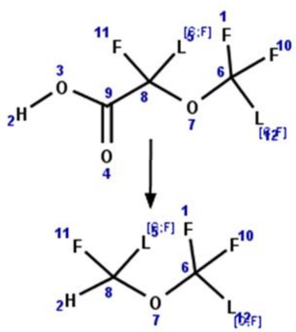
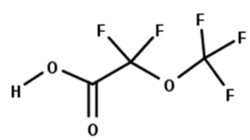
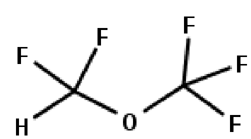
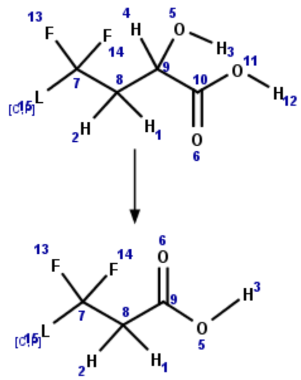
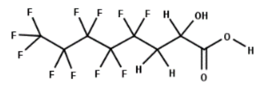
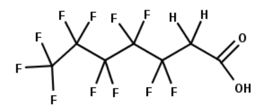
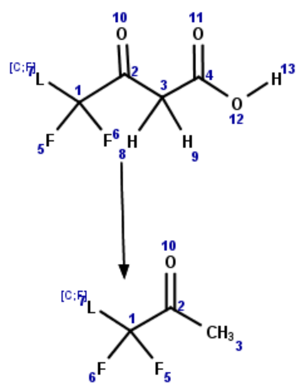
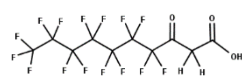
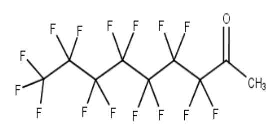
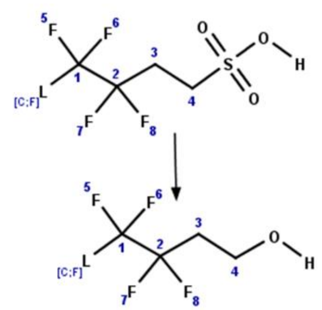
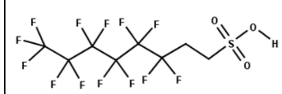
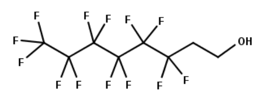
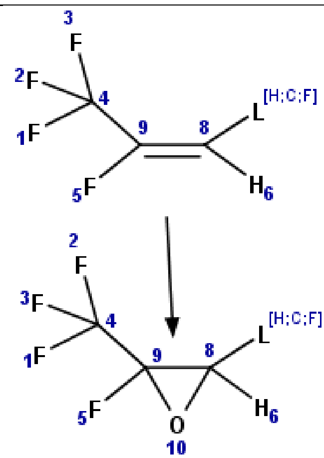
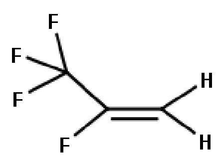
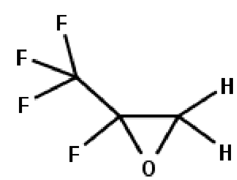
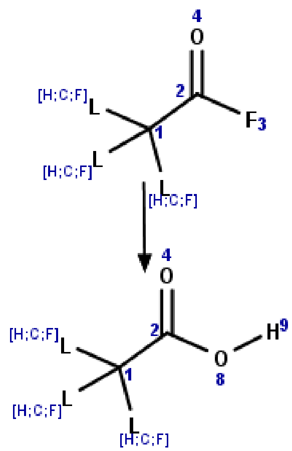
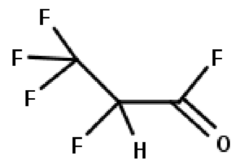
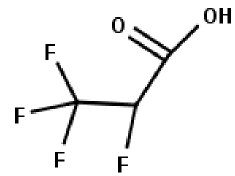
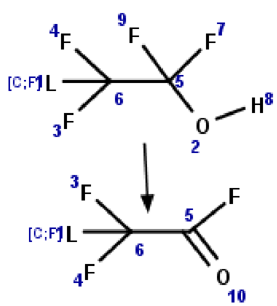
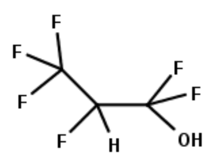
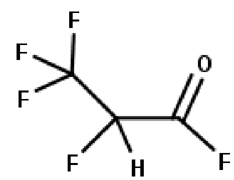
Electronic Supplementary Material (ESI) for Environmental Science: Processes & Impacts.

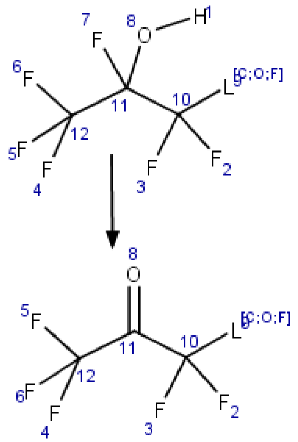
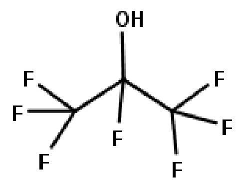
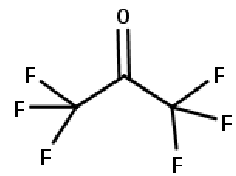
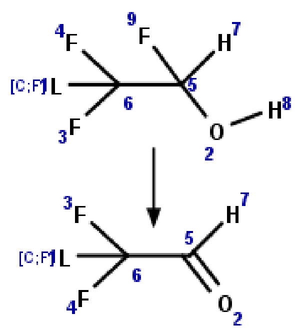
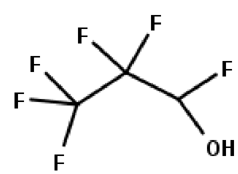
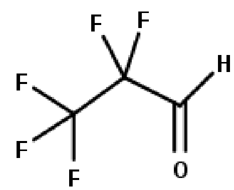
Table SI: The list of generalized reaction schemes for the PFAS conjugation reactions and structure of the parent PFAS on which the reaction schemes were based are taken from Table 3. Column 4 provides the structure of the predicted TP based on the transformation of the parent PFAS column by the reaction scheme. Column 5 states if the predicted TP is formed based on the parent PFAS and execution of the BioTransformer-Phase I transformer. Column 6 lists additional TPs that were observed from the parent PFAS and execution of the BioTransformer Phase I transformer reaction libraries executed through the CTS. Column 7 lists additional TPs formed from the parent PFAS based on execution of EnviPath. Cells shaded in grey represent transformations occurring in environmental systems and cells shaded in blue represent transformations occurring in biological systems.

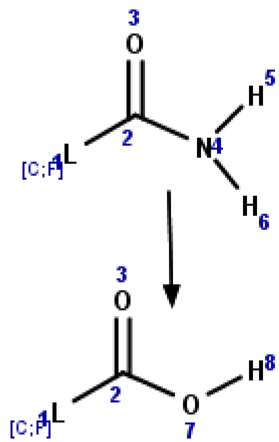
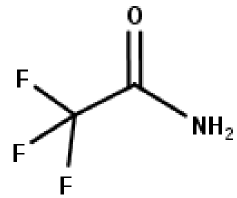
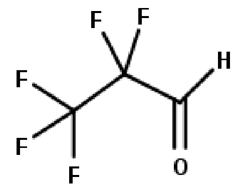
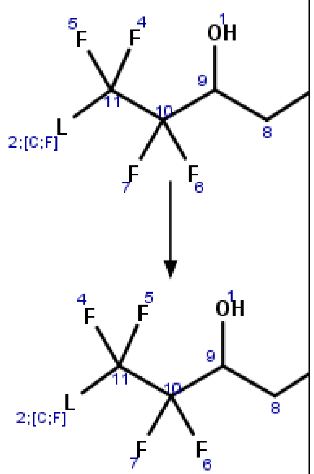
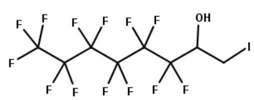
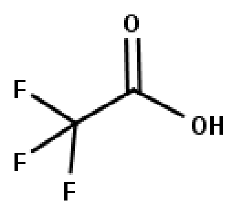
Reaction Scheme	**Generalized Reaction Scheme**	**Parent PFAS**	**Predicted TP based on the parent PFAS and execution of the reaction scheme**	**Is the predict-ed TP formed by BioTrans-former-Phase 1?**	**Other TPs predicted by BioTransformer -Phase 1**	**Is the predict ed TP formed by Envi-Path?**	**Other TPs predicted by EnviPath**
22. Decarboxylation: Alpha carboxy ether to ether						**NO**	

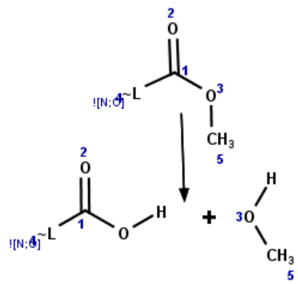
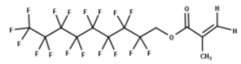
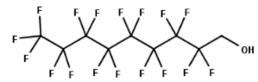
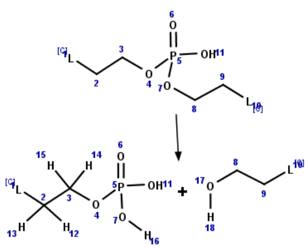
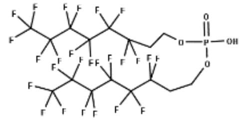
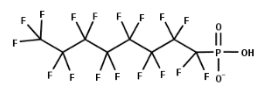
23. Decarboxylation: Alpha hydroxy carboxylate to carboxylic acid						**NO**	
24. Decarboxylation: Beta carboxy ketone to methyl ketone						**NO**	

