Experimental Section

***6-Iodo-2-undecyl-4H-benzo[d][1,3]oxazin-4-one (2)*:** A solution of **1** (4.4 gm, 10 mmole) in freshly distilled acetic anhydride (10 ml) was heated under reflux for 3 h. The crude white solid that precipitated after cooling was filtered off, washed with light-petroleum ether (b.p. 40-60°C) then recrystallized from light-petroleum ether (b.p. 60-80°C) to give **2** as white crystals; mp 58-60°C, yield 90%. Anal. calcd. for C19H26INO2 (427.33): C, 53.40; H, 6.13; I, 29.70; N, 3.28. Found: C, 53.50; H, 6.35; I, 29.44; N, 2.95. IR (υ/cm-1): 1764 (C=O oxazinone), 1643 (C=N). MS m/z (%): 427 (M**+**., 17.9), 286 (100). 1H-NMR (CDCl3) δ (ppm): 8.52-7.30 (m, 3H), 2.67 (t, 2H), 1.82 (m, 2H), 1.36-1.2 (m, 16H), 0.88 (t, 3H).

***Reaction of benzo[d][1,3]oxazin-4-one 2 with primary amines; General procedure***

A mixture of benzoxazinone derivative **2**  (4.2 gm, 10 mmole) and primary amines, namely cyclohexyl amine and/or sulfanilamide (10 mmol), in dioxane (20 ml) was heated under reflux for 3 h, left to cool, and the solid product was collected, dried, and recrystallized to give **3, 4**, respectively.

***N-Cyclohexyl-2-dodecanamido-5-iodobenzamide (3)*:** Recrystallized from light-petroleum ether (b.p.80-100°C) as white crystals; mp 128-130°C, yield 70%. Anal. calcd. for C25H39IN2O2 (526.50): C, 57.03; H, 7.47; I, 24.10; N, 5.32. Found: C, 57.31; H, 7.52; I, 24.19; N, 5.20. IR (υ/cm-1):3331, 3263 (NH), 2925, 2852 (CH aliphatic), 1689 (C=O). MS m/z (%): 527 (M**+**1, 25.9), 428 (66.5), 344 (100), 262 (53.9), 246 (83.2) and 219 (20.7). 1H-NMR (CDCl3) δ (ppm): 10.90 (s, 1H, Ar-NHCO), 8.43-7.68 (m, 4Harom. + Ar-CONH), 5.99 (s, 1H, NH-C6H11, exchangeable with D2O), 3.91 (d, 1H, NH-CH), 2.41 (t, 2H), 2.0 (d,d, 2H), 1.79-1.6 (m, 10H, cyclohexyl protons), 1.4 (m, 16H) and 0.9 (t, 3H).

***2-Dodecanamido-5-iodo-N-(4-sulfamoylphenyl) benzamide (4)*:** Recrystallized from ethanol to give **13** as white crystals; mp 110-112°c, yield 90%. Anal. calcd. for C25H34IN3O4S (599.53): C, 50.09; H, 5.72; I, 21.17; N, 7.01; S, 5.35. Found: C, 50.37; H, 5.88; I, 21.39; N, 7.22; S, 5.55. IR (υ/cm-1): 3478, 3375, 3266 (NH, NH2), 2922, 2851 (CHaliphatic), 1712, 1666 (C=O). MS m/z (%): 599 (M**+**., 7.6), 417 (100), 262 (44.9), 246 (75.8) and 219 (42.7).1H-NMR (DMSO-d6) δ (ppm): 11.06 (s, 1H, NH, exchangeable with D2O), 10.23 (s, 1H, NH, exchangeable with D2O), 8.32-6.57 (m, 7Harom.), 6.85 (s, 2H, NH2, exchangeable with D2O), 2.38 (t, 2H), 1.60 (m, 2H), 1.26-1.16 (m, 16H), 0.84 (t, 3H).

***Ethyl 2-dodecanamido-5-iodobenzoate (5)*:** A mixture of benzoxazinone derivative **2** (4.2 gm, 10 mmole) and primary amines, namely cyclohexyl amine and/or sulfanilamide (10 mmol), in ethanol (20 ml) was heated under reflux for 3 h. The solid product that deposited was collected by filtration, washed with cold water, dried and then recrystallized from benzene to give **5** as white crystals; mp 60-62°C, yield 85%. Anal. calcd. for C21H32INO3 (473.40). C, 53.28; H, 6.81; I, 26.81; N, 2.96. Found: C, 53.33; H, 6.57; I, 26.93; N, 3.20. IR (υ/cm-1): 3324 νNH, 2920, 2850 νCH aliphatic, 1687 νC=O. MS m/z (%): 473 (M**+**., 33.7). 1H-NMR (CDCl3) δ (ppm): 11.02 (s, 1H, NH, exchangeable with D2O), 8.56-7.77 (m, 3Harom.), 4.40 (q, 2H, CH2CH3), 1.43 (t, 3H, CH2CH3), 2.45 (t, 2H), 1.74 (m, 2H), 1.4-1.26 (m, 16H), 0.88 (t, 3H).

