo test. Introduction into eggs incubated for 48-72 hours of substance dissolved in propylene glycol or sesame oil. By the use of embryos with sex-linked plumage characteristics the original sex can be determined. Criteria: size, form and histology of the gonads and secondary sex glands. "Musculinization" is the tendency for the gonads of ♀ to be modified towards the ♂ type, while "feminization" is the reverse (71207).
- O 82. D adrenalectomized-injections once daily. Criterion: maintenance (over a period of 4 days) of appetite and normal body temperature (A30747).
- C 83. D adrenalectomized-conditions of test similar to those of assay 81 but 50% rise in N.P.N. chosen as end point indicating adrenal insufficiency (A36727).
- O 84. R adrenalectomized (40-50 g.) — injected with oil solution for 15 days. Criteria: increase in body wt. and maintenance of life (75213).
- T 85. R pregnant — prenatal influence of hormone administered to mother in daily s.c. injections for 10-17 days after the finding of sperm in the vagina. Criteria: sex characteristics of the young (72085).
- L 86A + B. Immature ♀/c Rb — treatment with (A) or without (B) folliculoid pretreatment. U. = amount causing "definite" pregestational proliferation (A18138, A32096, A2959).
- C 87. Water Intoxication test. ♂R adrenalectomized 17 hours and fasted for 12 hours before the test, are given distilled water in an amount corresponding to 6% of their body wt. This is administered by gavage in 5 hourly portions. Urine volumes are measured at intervals for 24 hours. Technic of hormone administration variable. Criterion: survival during this time or excretion of more than 90% of the administered water within 11 hours (78679, A37457).
- C 88. Immature R adrenalectomized — immediately after operation single injection of substance s.c. in 2 cc. sesame oil. Criterion: survival time (72685).
- L 89. Mature ♀/c cat — at the time of spaying 1 adrenal is extirpated and the animals receive daily injections of 33 $\mu$  of estradiol benzoate for 10 days. The 2nd adrenal is then removed, following which the substance to be tested is injected for 5 to 9 days. Criterion: pregestational proliferation of the endometrium (A33855).
- F 90. ♀/c R (3-5 month old) — intravaginal application of an oil or alcoholic solution. Criterion: vaginal cornification (histology) after 24 hours (79053).
- L 91. Immature ♀Rb — pretreated with 8 daily folliculoid injections. Substance to be tested is dissolved in 0.5 cc. of oil and introduced into ligated portion of uterine cavity. Criterion: pregestational endometrium (79054).
- T 92. C (White Leghorn) — local application of compound in oil to the comb for 9 or 15 days. Criterion: comb growth (79054).
- F, T 93. Immature ♀/c G — 20 daily s.c. injections. Criteria: hypertrophy of the clitoris and histological examination of the uterus (79056).
- O 94. G adrenalectomized. Criterion: life maintenance (A36786).
- O 95. D adrenalectomized — maintained on low NaCl diet and injected daily with oil solution. Criteria: maintenance of good clinical condition and essentially normal blood chemistry (75975).
- T 96. ♂/c R (40-60 g.) animals are simultaneously hypophysectomized and castrated. Treatment as in test 132. Criterion: wts. of seminal vesicles, prostate and preputial glands. (Standard errors in controls: s.ves.  $\pm$  6; pta.  $\pm$  11; prep. gl.  $\pm$  5) (100,000).
- O 97. M adrenalectomized — daily injections in 0.05 cc. sesame oil. Criterion: life maintenance (A35567).
- C 98. Adult ♂R adrenalectomized — Criterion: diuresis after water administration 4 days postoperatively (A31897).
- C 99. ♂R adrenalectomized — injections s.c. in oil for 4 days. Killed 6 hours after the last injection. Criteria: life maintenance and prevention of blood chemical changes characteristic of adrenal insuffi-

- ciency (hemoglobin, glucose, chlorides, N.P.N.) (A36390).
- L 100A. ♀/c and ♀ opossum — pretreated with 1000 I.U. of estrone daily for 20 days then injected for 5 days with the substance to be tested. Criterion: pre-gestational proliferation of the endometrium (80860).
- L 100B. Same as 100A but the substance to be tested is administered for 20 days without previous sensitization (80860).
- F 101. Mature ♀/c monkey — daily s.c. injections in oil for periods up to 30 days. Criteria: daily vaginal smears, sexual skin coloration and biopsies of mammary glands (A35195).
