Heterocyclic Synthesis: A Convenient Route to Some 2-Mercepto 1,3,4-Oxadiazole and Green Chemistry Microwave-Induced One-Pot Synthesis of 2-Aryl 1,3,4-Oxadiazole in Quinazolone and Their Antibacterial and Antifungal Activity

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Several 6-substituted-3-[(5-mercepto-1,3,4-oxadiazol-2-yl)methyl]-2-substituted quinazolin-4(3*H*)-one or 6-substituted-3-[4-(5-mercepto-1,3,4-oxadiazol-2-yl)phenyl]-2-substituedquinazolin-4(3*H*)-one **2**(**a-l**) and 6-substituted-3-[(5-phenyl-1,3,4-oxadiazol-2-yl)methyl]-2-substitutedquinazolin-4(3*H*)-one or 6-substituted-3-[4-(5-phenyl-1,3,4-oxadiazol-2-yl) phenyl]-2-substitutedquinazolin-4(3*H*)-one **3**(**a-l**) were synthesized using conventional and microwave techniques respectively and were screened for antibacterial and antifungal activity.

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Introduction.

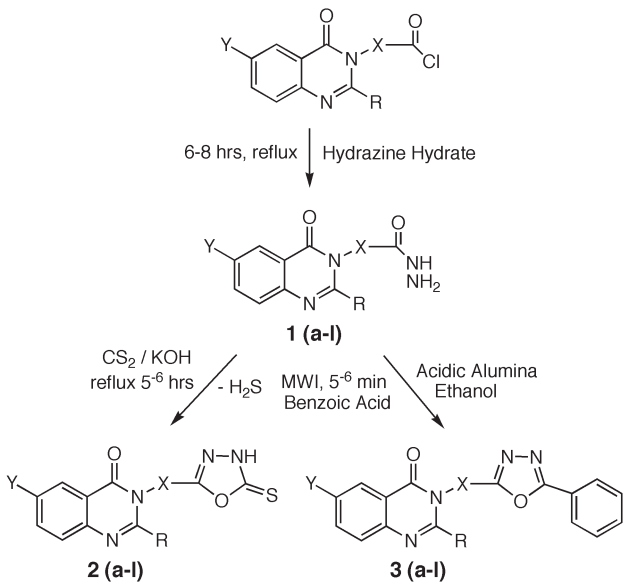
The increasing environmental consciousness throughout the world has put a pressing need to develop an alternate synthetic approach for biologically and synthetically important compounds. The present day industrialization has led to immense environmental deterioration. One of the advances in the field of green chemistry [1] where substantial progress has been made is the microwave-assisted solid-supported one-pot synthesis [2]. Inorganic solid supports (aluminas, silicas, zeolites, clays) coupled with microwaves have made a landmark in this direction as reactions can be performed in dry media or under solventless conditions [3]**.**

Substituted 1,3,4-oxadiazoles are of considerable pharmaceutical and material interest, which is documented by a steadily increasing number of publications and patents. For instance, 2-amino-1,3,4-oxadiazoles acts as muscle relaxants [4] and show antimitotic activity [5]. Analgesic, anti-inflammatory, anticonvulsive, diuretic and antiemetic properties are exhibited by 5-aryl-2-hydroxymethyl-1,3,4-oxadiazole derivatives [6], and 2-hydroxyphenyl-1,3,4-oxadiazole acts as a hypnotic and as a sedative [7]. Some material applications of 1,3,4-oxadiazole derivatives lie in the fields of photosensitizes [8] and liquid cyrstals [9].

1,3,4-Oxadiazoles are associated with a broad spectrum of biological activities including antifungal, antibacterial and antitumor properties [10-12]. Several methods for the synthesis of these biologically active compounds are reported in literature [13-14].