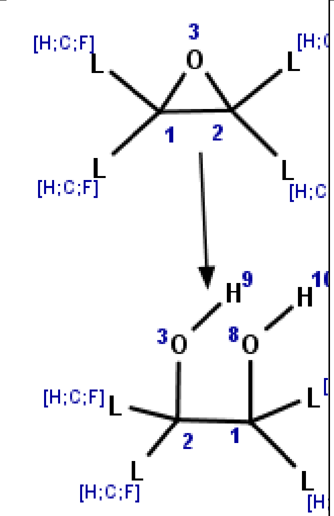
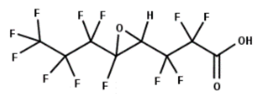
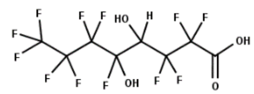
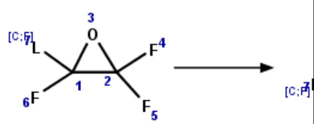
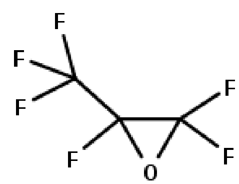
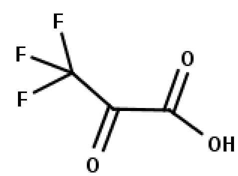
25. Desulfonation: Fluorotelomer sulfonate to fluorotelomer alcohol						**NO**		
26. Epoxidation: Alkene to epoxide_PTP				**YES**				

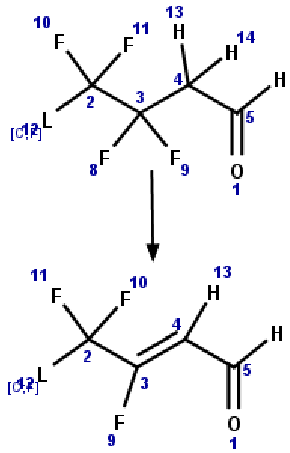
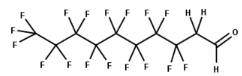
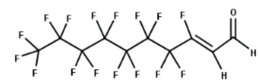
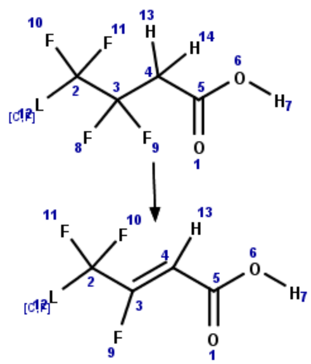
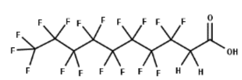
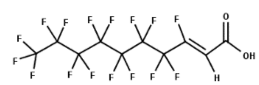
27. Hydrolysis: Acid fluoride to carboxylic acid				**NO**	**-the alpha-hydroxy acid fluoride**	**NO**	
28. Hydrolysis: Alpha difluoro alcohol to acid fluoride				**NO**	**-the diol**	**NO**	

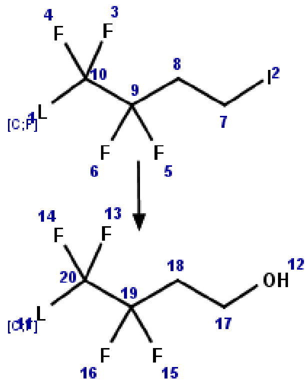
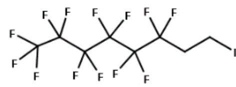
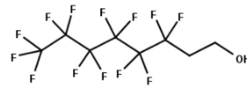
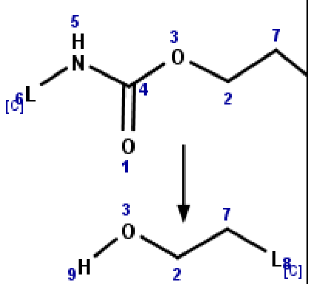
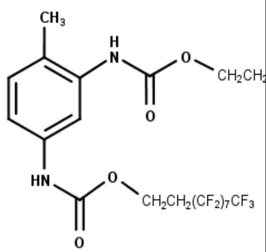
29. Hydrolysis: Alpha fluoro secondary alcohol to ketone				**YES**		**NO**	
30. Hydrolysis: Alpha fluoro primary alcohol to aldehyde				**NO**		**NO**	

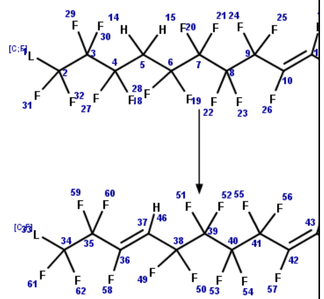
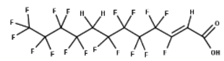
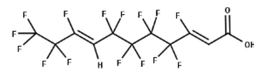
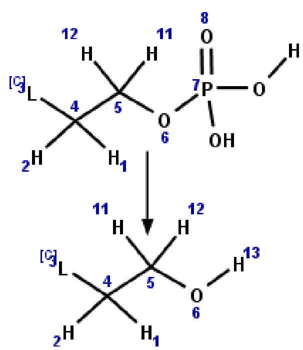
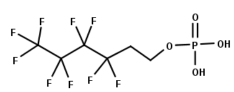
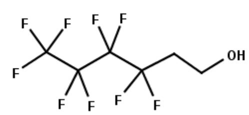
31. Hydrolysis: Amide to carboxylic acid				**NO**		**YES**	
32. Hydrolysis: Beta hydroxy fluorotelomer iodide to diol_PTP						**YES**	**-the alpha-beta epoxide** **-the beta-keto iodide** **the alpha-hydroxy-iodide**

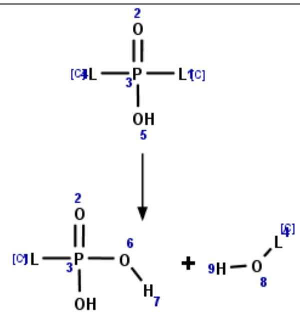
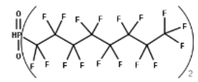
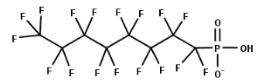
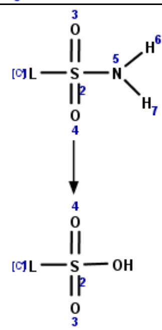
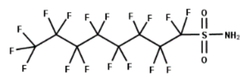
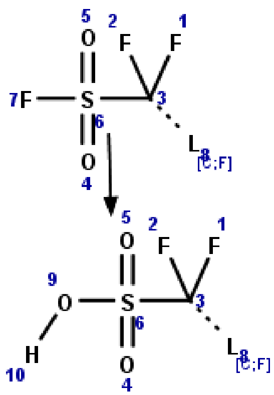
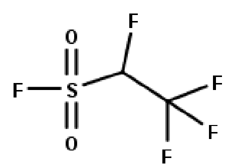
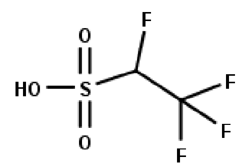
33. Hydrolysis: Carboxylic acid ester to carboxylic acid				**YES**	**-the alpha-beta epoxide** **-the alpha-keto carboxylic acid ester**	**NO**	**-the alpha-beta epoxide** **-the saturated carboxylic acid ester** **-the alpha-hydroxy carboxylic acid ester**
34. Hydrolysis: Diphosphate ester to monophosphate ester						**YES**	**-the alpha-hydroxy phosphate ester**

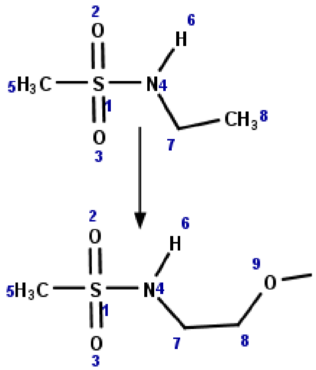
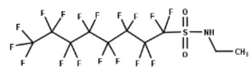
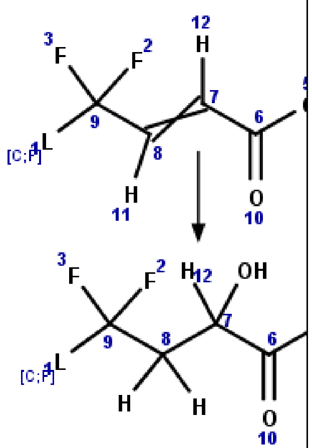
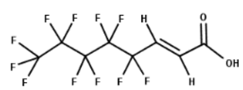
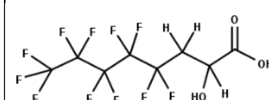
35. Hydrolysis: Epoxide to diol_PTP						**YES**	
36. Hydrolysis: Perfluorinated epoxide to beta keto carboxylic acid				**NO**		**NO**	

