

Supplementary Information

Synthesis and Antibacterial Activity of Cationic Amino Acids-Conjugated Dendrimers Loaded With a Mixture of Two Triterpenoid Acids

Anna Maria Schito ¹, Gian Carlo Schito ¹ and Silvana Alfei ^{2,*}

¹ Department of Surgical Sciences and Integrated Diagnostics (DISC), University of Genoa, Viale Benedetto XV, 6, I-16132 Genova, Italy, amschito@unige.it (A.M.S); giancarlo.schito@unige.it (G.C.Z.)

² Department of Pharmacy (DiFAR), University of Genoa, Viale Cembrano 4, I-16148, Genova, Italy, alfei@difar.unige.it (S.A.)

* Correspondence: alfei@difar.unige.it; Tel.: +39-010-335-2296 (S.A.)

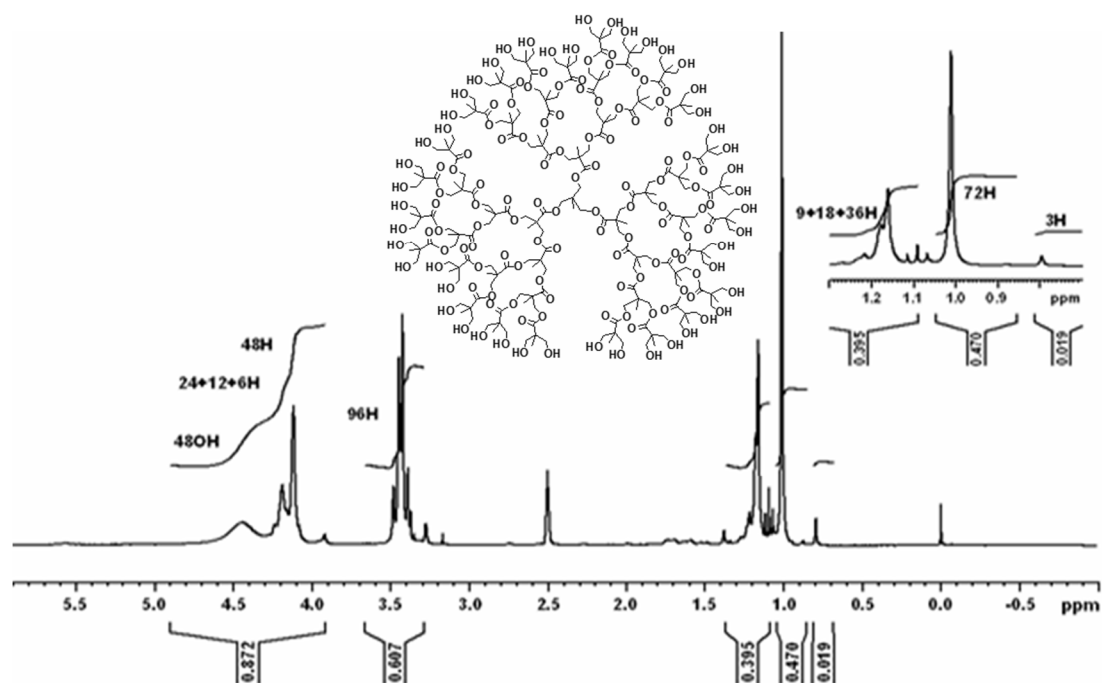


Figure S1. ¹H NMR of G4 (300 MHz, DMSO-*d*₆).