- G 102. ♂R — Criteria: inhibition of testis atrophy in hypophysectomized or folliculoid-treated adult R. Also inhibition of functional inactivation of testis as indicated by the lack of atrophy of accessory sex glands. — Only non-testoid cpds. can be assayed for the latter activity by this test (69957).
- F 103. ♀/c R adrenalectomized — daily injections. Criterion: vaginal smears (A34002).
- C 104. R or M — adrenalectomized and treated (per os or s.c.) with steroids. Growth curve compared with that obtained by treatment with a standard corticoid preparation. Logarithm of dose plotted against gain in wt. is a linear function. Similar to tests 53A and 53B (A37040).
- F 105. ♀/c R (45-50 g.) beginning immediately after the operation 2 daily injections in oil for 20 days. Killed on the 21st day. Criteria: daily vaginal smears, uterus and adrenal wts. (The latter are increased by folliculoids) (A36637).
- T 106. ♂/c R (25 day old) — injected daily for 6 days. Killed on 7th day. Criteria: seminal vesicle and prostate wts. (A37407).
- F 107A. + B. (A) ♀R and (B) ♀/c R — injected s.c. daily for varying periods of time. Criteria: vaginal smears and histology of vagina, uterus and mammary glands (69956).
- C 108. Cold test. (Selye + Schenker). ♂ or ♀R adrenalectomized (45 g.) — 24 hours after adrenalectomy R are placed in refrigerator (temperature —5° to +2°C), being allowed no food or water. Injected at 0, 3, 4, 6 hours during exposure to cold. U. = minimum amount which suffices to maintain alive 6 of 9 adrenalectomized rats when 6 of 9 untreated adrenalectomized controls are dead (A15353).
- C 109. R partially pancreatectomized — injected daily. Criteria: changes in the urine and blood glucose and nitrogen levels (A36674).
- F 110. Immature ♀R. — s.c. injection once daily for 5 days. Criteria: vaginal introitus and uterine wt. (In the case of esters the doses given represent wt. of free cpd. contained in them) (A35275).
- T 111. ♂/c R, ♀/c R, ♂R, ♀R — injected s.c. daily for 21 days with or without simultaneous folliculoid administration. Criteria: wts. and histology of sex organs (A2409).
- C 112. Swimming test (Gaarenstroom, Waterman + Laqueur). R adrenalectomized (60 g.) two days later treated with a single injection. Swimming time recorded previous to injection and on the following two days. The response is "positive", when the swimming time is doubled, "half-positive" when it remains the same on 4th as on 2nd day of treatment and negative when it decreases (87877).
- O 113. R — diabetogenic test (Ingle). R — animals force fed with high carbohydrate diet and injected with substance to be tested. Criteria: blood and urine glucose, urinary nitrogen and glycogen levels (A36742).
- T 114. ♂/c R — 2 daily s.c. injections in peanut oil suspension begun the day following operation and continued for 10 days. Prepubertal and pubertal ♂/c continued for 10 days. Prepubertal and pubertal ♂/c used to test the difference in the response of the accessory glands in R of different ages (A37420).
- F 115. Mammotropic test. ♀/c M (virgin 12-18 g.) — Criterion: development of the lobule-alveolar system of mammary gland. U. = total amount which when injected s.c. once daily for 10 days produces definite lobulo-alveolar development in 50% of 10 or more M (A36499).
- F, L 116. Immature ♀ or ♀/c Rb — estrone pretreatment followed by injection of substance to be tested. Determination of pituitrin reactivity of uterus (in vitro and vivo). Folliculoids increase tone and magnitude of contractions, while luteoids decrease them or give no response (A2959).
- F, T 117. ♀/c R strain with vestigial ♀ prostate gland. — Estrone pretreatment followed by injection or oral administration of substance to be tested. Criteria: vaginal and prostate histology (80260).
- F 118. Endometrial mole test. Postpubertal. ♀/c R — given daily s.c. injections in oil for sensitization to endometrial mole formation. Trauma produced on the 9th day of treatment by slitting the uterine horn longitudinally and uterus examined 5 days later. Criterion: mole formation (A31650, A240).
- C 119. R adrenalectomized — Operation performed 1 day after parturition and injections begun immediately and continued for 17-22 days. Criteria: survival time and maintenance of lactation (A37900, A38216).