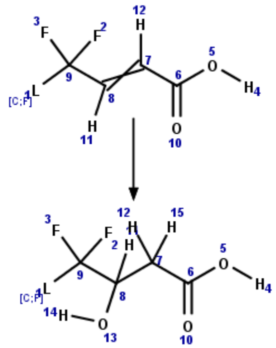
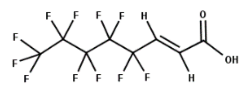
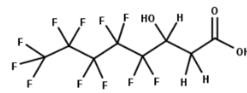
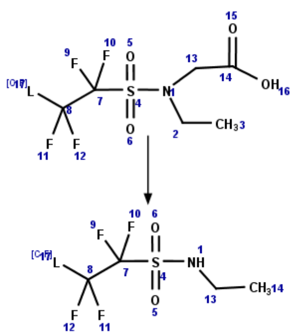
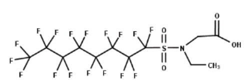
37. Hydrolysis: Fluorotelomer aldehyde to fluorotelomer unsaturated aldehyde				**NO**	**-the 8:2 fluorotelomer alcohol** **-the 8:2 fluorotelomer carboxylic acid** **the 8:2 alpha hydroxy telomer alcohol**		
38. Hydrolysis: Fluorotelomer acid to unsaturated telomer acid				**NO**	**-the alpha-hydroxy carboxylic acid.**	**NO**	**-the alpha-hydroxy carboxylic acid** **-the alpha keto carboxylic acid**

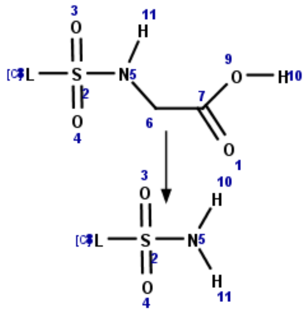
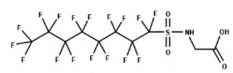
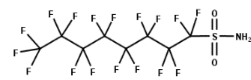
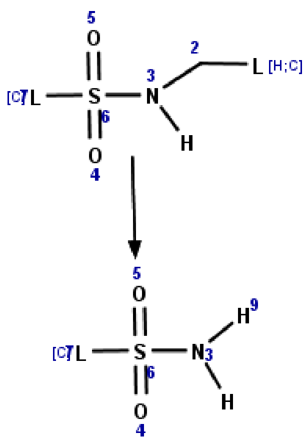
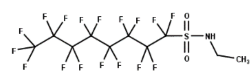
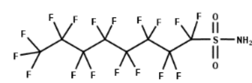
39. Hydrolysis: Fluorotelomer iodide to fluorotelomer alcohol						**NO**	**-the alpha-hydroxy iodide** **-the beta-hydroxy iodide.**
40. Hydrolysis: Fluorotelomer urethane to fluorotelomer alcohol						**NO**	**-the phenol with urethane groups intact** **--the methyl alcohol with urethane groups intact**

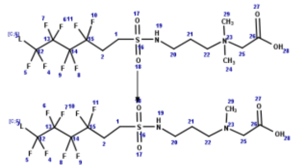
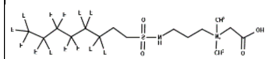
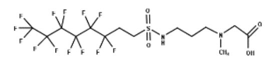
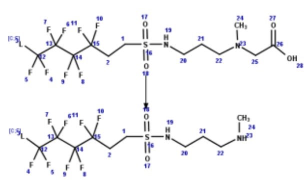
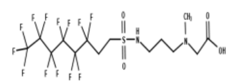
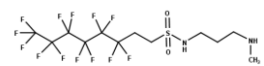
41. Hydrolysis: Hydrodefluorination of PFC chain						**NO**	**-the beta-hydroxyl carboxylic acid** **-the saturated carboxylic acid**
42. Hydrolysis: Monophosphate ester to alcohol				**NO**	**-TP resulting from alpha hydroxylation** **-TP resulting from beta hydroxylation**	**NO**	

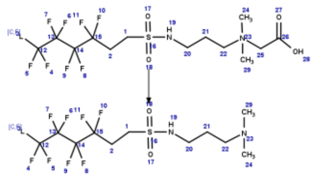
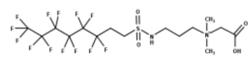
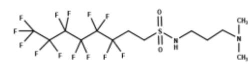
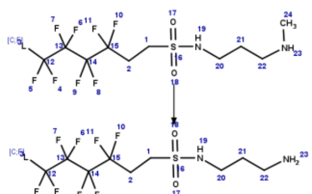
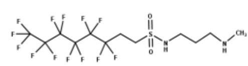
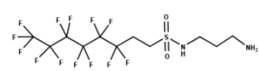
43. Hydrolysis: Diperfluoro-phosphinate to monoperfluoro-phosphonate				**NO**			
44. Hydrolysis: Sulfonamide to sulfonate				**NO**			
45. Hydrolysis: Sulfonyl fluoride to sulfonate						**NO**	**-TP resulting from alpha hydroxylation** **-TP resulting from beta hydroxylation** **-TP resulting from loss of amide group**

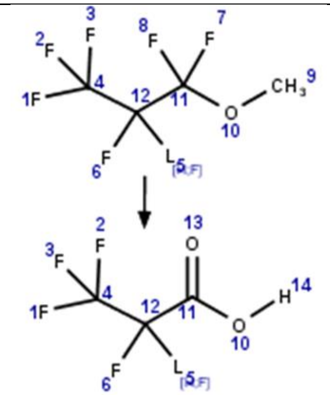
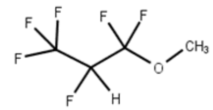
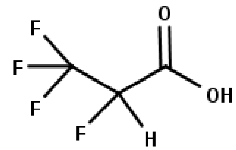
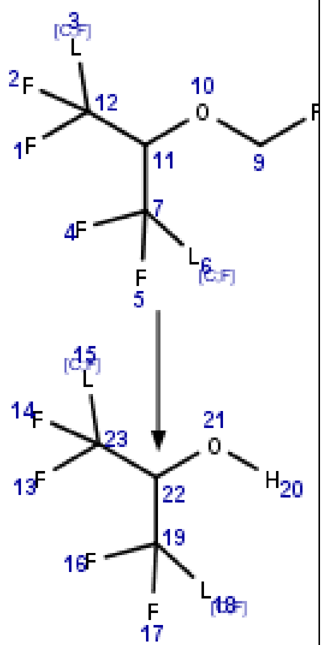
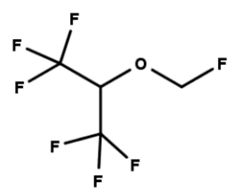
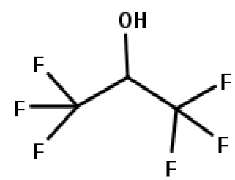
46. Hydroxylation: N-Alkyl sulfonamide to N-alkyl sulfonamide alcohol_PTP						**YES**	
47. Hydroxylation: Unsaturated Fluorotelomer acid to alpha hydroxy fluorotelomer acid				**NO**	**-the beta-keto fluorotelomer carboxylic acid** **-the alpha-beta epoxide of the fluorotelomer carboxylic acid**		

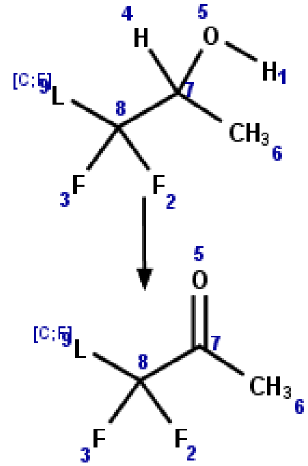
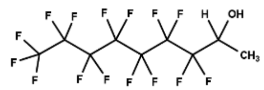
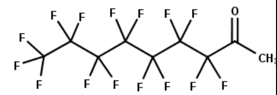
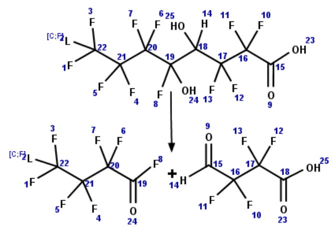
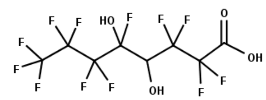
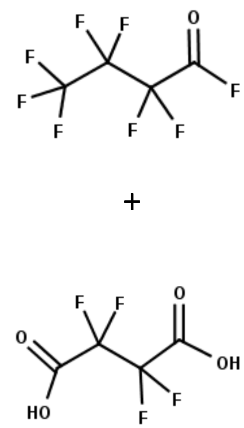
48. Hydroxylation: Unsaturated Fluorotelomer acid to beta hydroxy fluorotelomer acid				**NO**	**-the alpha-beta keto carboxylic acid** **-the alpha-beta epoxide of the carboxylic acid.**	**NO**	**-the alpha-hydroxy carboxylic acid** **-the 5:2 carboxylic acid telomer**
49. N-Deacetylation: N-acetyl, N-alkyl sulfonamide to N-alkyl sulfonamide				**NO**	**-the N-acetyl sulfonamide** **-the N-alpha-hydroxy acetyl sulfonamide**		