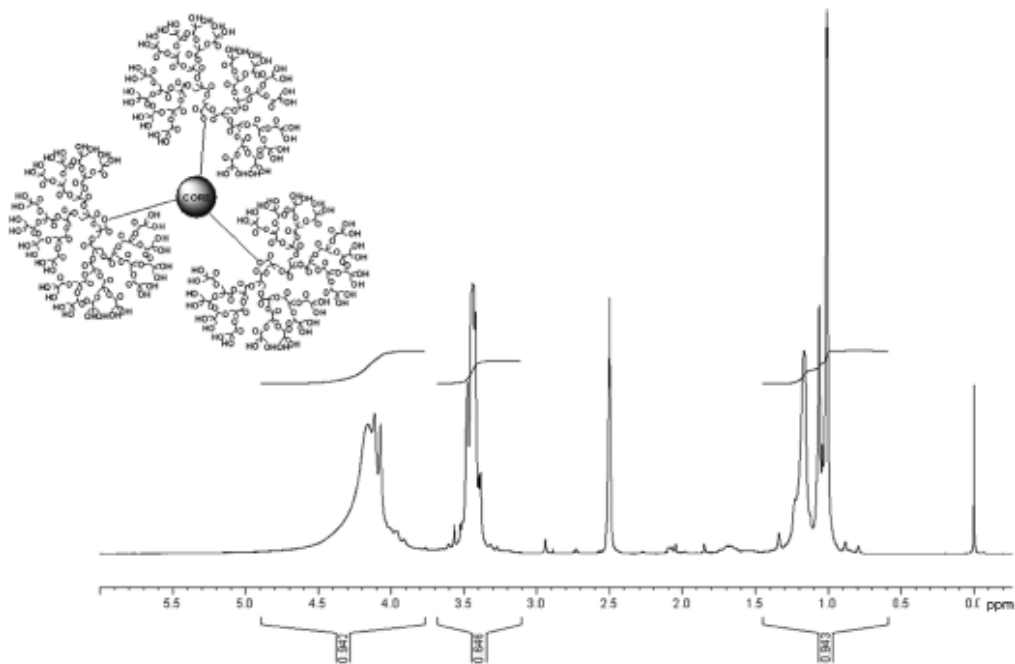
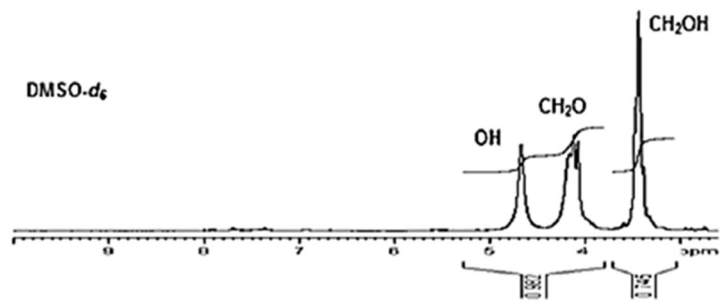


Figure S2. ^1H NMR of G5 (300 MHz, $\text{DMSO-}d_6$).

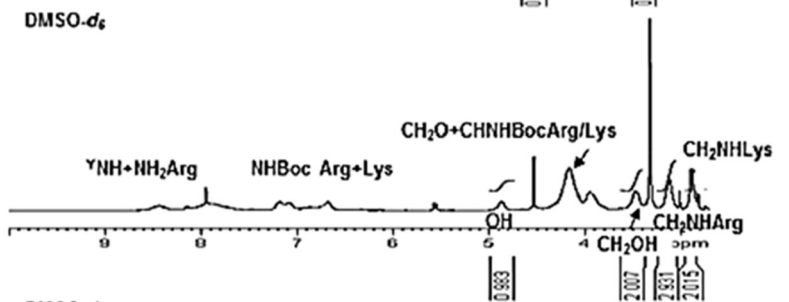
G5:

192 H di CH_2OH
 186 H di CH_2OR
 96 OH



G5BocLys(30)BOCArg(NO₂)(38)OH(28):

60 H di CH_2NHLys
 76 H di $\text{CH}_2^{\gamma}\text{NH Arg}$
 56 H di CH_2OH
 28 H di OH



G5Lys(30)Arg(38)OH(28) x 136HCl:

60 H di CH_2NHLys
 76 H di $\text{CH}_2^{\gamma}\text{NH Arg}$
 56 H di CH_2OH
 408 NH_3^+Cl^-

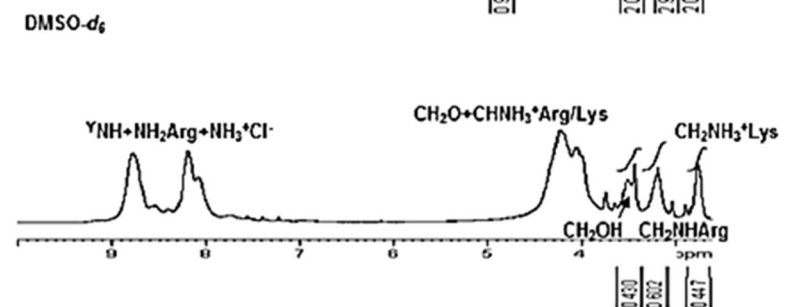


Figure S3. ^1H NMR of G5, Boc-protected intermediate and the final cationic dendrimer G5R(38)K(30)OH(28) (300 MHz, $\text{DMSO-}d_6$).

