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Supplementary information

New Bromo- and Iodo-hydroxylactones with Two Methyl Groups Obtained by Biotransformation of Bicyclic Halolactones

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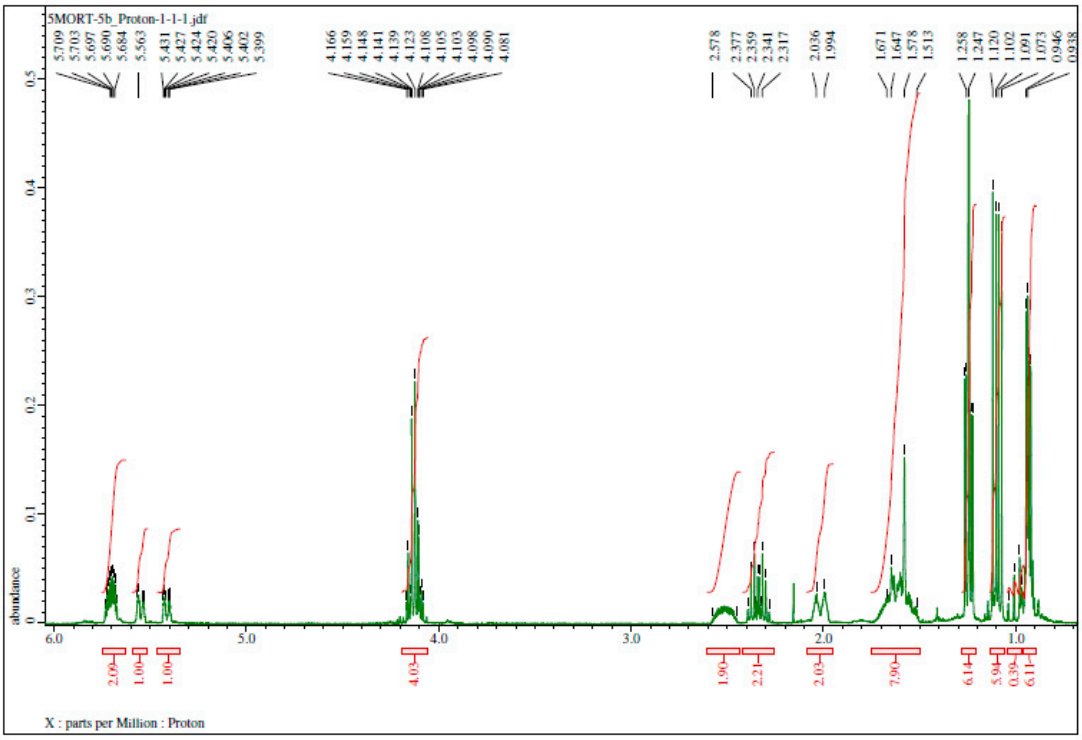