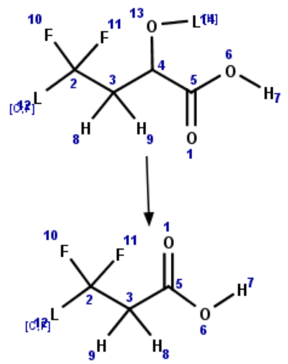
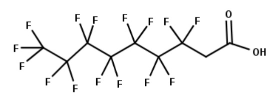
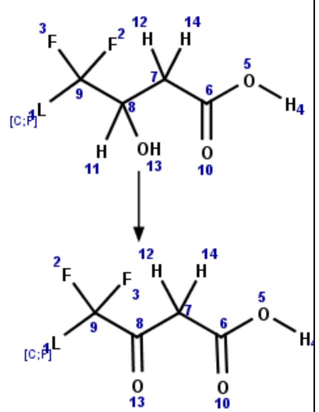
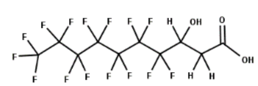
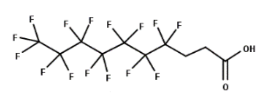
50. N-Deacetylation: N-acetyl sulfonamide to sulfonamide				**NO**	**-the beta-hydroxy N-acetyl sulfonamide**		
51. N-Dealkylation: N-alkyl sulfonamide to sulfonamide				**YES**	**-the beta-hydroxy N-alkyl sulfonamide**		

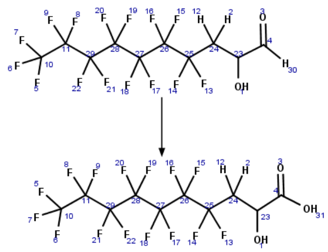
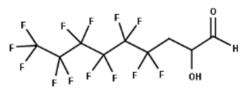
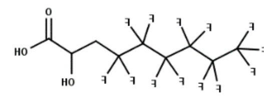
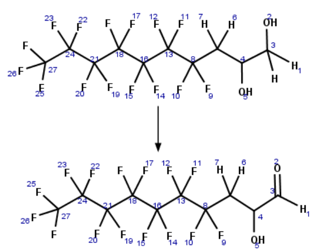
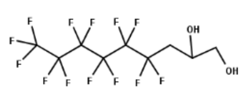
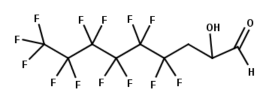
52. N-Demethylation: fluorotelomer sulfonamide N-dimethyl-N-acetyl betaine to fluorotelomer sulfonamide N-methyl-N-acetyl betaine				**NO**			
53. N-Deacetylation: fluorotelomer sulfonamide N-methyl-N-acetyl-betaine to fluorotelomer sulfonamide N-methyl betaine				**YES**	**-N-Oxide of tertiary amine** **-Hydroxylation of terminal methyl group** **-Demethylation of tertiary amine** **-Hydroxylation of C alpha to tertiary amine**		

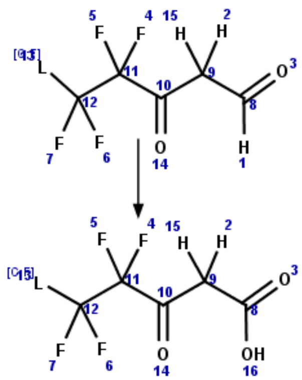
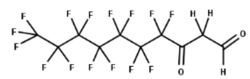
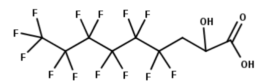
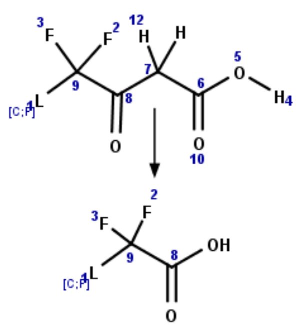
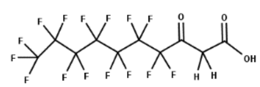
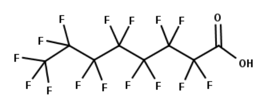
54. N-Deacetylation: fluorotelomer sulfonamide N-dimethyl-N-acetyl-betaine to fluorotelomer sulfonamide N-dimethyl betaine				**NO**			
55. N-Demethylation: fluorotelomer sulfonamide N-methyl betaine to fluorotelomer sulfonamide betaine				**YES**	**-Hydroxylation of terminal methyl group** **-N-Demethylation of secondary amine**		

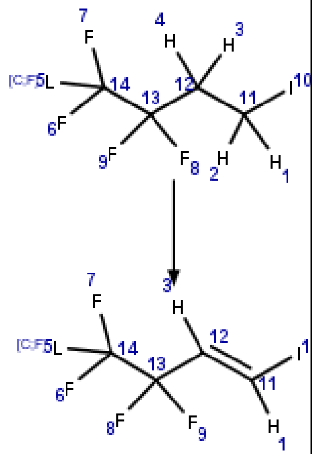
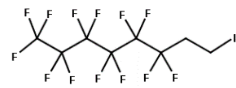
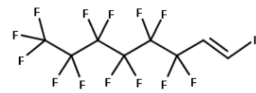
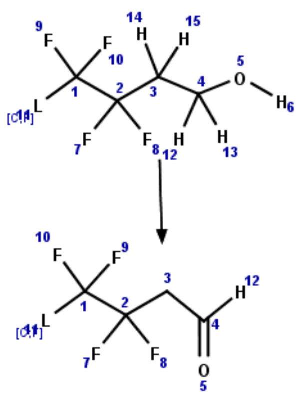
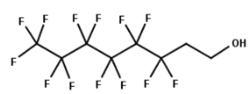
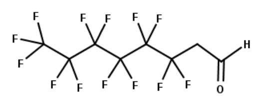
56. O-Demethylation: Alpha difluoro methyl ether to carboxylic acid				**YES**	**-the fluorinated propyl alcohol** **-the beta-hydroxy propyl alcohol.**		
57. O-Demethylation: Fluoromethyl ether to secondary alcohol				**YES**	**- the ditrifluoro ketone** **-the alpha hydroxy fluoromethyl ether**		

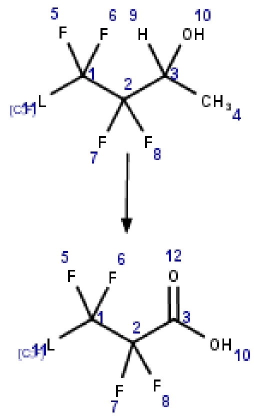
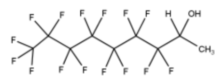
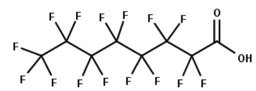
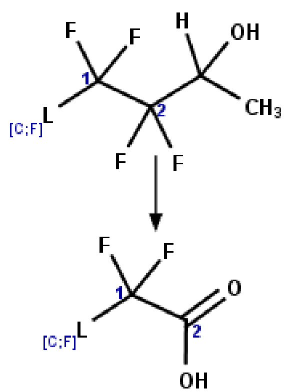
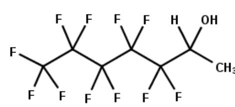
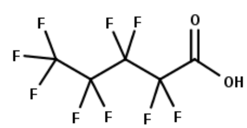
58. Oxidation: Alcohol to ketone						**YES**	**-Methyl hydroxylation**
59. Oxidation: Alpha fluoro diol to acid fluoride and carboxylic acid with C-C bond cleavage_PTP						**NO**	**-the alpha hydroxy-alpha fluoro ketone** **-**

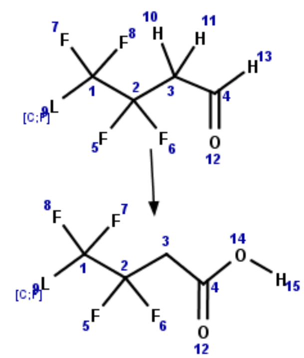
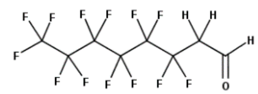
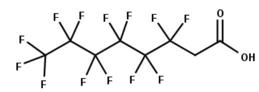
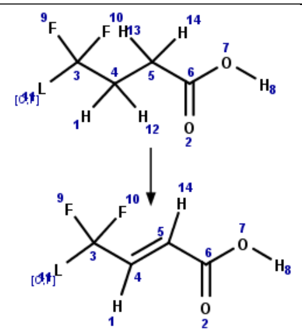
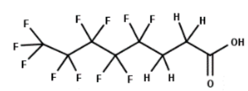
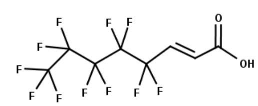
60. Oxidation: Alpha oxidation of an alpha hydroxy fluorotelomer carboxylic acid to a carboxylic acid				**NO**	**-the alpha-beta-dihydroxy carboxylic acid** **-the alpha-keto carboxylic acid**		
61. Oxidation: Beta hydroxy fluorotelomer acid to beta keto fluorotelomer acid_PTP				**YES**	**-alpha-beta-dihydroxy aldehyde** **-the beta-keto aldehyde**		

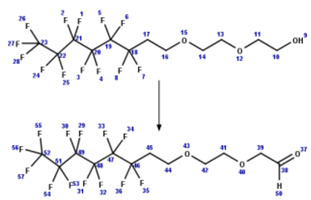
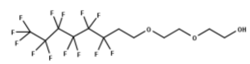
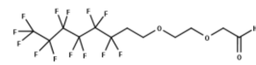
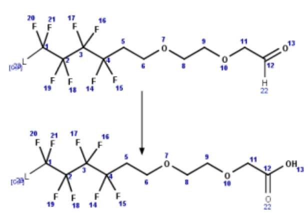
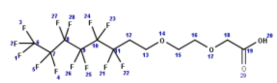
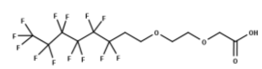
62. Oxidation: Alpha hydroxy fluorotelomer aldehyde to beta hydroxy fluorotelomer carboxylic acid_PTP						Yes	**-the alpha keto aldehyde** **-the alpha-beta dihydroxy aldehyde**
63. Oxidation: Fluorotelomer diol to beta hydroxy fluorotelomer aldehyde_PTP						YES	**-the beta-keto alcohol** **-the alpha-beta dihydroxy alcohol**

