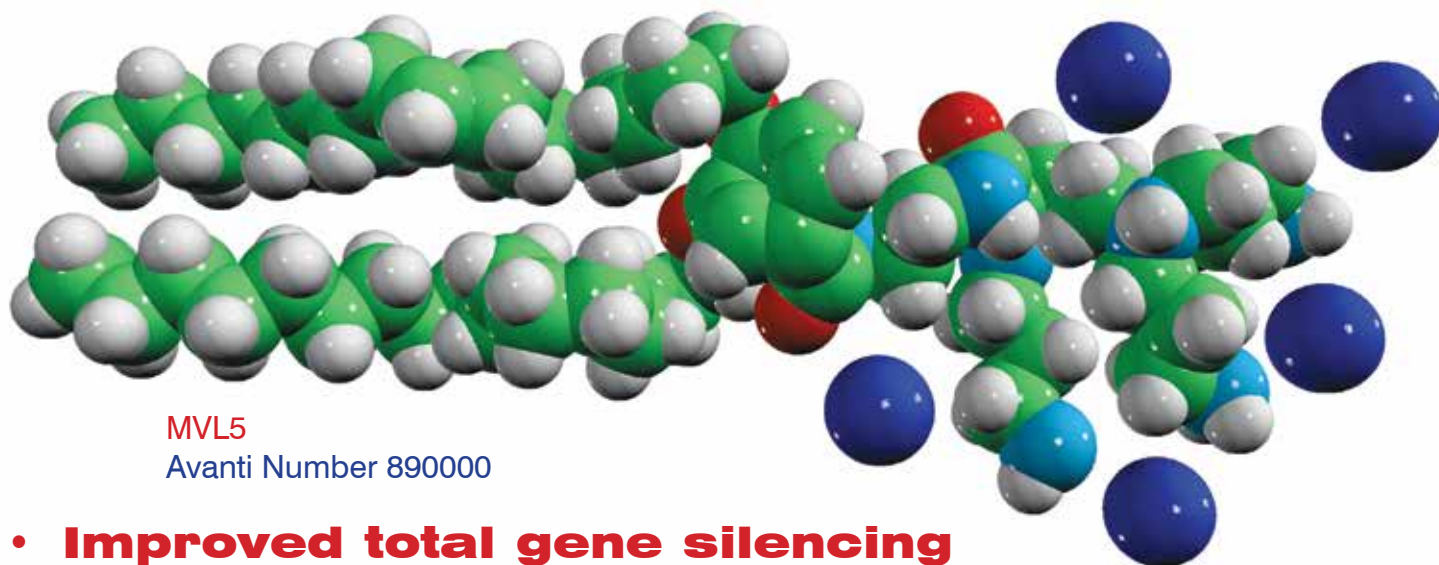


# NEW MULTIVALENT CATIONIC LIPID FOR siRNA DELIVERY



MVL5

Avanti Number 890000

- **Improved total gene silencing**
- **Lower non-specific gene silencing**
- **Lower toxicity**

These attributes establish the multivalent MVL5 as a superior transfection vector for siRNAs, and have implications for the optimal use of cationic lipids in therapeutic applications.

[Click here for more information](#)

## References

Bouxsein, N.F., C.S. McAllister, K.K. Ewert, C.E. Samuel, and C.R. Safinya. (2007). Structure and gene silencing activities of monovalent and pentavalent cationic lipid vectors complexed with siRNA. *Biochemistry* 46:4785-92.

Ewert, K., A. Ahmad, H.M. Evans, H.W. Schmidt, and C.R. Safinya. (2002). Efficient synthesis and cell-transfection properties of a new multivalent cationic lipid for nonviral gene delivery. *J Med Chem* 45:5023-9.

## **An extensive selection of Cationic Lipids now in stock at Avanti**

- **DC-Cholesterol**
- **pH Sensitive Lipids**
- **Ethyl PC**
- **DOTAP**
- **DDAB**
- **DOTMA**

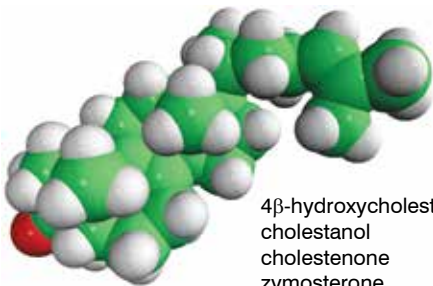
Also refer: Guo, X. and L. Huang. (2012). Recent advances in nonviral vectors for gene delivery. *Acc Chem Res* 45:971-9.