Figure S1. ^{1}H NMR (400 MHz, $CDCl_3$) spectrum of ester **2.**

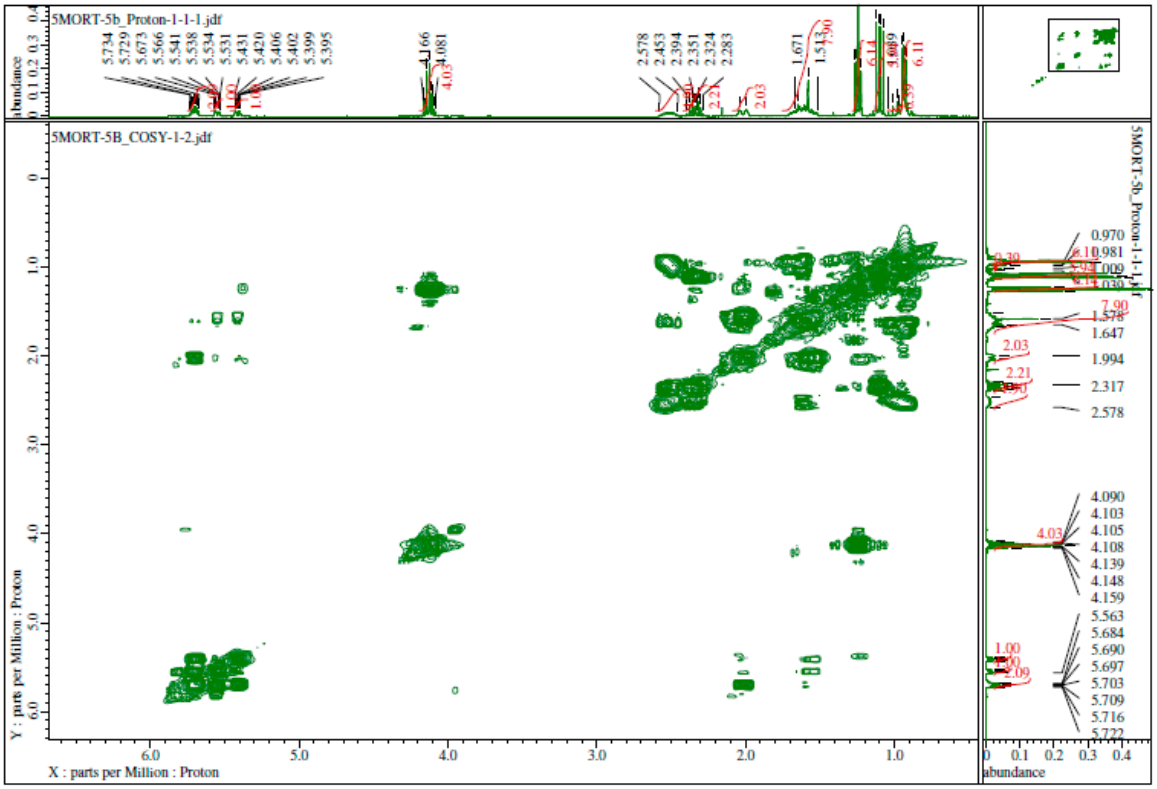


Figure S2. COSY (100 MHz, $CDCl_3$) spectrum of ester **2.**

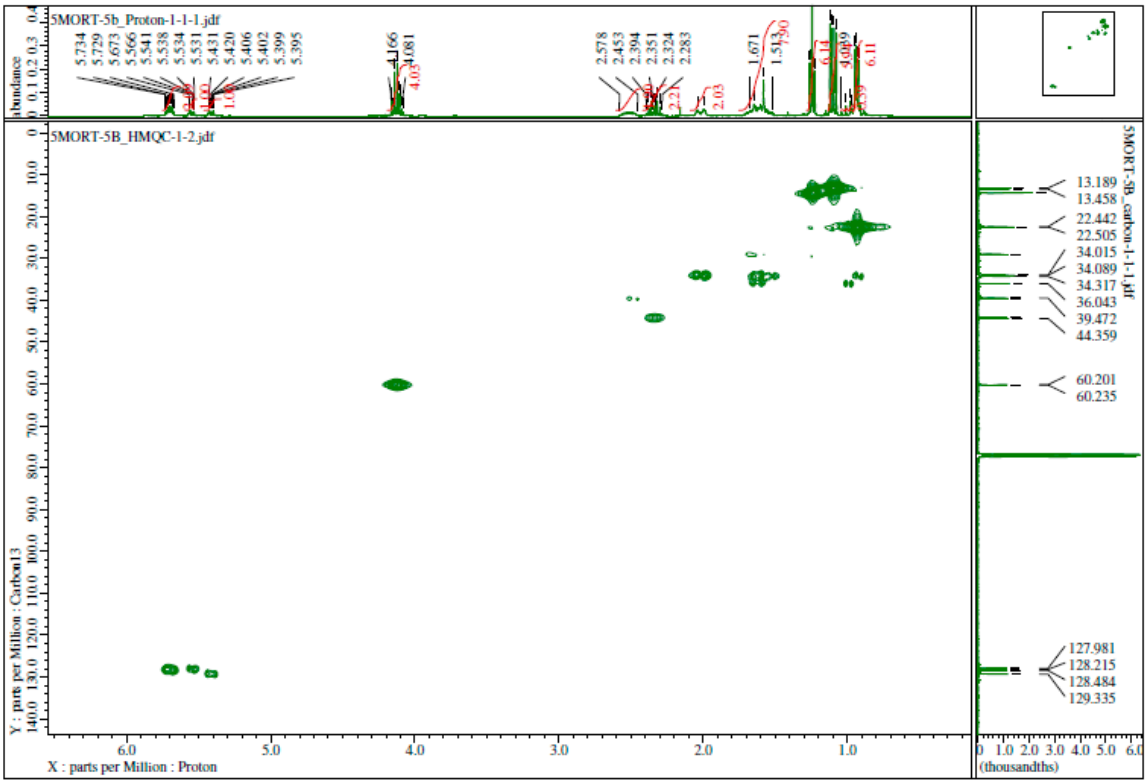


Figure S3. HMQC (100 MHz, $CDCl_3$) spectrum of ester **2.**

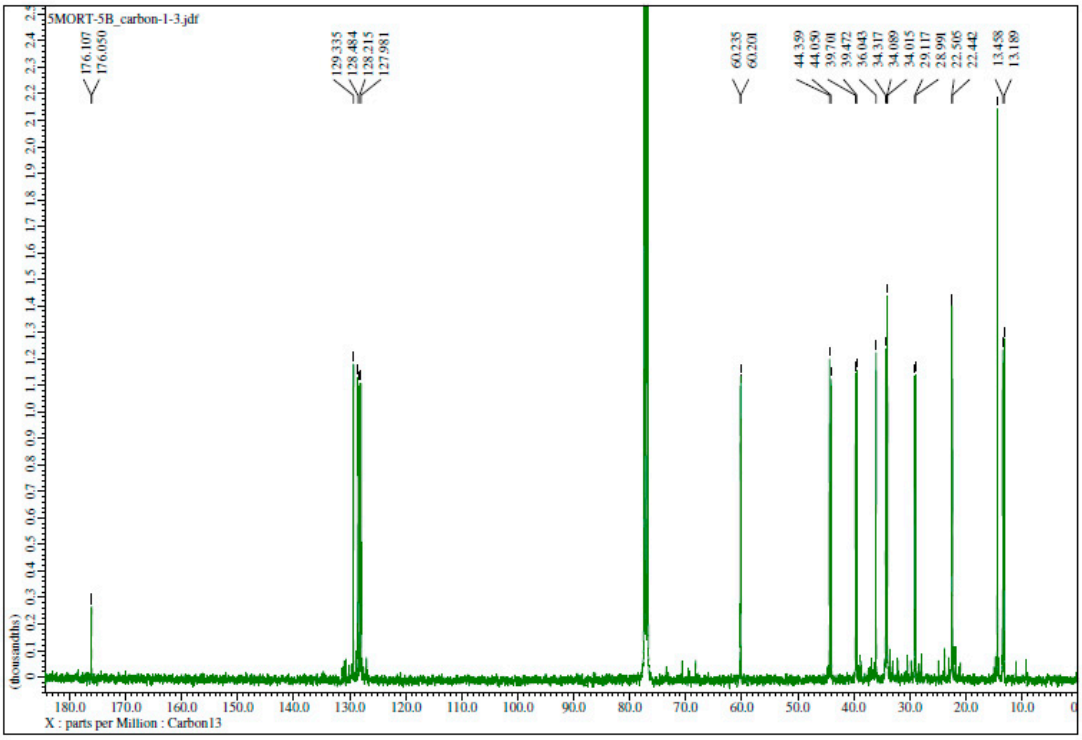


Figure S4. ^{13}C NMR (100 MHz, $CDCl_3$) spectrum of ester **2.**

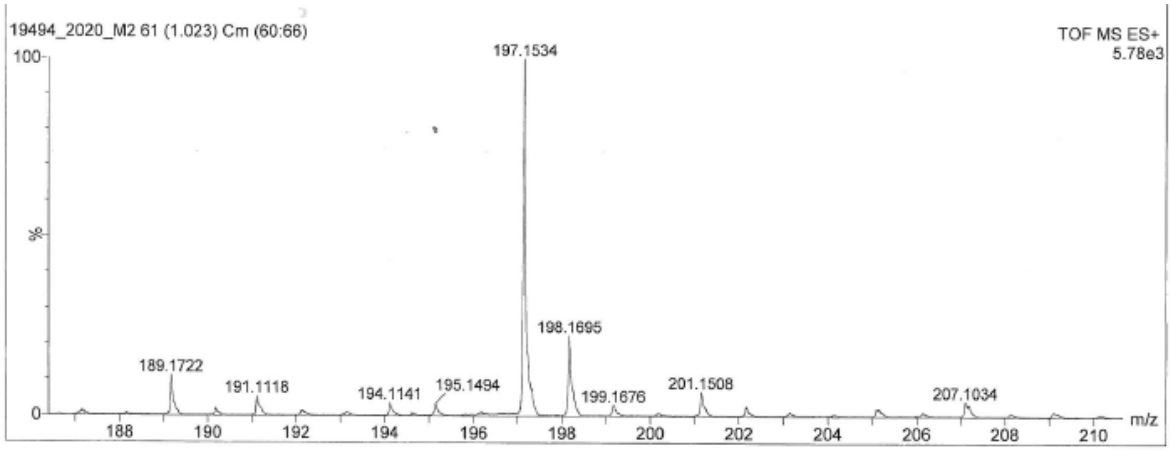


Figure S5. HRMS spectrum of ester **2.**

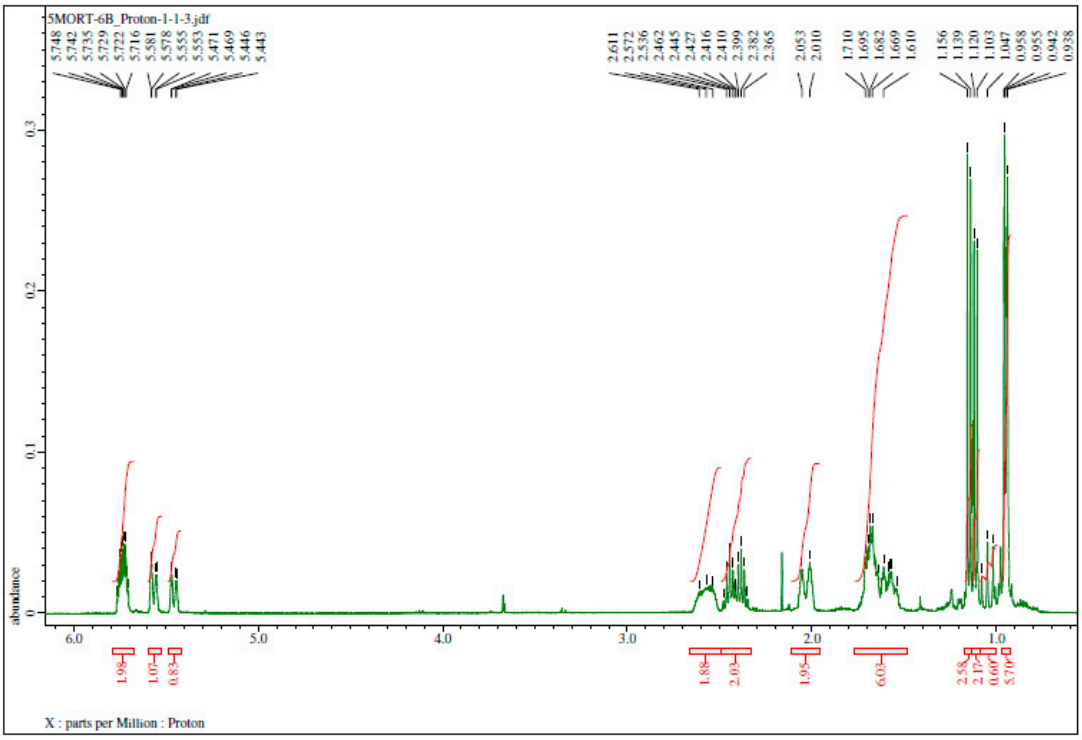


Figure S6. ^{1}H NMR (400 MHz, $CDCl_3$) spectrum of acid **3.**

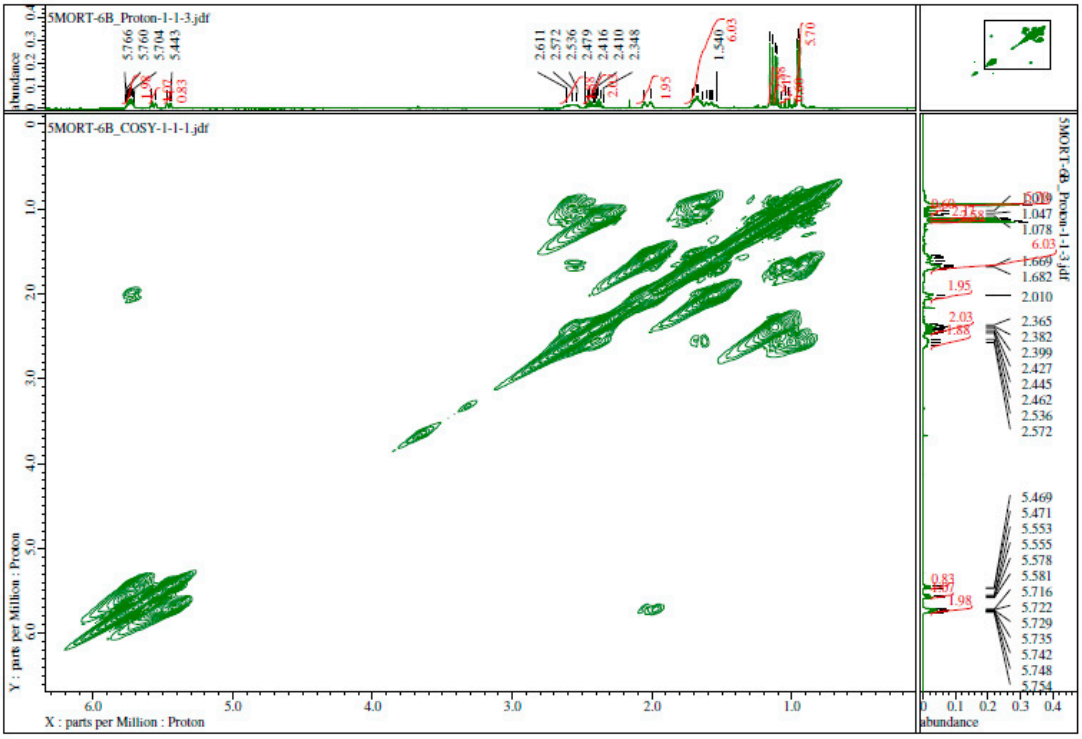


Figure S7. COSY (100 MHz, $CDCl_3$) spectrum of acid **3.**