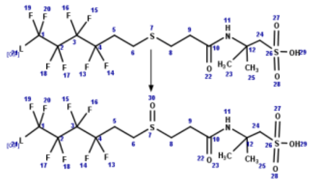
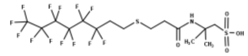
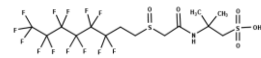
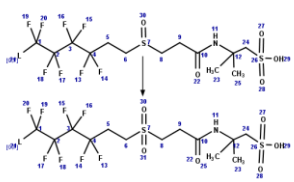
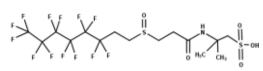
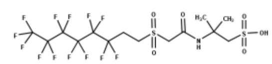
64. Oxidation: Beta-keto aldehyde to beta-keto acid_PTP				**YES**	**-the beta-hydroxy, alpha-keto aldehyde** **- the beta-keto alcohol** **-the beta-keto aldehyde**		
65. Oxidation: Beta oxidation of beta keto fluorotelomer acid				**NO**	**-the alpha-hydroxy** **-beta keto carboxylic acid** **the beta-hydroxy carboxylic acid**	**NO**	

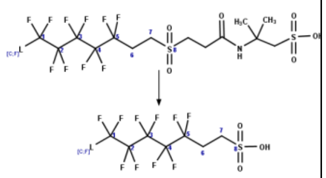
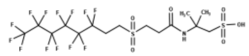
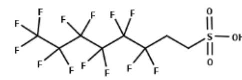
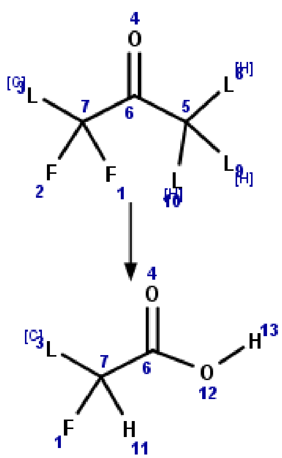
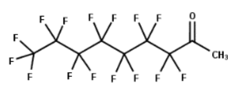
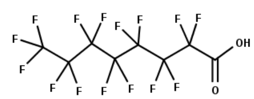
66. Oxidation: Fluorotelomer iodide to alpha beta unsaturated fluorotelomer iodide_PTP				**NO**	**-the alpha-hydroxy fluorotelomer iodide** **-the beta-hydroxy fluorotelomer iodide**	**NO**	
67. Oxidation: Fluorotelomer alcohol to fluorotelomer aldehyde				**NO**	**-the beta-keto fluorinated hexane** **-the alpha-beta diol fluorinated hexane**	**YES**	**-the alpha-beta diol fluorinated hexane**

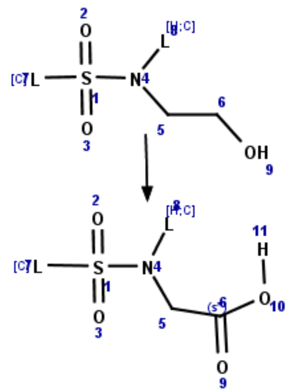
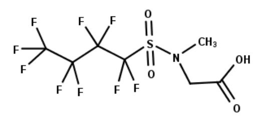
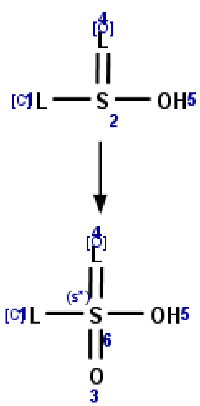
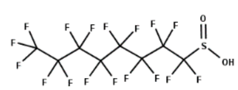
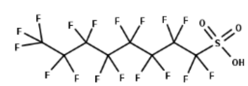
68. Oxidation: Fluorotelomer alcohol to carboxylic acid with loss of methyl group				**NO**	**-the beta-keto fluorinated heptane** **-the alpha-beta diolfluorinated heptane**	**YES**	**-the beta-keto fluorinated heptane** **-the alpha-beta diol fluorinated heptane**
69. Oxidation: Fluorotelomer alcohol to fluorotelomer carboxylic acid with loss of CF2 and methyl groups				**NO**	**-the beta-keto fluorinated heptane**	**NO**	**-the beta-keto fluorinated heptane** **-the alpha-beta diol fluorinated heptane**

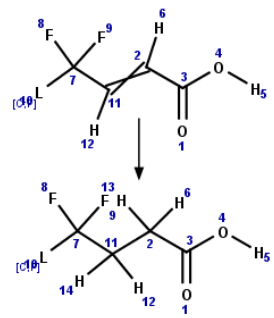
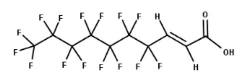
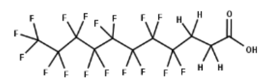
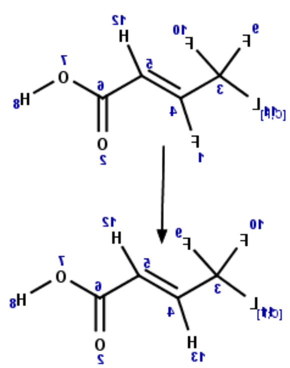
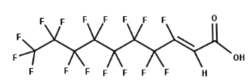
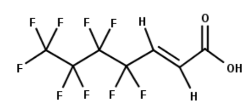
70. Oxidation: Fluorotelomer aldehyde to fluorotelomer carboxylic acid				**YES**	**-the beta-hydroxy fluorotelomer carboxylic acid.**	**NO**	**-the beta-hydroxy fluorotelomer carboxylic acid.**
71. Oxidation: Fluorotelomer carboxylic acid to 2,3-unsaturated fluorotelomer carboxylic acid				**NO**	**-the alpha-hydroxy caroboxylic acid** **-the beta-hydroxy carboxylic acid.**	**NO**	**-the alpha-hydroxy caroboxylic acid.**

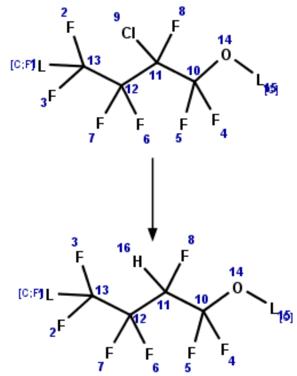
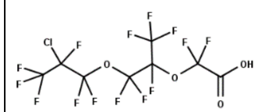
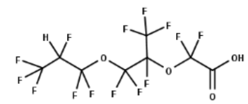
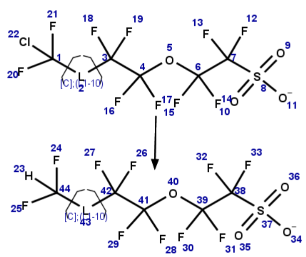
72. Oxidation: Fluorotelomer polyethoxylate alcohol to fluorotelomer ethoxylate aldehyde						**NO**	**-Oxidative cleavage of the C-O bond beta to the hydroxyl group** **-the alpha-hydroxy carboxylic acid** **-the alpha hydroxylation of the carbon alpha to the CF_2 group**
73. Oxidation: Fluorotelomer ethoxylate aldehyde to fluorotelomer ethoxylate carboxylic acid						**YES**	**-hydroxylation of the carbon alpha to the CF_2 group** **- the aldehyde from cleavage of the C-O bond**

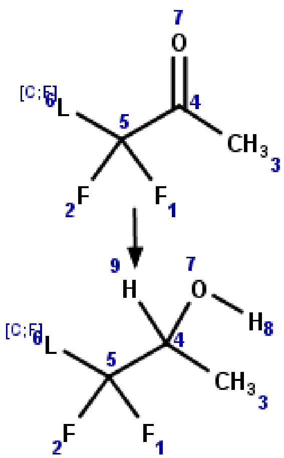
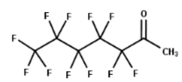
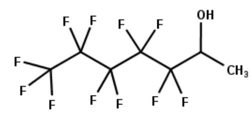
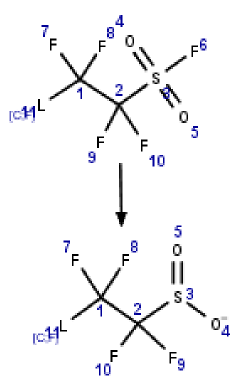
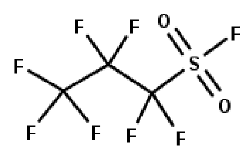
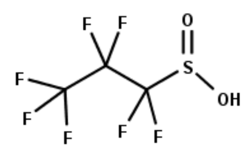
74. Oxidation: Fluorotelomer thioether amido sulfonate to fluorotelomer sulfoxide amido sulfonate						**NO**	
75. Oxidation: Fluorotelomer sulfoxide amido sulfonate to fluorotelomer sulfone amido sulfonate						**NO**	

76. Oxidation: Fluorotelomer sulfoxide amido sulfone to fluorotelomer sulfonate						**NO**	
77. Oxidation: Hydrodefluorination with alpha hydroxylation and alpha oxidation						**NO**	**-the alpha-hydroxy ketone**