***3-(1,5-Dimethyl-3-oxo-2-phenyl-2,3-dihydro-1H-pyrazol-4-yl)-6-iodo-2-undecylquinazolin-4(3H)-one (6):*** A mixture of benzoxazinone derivative **2** (4.2 gm, 10 mmole) and 4-aminoantipyrine (2 gm, 10 mmol) in dioxane (20 ml) was heated under reflux for 3 h. The solid product that deposited was collected by filtration, washed with cold water, dried and then recrystallized from ethanol to give **6** as buff crystals; mp 144-146°C, yield 75%. Anal. calcd. for C21H32INO3 (612.56). C, 58.82; H, 6.09; I, 20.72; N, 9.15. Found: C, 58.66; H, 5.87; I, 20.69; N, 9.02. IR (υ/cm-1): 2920, 2850 (CH aliphatic), 1685, 1665 (C=O). MS m/z (%): 612 (M**+**., 36.8). 1H-NMR (CDCl3) δ (ppm): 8.33-7.35 (m, 3Harom.), 3.21 (s, 3H, NCH3), 2.36 (t, 2H), 2.21 (s, 3H, C=C-CH3), 1.72 (m, 2H), 1.45-1.26 (m, 16H), 0.88 (t, 3H).

***3-Amino-6-iodo-2-undecylquinazolin-4(3H)-one (7)*:** A mixture of **2** (4.2 gm, 10 mmole) and hydrazine hydrate (0.5 ml, 10 mmole) in absolute ethanol (30 ml) was refluxed for 8 h. The separated solid was filtered off, dried and recrystallized from ethanol to give **7** as white crystals; mp 108-110°c, yield 82%. Anal. calcd. for C19H28IN3O (441.36): C, 51.71; H, 6.39; I, 28.75; N, 9.52 . Found: C, 51.43; H, 6.50; I, 28.82; N, 9.21. IR (υ/cm-1): 3319, 3210 (NH2), 2919, 2849 (CH aliphatic), 1673 (C=O). MS m/z (%): 441 (M**+**., 6.8), 301 , 271 , 245 .1H-NMR (CDCl3) δ (ppm): 8.58-7.39 (m, 3Harom.), 4.84 (s, 2H, NH2, exchangeable with D2O), 3.02 (t, 2H), 1.82 (m, 2H), 1.57-1.27 (m, 16H), 0.89 (t, 3H).

 ***3-(((1,3-Diphenyl-1H-pyrazol-4-yl)methylene) amino)-6-iodo-2-undecylquinazolin-4(3H)-one (8)*:** A mixture of compound **6** (4.4 gm, 10 mmole) and 1,3-diphenyl-1*H*-pyrazole-4-carbaldehyde (2.4 gm, 10 mmole) in dioxane (30 ml) in the presence of TEA (1 ml) as a catalyst was heated under reflux for 8 h. The separated solid was filtered off, dried and recrystallized from ethanol/dioxane to give **8** as white crystals; mp 126-128°c yield 77%. Anal. calcd. for C35H38IN5O (671.63): C, 62.59; H, 5.70; I, 18.90; N, 10.43. Found: C, 62.38; H, 5.43; I, 19.12; N, 10.25. IR (υ/cm-1): 2915, 2850 (CH aliphatic), 1671 (C=O). MS m/z (%): 671 (M**+**., 10.5), 427 , 287 , 245.1H-NMR (CDCl3) δ (ppm): 8.86 (s, 1Holefenic), 8.67-7.40 (m, 13Harom.), 2.89 (t, 2H), 1.85 (m, 2H), 1.56-1.22 (m, 16H), 0.86 (t, 3H).

***Reaction of benzo[d][1,3]oxazin-4-one 2 with bident nucleophiles; General procedure***

A mixture of benzoxazinone derivative **2**  (4.2 gm, 10 mmole) and bident nucleophiles, namely 1,2-diaminoethane, 1,5-diaminopentane and/or ethanolamine (10 mmol) in ethanol (20 ml) was heated under reflux for 3 h, left to cool, and the solid product was collected, dried, and recrystallized to give **9a,b, 10**, respectively.