- Anti-F 120. ♀/c M. or ♀/c R Criterion: inhibition of the vaginal cornifying action of simultaneously administered folliculoids (A36553, 78159, 72400).
- T 121. Korenchevsky test. ♂R and ♂/c R (57-68 days old) — 2 daily injections in sesame oil for 7 or 21 days. U. = amount which determines 40% increase in prostate wt. (38925).
- Gon 122. Immature ♀R (50 g.) — U. = minimum amount of a substance which causes corpus luteum formation in the majority of the R (68772).
- T 123. C — U. = smallest daily dose, which in 2 daily s.c. injections (in at least 3 C) given over a period of 4 days, produces on the 5th day (in at least 2/3 of the C) a ca. 15% increase in the surface area of the comb (2388).
- L 124. ♀/c Rb or ♀/c M — Cpd. administered after spaying. Criterion: maintenance of pregnancy (A38372, 78159).
- Gon T 125. ♂R same as test 132, using hypophysectomized instead of castrated R. Criterion: wt. of testes for gonadotropic activity; wt. of seminal vesicles, prostate and preputial glands for testoid activity. Expressed as % deviation from wt. of control organs. Doses recorded in text represent daily amounts. (Standard errors in untreated hypophysectomized group: te. ± 21; s.ves. ± 17; prep.gl. ± 8) (100,000).
- Gon 126. Immature ♀ R — Criterion: follicle or corpus luteum formation (3959).
- An 127. Anesthetic test. Minnow — U. = minimum amount of a substance (expressed in mg.) which must be added per fish and per 200 cc. of tap water in order to produce deep anesthesia (A38070).
- F 128A. ♀/c R (50 g.) — 2 daily injections of crystal suspension in oil beginning the day following spaying and continued for 10 days. Vaginal smears taken twice daily (when vagina is patent). Criteria: vaginal opening, smear and histology, mammary gland development, uterine wt. (expressed as % of control wt.) and anti-castration cell effect on the pituitary (in scale of 0 to +++). Doses recorded in text represent daily amounts. (Standard error in untreated control groups: uterus ± 13) (A37513, A56752).
- T 128B. ♀/c R (50 g.) — Treatment as in 128A. Criterion: wt. of preputial glands expressed as % deviation from controls (Standard error in spayed controls: prep.gl. ± 7) (A56752).
- F 128C. ♀/c R — Treatment as in 128A but for varying periods of time. Criteria: vaginal stratification, mucification or cornification (A37486).
- Anti-F 129. ♂ R (155 g.) — 2 daily s.c. injections with 150 $\gamma$  of estradiol and varying amounts of the steroid to be tested for its anti-folliculoid actions. Both cpds. given as crystal suspensions in peanut oil. Animals are sacrificed on 15th day. Criteria: decrease in pituitary and adrenal wt. and increase in testis wt. in comparison with controls receiving estradiol only. Doses recorded in text represent daily amounts.

- (Standard errors in the group receiving estradiol only, te.  $\pm$  5; ad.  $\pm$  5) (A37637).
- F 130. S/L test (Eminens).**  $\text{♀/c M}$  — injected s.c. with oil solution or intra-vaginally with 0.01 cc. of 50% glycerol solution (twice on 8 consecutive days). Criterion: presence of cornified or nucleated epithelial cells with no leucocytes in 50% of the M. S/L ratio is that between the effectiveness of systemic and local administration. For precursors of folliculoids it is in the neighborhood of unity, while for folliculoids it is much greater (A38663).
- T 131.** Immature  $\delta/c G$  — injected for 12 days with cpd. in oil solution. Criteria: wt. and histology of seminal vesicles (A38456).
- T + F 132.**  $\delta/c R$  (40-60 g.) — 2 daily s.c. injections of crystal suspension in oil during 10 days starting on day of castration. Animals killed on 11th day. Criteria: for testoid effect: wt. of male accessory sex organs after fixation in "Susa" solution. For folliculoid effect: prevention of castration changes in hypophysis. Doses recorded in text represent daily amounts (Standard errors in untreated control group a.ves.  $\pm$  15; pta.  $\pm$  7; prep.gl.  $\pm$  13) (A37513, A38071).