78. Oxidation: N-Alky sulfonamide alcohol to N-alkyl sulfonamide carboxylic acid				**NO**	**-the beta-hydroxy N-alkyl sulfonamide carboxylic acid** **-the beta-aldeyde sulfonamide carboxylic acid** **-the N-methyl sulfonamide carboxylic acid**	**NO**	**-the butanoic sulfonate** **-the beta-hydroxy N-alkyl sulfonamide carboxylic acid** **-the beta-aldeyde sulfonamide carboxylic acid**
79. Oxidation: Sulfinate to sulfonate						**YES**	**-the 1-H perfluoro nonane**

80. Reduction: 2,3-Unsaturated fluorotelomer carboxylic acid to fluorotelomer carboxylic acid				**NO**	**- the alpha-beta epoxide carboxylic acid** **-the beta-keto carboxylic acid**	**YES**	**-the beta-hydroxy carboxylic acid**
81. Reduction: Beta fluoro unsaturated telomer acid to beta H unsaturated telomer acid				**NO**	**-the beta-keto carboxylic acid**	**NO**	**-the beta-hydroxy beta-fluoro caboxylic acid** **-the beta-fluoro 7:2 fluorotelomer carboxylic acid**

82. Reduction: Hydrogenolysis of chlorinated perfluorinated ether_PTP				**NO**		**YES**		
83. Reduction: Hydrogenolysis of chlorinated perfluorinated ether sulfonate				**NO**				

84. Reduction: Ketone to alcohol				**YES**	**-the alpha-hydroxy ketone**	**YES**	**-the alpha-hydroxy ketone**
85. Reduction: Perfluoroalkyl sulfonyl fluoride to perfluoroalkyl sulfinic acid				**NO**			

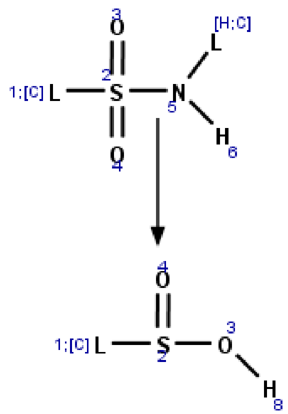
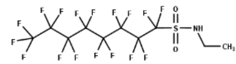
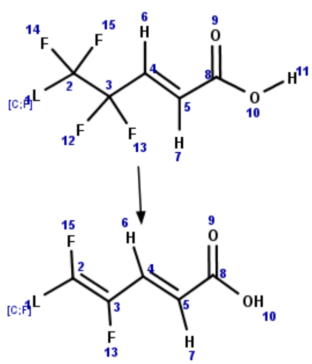
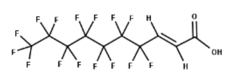
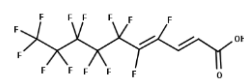
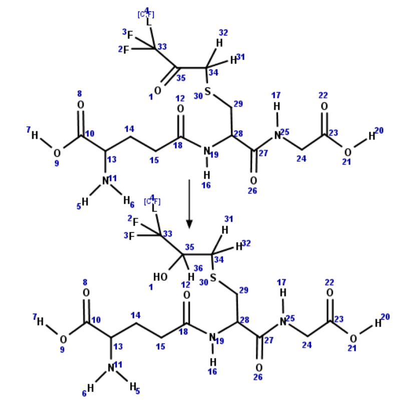
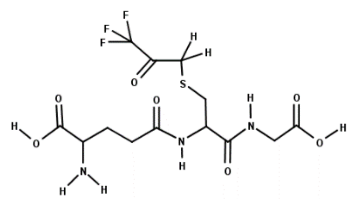
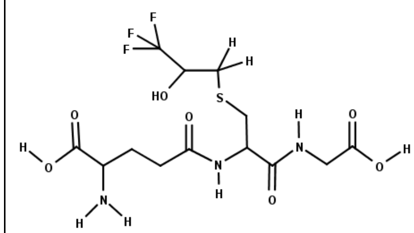
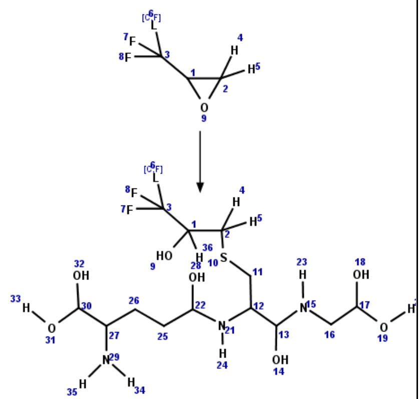
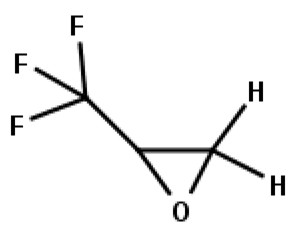
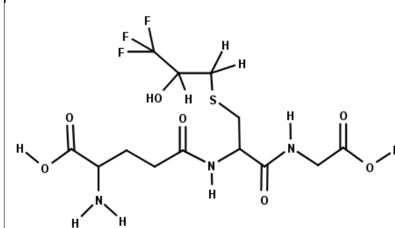
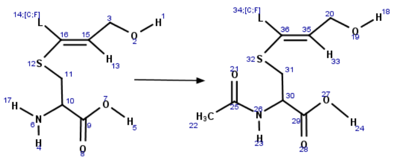
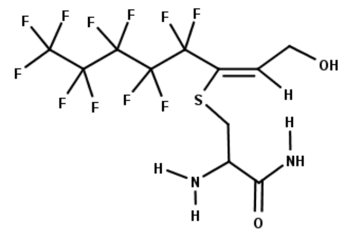
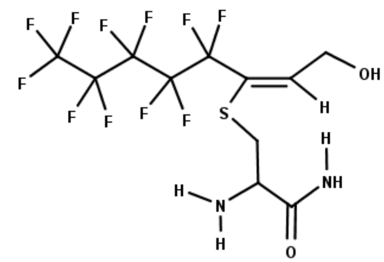
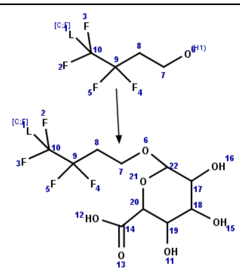
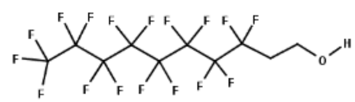
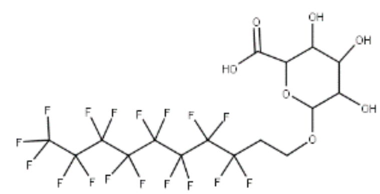
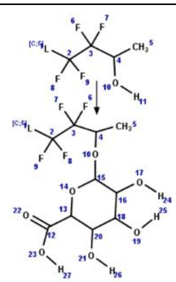
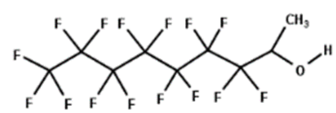
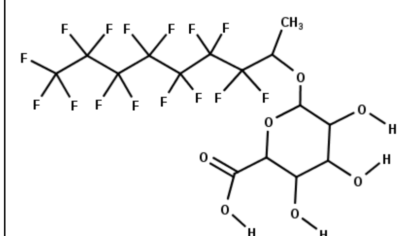
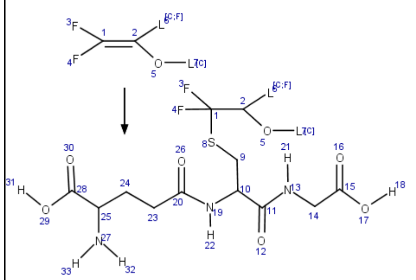
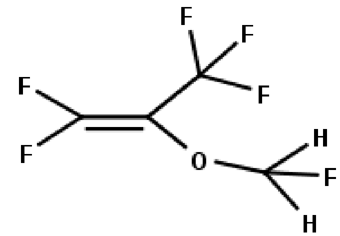
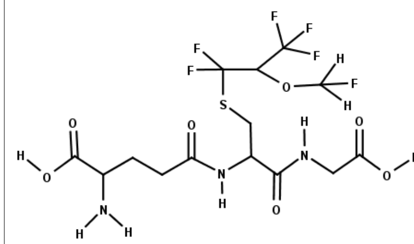
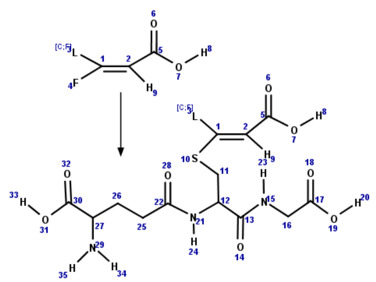
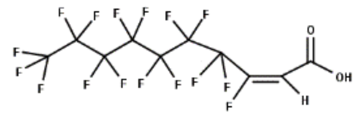
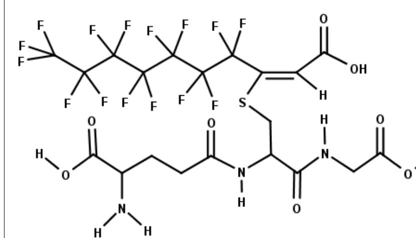
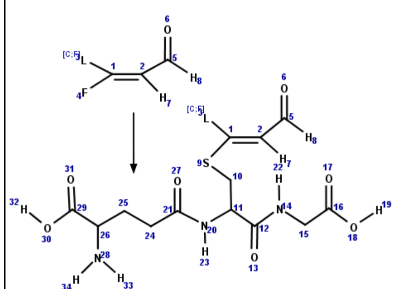
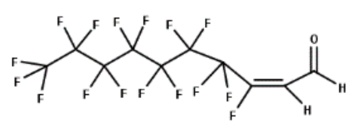
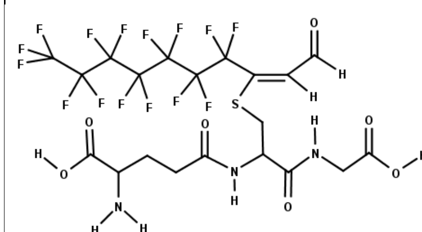
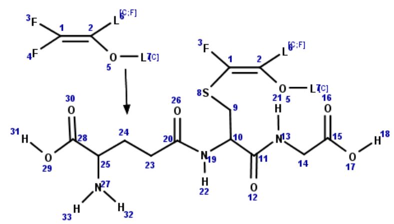
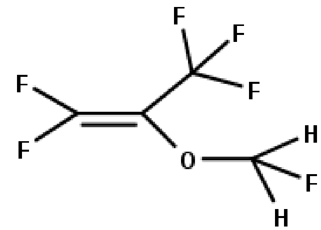
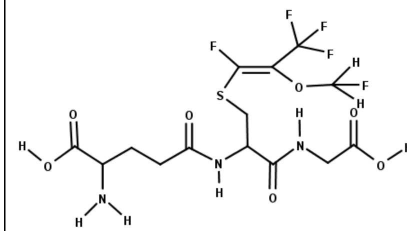
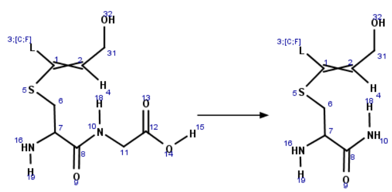
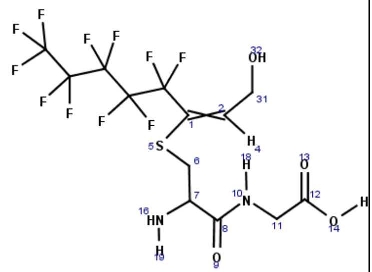
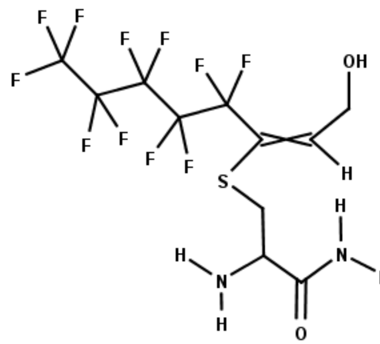
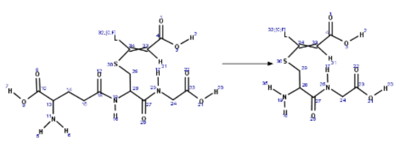
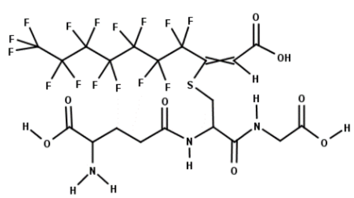
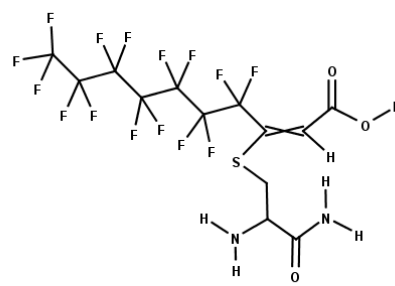
86. Reduction: Sulfonamide to sulfinic acid						**NO**	**-the beta-hydroxy sulfonamide** **-the sulfonate**
87. Reduction: Vicinal bis-defluorination of unsaturated carboxylic acid_PTP						**NO**	**-the saturated fluorotelomer caboxylic acid** **-the beta-hydroxy saturated fluor0 carboxylic acid telomer**