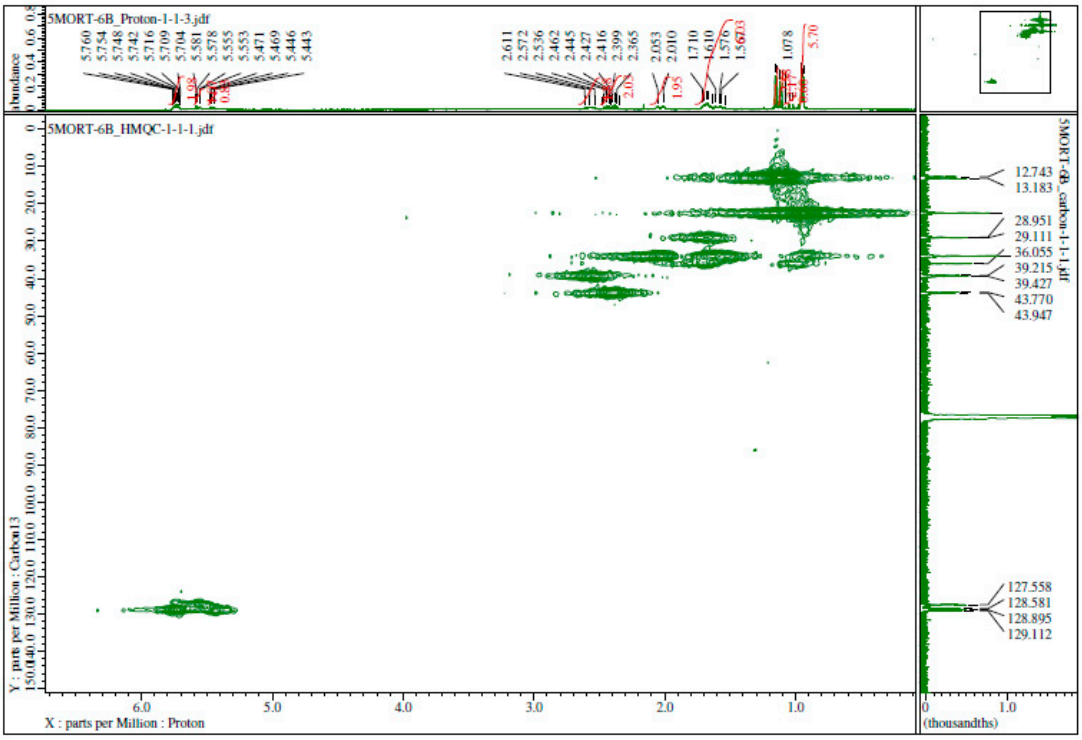


Figure S8. HMQC (100 MHz, $CDCl_3$) spectrum of acid **3.**

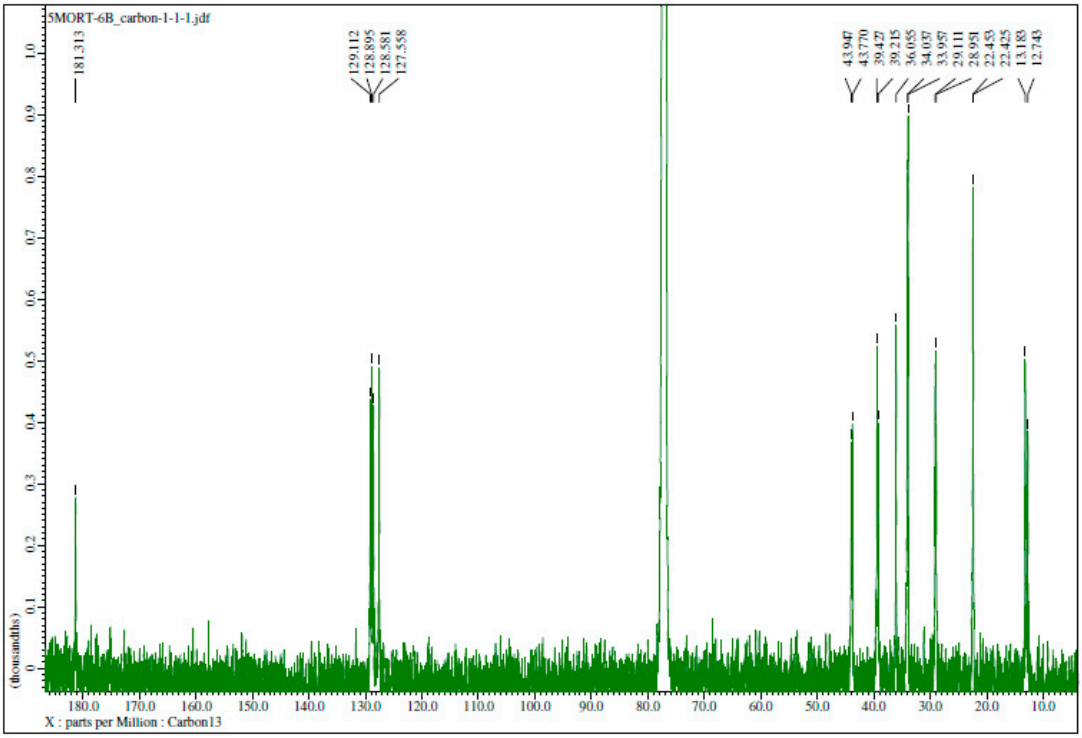


Figure S9. ^{13}C NMR (100 MHz, $CDCl_3$) spectrum of acid **3.**

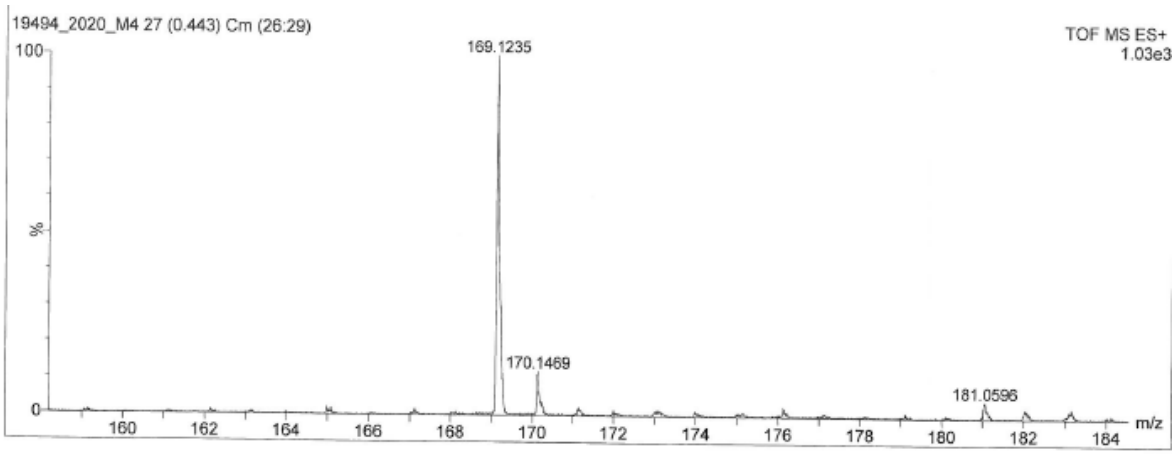


Figure S10. HRMS spectrum of acid **3.**

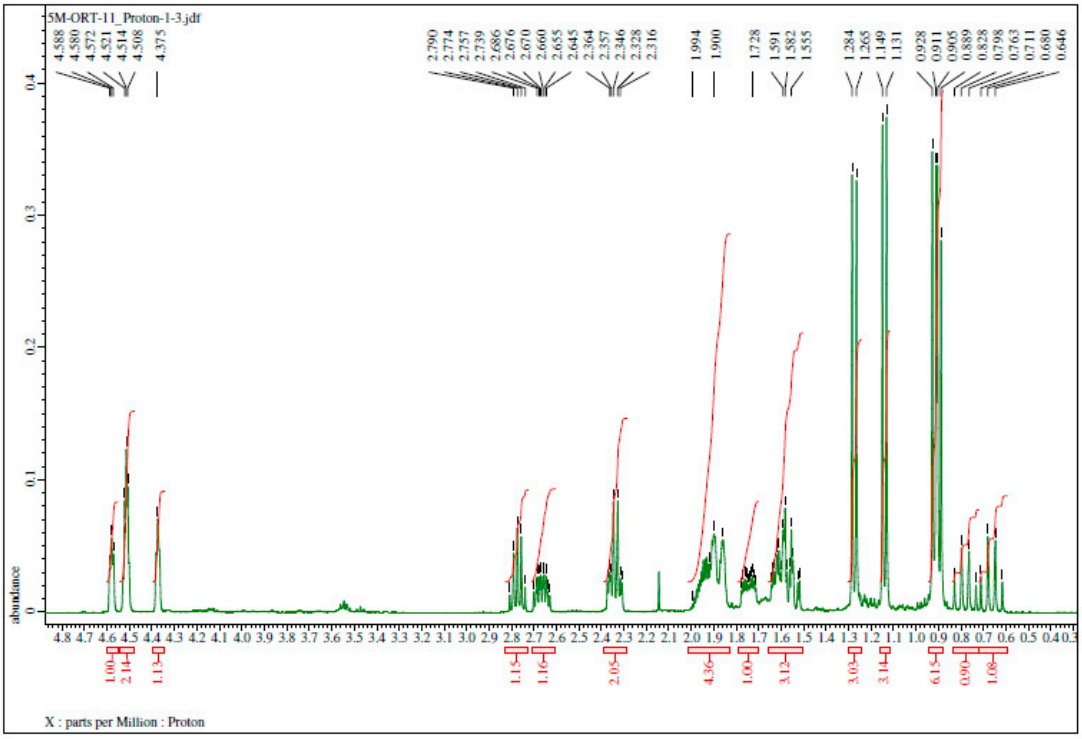


Figure S11. ^{1}H NMR (400 MHz, $CDCl_3$) spectrum of chlorolactone **4.**

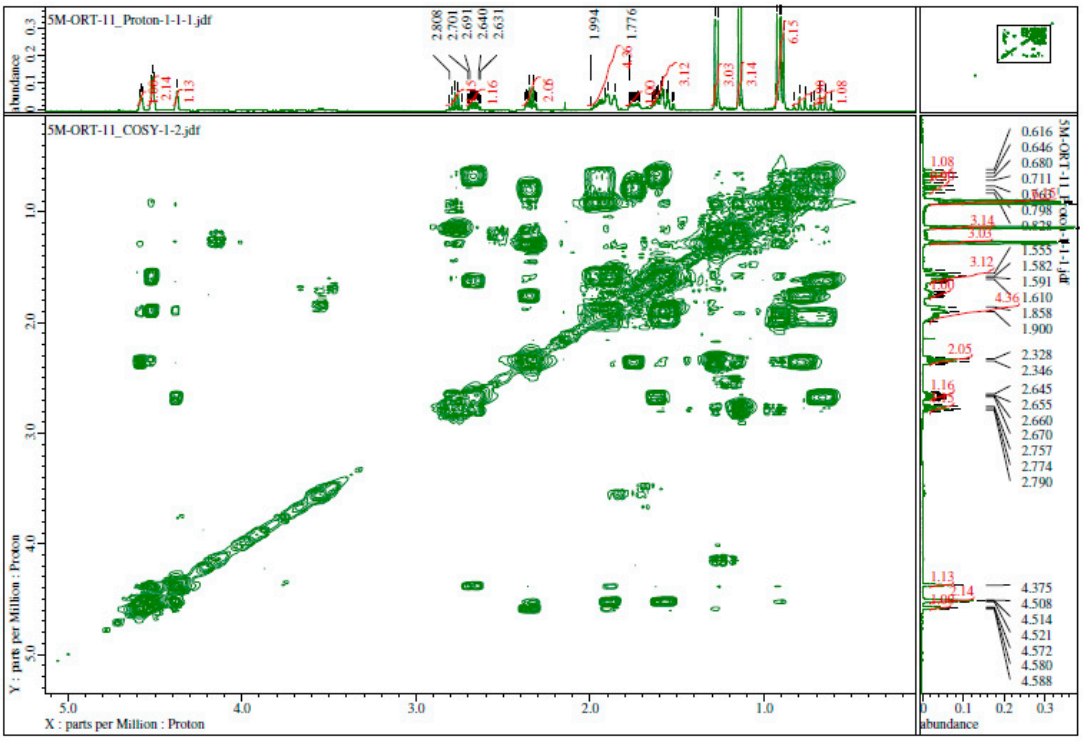


Figure S12. COSY (100 MHz, $CDCl_3$) spectrum of chlorolactone **4.**

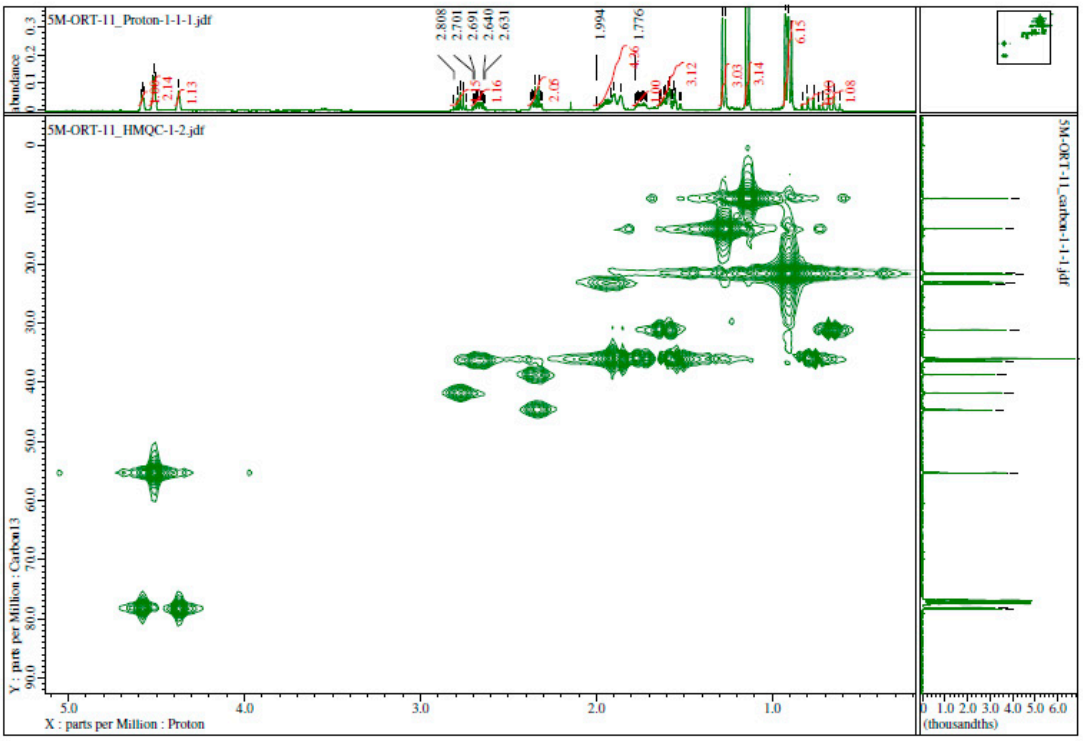


Figure S13. HMQC (100 MHz, $CDCl_3$) spectrum of chlorolactone **4.**

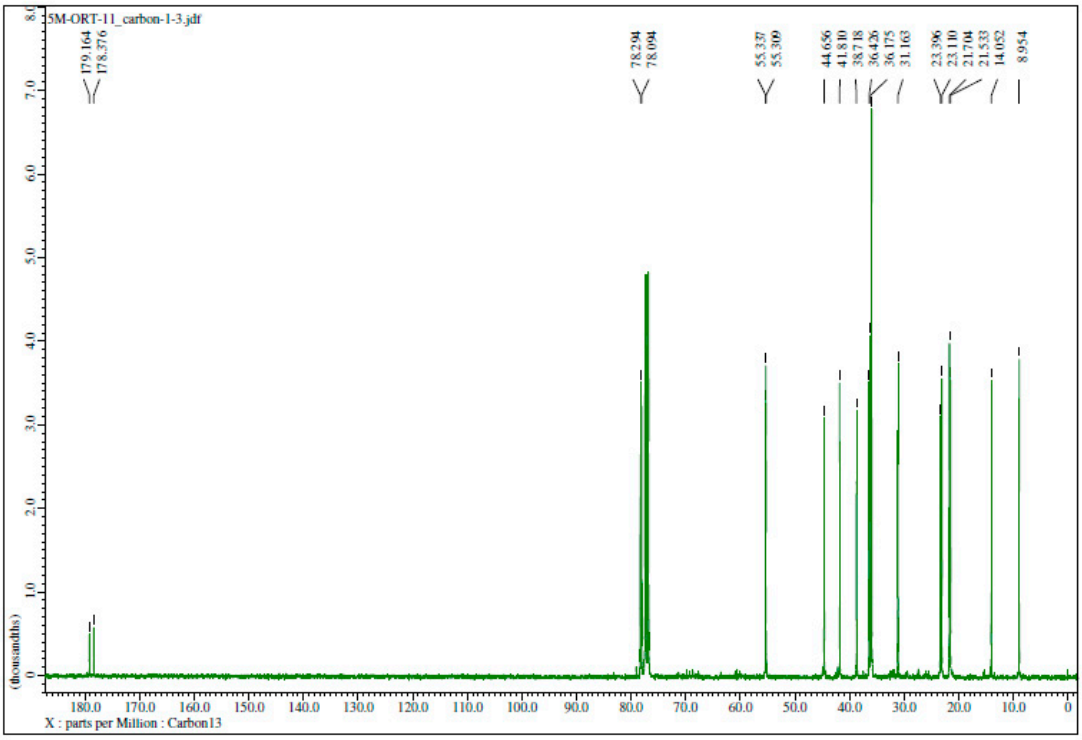