Hydrazide derivatives have been extensively used as useful precursors for the synthesis of these derivatives [15-16]. Keeping in view the biological importance of the above mentioned heterocyclic compounds and in continuation to our endeavor towards environmentally benign synthesis [17], we report herein the synthesis of 6-substituted-3-[(5-mercepto-1,3,4-oxadiazol-2-yl)methyl]-2-substitutedquinazolin-4(3*H*)-one or 6-substituted-3-[4-(5-mercepto-

Scheme 1



Comp. No. **2** & **3**	Y	R	X
a	Br	CH_3	4-C_6H_4
b	H	CH_3	4-C_6H_4
c	Br	C_6H_5	4-C_6H_4
d	H	C_6H_5	4-C_6H_4
e	Br	CH_3	CH_2
f	H	CH_3	CH_2
g	Br	C_6H_5	CH_2
h	H	C_6H_5	CH_2
i	Br	CH_3	3-C_6H_4
j	H	CH_3	3-C_6H_4
k	Br	C_6H_5	3-C_6H_4
l	H	C_6H_5	3-C_6H_4

Table Ia

Reaction Conditions for Microwave and Conventional Techniques **2**(**a-l**) and **3**(**a-l**)

Comp. No.	Conventional Time (hr)	Conventional Yield (%)	m.p/ºC	Comp. No.	Microwave [a] Time (min) [b]	Microwave [a] Yield (%)	m.p/ºC
2a	5.5	62	156~157	**3a**	7.0	85	192
2b	6.0	68	182	**3b**	6.5	88	175~177
2c	5.5	72	225	**3c**	7.5	90	152
2d	6.0	75	172	**3d**	7.0	82	221
2e	6.5	65	190~192	**3e**	6.0	92	242
2f	6.0	60	250	**3f**	7.5	85	280
2g	5.5	74	>300	**3g**	6.5	80	148
2h	6.0	72	110~115	**3h**	7.0	78	164
2i	6.5	68	152	**3i**	7.5	82	182~184
2j	5.0	70	245	**3j**	6.5	86	205
2k	5.5	65	221	**3k**	7.0	88	210
2l	6.5	70	252	**3l**	6.5	85	272

[a] Microwave irradiations were carried out in a Kenstar microwave oven, model No. OM9925E (2450 MHz, 750 Watts); [b] Acidic Alumina.

Table 1b

Elemental Analysis and Physical Data of Compound **2**(**a-l**) and **3**(**a-l**)

Comp. No.	Formula *(Mr)*	Anal. Calcd. (found) / % C	H	N	Comp. No.	Formula *(M.P/ºC)*	Anal. Calcd. (found) / % C	H	N
2a	$C_{17}H_{11}BrN_4O_2S$	49.17	2.67	13.49	**3a**	$C_{23}H_{15}BrN_4O_2$	60.15	3.29	12.20
	(415)	(49.21	2.64	13.52)		(459)	(60.12	3.32	12.22)
2b	$C_{17}H_{12}N_4O_2S$	60.70	3.60	16.66	**3b**	$C_{23}H_{16}N_4O_2$	72.62	4.24	14.73
	(336)	(60.72	3.58	16.70)		(380)	(72.58	4.21	14.75)
2c	$C_{22}H_{13}BrN_4O_2S$	59.35	3.52	9.28	**3c**	$C_{28}H_{17}BrN_4O_2$	64.50	3.29	10.75
	(477)	(59.38	3.49	9.25)		(521)	(64.54	3.31	10.78)
2d	$C_{22}H_{14}N_4O_2S$	66.32	3.54	14.06	**3d**	$C_{28}H_{18}N_4O_2$	76.01	4.10	12.66
	(398)	(66.34	3.51	14.02)		(442)	(76.04	4.08	12.70)
2e	$C_{12}H_9BrN_4O_2S$	40.81	2.57	15.86	**3e**	$C_{18}H_{13}BrN_4O_2$	54.43	3.30	14.10
	(353)	(40.83	2.61	15.82)		(397)	(54.41	3.32	14.12)
2f	$C_{12}H_{10}N_4O_2S$	52.54	3.67	20.43	**3f**	$C_{18}H_{14}N_4O_2$	67.91	4.43	17.60
	(274)	(52.51	3.69	20.41)		(318)	(67.93	4.45	17.58)
2g	$C_{17}H_{11}BrN_4O_2S$	49.17	2.67	13.49	**3g**	$C_{23}H_{15}BrN_4O_2$	60.15	3.29	12.20
	(415)	(49.21	2.64	13.52)		(459)	(60.17	3.31	12.25)
2h	$C_{17}H_{12}N_4O_2S$	60.70	3.60	16.66	**3h**	$C_{23}H_{16}N_4O_2$	72.62	4.24	14.73
	(336)	(60.72	3.57	16.67)		(380)	(72.65	4.27	14.75)
2i	$C_{17}H_{11}BrN_4O_2S$	49.52	2.85	13.85	**3i**	$C_{23}H_{15}BrN_4O_2$	60.28	3.42	12.85
	(415)	(49.49	2.83	13.87)		(459)	(60.32	3.41	12.82)
2j	$C_{17}H_{12}N_4O_2S$	60.25	3.21	16.42	**3j**	$C_{23}H_{16}N_4O_2$	72.05	4.65	14.25
	(336)	(60.27	3.18	16.40)		(380)	(72.03	4.63	14.28)
2k	$C_{22}H_{13}BrN_4O_2S$	59.98	3.22	9.75	**3k**	$C_{28}H_{17}BrN_4O_2$	64.94	3.52	10.20
	(477)	(59.96	3.25	9.72)		(521)	(64.92	3.48	10.18)
2l	$C_{22}H_{14}N_4O_2S$	66.32	3.54	14.06	**3l**	$C_{28}H_{18}N_4O_2$	76.65	4.18	12.97
	(398)	(66.34	3.51	14.02)		(442)	(76.68	4.22	12.98)