- F 133A. + B.**  $\delta/c R$  (135-145 g.) — 2 daily s.c. injections of crystal suspension in oil during 14 days. Animals killed on 15th day. Criteria: A. wt. of male sex organs after fixation in "Susa" solution (decreased by folliculoids). B. Degree of Leydig cell atrophy. Doses recorded in text represent daily amounts (A38086).
- L 134A.**  $\text{♀/c R}$  (150-200 g.) — Ovariectomy and uterine traumatization 4 days after induction of pseudopregnancy by faradic stimulation of cervix. Cpd. given in three or five successive daily injections beginning on day of operation. Criterion: presence of decidiuomata at end of injection period (76422).
- L 134B.**  $\text{♀/c G, M, Rb, R}$  — Uterine traumatization at time of ovariectomy during pseudopregnancy or after sensitization with folliculoids and luteoids. Subsequent treatment with luteoid cpd. alone. Criteria: formation of decidiuomata (A58195, A36512).
- L 134C.**  $\text{♀/c M, R}$  — Uterine traumatization in non-pseudopregnant and not hormone primed animals. Treatment with luteoid cpd. only after ovariectomy. Criterion: decidiuoma formation (A35972, A31649).
- Anti-F 134B.**  $\text{♀G, M, Rb, R}$  — Simultaneous treatment for varying lengths of time with folliculoid and anti-folliculoid cpd. Criterion: development of luteoid changes (progestational proliferation, decidiuomata) in spite of folliculoid treatment (77168, 76422).
- T 135.** Immature chicks. Daily s.c. injections. Insufficient details concerning technic of treatment. Criterion: growth of comb (75712).
- L 136.**  $\text{♀/c G}$  — after priming with a folliculoid, injection of substance to be tested. Criterion: relaxation of pelvic ligaments (A30263, A54671).
- T 137.**  $C$  — injected daily for indefinite period. Criterion: comb growth (56093, 33338).
- G 138A.**  $\delta R$  hypophysectomized — injections started on 2nd day after operation and continued for 20 days. Criterion: maintenance of testis wt. and spermatogenesis (69957).
- T 138B.** Same as 138A but Criterion: wt. of accessory sex organs (69957).
- F 139. Metrotropic test (Lauson et al.).** Immature  $\text{♀R}$  (34-39 g.) — 0.5 cc. aqueous sol. Injection s.c. twice daily for 3 days or 0.2 cc. of oil sol. s.c. once daily for 3 days. Criterion: uterine wt. (A19148).
- F 140. Metrotropic test (Astwood).** Immature  $\text{♀R}$  (25-49 g.) — one single injection s.c. in 0.1 cc. of oil. Animals killed 6 hours later. Criterion: uterine wt. (71906).
- F 141.** C (Brown Leghorn) — Substance in 5 cc. of oil administered in a single intra-muscular injection. Criterion: appearance of brown bar in the normally black ventral feathers indicates intensity (width of bar) and duration (length of bar) of folliculoid effect (68721).
- F 142.**  $\text{♀/c}$  or  $\delta/c R$  — Treated for varying lengths of time either immediately after gonadectomy or following several weeks rest. Doses recorded in text represent daily amounts. Criteria: prevention or cure of castration changes in hypophysis (A320, 70000).
- Ren 143.**  $\delta R$  (90 g.) — 20 daily s.c. injections of crystal suspension in 0.4 cc. of oil beginning on day of hypophysectomy. Criterion: % increase in kidney wt. in comparison with hypophysectomized controls. Doses recorded in text represent daily amounts (A35219).
- Anti-F 144.**  $\text{♀/c Monkey}$  — After priming with folliculoid, simultaneous treatment with folliculoid and luteoid cpd. Criterion: prevention of sex-skin changes (69629).
- Ren 145.**  $\delta/c M$  — Pellets implanted for a period of 30 days. Results are expressed in % increase of kidney wt./kg. of body wt. Dose recorded in text represents the total amount of hormone absorbed during the experimental period (100,000).
- C 146.**  $\delta M$  (18-22 g.) — Animals (divided in groups of 20) are injected s.c. at the onset of a 6-hour fast with cpd. to be tested in 0.2-0.5 cc. of oil (solutions or suspensions). At the end of the fasting period each animal receives 1.5 or 2 U. of insulin per kg. of body wt. and is maintained at temperature of 34°C. Criterion: Percentage of animals in convulsions (77887).