Figure S14. ^{13}C NMR (100 MHz, $CDCl_3$) spectrum of chlorolactone **4.**

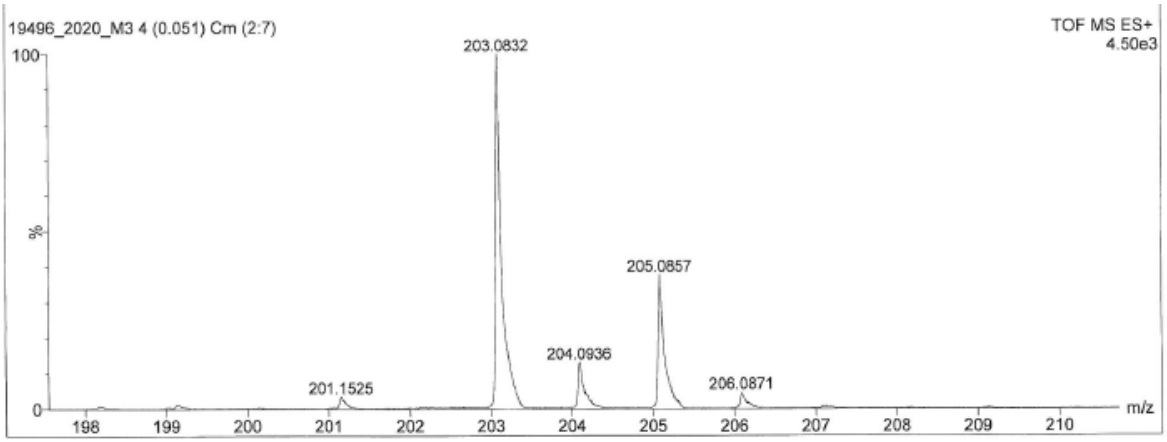


Figure S15. HRMS spectrum chlorolactone **4.**

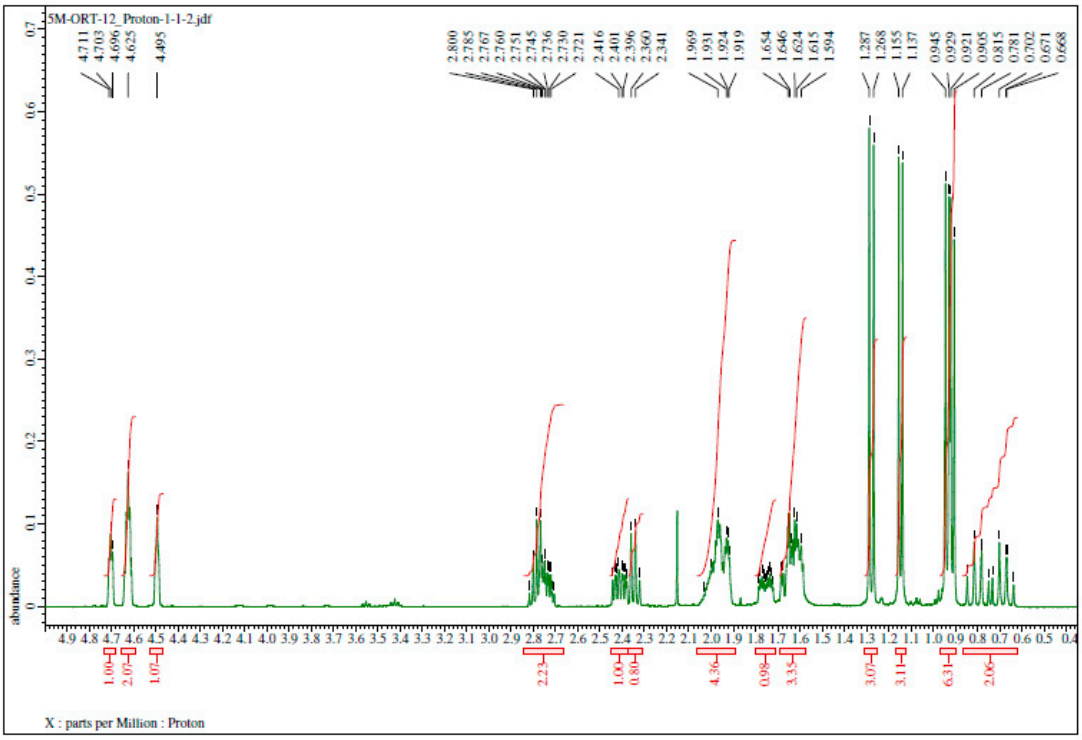


Figure S16. ^{1}H NMR (400 MHz, $CDCl_3$) spectrum of bromolactone **5.**

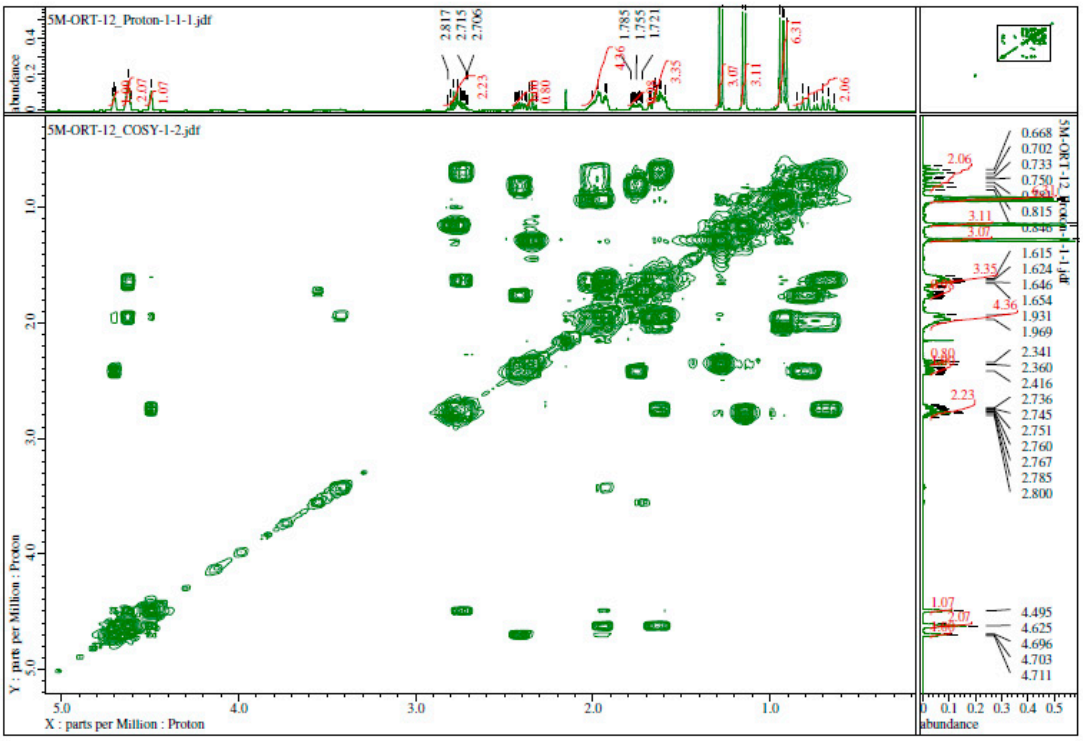


Figure S17. COSY (100 MHz, $CDCl_3$) spectrum of bromolactone **5.**

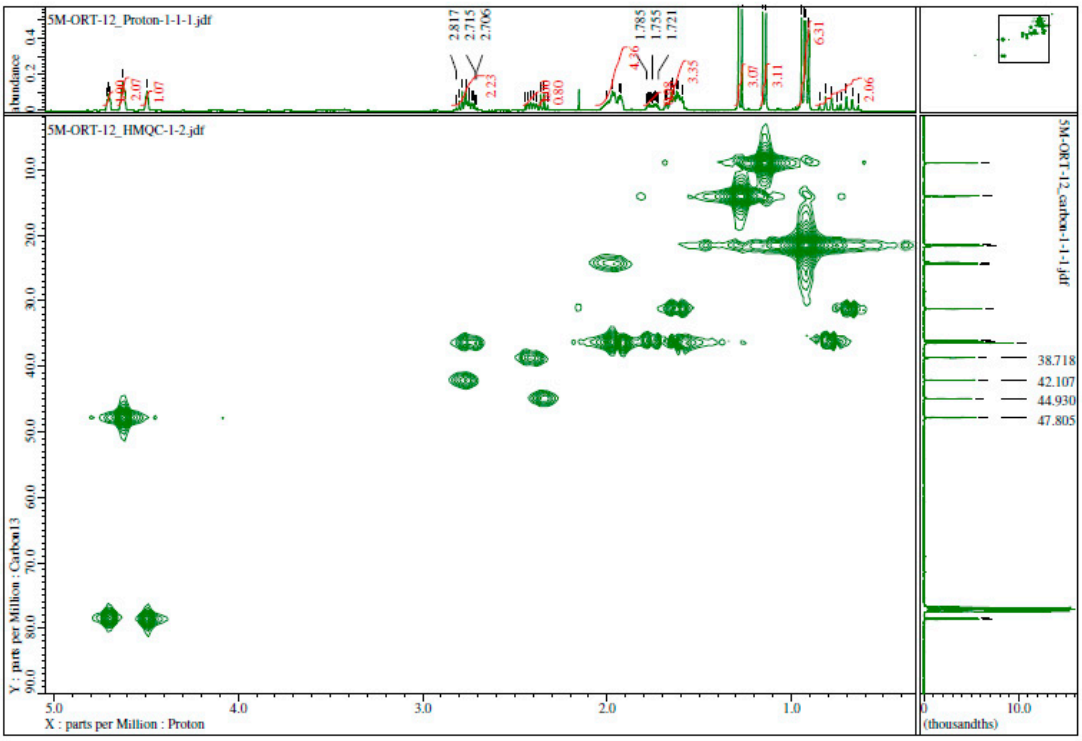


Figure S18. HMQC (100 MHz, $CDCl_3$) spectrum of bromolactone **5.**

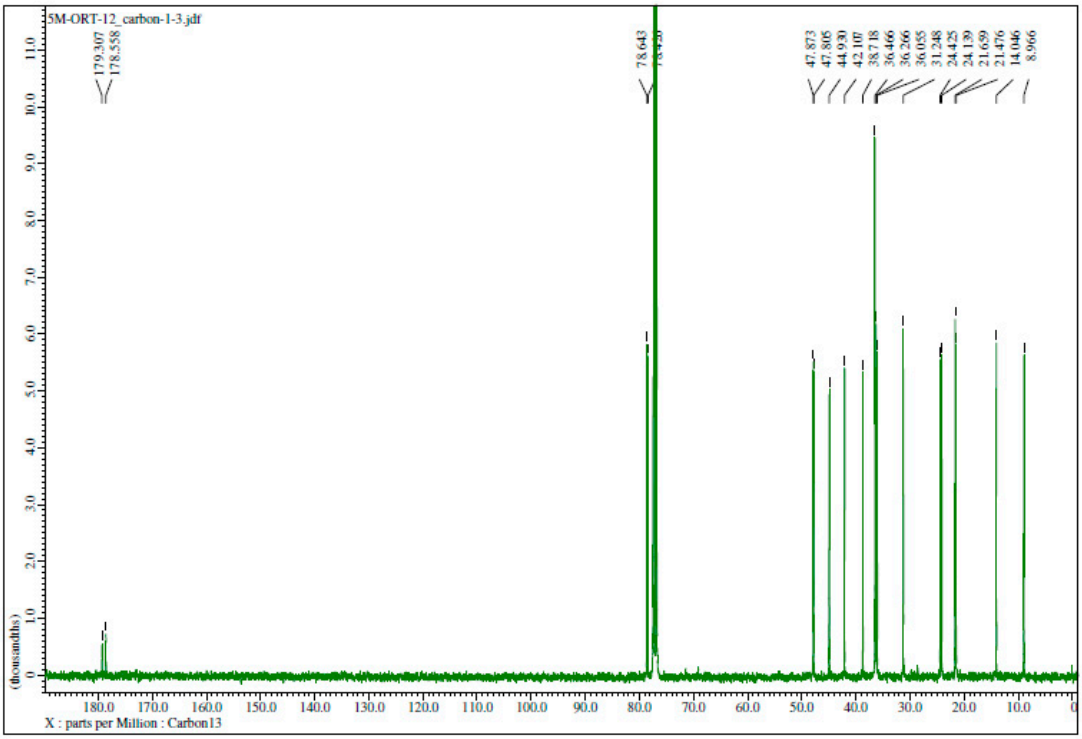


Figure S19. ^{13}C NMR (100 MHz, $CDCl_3$) spectrum bromolactone **5.**

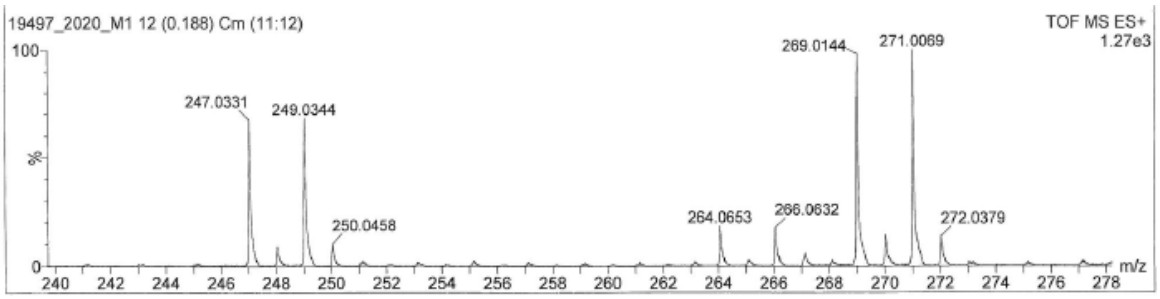


Figure S20. HRMS spectrum bromolactone **5.**