[Click here for complete list](#)

# STEROLS GALORE

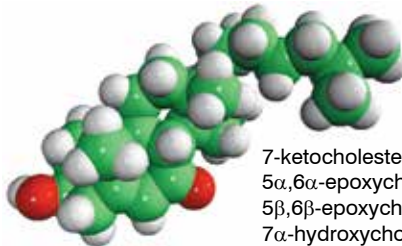
## ALL MADE WITH THE FAMOUS AVANTI<sup>®</sup> PURITY

### A-ring Substituted



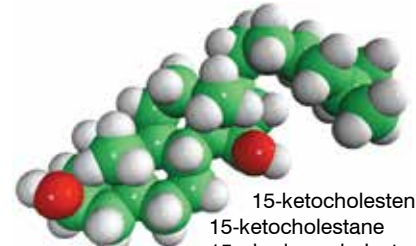
4β-hydroxycholesterol  
cholestanol  
cholestenone  
zymosterone

### B-ring Substituted



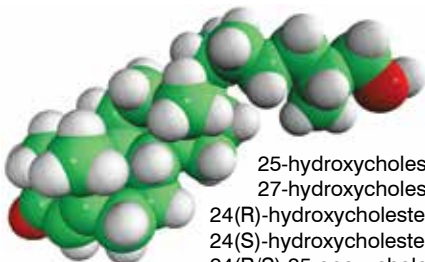
7-ketocholesterol  
5α,6α-epoxycholestanol  
5β,6β-epoxycholestanol  
7α-hydroxycholesterol  
7β-hydroxycholesterol  
6α-hydroxy5αcholestanol  
7-dehydroxycholesterol  
8(9)-dehydrocholesterol  
8(14)-dehydrocholesterol  
7α-hydroxycholestenone

### D-ring Substituted



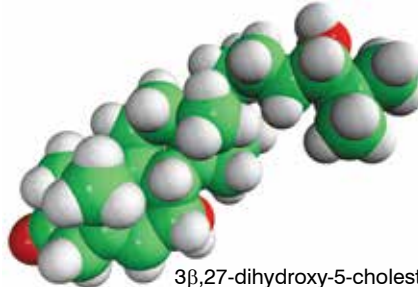
15-ketocholestene  
15-ketocholestanol  
15α-hydroxycholestenone  
15β-hydroxycholestenone  
15α-hydroxycholestanol  
15β-hydroxycholestanol

### Side Chain Substituted



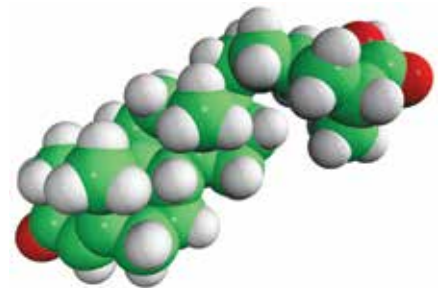
25-hydroxycholesterol  
27-hydroxycholesterol  
24(R)-hydroxycholesterol  
24(S)-hydroxycholesterol  
24(R/S),25-epoxycholesterol  
24(S),25-epoxycholesterol  
22(R)-hydroxycholesterol  
27-hydroxy cholestone  
22(S)-hydroxycholesterol

### Double Substituted



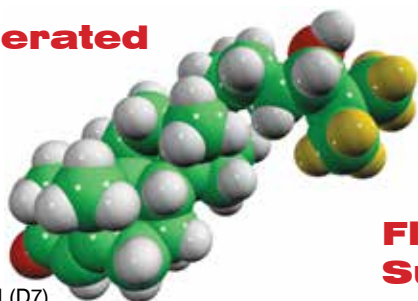
3β,27-dihydroxy-5-cholesten-7-one  
7α,27-dihydroxy-4-cholesten-3-one  
7α,24(S)-diOH-4-cholesten-3-one  
7α,25-dihydroxycholesterol  
7α,24(S)-dihydroxycholesterol  
7β,25-dihydroxycholesterol  
7α,27-dihydroxycholesterol  
7β,27-dihydroxycholesterol  
5α,6β-dihydroxycholestanol

### Cholestenic & Cholestanic Acid



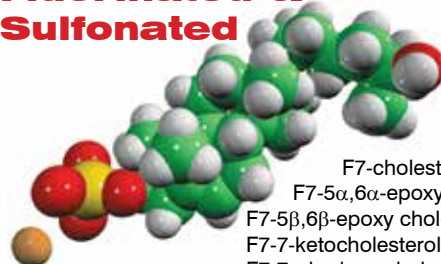
3β-hydroxy-7-oxo-5-cholestenic acid  
7α-hydroxy-3-oxo-4-cholestenic acid  
3β,7α-dihydroxy-5-cholestenic acid  
3β,7β-dihydroxy-5-cholestenic acid  
3β-dihydroxy-5-cholestenic acid  
3-oxo-4-cholestenic acid  
trihydroxycholestanic acid