1,3,4-oxadiazol-2-yl)phenyl]-2-substituedquinazolin-4(3*H*)-one **2**(**a-l**) and 6-substituted-3-[(5-phenyl-1,3,4-oxadiazol-2-yl) methyl]-2-substitutedquinazolin-4(3*H*)-one or 6-substituted-3-[4-(5-phenyl-1,3,4-oxadiazol-2-yl)phenyl]-2-substitutedquinazolin-4(3*H*)-one **3**(**a-l**).

Results and Discussion.

6-Substituted-3-[(5-mercepto-1,3,4-oxadiazol-2-yl)-methyl]-2-substituted quinaz-olin-4(3*H*)-one or 6-substituted-3-[4-(5-mercepto-1,3,4-oxadiazol-2-yl)phenyl]-2-substituedquinazolin-4(3*H*)-one **2**(**a-l**) were prepared by the cyclization of substituted anthranilic acid with acetyl chloride or benzoyl chloride in presence of pyridine base. Use of an appropriate amine *viz p*-amino benzoic acid or glycine generated the corresponding 6-substituted-2-substiuted-4-oxoquinazolin-3(4*H*)-yl)benzoic acid or 6-substituted-2-substiuted-4-oxoquinazolin-3(4*H*)-yl)acetic acid. This on subsequent chlorination with thionyl chloride yields acid chlorides which on further reaction with hydrazine hydrate yields hydrazides **1**(**a-l**), the desired pre-