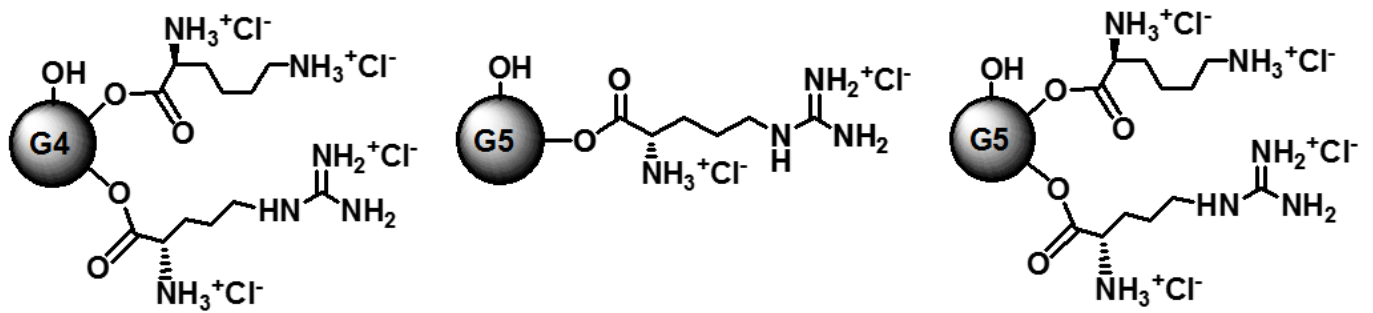


Figure S4. Starting from the left side, simplified structures of G4R(16)K(19)OH(13), G5R(66)OH(30) and G5R(38)K(30)OH(28).

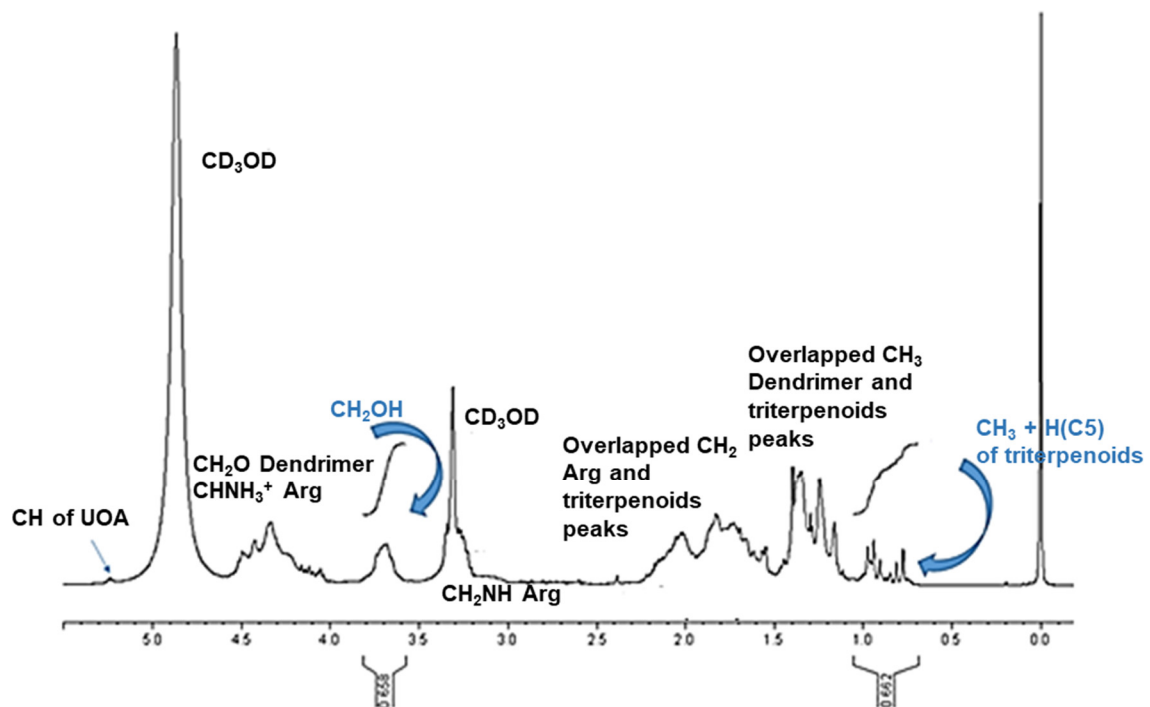


Figure S5. ^1H NMR spectrum of G5R(66)UOA(3) in CD_3OD (300MHz).