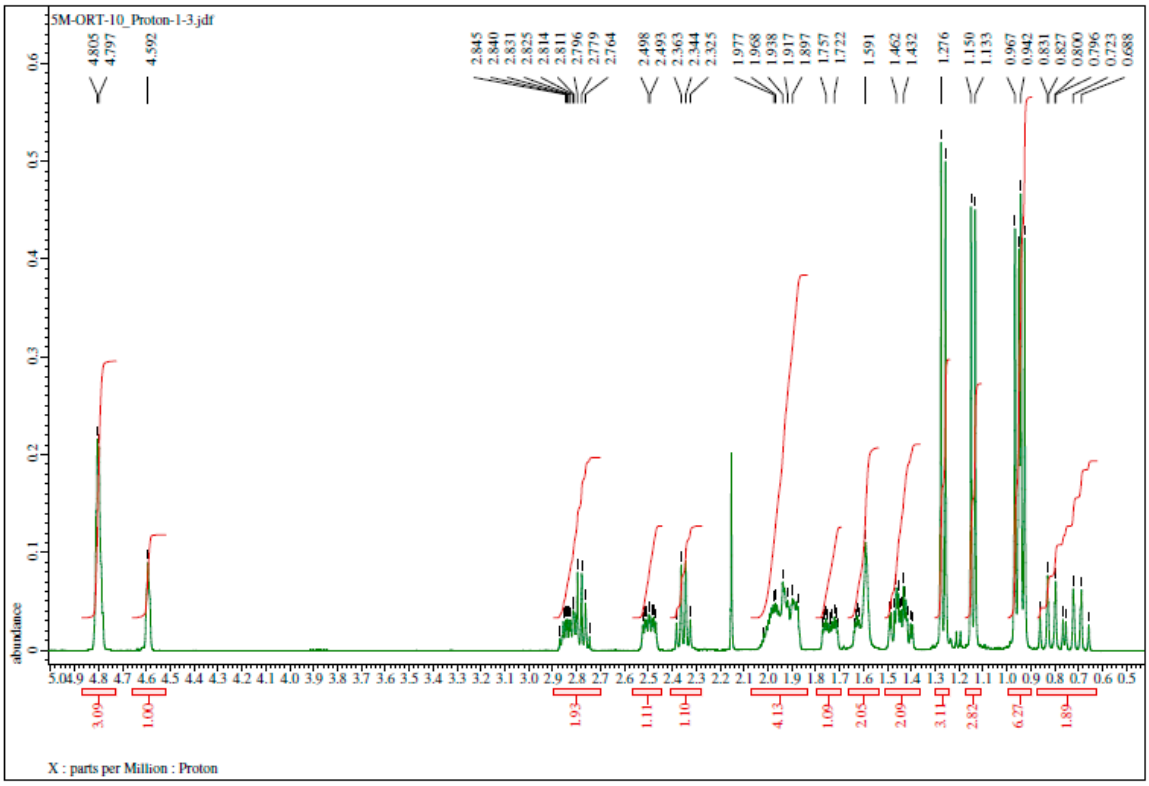


Figure S21. ^{1}H NMR (400 MHz, $CDCl_3$) spectrum of iodolactone **6.**

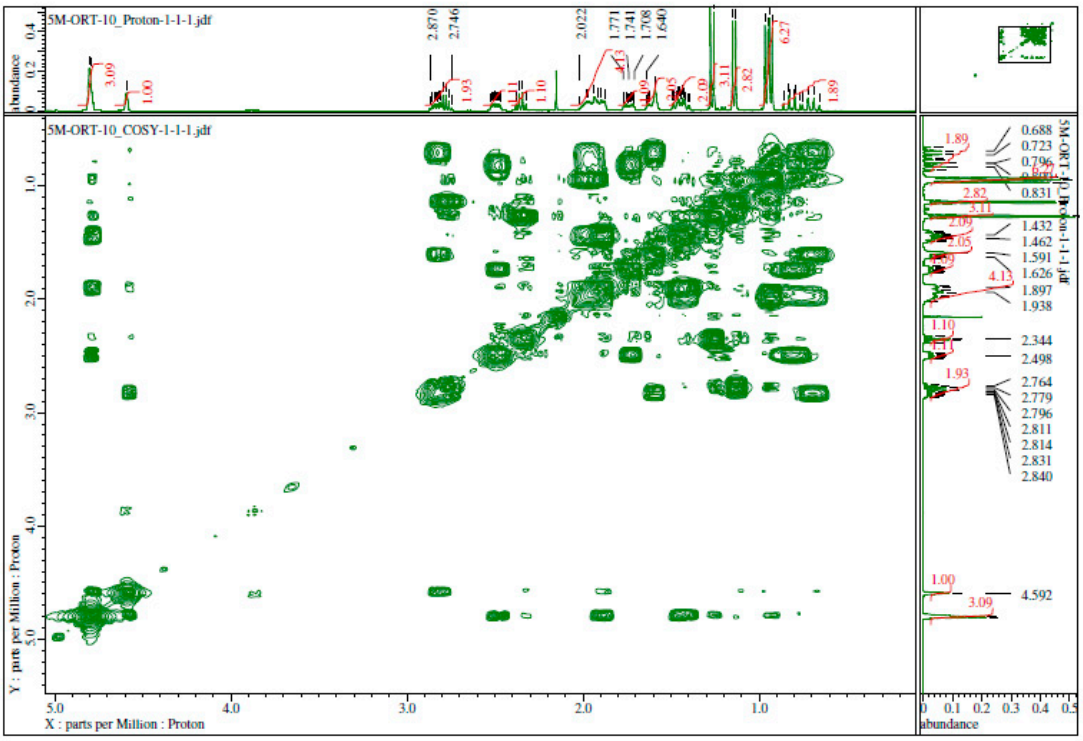


Figure S22. COSY (100 MHz, $CDCl_3$) spectrum of iodolactone **6.**

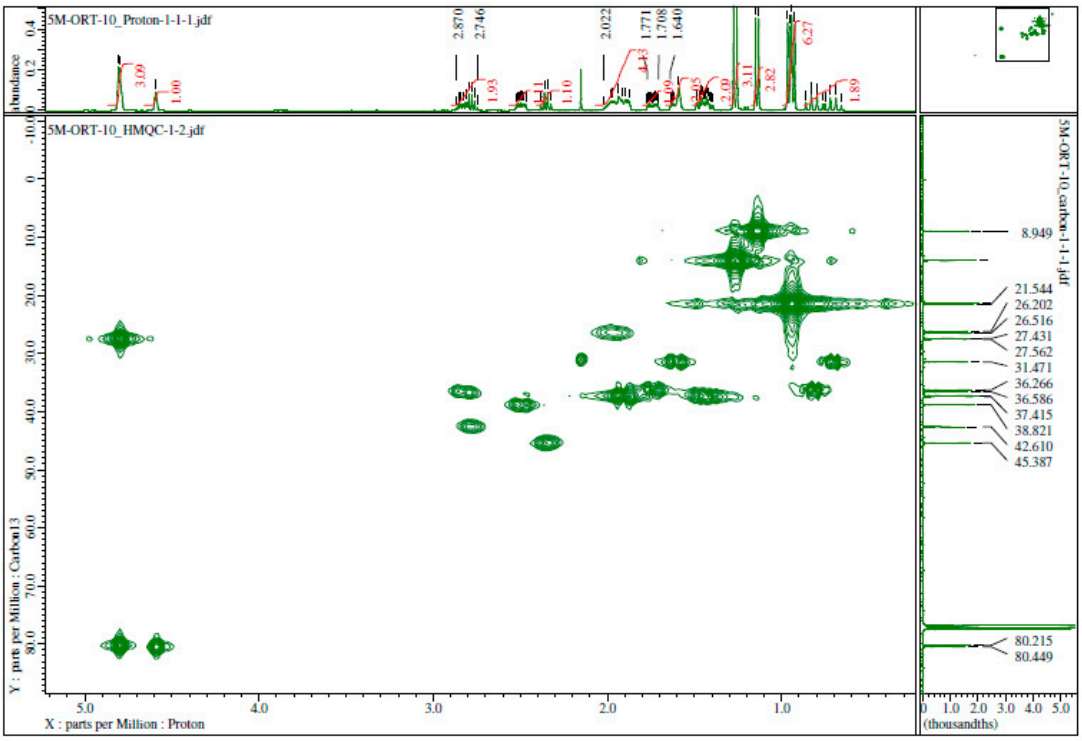


Figure S23. HMQC (100 MHz, $CDCl_3$) spectrum of iodolactone **6.**

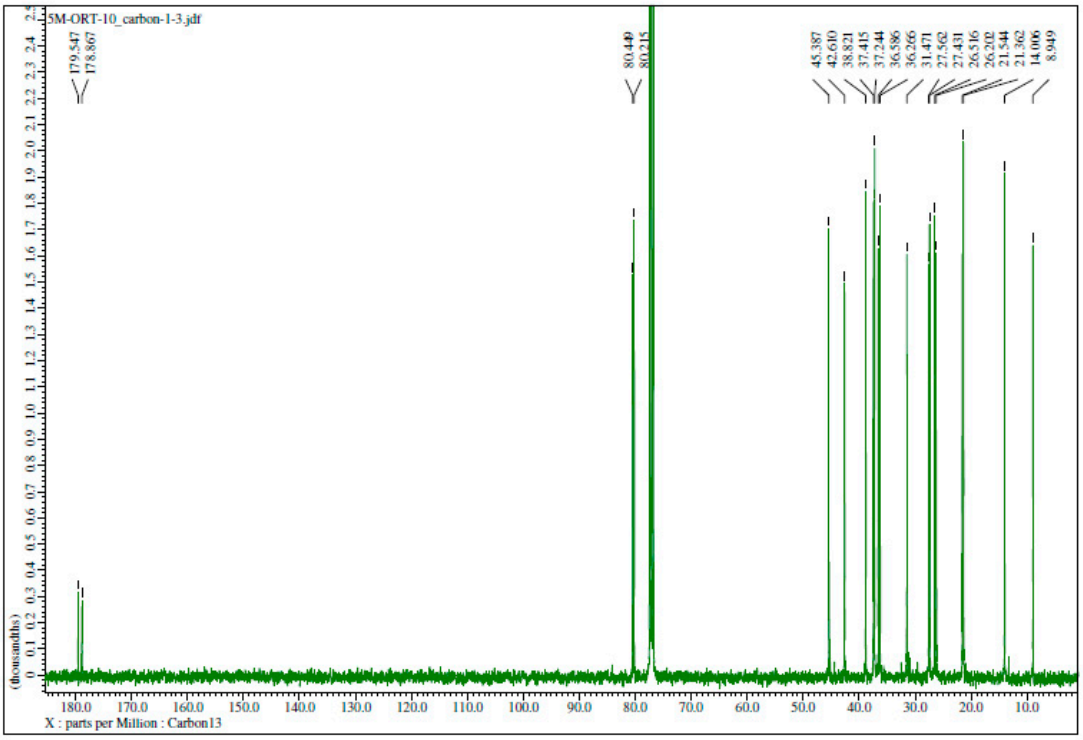


Figure S24. ^{13}C NMR (100 MHz, $CDCl_3$) spectrum of iodolactone **6.**

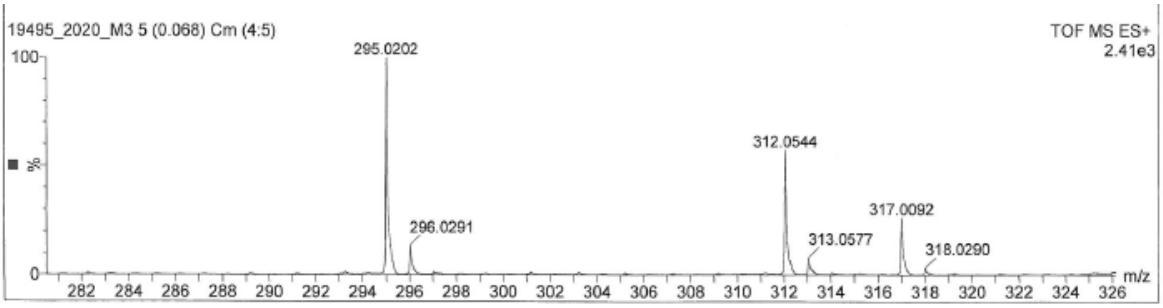


Figure S25. HRMS spectrum of iodolactone **6.**

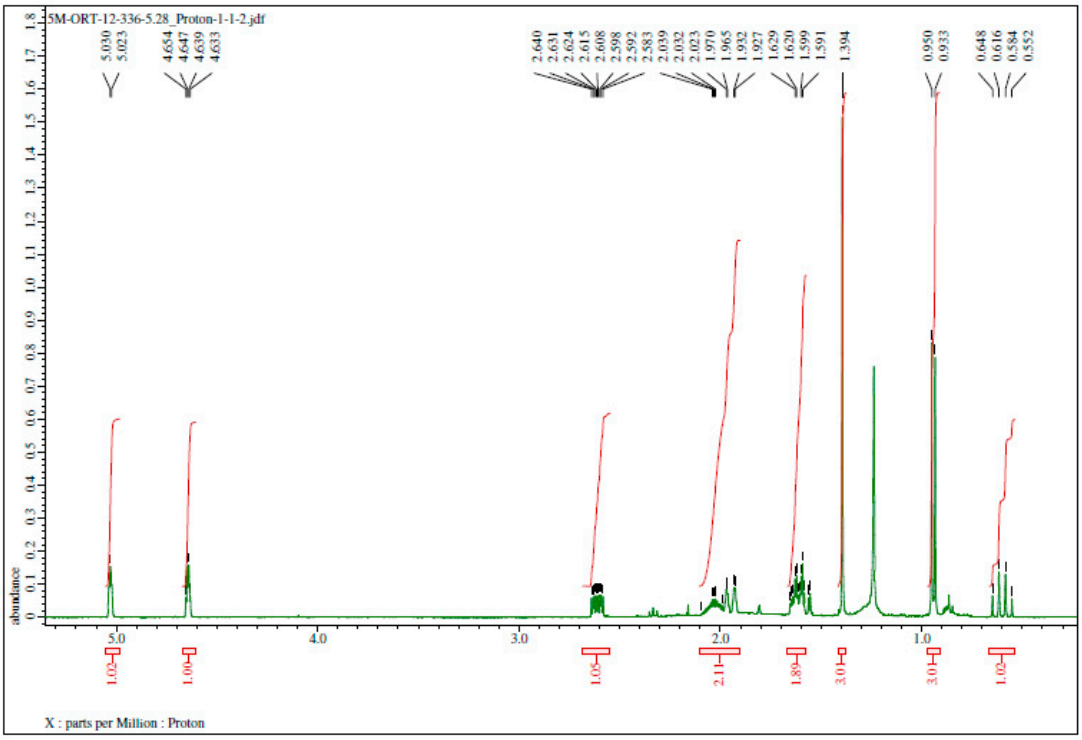


Figure S26. ^{1}H NMR (400 MHz, $CDCl_3$) spectrum of bromo-hydroxylactone **7.**