## ABBREVIATIONS

Ac. = Acetate  
 Act. = Active, activity, action  
 Ad. = Adrenal  
 Adrx. = Adrenalectomized  
 Alc. = Ethyl alcohol.  
 An. = Anesthetic  
 Bz. = Benzoate  
 Ca. = Approximately  
 Carb. = Carbonate  
 Cho. = Carbohydrate  
 Cl. = Chloro compound  
 Cpd. = Compound  
 D.C.A. = Desoxycorticosterone acetate  
 Diac. = Diacetate  
 Dibz. = Dibenzoate  
 Et. = Ethyl  
 Gon. = Gonadotropic  
 $(+H_2O)$  = Hydrated  
 Hyp. = Hypophysis  
 Hypx. = Hypophysectomized  
 i.m. = Intramuscular  
 i.p. = Intraperitoneally  
 Inact. = Inactive, etc.  
 I.U. = International unit  
 Me. = Methyl

M.P. = Melting point (If cpd. resolidifies after reaching a first melting point and then remelts at a higher temperature, the two melting points are connected by the sign +).  
 Ov. = Ovary  
 Pr. = Propionate  
 Preg. = Pregnant  
 Prep. gl. = Preputial glands  
 Pta. = Prostate  
 S.c. = Subcutaneous  
 Semicarb. = Semicarbazone  
 Sex. recept. = Sexual receptivity  
 Sol. = Solution  
 Subs. = Substance  
 S.ves. = Seminal vesicles  
 Te. = Testis  
 Tosylate = Paratoluenesulphonic acid ester  
 Triac. = Triacetate  
 Tribz. = Tribenzoate  
 U. = Unit  
 (u) = Uncorrected  
 Ur. = Urine  
 Vac. = In vacuo  
 Vag. = Vagina  
 Wt. = Weight

## SYMBOLS

B = Bitterling  
 C = Capon  
 D = Dog  
 G = Guinea pig  
 M = Mouse  
 R = Rat  
 Rb = Rabbit  
 X = Xenopus  
 $\delta$  = Male  
 ♀ = Female  
 $\delta/c$  = Castrate male  
 $\text{♀/c}$  = Spayed female  
 $[\alpha]$  = Optic rotation

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## Commonly used designations of compounds listed in this index

In the literature many steroids are generally referred to by their trivial names. Without knowledge of their exact chemical structure, such compounds are difficult to find in these volumes, and for the sake of convenience this alphabetical list is provided. It lists (a) frequently used common names, (b) antiquated, corrupt or abridged chemical terms and (c) systematic designations (in the nomenclature of this index) of the first mentioned derivatives of each parent hydrocarbon.

COMPOUND	NUMBER	COMPOUND	NUMBER
Acid from Kendall's cpd. "C"	239	8-epi-estrone	..... 30
Adrenosterone	187	epl-pregnanolone	..... 578
Allo-homo-( $\alpha$ )-pregnane	448	Equilenane	..... 62
Allo-pregnane	268	Equilenin	..... 69
Allo-pregnane-3( $\beta$ ),20( $\alpha$ )-diol	280	11-equilenone	..... 64
Allo-pregnane-3( $\beta$ ),20( $\beta$ )-diol	281	17-equilenone	..... 65
Allo-pregnane-dione	290	Equilin	..... 58
Allo-pregnanolone	283	Equilin-glycol	..... 45
17-allyl-testosterone	463	$\alpha$ -estradiol	..... 34
Androstane	125	$\beta$ -estradiol	..... 36
Androstanediol	133	Estrane	..... 20
Androstane-3,17-dione	143	Estranediol A	..... 25
Androstenedione	179	Estranediol B	..... 24
Anhydro-hydroxyprogesterone	440	Estranedione A	..... 29
Anthro-po-desoxycholic acid	670	Estranedione B	..... 29
Bisnor-chenodesoxycholic acid	639	Estriol	..... 40
3( $\beta$ )-bisnor-cholanic acid	637	Estrone	..... 37