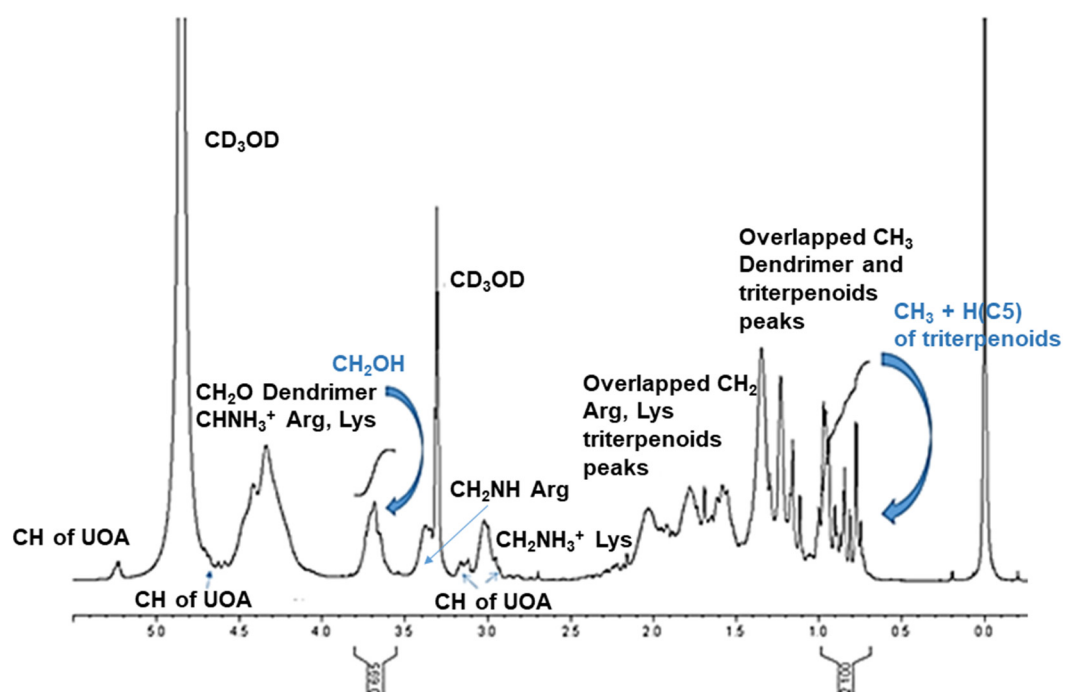


Figure S6. ^1H NMR spectrum of G5R(38)K(30)UOA(8) in CD_3OD (300MHz).