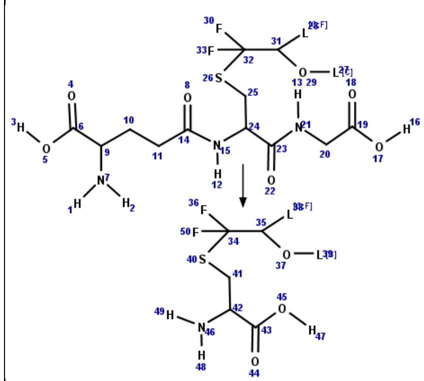
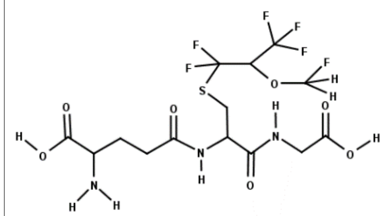
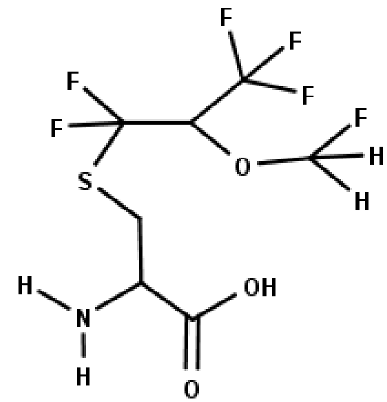
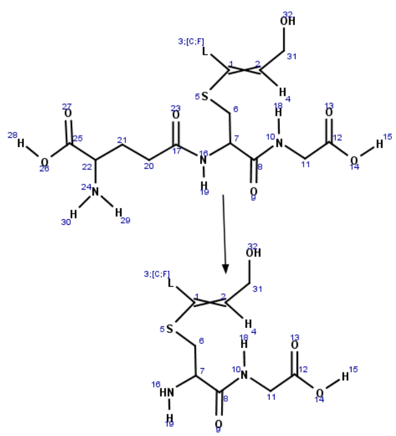
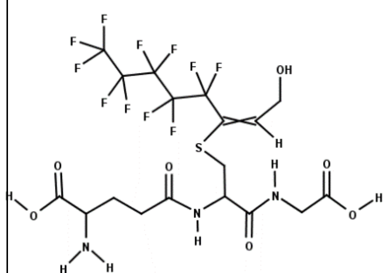
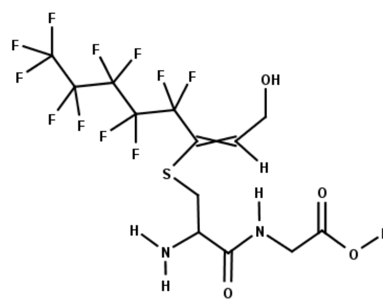
Table S2: The list of generalized reaction schemes for the PFAS conjugation reactions and structure of the parent PFAS on which the reaction schemes were based are taken from Table 3. Column 3 provides the structure of the predicted TP based on the transformation of the parent PFAS by the reaction scheme. Column 4 states if the predicted TP is formed based on the parent PFAS and execution of BioTransformer Phase II Transformer through the CTS. Additional TPs that were observed upon execution of the BioTransformer Phase II transformer are listed in column 5.

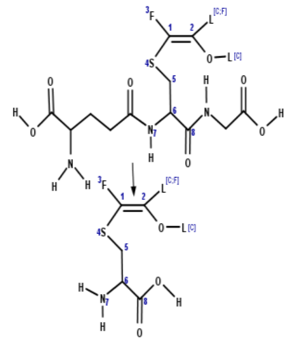
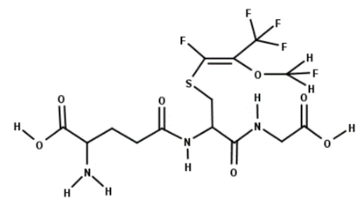
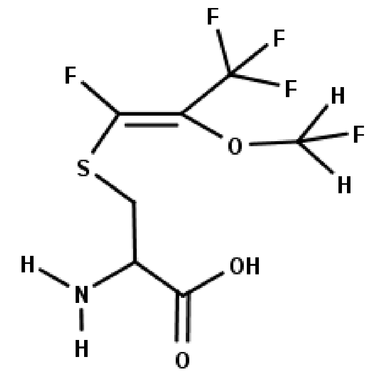
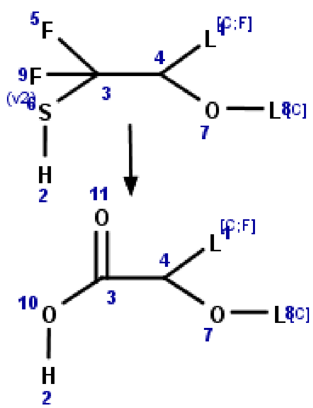
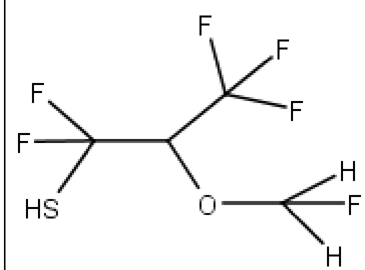
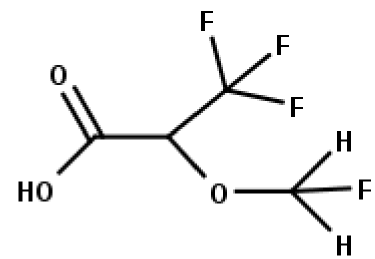
Reaction Scheme	Generalized Reaction Scheme	Parent PFAS	Predicted TP based on the reaction scheme	TP predicted by BioTransformer?	Other TPs predicted by BioTransformer
1. Conjugation: Reduction of alpha-keto glutathione conjugate to alpha-hydroxy glutathione conjugate				**NO**	**-glycine conjugation** **- S-methylation**
2. Conjugation: Glutathione-epoxide conjugate formation				**YES**	