Bisnor-desoxycholic acid	640	Estrone-a	..... 38
Bisnor-hyodesoxycholic acid	638	Ethenyl-androstendiol	..... 433
Cafestrol	265	17-ethenyl-estradiol	..... 94
Cheno-dehydrodesoxycholic acid	689	Ethenyl-testosterone	..... 425
Cheno-desoxycholic acid	670	17-ethynyl-androstane-3( $\beta$ ),17( $\alpha$ )-diol	..... 438
Cholane-24-ol	667	Ethynyl- $\alpha'$ -androstendiol-3,17	..... 441
Cholanic acid	657	17-ethynyl-estradiol	..... 95
Cholestenone	521	Ethynyl-testosterone	..... 440
Cholesterol	520	17-ethyl-androstendiol	..... 380
Cholic acid	693	Ethyl-dihydrotestosterone	..... 285
Chrysopregnane	534	21-ethyl-progesterone	..... 496
Cis-dihydrotestosterone	142	Ethyl-testosterone	..... 342
Cis-testosterone	178	Etio-allo-cholanic acid	..... 225
Coprostenone	521	Etiocolane	..... 547
Corticosterone	370	Etiodesoxy-cholic acid	..... 562
Dehydroandrosterone	194, 195	Etiolithocholic acid	..... 557
Dehydro-iso-androsterone	195	Follicular hormone	..... 37
Dehydrocholic acid	700	$\alpha$ -follicular hormone	..... 67
Dehydro-corticosterone	373	Follicular hormone hydrate	..... 40
Dehydrohyo-desoxycholic acid	688	Folliculostерone	..... 52
6-dehydroprogesterone	416	Hetero- $\beta$ '-allo-pregnane-dione	..... 338
9-dehydroprogesterone	417.1	Hetero- $\beta$ '-androstene-3-one-17( $\alpha$ )-ol	..... 164
11-dehydroprogesterone	418	Hexahydro-equilenin	..... 50
16-dehydroprogesterone	419	Hexahydro-estradiol	..... 24
Desoxycortic acid	673	Hexahydro-estriol	..... 30
Desoxycorticosterone	354	Hexahydro-estrone	..... 27
Desoxy-estrone	33	Hippulin	..... 56
11-desoxy-17-hydroxy-corticosterone	371	Homo-androstane	..... 523
Desoxo-testosterone	171	6( $\alpha$ )-hydroxy-11-desoxycorticosterone	..... 367
D-homo-equilenin	105	$\Delta^4$ -3( $\beta$ )-hydroxycholenic acid	..... 510
D-homo-iso-equilenin	106	17-hydroxy-corticosterone	..... 376
Dihydro-adrenosterone	156	6( $\alpha$ )-hydroxyprogesterone	..... 349
Dihydro-androsterone	183	11-hydroxy-progesterone	..... 350
Dihydrocorticosterone	328	12-hydroxy-progesterone	..... 351
$\alpha$ -dihydro-equilenin	66	17( $\alpha$ )-hydroxy-progesterone	..... 353
$\beta$ -17-dihydro-equilenin	67	17( $\beta$ )-hydroxy-progesterone	..... 352
17( $\alpha$ )-dihydro-equilin	55	21-hydroxy-progesterone	..... 364
Dihydrofollicular hormone	34	Hyodesoxycholic acid	..... 669
Dihydromenformon	34	1-Androstan-6-one	..... 119
Dihydro-progesterone	343, 584	1-Pregnolone	..... 124
Dihydrotheelin	34	Iso-allo-pregnanolone	..... 284
Dihydroxyestrin	34	Iso-androsterone	..... 140
Dihydroxy-ethenyl-estradiol	93	17-Iso-desoxycorticosterone	..... 355
3( $\beta$ ),20-dihydroxy-nor-allo-cholanic acid	498	Isoequilenin	..... 70
11,21-dihydroxy-progesterone	370	Isoequillin A	..... 67
D-homo-cis-androsterone	525	$\Delta^4$ -isoequillin	..... 54
D-homo- $\alpha$ -estradiol	102	17-iso-epi-pregnanolone	..... 679
D-homo- $\beta$ -estradiol	103	Iso-pregnanolol	..... 577
D-homo-estrone	104	17-iso-pregnolone	..... 384
D-homo-trans-androsterone	526	Iso-progesterone	..... 345
Epi-allo-pregnanolol	278	$\Delta^4$ -iso-progesterone	..... 386