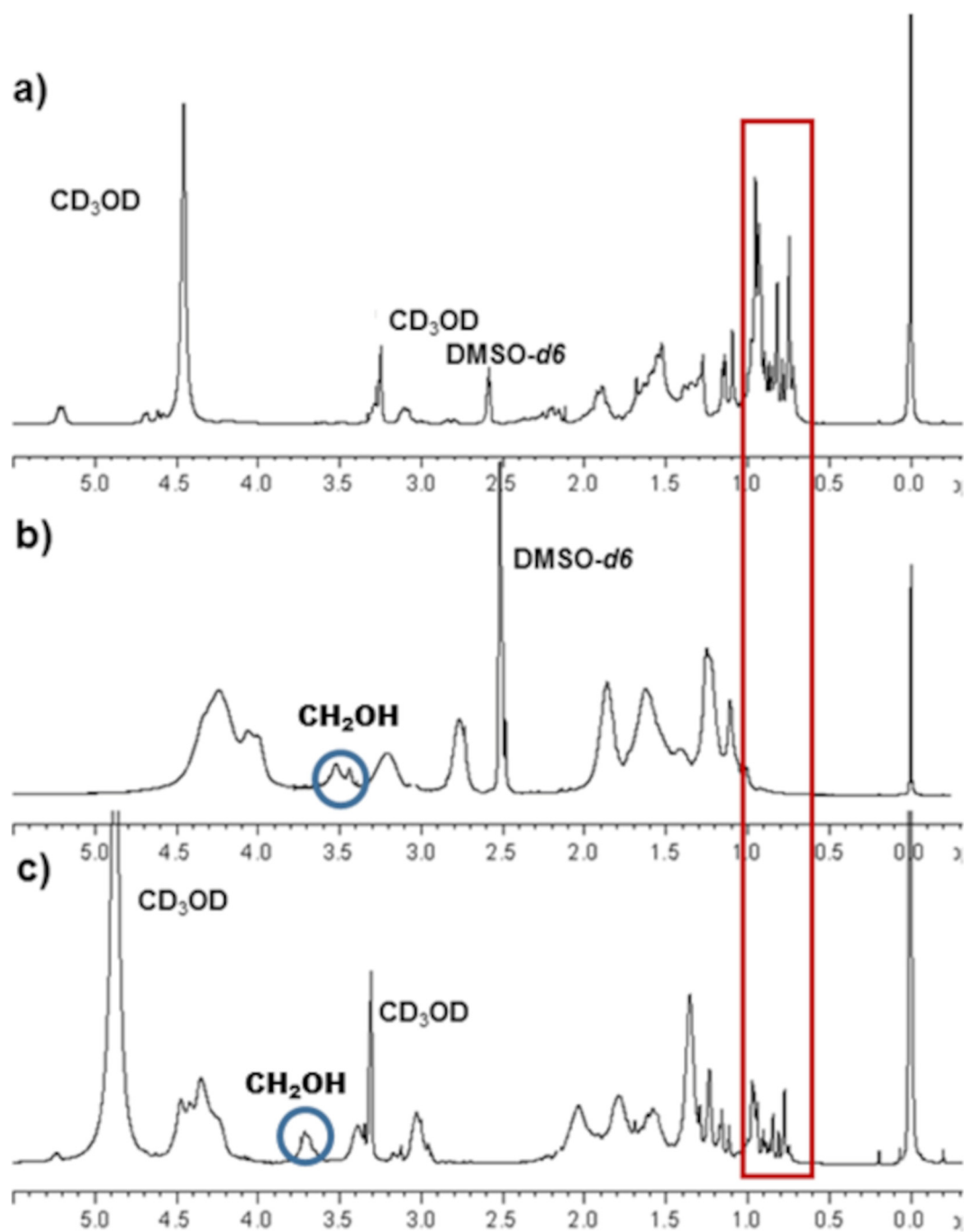


Figure S7. Comparison between the ¹H NMR spectra of UOA (a), the cationic empty dendrimer G4R(16)K(19)OH(13) and the UOACD G4R(16)K(19)UOA(4). In the unloaded dendrimer, the signal of the CH₂OH group appears slightly shifted due to the different solvents used during spectra acquisition.

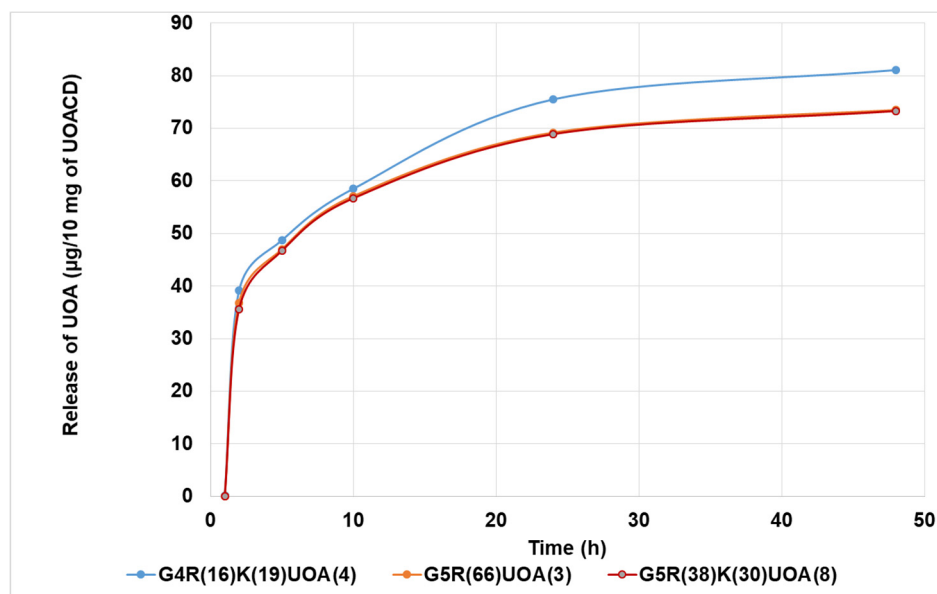


Figure S8. Release profile of UOA from UOACDs.