### Deuterated



cholesterol (D7)  
desmosterol (D6)  
zymosterol (D5)  
zymostenol (D7)  
14-demethyl-lanosterol (D6)  
sitosterol (D6)  
lathosterol (D7)  
lanosterol (D6)  
dihydrolanosterol (D7)  
campesterol (D6)  
4β-hydroxycholesterol (D7)  
cholestanol (D5)  
7-ketocholesterol (D7)  
5α,6α-epoxycholestanol (D7)  
5β,6β-epoxycholestanol (D7)  
7α-hydroxycholesterol (D7)  
7β-hydroxycholesterol (D7)  
6α-hydroxy5αcholestanol (D7)  
7α-hydroxycholestenone (D7)  
7-dehydrocholesterol (D7)  
25-hydroxycholesterol (D6)

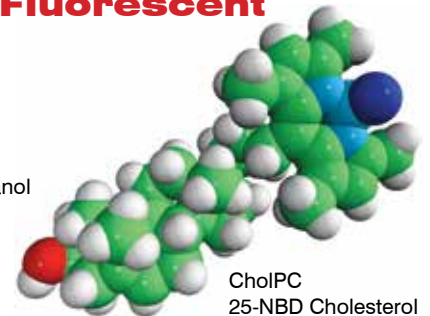
### Fluorinated & Sulfonated



27-hydroxycholesterol (D6)  
24(R/S)-hydroxycholesterol (D7)  
24(R/S),25-epoxycholesterol (D6)  
22(R)-hydroxycholesterol (D7)  
22(S)-hydroxycholesterol (D7)  
7α,25-dihydroxycholesterol (D6)  
5α,6β-dihydroxycholestanol (D7)  
7α,24(R/S)-diOHcholesterol (D7)  
7α,24(R/S)-diOHcholestenone (D7)

F7-cholesterol  
F7-5α,6α-epoxy cholestanol  
F7-5β,6β-epoxy cholestanol  
F7-7-ketocholesterol  
F7-7α-hydroxycholesterol  
F7-7β-hydroxycholesterol  
25-OHcholesterol-3-sulfate  
cholesterol sulfate  
DHEA sulfate

### Phosphorylated & Fluorescent



CholIPC  
25-NBD Cholesterol  
NBD-6 Cholesterol  
NBD-12 Cholesterol  
dehydroergosterol  
TopFluor<sup>®</sup> Cholesterol

[Click here for details of all Avanti Sterols](#)

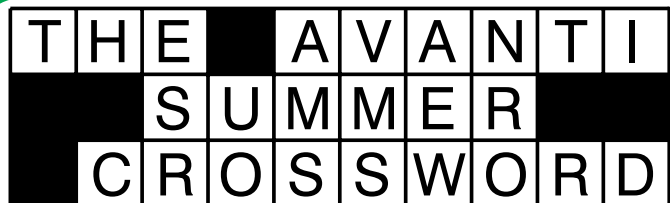
## Spam Filter

To ensure that future Emails from Avanti aren't blocked by antispam software, be sure to add [newsletter@avantilipids.com](mailto:newsletter@avantilipids.com) to your list of 'allowed senders and contacts'.

## New Products

Avanti's scientists are constantly developing exciting new lipids. Keep up to date by visiting this section regularly.

[Click here for more information](#)



## Test your wits...

.....against the world's best!

[Click here to download](#)

## Please look us up during one of the many Shows at which we will be exhibiting

- 40th Controlled Release Society Annual Meeting  
[Avanti will be Exhibiting](#)  
July 21 - 24  
Honolulu, HI
- Gordon Research Conference  
[Avanti will be Attending & Supporting Financially](#)  
July 21 - 26  
Waterville Valley, NH
- 54th International Conference on the Bioscience of Lipids  
[Avanti will be Exhibiting](#)  
September 17 - 21  
Bari, Italy
- NIH Research Festival  
[Avanti will be Exhibiting](#)  
October 7 - 11  
Bethesda, MD
- 7th International Ceramide Conference  
[Avanti will be Attending](#)  
October 20 - 24  
New York, NY
- CPhI Worldwide  
[Avanti will be Exhibiting](#)  
October, 22 - 24  
Messe Frankfurt, Germany
- Bioactive Lipids in Cancer, Inflammation and Related Diseases  
[Avanti will be Exhibiting & Supporting Financially](#)  
November 3 - 6  
San Juan, Puerto Rico
- AAPS Annual Meeting and Exposition  
[Avanti will be Exhibiting](#)  
November 10 - 14  
San Antonio, TX
- SupplySide West  
[Avanti will be Exhibiting](#)  
November 12 - 16  
Las Vegas, NV
- 48th Southeastern Regional Lipid Conference  
[Avanti will be Attending & Supporting Financially](#)  
November 13 - 15  
Cashiers, NC