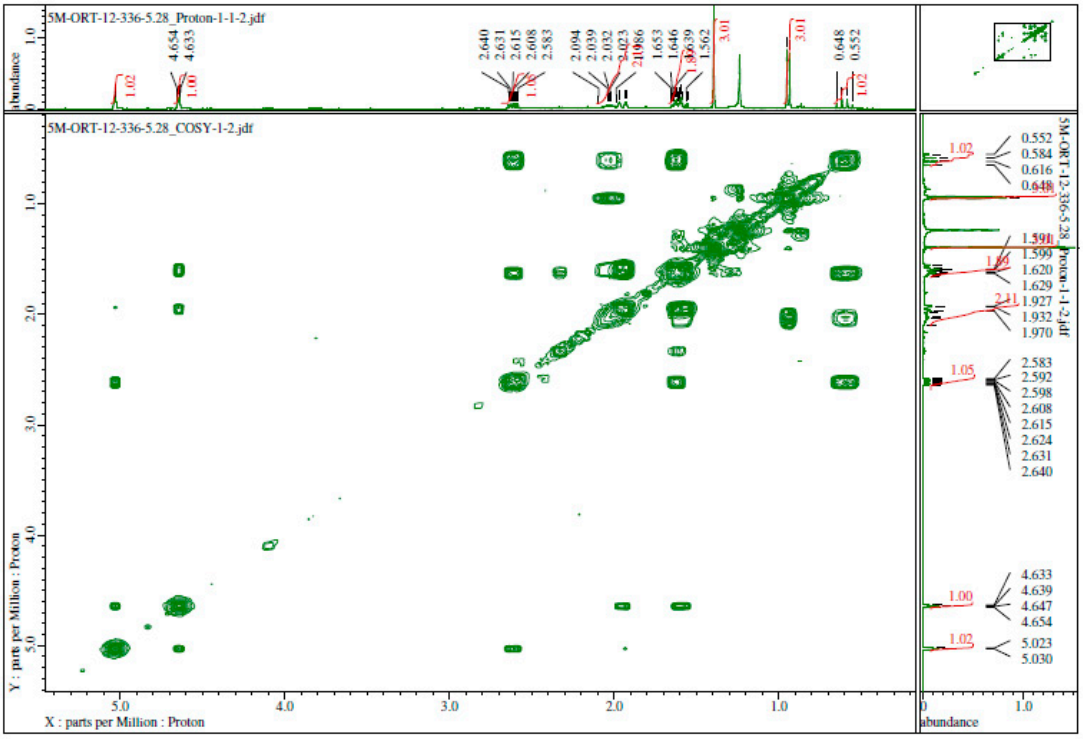


Figure S27. COSY (100 MHz, $CDCl_3$) spectrum of bromo-hydroxylactone **7.**

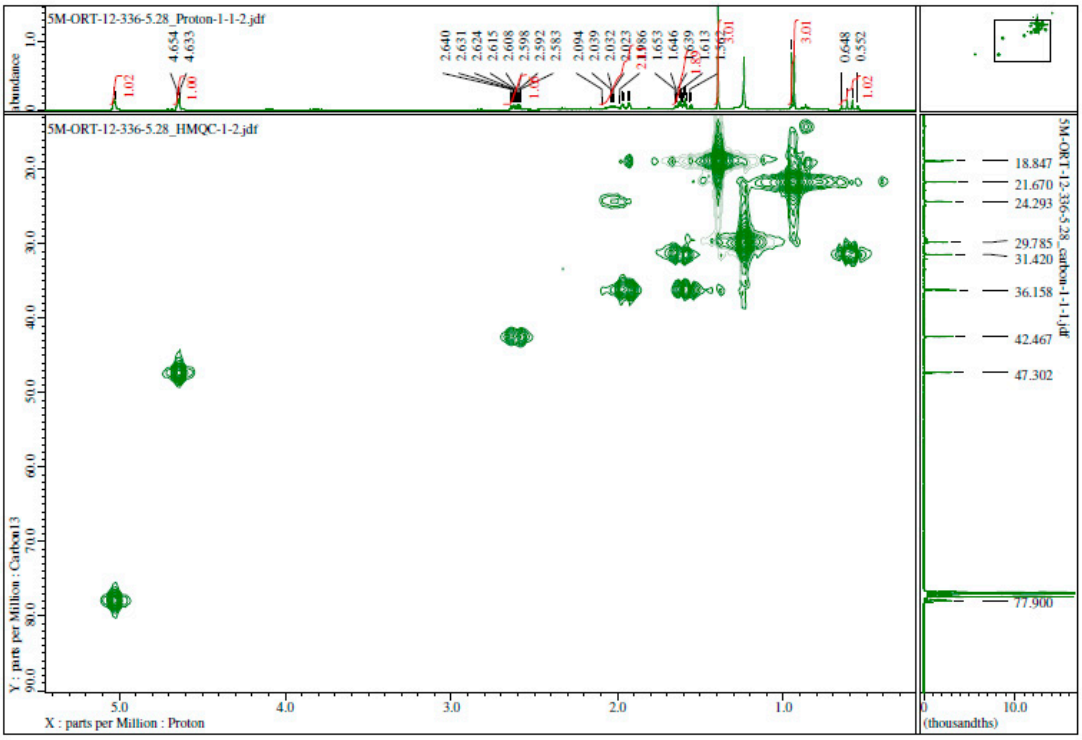


Figure S28. HMQC (100 MHz, $CDCl_3$) spectrum of bromo-hydroxylactone **7.**

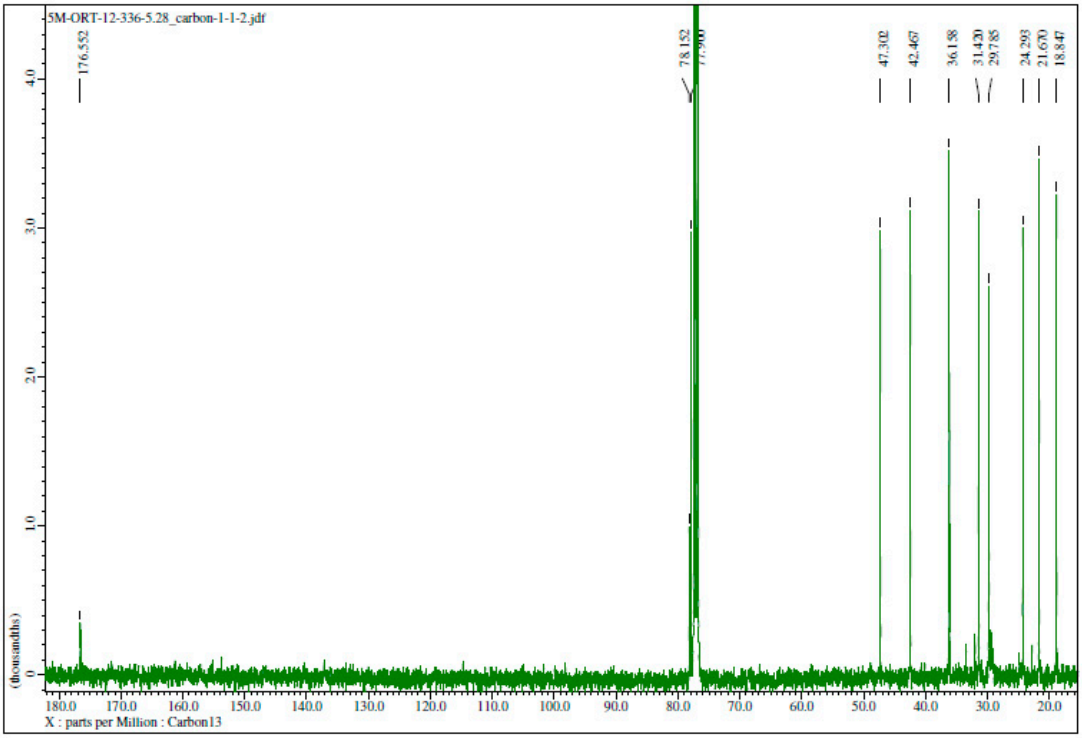


Figure S29. ^{13}C NMR (100 MHz, $CDCl_3$) spectrum of bromo-hydroxylactone **7.**

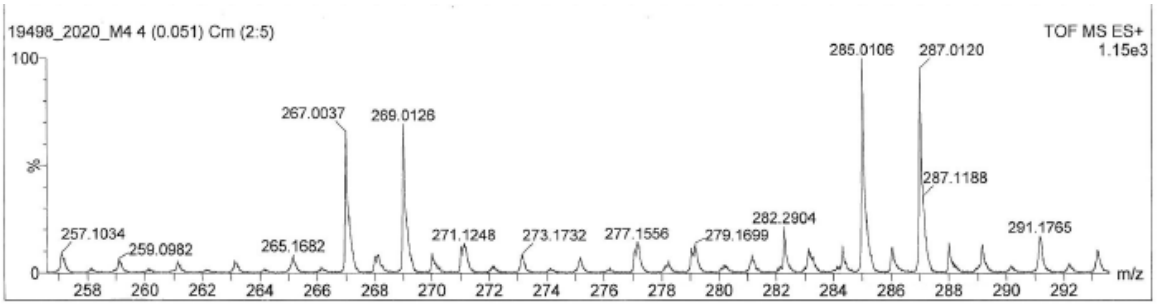


Figure S30. HRMS spectrum of bromo-hydroxylactone **7.**

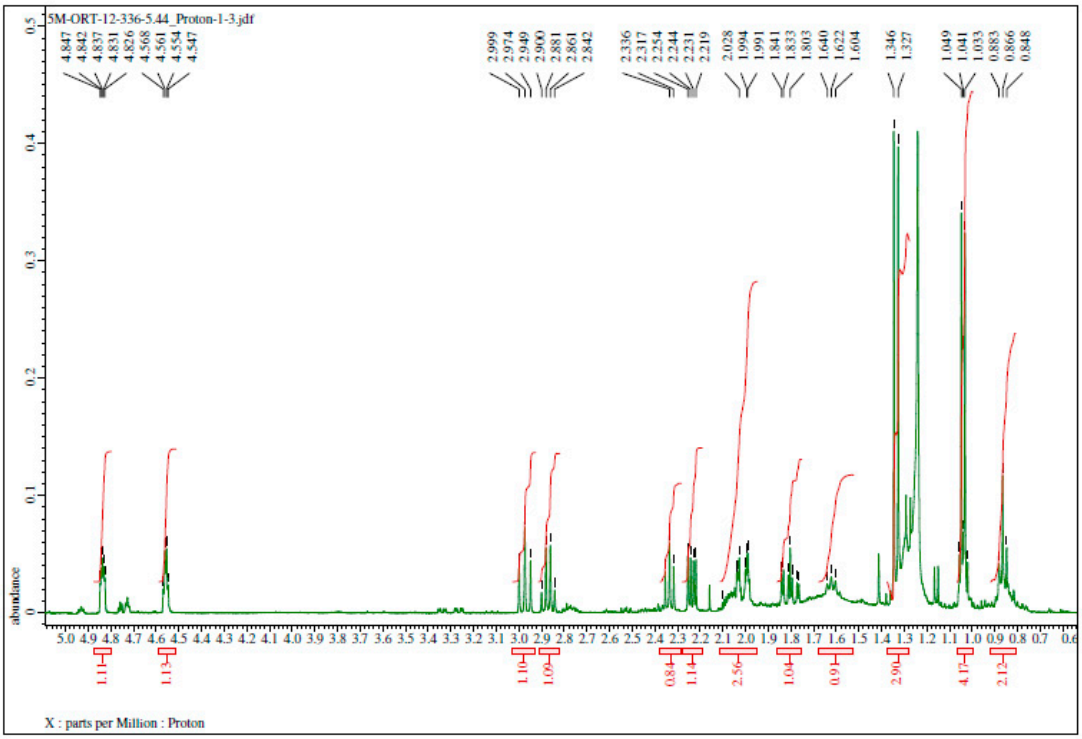


Figure S31. ^{1}H NMR (400 MHz, $CDCl_3$) spectrum of bromo-hydroxylactone **8.**