Table IIa

IR Spectral Analysis of Compound **2(a-l)** and **3(a-l)**

Comp No.	IR (KBr) $_{max}$/cm^{-1}	Comp No.	IR (KBr) $_{max}$/cm^{-1}
2a	1690 (C=O), 1593 (C=N), 1342 (C-O-C), 1267 (C=S), 540 (C-Br), 1310 (C-CH_3).	**3a**	1699 (C=O), 1595 (C=N), 1334 (C-O-C), 565 (C-Br), 1312 (C-CH_3).
2b	1699 (C=O), 1595 (C=N), 1334 (C-O-C), 1269 (C=S), 1312 (C-CH_3).	**3b**	1690 (C=O), 1593 (C=N), 1342 (C-O-C), 1315 (C-CH_3).
2c	1710 (C=O), 1598 (C=N), 1335 (C-O-C), 1270 (C=S), 565 (C-Br).	**3c**	1691 (C=O), 1594 (C=N), 1345 (C-O-C), 540 (C-Br).
2d	1690 (C=O), 1593 (C=N), 1342 (C-O-C), 1267 (C=S).	**3d**	1715 (C=O), 1589 (C=N), 1348 (C-O-C).
2e	1691 (C=O), 1594 (C=N), 1345 (C-O-C), 1271 (C=S), 540 (C-Br), 1315 (C-CH_3).	**3e**	1698 (C=O), 1593 (C=N), 1350 (C-O-C), 558 (C-Br), 1310 (C-CH_3).
2f	1715 (C=O), 1589 (C=N), 1348 (C-O-C), 1258 (C=S), 1308 (C-CH_3).	**3f**	1695 (C=O), 1590 (C=N), 1339 (C-O-C), 1312 (C-CH_3).
2g	1710 (C=O), 1582 (C=N), 1352 (C-O-C), 1255 (C=S), 545 (C-Br)	**3g**	1705 (C=O), 1599 (C=N), 1332 (C-O-C), 542 (C-Br).
2h	1698 (C=O), 1593 (C=N), 1350 (C-O-C), 1262 (C=S)	**3h**	1695 (C=O), 1590 (C=N), 1339 (C-O-C).
2i	1705 (C=O), 1605 (C=N), 1345 (C-O-C), 1272 (C=S), 548 (C-Br), 1308 (C-CH_3).	**3i**	1700 (C=O), 1602 (C=N), 1352 (C-O-C), 560 (C-Br), 1311 (C-CH_3).
2j	1699 (C=O), 1595 (C=N), 1334 (C-O-C), 1269 (C=S), 1312 (C-CH_3).	**3j**	1690 (C=O), 1593 (C=N), 1342 (C-O-C), 1309 (C-CH_3).
2k	1695 (C=O), 1595 (C=N), 1348 (C-O-C), 1258 (C=S), 560 (C-Br).	**3k**	1710 (C=O), 1598 (C=N), 1335 (C-O-C), 572 (C-Br).
2l	1692 (C=O), 1600 (C=N), 1345 (C-O-C), 1272 (C=S).	**3l**	1699 (C=O), 1598 (C=N), 1345 (C-O-C).

Table IIb

^{1}H nmr Spectral Analysis of Compounds **2(a-l)** and **3(a-l)**

No.	^{1}H nmr / ppm	No.	^{1}H nmr / ppm
2a	2.54 (s, 3H, Me), 7.05-8.18 (m, 7H, Ph & H-5, H-7-8), 9.54 (s, br, 1H, NH).	**3a**	2.62 (s, 3H, Me), 7.15-8.18 (m, 12H, 2Ph & H-5, H-7-8).
2b	2.50 (s, 3H, Me), 7.15-8.10 (m, 8H, Ph & H-5-8), 9.68 (s, br, 1H, NH).	**3b**	2.25 (s, 3H, Me), 7.12-8.20 (m, 13H, 2Ph & H-5-8).
2c	2.25 (s, 3H, Me), 7.10-8.25 (m, 13H, 2Ph & H-5, H-7-8), 9.72 (s, br, 1H, NH).	**3c**	2.42 (s, 3H, Me), 7.08-8.32 (m, 17H, 3Ph & H-5, H-7-8).
2d	2.62 (s, 3H, Me), 7.20-8.30 (m, 14H, 2Ph & H-5-8), 9.40 (s, br, 1H, NH).	**3d**	2.64 (s, 3H, Me), 7.21-8.10 (m, 18H, 2Ph & H-5-8).
2e	2.52 (s, 3H, Me), 7.15-8.19 (m, 3H, H-5, H-7-8), 9.58 (s, br, 1H, NH), 5.58 (s, 2H, NCH_2N).	**3e**	2.58 (s, 3H, Me), 7.14-8.28 (m, 8H, Ph & H-5, H-7-8), 5.52 (s, 2H, NCH_2N).
2f	2.58 (s, 3H, Me), 7.07-8.17 (m, 4H, H-5-8), 9.19 (s, br, 1H, NH), 5.45 (s, 2H, NCH_2N).	**3f**	2.42 (s, 3H, Me), 7.09-8.21 (m, 9H, Ph & H-5-8), 5.45 (s, 2H, NCH_2N).
2g	2.72 (s, 3H, Me), 7.19-8.20 (m, 8H, Ph, H-5, H-7-8), 9.29 (s, br, 1H, NH), 5.44 (s, 2H, NCH_2N).	**3g**	2.25 (s, 3H, Me), 7.25-8.21 (m, 13H, 2Ph, H-5, H-7-8), 5.54 (s, 2H, NCH_2N).
2h	2.54 (s, 3H, Me), 7.03-8.15 (m, 9H, H-5-8), 9.55 (s, br, 1H, NH), 5.41 (s, 2H, NCH_2N).	**3h**	2.48 (s, 3H, Me), 7.07-8.18 (m, 14H, Ph & H-5-8), 5.65 (s, 2H, NCH_2N).
2i	2.55 (s, 3H, Me), 7.12-8.25 (m, 7H, Ph & H-5, H-7-8), 9.16 (s, br, 1H, NH).	**3i**	2.68 (s, 3H, Me), 7.12-8.25 (m, 12H, 2Ph & H-5, H-7-8).
2j	2.60 (s, 3H, Me), 7.10-8.12 (m, 8H, Ph & H-5-8), 9.28 (s, br, 1H, NH).	**3j**	2.44 (s, 3H, Me), 7.09-8.19 (m, 13H, 2Ph & H-5-8).
2k	2.48 (s, 3H, Me), 7.07-8.24 (m, 13H, 2Ph & H-5, H-7-8), 9.32s, br, 1H, NH).	**3k**	2.54 (s, 3H, Me), 7.04-8.12 (m, 17H, 3Ph & H-5, H-7-8).
2l	2.54 (s, 3H, Me), 7.03-8.17 (m, 14H, 2Ph & H-5-8), 9.54s, br, 1H, NH).	**3l**	2.58 (s, 3H, Me), 7.14-8.18 (m, 18H, 2Ph & H-5-8).