***3-(2-Aminoethyl)-6-iodo-2-undecylquinazolin-4(3H)-one (9a)*:** Recrystallized from light-petroleum ether (b.p. 80-100°C) as white crystals; mp 78-80оC. Anal. Calcd. for C21H32IN3O (469.41): C, 53.73; H, 6.87; I, 27.03; N, 8.95. Found: C, 53.54; H, 6.99; I, 27.36; N, 9.11. IR (υ/cm-1): 3370, 3303 (NH2), 2915, 2850 (CH aliphatic), 1677 (C=O). MS m/z (%): 469 (M**+**., 40.2). 1H-NMR (CDCl3) δ (ppm): 8.57-7.35 (m, 3Harom), 4.16 (t, 2H), 3.05 (t, 2H), 2.84 (t, 2H), 1.83 (m, 2H), 1.56 (s, 2H, NH2, exchangeable with D2O), 1.45-1.27 (m, 16H), 0.88 (t, 3H).

***3-(5-Aminopentyl)-6-iodo-2-undecylquinazolin-4(3H)-one (9b):*** Recrystallized from light-petroleum ether (b.p. 40-60°C) as white crystals; mp 62-64оC. Anal. Calcd. for C24H38IN3O (511.49): C, 56.36; H, 7.49; I, 24.81; N, 8.22. Found: C, 56.28; H, 7.57; I, 24.96; N, 8.11. IR (υ/cm-1): 3394, 3326 (NH2), 2920, 2849 (CH aliphatic), 1675 (C=O). MS m/z (%): 511 (M**+**., 15.6).1H-NMR (CDCl3) δ (ppm): 8.56-7.35 (m, 3Harom), 4.38 (t, 2H), 4.10 (t, 2H), 2.81 (t, 2H), 1.81 (m, 2H), 1.57 (s, 2H, NH2, exchangeable with D2O), 1.51-1.26 (m, 22H), 0.88 (t, 3H).

***3-(2-Hydroxyethyl)-6-iodo-2-undecylquinazolin-4(3H)-one (10)*:** Recrystallized from ethanol as white crystals; mp 78-80°c, yield 85%. Anal. calcd. for C21H31IN2O2 (470.40): C, 53.62; H, 6.64; I, 26.98; N, 5.96. Found: C, 53.41; H, 6.52; I, 26.83; N, 6.13. IR (υ/cm-1): 3462 (OH), 2919, 2849 (CH aliphatic), 1667 (C=O). MS m/z (%): 470 (M**+**., 18.3). 1H-NMR (CDCl3) δ (ppm): 8.50-7.32 (m, 3Harom.), 4.72 (s, 1H, OH, exchangeable with D2O), 4.29 (t, 2H), 3.98 (t, 2H), 2.90 (t, 2H), 1.79 (m, 2H), 1.44-1.27 (m, 16H), 0.88 (t, 3H).

***2-Undecyl-1H-benzo[d]imidazole (11)*:**A mixture of **2** (4.2 gm, 10 mmole) and *o*-phenylene diamine (1 gm, 10 mmole) in pyridine (40 ml) was refluxed for 8 h. The separated solid was filtered off, dried and recrystallized from light-petroleum ether (b.p. 60-80°C) to give **11** as white crystals; mp 90-92°c, yield 70%. Anal. calcd. for C18H28N2 (272): C, 79.36; H, 10.36; N, 10.28. Found: C, 79.44; H, 10.52; N, 10.11. IR (υ/cm-1): 3166 (NH), 2921, 2849 (CH aliphatic), 1624 (C=N). MS m/z (%): 272 (M**+**., 16.8). 1H-NMR (CDCl3) δ (ppm): 12.16 (s, 1H, NH, exchangeable with D2O), 7.56-7.20 (m, 4Harom.), 2.93 (t, 2H), 1.86 (m, 2H), 1.38-1.23 (m, 16H), 0.88 (t, 3H). Acidification of the filtrate with cold concentrated hydrochloric acid afforded brown precipitate which identified as 5-iodoanthranilic acid which recrystallized from benzene; mp 220-222°c, yield 30%. IR (υ/cm-1): 3500 (OH), 3415, 3386 (NH2), 1677 (C=O). 1H-NMR (DMSO-d6) δ (ppm): 14.12 (br.s, 1H, OH, exchangeable with D2O), 8.8 (br.s, 2H, NH2, exchangeable with D2O), 7.92-6.59 (m, 3Harom.).

