Summary

4,5,6,7-Tetrabromo-2-[4-(4-chloro-benzylidene)-5-oxo-4,5-dihydrooxazol-2-ylmethyl]-isoindole-1,3-dione **(1)** was obtained from the condensation of aromatic aldehydes with aroylglycine, via Erlenmeyer synthesis.

It reacts with primary amines namely, (propyl amine, pentyl amine, hexyl amine, p-nitroaniline, p-anizidene, p-phenylene-diamine) in DMF solution to give the corresponding 3-(4-Chloro-phenyl)-N-alkyl-2-[2-(4,5,6,7-tetrabromo-1,3-dioxo-1,3,3a,7a-tetrahydro-isoindol-2-ylacetylamino]-acryl amide **(2a-f)** .

The oxazolone **(1)** reacts with secondary amines namely, piperidine to yield N-[2-(4-Chloro-phenyl)-1-(piperidine-1-carbonyl)-vinyl]-2-(4,5,6,7-tetrabromo-1,3-dioxo-1,3,3a,7a-tetrahydro-isoindol-2-yl)-acetamide **(3)**.

Compound **(1)** reacts with amino acids in DMF to give the corresponding {3-(4-Chloro-phenyl)-2-[2-(4,5,6,7-tetrabromo-1,3-dioxo-1,3,3a,7a-tetrahydro-isoindol-2-yl)-acetyl-amino]-acryloylamino}-acetic acid **(4,5)**.

It reacts with hydrazine hydrate in DMF solution to give the corresponding N-[2-(4-Chloro-phenyl)-1-hydrazinocarbonyl-vinyl]-2-(4,5,6,7-tetrabromo-1,3-dioxo-1,3,3a,7a-tetrahydro-isoindol-2-yl)-acetamide **(6)**. Similarly, it condensed with phenyl hydrazine in boiling DMF and yielded the corresponding N-[2-(4-Chloro-phenyl)-1-(N'-phenyl-hydrazino-carbonyl)-vinyl]-2-(4,5,6,7-tetrabromo-1,3-dioxo-1,3,3a,7a-tetrahydro-isoindol-2-yl)-acetamide **(7)**.

N-[2-(4-Chloro-phenyl)-1-(N'-phenyl-hydrazino-carbonyl)-vinyl]-2-(4,5,6,7-tetrabromo-1,3-dioxo-1,3,3a,7a-tetrahydro-isoindol-2-yl)-acetamide **(7)** were readily cyclised by treatment with acetic acid and anhydrous sodium acetate to give the corresponding triazines **(8a, 8b)**.

4,5,6,7-Tetrabromo-2-[4-(4-chloro-benzylidene)-5-oxo-4,5-dihydrooxazol-2-ylmethyl]-isoindole-1,3-dione **(1)** reacts with hydroxylamine hydrochloride in boiling pyridine and DMF to give 4-arylidene-1-hydroxy-2-aryl-5-imidazolones **(9)**.

1-hydroxy-5-imidazolone derivative **(9)** reacts with hydrazines in ethanol or acetic acid to give 1,2,4-triazine derivatives **(8a)**.

Compound **(1)** reacts with sodium azide in acetic anhydride to give 3-(4-Chloro-phenyl)-2-[5-(4,5,6,7-tetrabromo-1,3-dioxo-1,3,3a,7a-tetrahydro-isoindol-2-ylmethyl)-tetrazol-1-yl]-acrylic acid **(10)**.

2N-(pht-amino acid) and 2N-(tos-amino acid) imidazolones **(20a-d), (21a-d)** were prepared via the carbodiimide method. Imidazolone derivatives are dissolved in tetrahydrofuran (THF) and coupled with a solution of pht-and/or tos-amino acid in tetrahydrofuran and N,N-dicyclohexylcarbodiimide (DCC) added to yield the compounds **(20a-d), (21a-d)**.

Synthesis of 2-(aminoacyl) imidazolones **(22a-d)** were performed by hydrazinolysis of the corresponding pht-amino acid imidazolones derivatives **(20a-d).**

The structure of all the synthesized derivatives is established by:
(i) Elemental analysis, (ii) IR, (iii) NMR, (iv) Mass spectra.
Biological activities of the synthesized compounds have been investigated and the results are cited in test.