cursor for one pot synthesis of 2-aryl or 2-mercepto 1,3,4-oxadiazole incorporated into quinazolone derivatives.

The compound **1(a-l)** on reaction with carbon disulphide in the presence of potassium hydroxide yields the title compound 6-substituted-3-[(5-mercepto-1,3,4-oxadiazol-2-yl)methyl]-2-substituted quinazoline-4(3*H*)-one or 6-substituted-3-[4-(5-mercepto-1,3,4-oxadiazol-2-yl)phenyl]-2-substitued quinazolin-4(3*H*)-one **2(a-l)**. Moreover the compound **1(a-l)** on microwave irradiation in the presence of acidic alumina catalyst with carboxylic acid yields the title compounds 6-substituted-3-[(5-phenyl-1,3,4-oxadiazol-2-yl)methyl]-2-substitutedquinazolin-4(3*H*)-one or 6-substitut- ed-3-[4-(5-phenyl-1,3,4-oxadiazol-2-yl)phenyl]-2-substitutedquinazolin-4(3*H*)-one **3(a-l)**. This proved to be a high-yielding protocol.

Table III

Antibacterial and Antifungal Activity of Compound 2(a-l) and 3(a-l)

compound	Antibacterial in (µg/ml)				Antifungal in (µg/ml)	
	Gram positive		Gram negative		Candida	C.krusei
	S.a[a]	B.s[b]	E.c[c]	P.a[d]	ATCC 10231	G03
2a	7	12	19	13	-	15
2b	9	0.8	6	0.9	10	0.9
2c	15	-	12	9	15	9
2d	8	7	10	-	*22*	-
2e	-	*22*	9	*25*	-	*21*
2f	15	0.9	8	-	0.9	0.4
2g	8	-	0.2	-	10	*25*
2h	*25*	7	12	10	-	8
2i	-	*28*	-	*18*	0.7	7
2j	8	12	*25*	8	7	0.8
2k	9	-	10	-	-	8
2l	12	15	0.8	12	*21*	10
3a	8	10	*21*	15	-	*20*
3b	7	0.8	8	1.1	12	0.8
3c	12	-	15	10	17	9
3d	7	9	12	12	-	12
3e	5	15	0.9	1.8	*20*	-
3f	10	*20*	-	*18*	0.9	*20*
3g	12	1.1	0.9	-	10	17
3h	15	*20*	12	12	17	8
3i	-	15	-	17	10	0.7
3j	9	10	12	9	7	0.8
3k	*24*	-	10	-	10	-
3l	12	10	0.9	10	17	*18*
	Zone of Inhibition of Standard Drugs (µg/ml)					
Ampicillin	40	45	40	50	-	-
Amoxicillin	35	40	38	45	-	-
Penicillin	40	38	42	48	-	-
Flucanozole	-	-	-	-	40	35

[a] S.a- S.aureus; [b] B.s- B.subtilis; [c] E.c-E.coli; [d] P.a-P.aeruginosa.