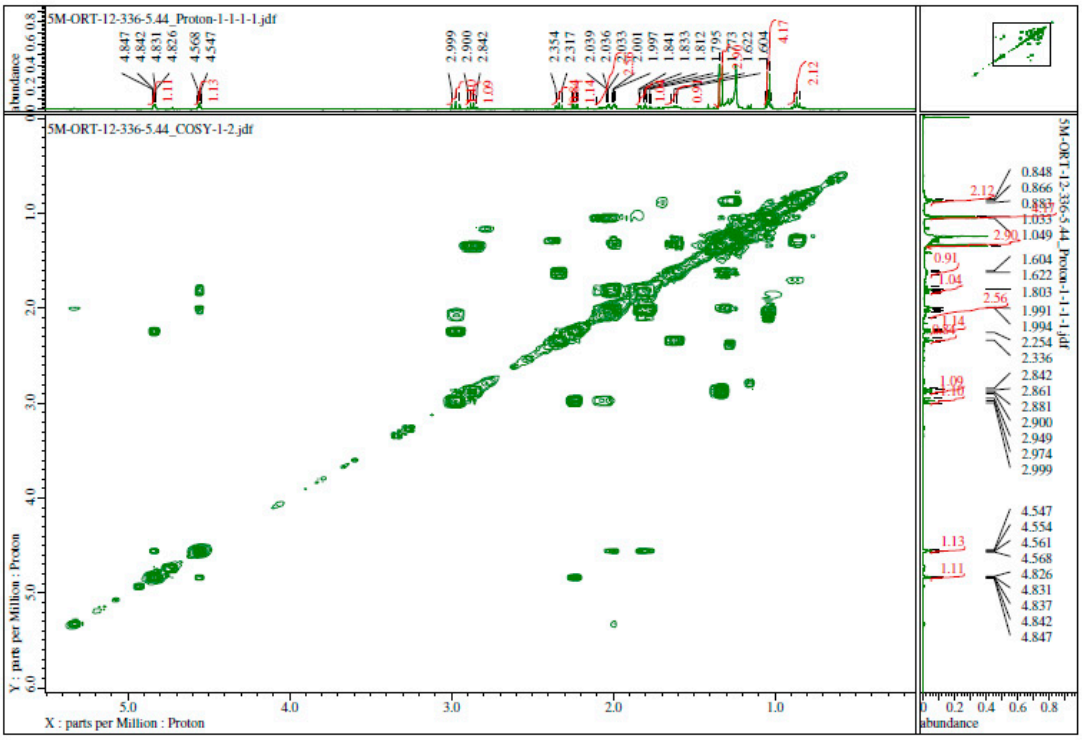


Figure S32. COSY (100 MHz, $CDCl_3$) spectrum of bromo-hydroxylactone **8.**

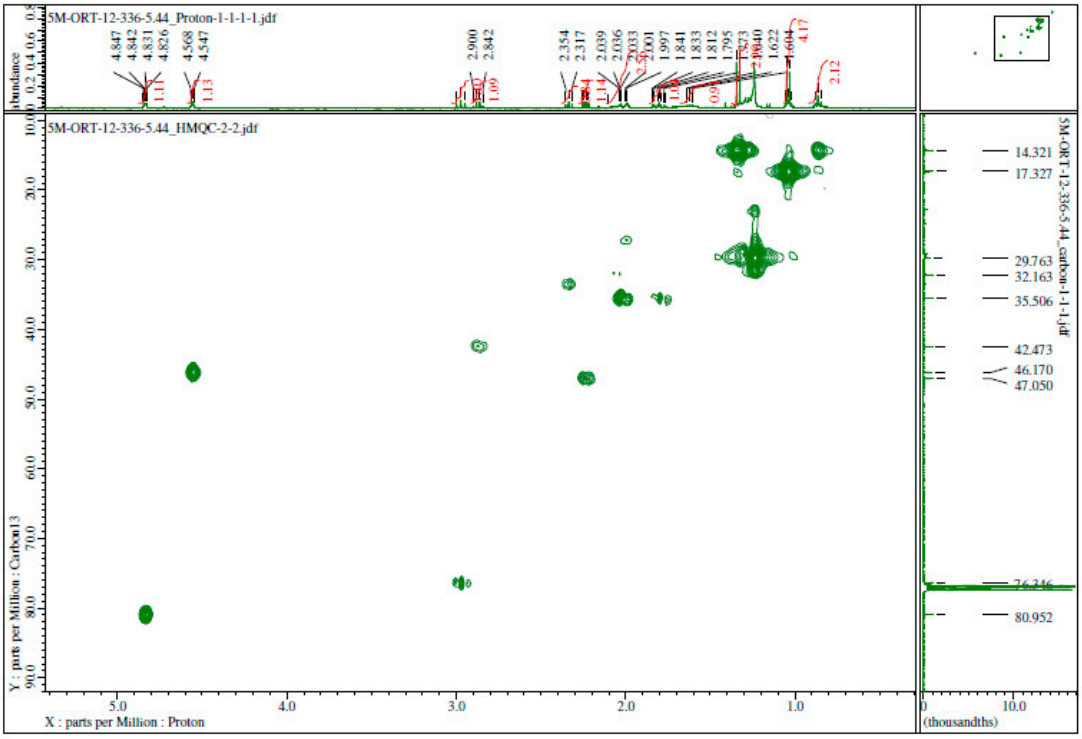


Figure S33. HMQC (100 MHz, $CDCl_3$) spectrum of bromo-hydroxylactone **8.**

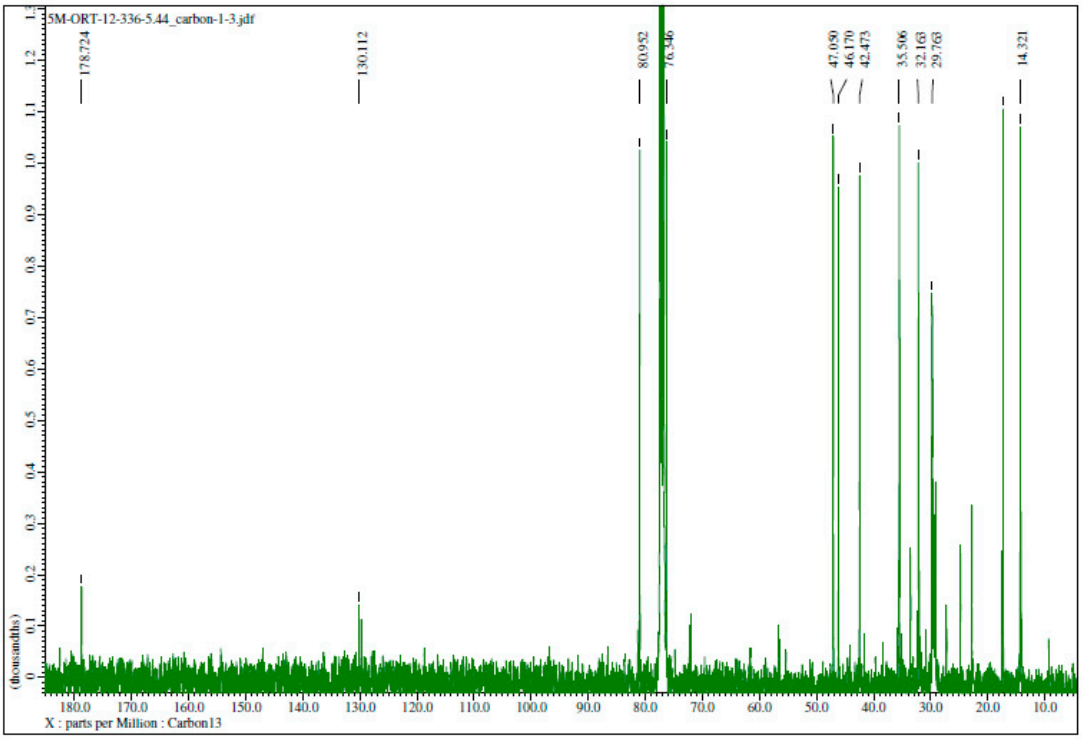


Figure S34. ^{13}C NMR (100 MHz, $CDCl_3$) spectrum of bromo-hydroxylactone **8.**