***Reaction of benzo[d][1,3]oxazin-4-one 2 with hydrazide derivatives; General procedure***

A mixture of benzoxazinone derivative **2**  (4.2 gm, 10 mmole) and hydrazide derivatives, namely semicarbazide hydrochloride, 4-methylbenzenesulfonohydrazide, 4-oxo-3,4-dihydrophthalazine-1-carbohydrazide and/or 2-cyanoacetohydrazide (10 mmol), in dioxane (20 ml) was heated under reflux for 8 h, left to cool, and the solid product was collected, dried, and recrystallized to give **14-16, 18**, respectively.

***1-(6-Iodo-4-oxo-2-undecylquinazolin-3(4H)-yl)urea (14)*:** Recrystallized from ethanol/dioxane as white crystals; mp 110-112°c, yield 75%. Anal. calcd. for C20H29IN4O2 (484.38): C, 49.59; H, 6.03; I, 26.20; N, 11.57. Found: C, 49.62; H, 6.20; I, 26.33; N, 11.73. IR (υ/cm-1): 3321, 3214 (NH, NH2), 2917, 2850 (CH aliphatic), 1673 (C=O). MS m/z (%): 484 (M**+**., 9.7). 1H-NMR (CDCl3) δ (ppm): 8.58-7.39 (m, 3Harom.), 4.84 (s, 2H, NH2, exchangeable with D2O), 3.0 (t, 2H), 1.82 (m, 2H), 1.56 (s, 1H, NH, exchangeable with D2O), 1.46-1.27 (m, 16H), 0.89 (t, 3H).

***N-(6-Iodo-4-oxo-2-undecylquinazolin-3(4H)-yl)-4-methylbenzenesulfonamide (15)*:** Recrystallized from dioxane as white crystals; mp 108-110°c, yield 83%. Anal. calcd. for C26H34IN3O3S (595.54): C, 52.44; H, 5.75; I, 21.31; N, 7.06; S, 5.38. Found: C, 52.65; H, 5.87; I, 21.41; N, 7.23; S, 5.29. IR (υ/cm-1): 3192 (NH), 2919, 2849 (CH aliphatic), 1696 (C=O). MS m/z (%): 595 (M**+**., 10.6).1H-NMR (CDCl3) δ (ppm): 11 (s, 1H, NH, exchangeable with D2O), 8.18-7.25 (m, 7Harom.), 3.0 (t, 2H), 2.4 (s, 3H), 1.79 (m, 2H), 1.27 (m, 16H), 0.89 (t, 3H).

***N-(6-iodo-4-oxo-2-undecylquinazolin-3(4H)-yl)-4-oxo-3,4-dihydrophthalazine-1-carboxamide (16):*** Recrystallized from ethanol as white crystals; mp 202-204°c, yield 76%. Anal. calcd. for C28H32IN5O3 (613.50): C, 54.82; H, 5.26; I, 20.69; N, 11.42. Found: C, 54.68; H, 5.06; I, 20.48; N, 11.22. IR (υ/cm-1): 3352, 3173 (NH), 2919, 2849 (CH aliphatic), 1720, 1699, 1662 (C=O). MS m/z (%): 613 (M**+**., 8.6).1H-NMR (CDCl3) δ (ppm): 13.9 (s, 1H, NH, exchangeable with D2O), 10.7 (s, 1H, NH, exchangeable with D2O), 8.46-7.23 (m, 7Harom.), 2.98 (t, 2H), 1.58 (m, 2H), 1.33 (m, 16H), 0.89 (t, 3H).

***5-Hydroxy-7-iodo-1-undecyl-[1,2,4]triazolo[4,3-a]quinoline-4-carbonitrile (18):*** Recrystallized from dioxane as white crystals; mp 210-212°c, yield 50%. Anal. calcd. for C22H27IN4O (490.39): C, 53.88; H, 5.55; I, 25.88; N, 11.43. Found: C, 54.10; H, 5.34; I, 26.02; N, 11.65. IR (υ/cm-1): 3129 (OH), 2922, 2851 (CH aliphatic), 2216 (C≡N conjugated), 1621 (C=N). MS m/z (%): 490 (M**+**.,11.5).1H-NMR (CDCl3) δ (ppm): 8.86-7.66 (m, 3Harom.), 8.62 (s, 1H, OH, exchangeable with D2O), 3.22 (t, 2H), 2.64-1.98 (m, 2H), 1.55-1.18 (m, 16H), 0.89 (t, 3H).