Epi-androstenediol	191	$\Delta^{11}$ -iso-progesterone	..... 620
8-epi-estradiol	35	16-isopropyl-progesterone	..... 507

COMPOUND	NUMBER	COMPOUND	NUMBER
Kendall's "acid 1"	252	Pregneninolone	440
Kendall's "acid 2"	251	Pregnenolone	383
Kendall's "acid 5"	254	Progesterone ( $\alpha$ + $\beta$ form)	344
Kendall's acid "1A"	237	Pseudo-androstanone	116
Kendall's acid "1B"	234	Pyroandrosterone	112
Kendall's acid "1C"	230	Pyro-iso-androsterone	113
Kendall's acid "1D"	235	Reichstein's cpd. "A"	331
Kendall's acid "5B"	241	Reichstein's cpd. "C"	333
Kendall's cpd. "A"	373	Reichstein's cpd. "D"	336
Kendall's cpd. "B"	370	Reichstein's cpd. "E"	375
Kendall's cpd. "C"	383	Reichstein's cpd. "Fa"	378
Kendall's cpd. "D"	381	Reichstein's cpd. "G"	187
Kendall's cpd. "E"	378	Reichstein's cpd. "H"	370
Kendall's cpd. "F"	376	Reichstein's cpd. "J"	302
Kendall's cpd. "G"	386	Reichstein's cpd. "K"	320
Kendall's cpd. "H"	326	Reichstein's cpd. "L"	304
Kendall's desoxy cpd. "B"	354	Reichstein's cpd. "M"	376
Kendall's dihydro cpd. "A"	329	Reichstein's cpd. "N"	326
Kendall's hexahydro-cpd. "B"	315	Reichstein's cpd. "O"	301
$\Delta^4$ -3-keto-bisnor-cholenic acid	470	Reichstein's cpd. "P"	323
Keto-hydroxy-estrin	37	Reichstein's cpd. "Q"	354
6-keto-progesterone	359	Reichstein's cpd. "R"	321
11-keto-progesterone	360	Reichstein's cpd. "S"	371
Lithocholic acid	680	Reichstein's cpd. "T"	369
Luteosterone A	283	Reichstein's cpd. "U"	377
Luteosterone C	344	Reichstein's cpd. "V"	334
Luteosterone D	344	Reichstein's cpd. "Iso P"	324
17 $\alpha$ -methyl-chrysopregnane	534	Reichstein's cpd. "Iso-R"	328
17-methyl-estradiol	85	Reichstein's "17-Iso-cpd. N"	327
16-methyl-progesterone	445	Reichstein's monoketone m.p. 236°	149
21-methyl-progesterone	451	Retro-androstadiene-3-ol	118
17-methyl-testosterone	244	Retro-estratriene-triol	14
Methyl-trans-androstone-diol	255	Stigmasterol	523
n- $\Delta^4$ -androstenediol	175	18 $\beta$ -butyl-progesterone	514
Neo-pregnane	534	Testalolone	312
Nor-chonodesoxycholic acid	652	Testosterone	177
Nor-cholanic acid	648	Theelin	37
Nor-cholestane-3,25-dione	516	Theelol	40
Nor-desoxycholic acid	653	Trans-androsterone	140
Norequilenin	8	Trans-dehydro-androsterone	195
Nor-estrane	1	Trans-dihydrotestosterone	141
Nor-hyodesoxycholic acid	651	3-trans-17-trans- $\Delta^4$ -androstenediol	193
Nor-lithocholic acid	649	Trihydroxy estrin	40
20-nor-pregnenolone	258	Trihydroxy-propyl-testosterone	455
20-nor-progesterone	246	Urane	715
n-pregnanediol	576	Urso-dehydrodesoxycholic acid	686
n-pregnannolone	580	Urso-desoxycholic acid	671
Octahydro-estrone	24	Vinyl-androstanediol	433
$\beta$ -phocal-cholic acid	652	Vinyl-testosterone	425
Pregnannedione	584	Wintersteiner's cpd. "A"	331
Pregnano	587	Wintersteiner's cpd. "B"	336
Pregnanediol	574	Wintersteiner's cpd. "D"	338
Pregnanetriol-A	723	Wintersteiner's cpd. "E"	378
Pregnanetriol-B	295	Wintersteiner's cpd. "G"	304
Pregnanetrione	608	Wintersteiner's and Allen's cpd. "B"	344
Pregnanolone	440	Wintersteiner's and Allen's cpd. "C"	344