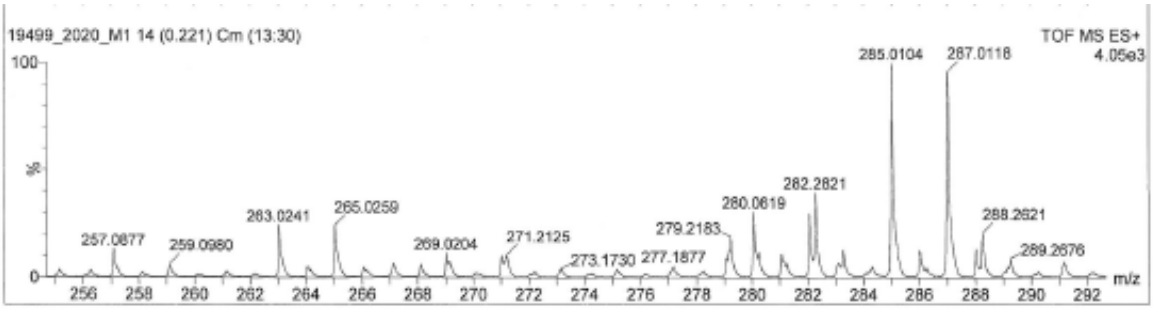


Figure S35. HRMS spectrum of bromo-hydroxylactone **8.**

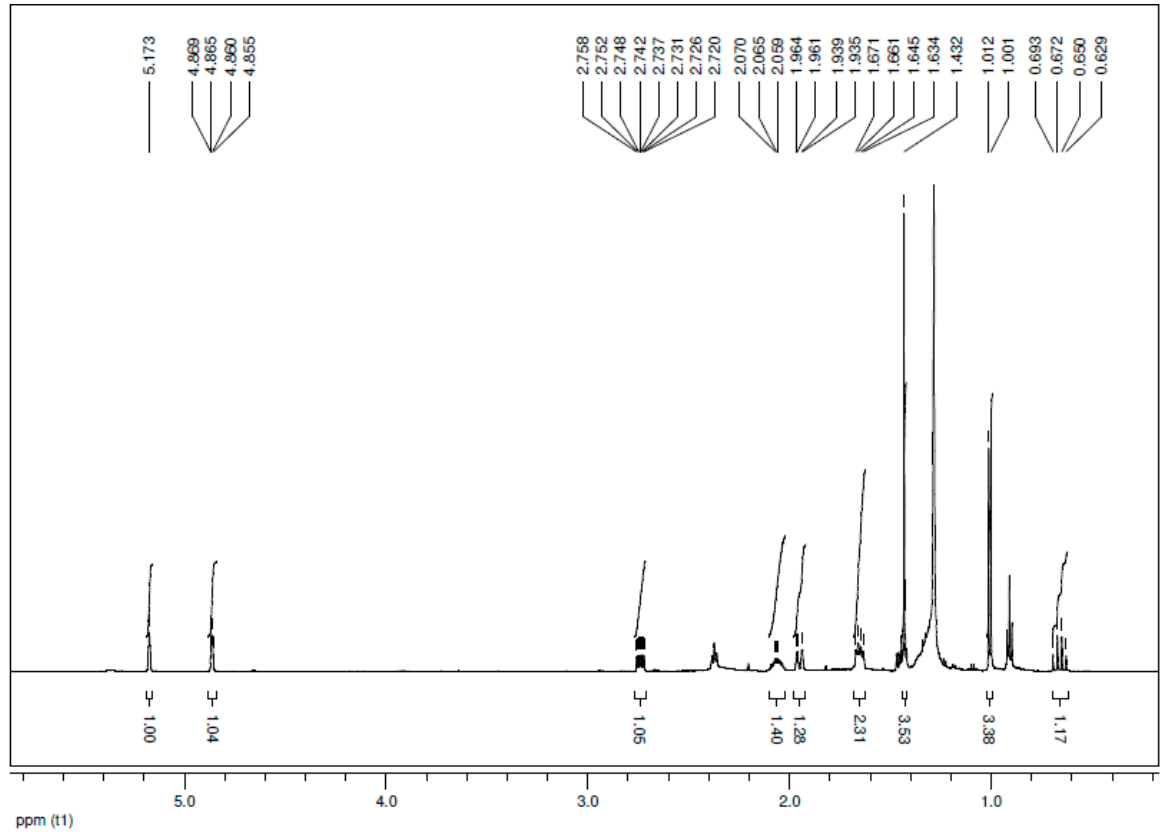


Figure S36. ^{1}H NMR (600 MHz, $CDCl_3$) spectrum of iodo-hydroxylactone **9.**

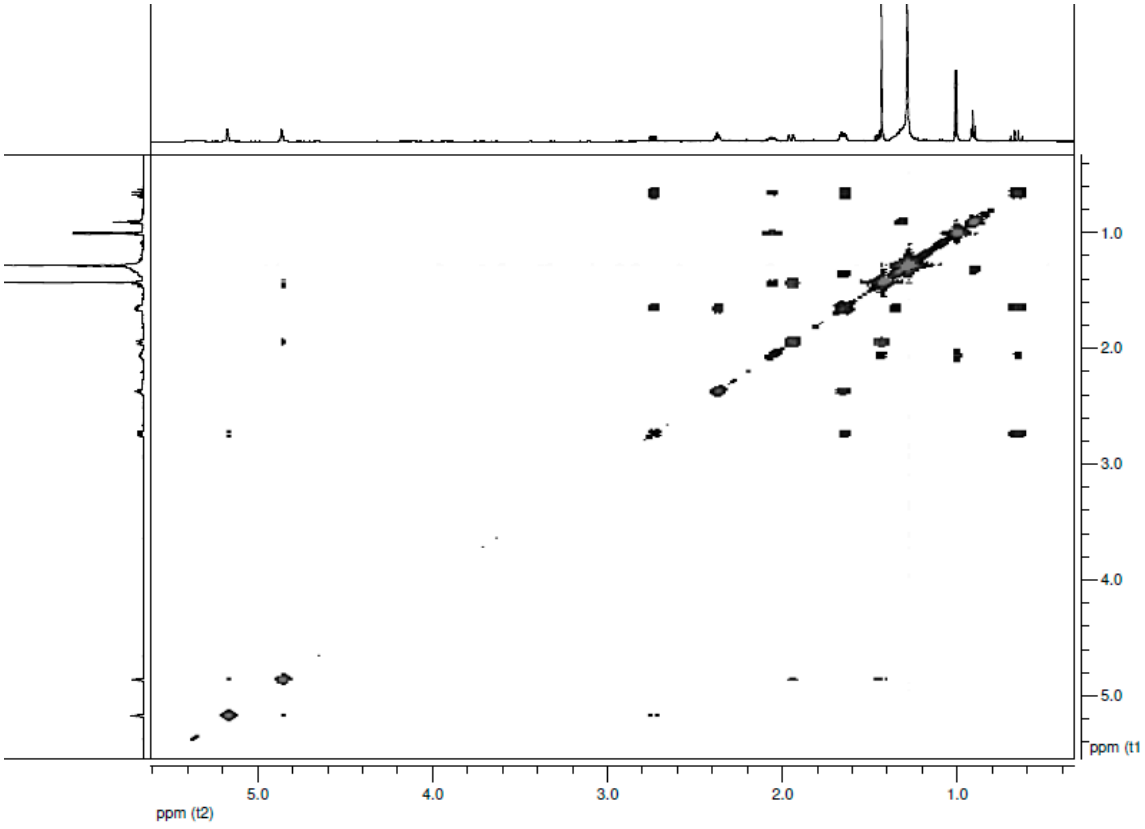


Figure S37. COSY (151 MHz, $CDCl_3$) spectrum of iodo-hydroxylactone **9.**

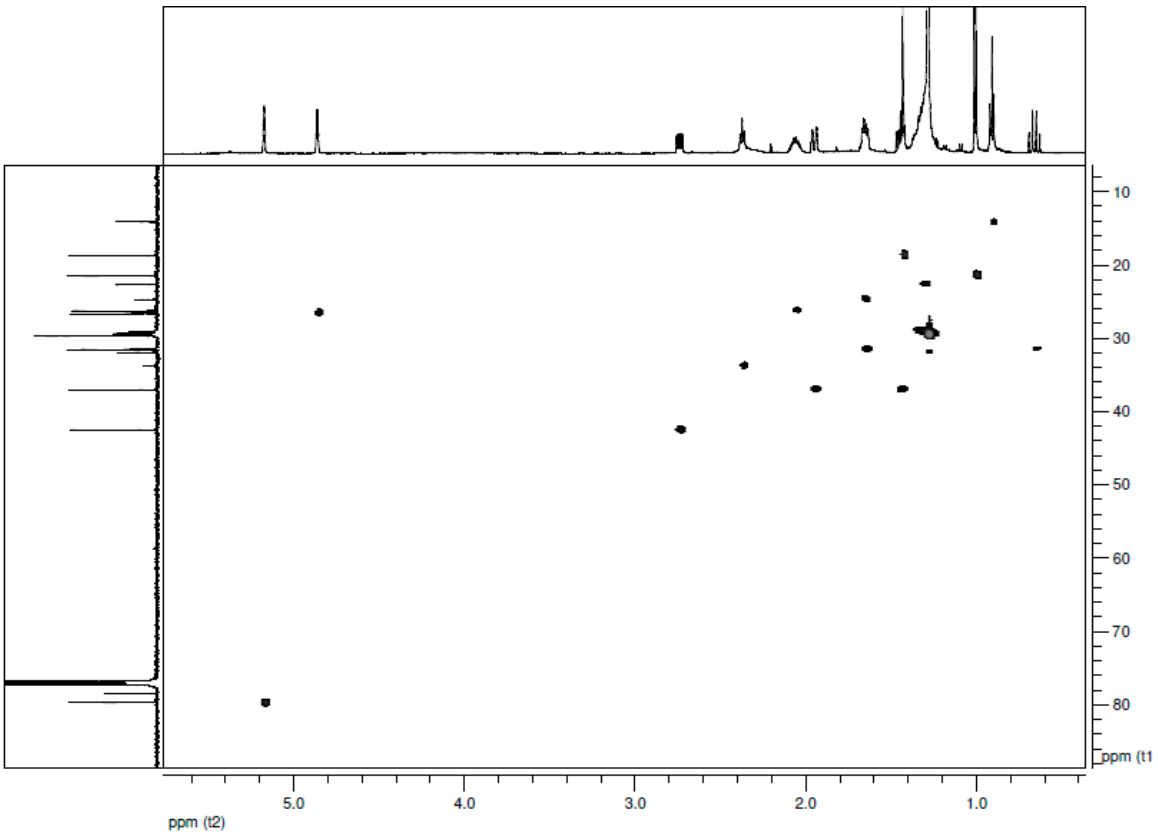


Figure S38. HMQC (151 MHz, $CDCl_3$) spectrum of iodo-hydroxylactone **9.**

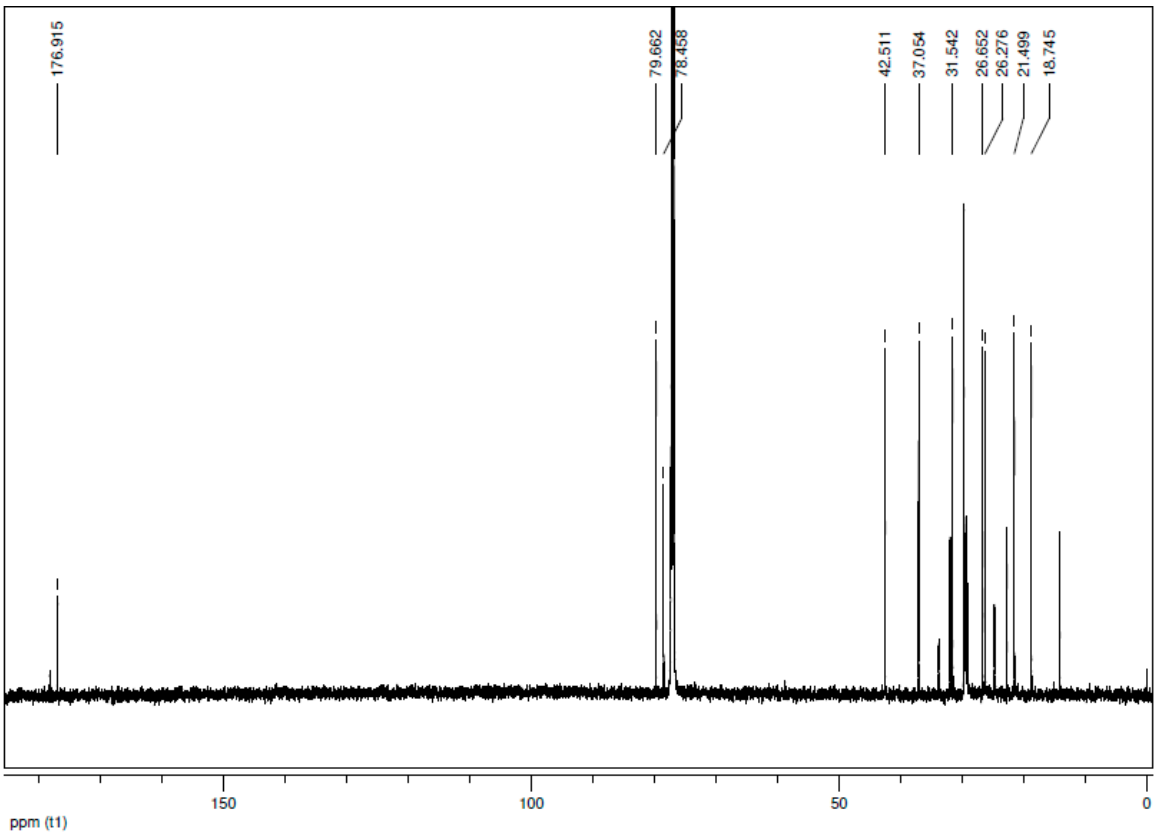


Figure S39. ^{13}C NMR (151 MHz, $CDCl_3$) spectrum of iodo-hydroxylactone **9.**

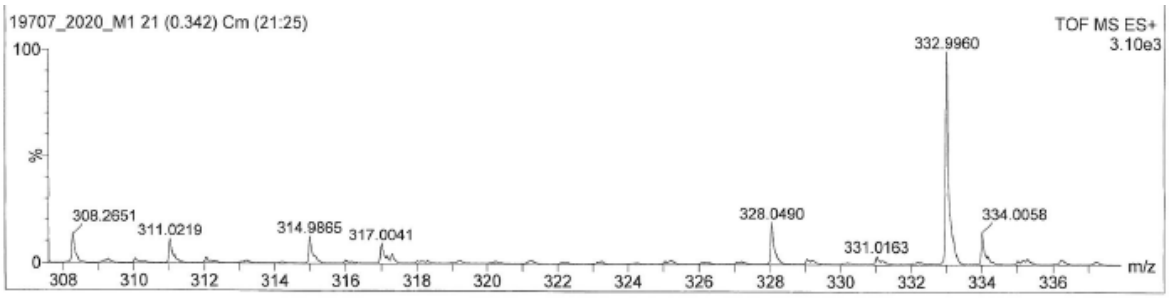
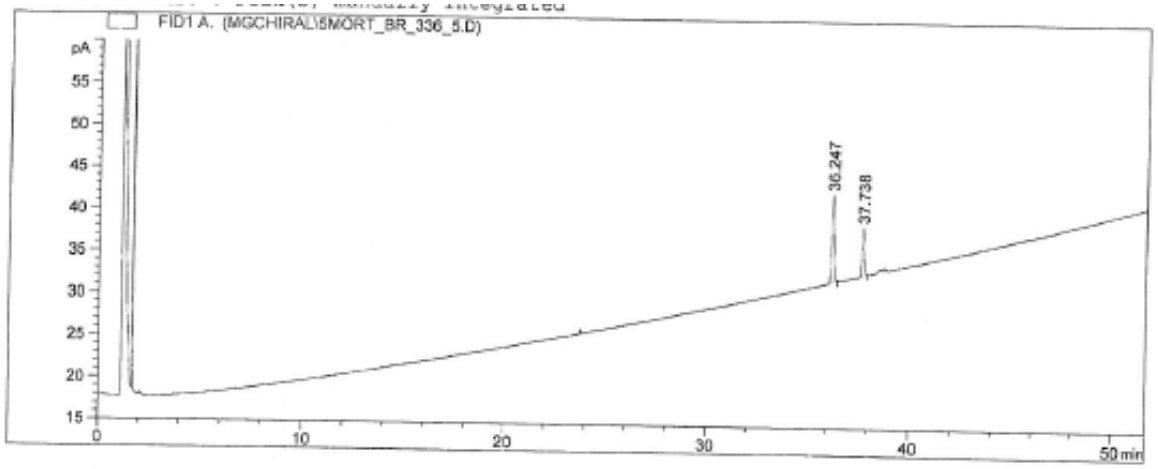
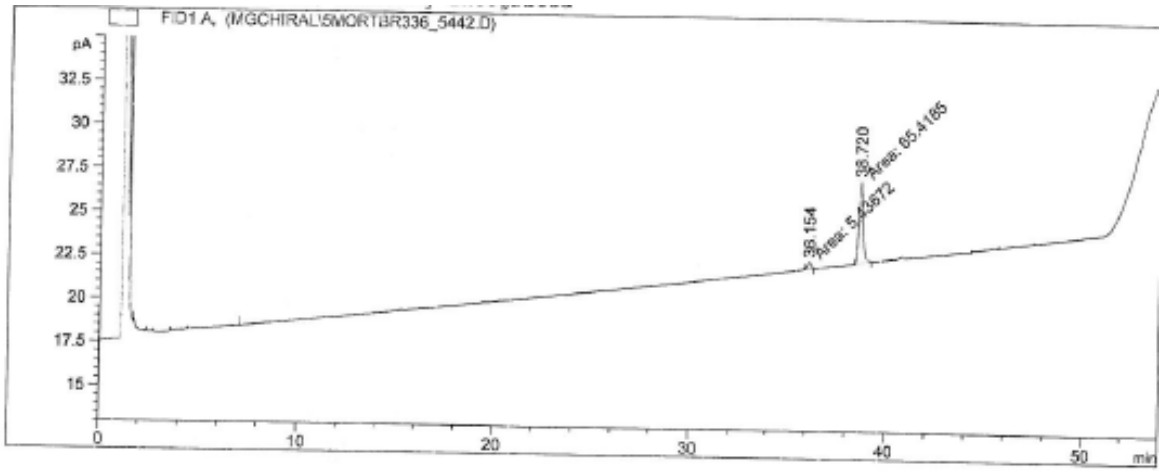


Figure S40. HRMS spectrum of iodo-hydroxylactone **9.**



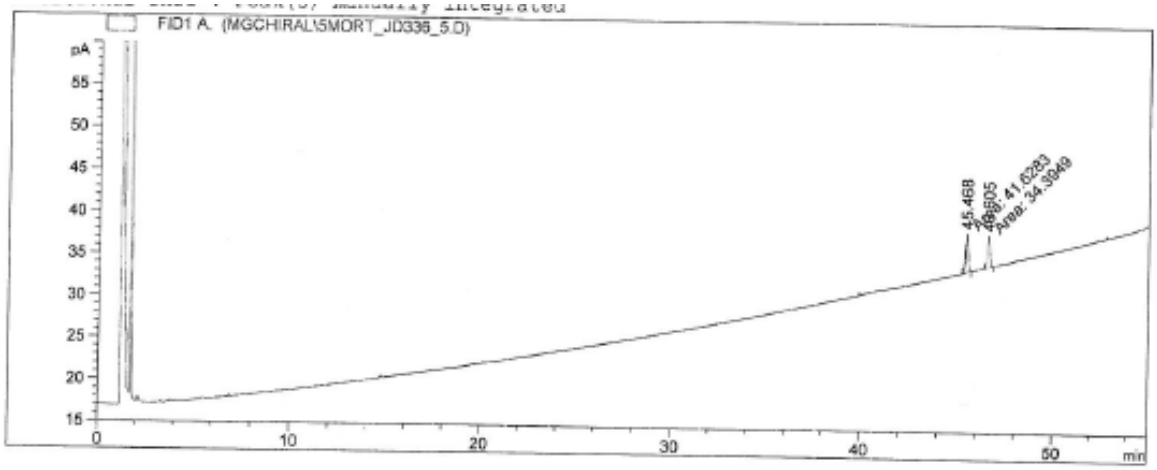
Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Height [pA]	Area %
1	36.247	BB	0.1159	89.71288	10.36830	66.19652
2	37.738	BB	0.1059	45.81219	5.63316	33.80348

Figure S41. Chiral chromatogram of bromo-hydroxylactone **7.**



Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Height [pA]	Area %
1	36.154	MM	0.2172	5.43672	4.17211e-1	7.67300
2	38.720	MM	0.2331	65.41850	4.67829	92.32700

Figure S42. Chiral chromatogram of bromo-hydroxylactone **8.**



Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Height [pA]	Area %
1	45.468	MM	0.1509	41.62828	4.59794	54.75732
2	46.605	MM	0.1539	34.39494	3.72455	45.24268

Figure S43. Chiral chromatogram of iodo-hydroxylactone **9.**