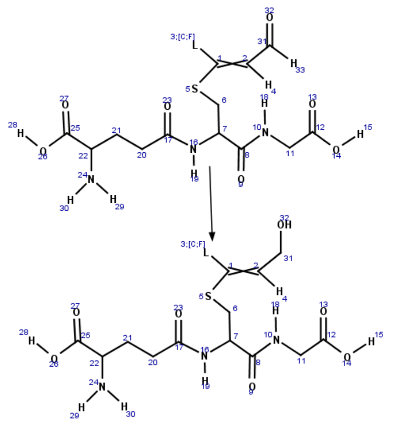
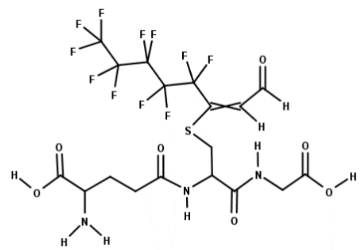
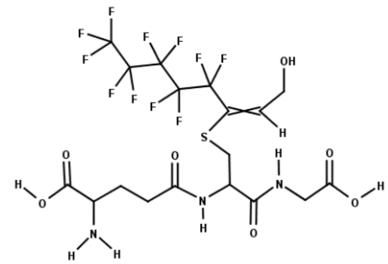
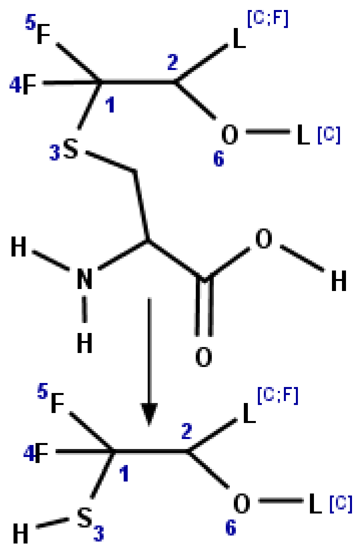
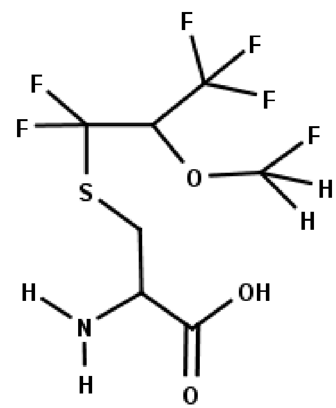
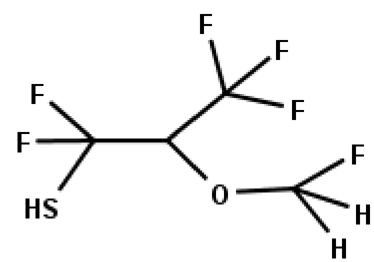
3. Conjugation: Acetylation of S-Cys-unsaturated fluorotelomer acid conjugate to S-Cys-N-acetyl-unsaturated fluorotelomer acid_PTP				**NO**	**-Glucuronide conjugation of the aliphatic acid** **-Glucuronide conjugation of the amide** **-Thioether methylation** **-Glycine conjugation**
4. Conjugation: Gluconerate-fluorotelomer alcohol conjugate formation				**YES**	**-Sulfonation of primary alcohol**
5. Conjugation: Gluconerate-fluorotelomer sec-alcohol conjugate formation				**YES**	**-Sulfonation of secondary alcohol**

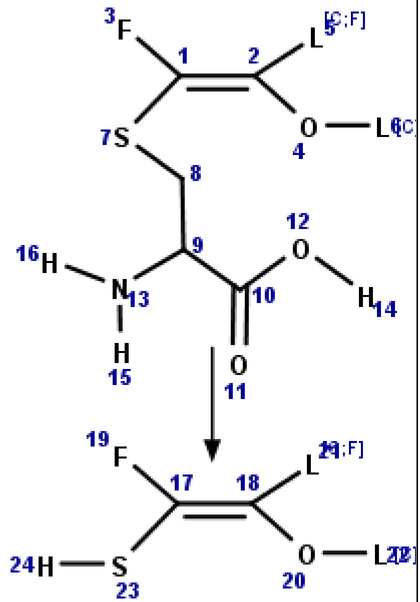
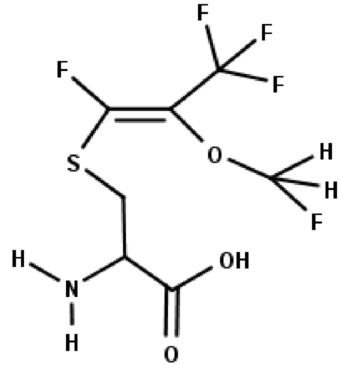
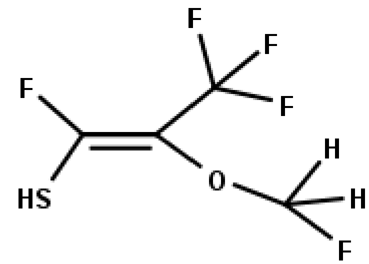
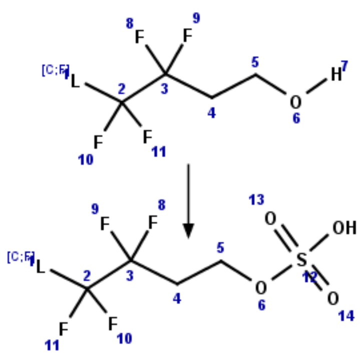
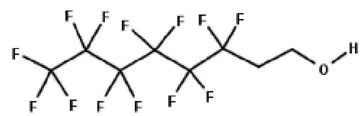
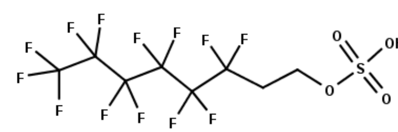
6. Conjugation: Glutathione-ether conjugate formation				**NO**	**-Glutathione conjugation of the fluoromethyl group**
7. Conjugation: Glutathione-unsaturated fluorotelomer acid conjugate formation				**NO**	**-Gluconerate conjugation of the carboxylic acid** **-Glycine conjugation of the carboxylic acid**
8. Conjugation: Glutathione-unsaturated fluorotelomer aldehyde conjugate formation				**NO**	

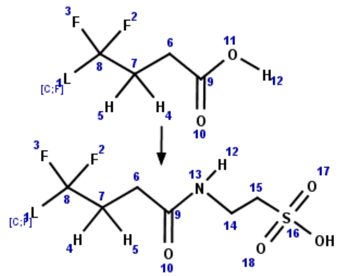
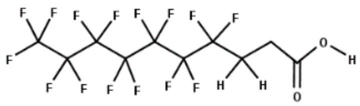
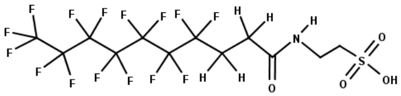
9. Conjugation: Glutathione-vinyl ether conjugate formation				**NO**	**-Glutathione conjugation of the fluoromethyl group**
10. Conjugation: Hydrolysis of S-Cys-Glycine-unsaturated fluorotelomer alcohol conjugate to S-Cys-unsaturated fluorotelomer alcohol_PTP				**NO**	**-Sulfide methylation** **-Glycine conjugation**
11. Conjugation: Hydrolysis of glutathione-unsaturated fluorotelomer acid conjugate to S-Cys-Glycine-unsaturated acid				**NO**	**-Glycine conjugation of the carboxylic acid** **-Glycine conjugation of the carboxylic acid** **-Glycine conjugation of the carboxylic acid**

12. Conjugation: Hydrolysis of glutathione-ether conjugate to cysteine-ether conjugate				**NO**	**-Glycine conjugation of carboxylic acid** **-Glycine conjugation of both carboxylic acids**
13. Conjugation: Hydrolysis of glutathione-unsaturated fluorotelomer alcohol conjugate to S-CysGly-unsaturated fluorotelomer alcohol_PTP				**NO**	**-Glycine conjugation of the carboxylic acid**

14. Conjugation: Hydrolysis of glutathione-vinyl ether conjugate to cysteine-vinyl ether conjugate				**NO**	**-Glycine conjugation of the carboxylic acid**
15. Conjugation: Hydrolysis of sulfide conjugate to carboxylic acid				**NO**	**-Gluconerate conjugation the thiol group** **-Glutathione conjugation of the thiol group** **-Glutathione conjugation of the methyl fluoro group**

17. Conjugation: Reduction of Glutathione-unsaturated fluorotelomer aldehyde conjugate to Glutathione-unsaturated fluorotelomer alcohol conjugate				**NO**	**-Glycine conjugation of both carboxylic acids**
18. Conjugation: S-Dealkylation of cysteine-ether conjugate to beta thio ether_PTP				**NO**	**-Glutathione conjugation of the fluoro methyl group** **-Glycine conjugation of the carboxylic acid**

19. Conjugation: S-Dealkylation of cysteine-vinyl ether conjugate to beta thio vinyl ether				**NO**	**-Methylation of thio group** **-Glutathione conjugate of the vinyl fluoride** **-Glycine conjugation of carboylic acid**
20. Conjugation: Sulfate-fluorotelomer alcohol conjugate formation				**YES**	**-gluconerate conjugation of the alcohol**

21. Conjugation: Taurine-fluorotelomer acid conjugate formation				**NO**	**-Gluconerate conjugation of the carboxlyic acid** **-Glycine conjugation of the carboxylic acid**