The Structure of **2**(**a-l**) and **3**(**a-l**) were confirmed on the basis of spectral and analytical data. IR spectra showed appearance of bands at 1699 cm^{-1} (C=O), 1600 cm^{-1} (C=N) for formation of quinazolone and 1590 cm^{-1} (C=N), 1339 cm^{-1} (C-O-C), 1267 cm^{-1} (C=S) for formation of 2-mercepto-1,3,4-oxadiazole. Similarly by appearance of bands at 1595 cm^{-1} (C=N), 1342 cm^{-1} (C-O-C) for 2-aryl-1,3,4-oxadizole. In ^1H nmr, appearance of the signal at δ 7.1-8.1 (m, 3H, H-3, H-7-8), 9.54 (s, br, 1H, NH) for **2**(**a-l**) and 7.05-8.18 (m, 8H, Ph, H-3, H-7-8) for **3**(**a-l**). Reaction conditions and % yields for microwave and conventional techniques are shown in Table-Ia. Elemental analysis and physical data are shown in Table-Ib. The compounds are confirmed on the basis of ir (Table-IIa**)** and ^1H nmr (Table-IIb) spectral studies. The reaction pathways are depicted in Scheme 1.

EXPERIMENTAL

All melting points were determined in PMP-DM scientific melting point apparatus and are uncorrected. The ir spectra were recorded in KBr on a Perkin-Elmer RX 1 FT-IR Spectrophotometer (serial No. 51448) and ^1H nmr spectra was recorded in $CDCl_3$ with TMS as an internal Standard on 300 MHz Bruker A/C 300 F Spectrophotometer.

Preparation of 2-(6-Bromo-2-methyl-4-oxoquinazolin-3(4*H*)-yl)-benzohydrazide **1**(**a-l**).

To a solution of 3.77 g (0.01 mole) of 4-(6-bromo-2-methyl-4-oxo-quinazolin-3(4*H*)-yl) benzoyl chloride in ethanol was added 0.48 g (0.01 mole) hydrazine hydrate slowly with constant stirring and the reaction mixture was refluxed for 6-8 hrs in a 250 mL round bottom flask. The solvent was then removed by distillation under reduced pressure and the residue was poured into ice-cold water, and recrystallised by using ethanol. The yield 3.23 g (76%), mp 220 °C; ir (potassium bromide): 1690 (C=O), 1600 (C=N), 1710 (C=O), 3394, 3284 (NH_2), 3218 (NH) cm^{-1}; ^1H nmr ($CDCl_3$): δ 2.54 (s, 3H, Me), 7.05-8.18 (m, 7H, Ph & H-5, H-7-8), 8.77 (s, br, 1H, NH), 5.88 (br, 2H, NH_2).

Anal. Calcd. For $C_{16}H_{13}BrN_2O_4$: C, 51.49; H, 3.51; N, 15.01. Found: C, 51.52; H, 3.49; N, 15.04.

Preparation of 6-Bromo-3-[4-(5-mercepto-1,3,4-oxadizole-2-yl)phenyl]-2-methyl quinazoline-4(3*H*)-one **2**(**a-l**).

To a solution of 3.73 g (0.01 mole) 2-(6-bromo-2-methyl-4-oxoquinazolin-3(4*H*)-yl)-benzohydrazide in ethanol (50 mL) was added potassium hydroxide 0.56 g (0.01 mole) and carbon disulphide (3 mL) in a 250 mL round bottom flask. The reaction mixture was refluxed until the evolution of hydrogen sulphide ceased. The reaction mixture was concentrated, dissolved in water and acidified with HCl. The precipitate was collected by filtration, washed, dried and recrystallised from ethanol to give 6-bromo-3-[4-(5-mercepto-1,3,4-oxadizole-2-yl)phenyl]-2-methyl-quinazoline-4(3*H*)-one. The yield 3.50 g (62%), mp 156~157 °C; ir (potassium bromide): 1690 (C=O), 1593 (C=N), 1342 (C-O-C), 1267 (C=S) cm^{-1}; ^1H nmr (DMSO-d_6): δ 2.54 (s, 3H, Me), 7.05-8.18 (m, 7H, Ph & H-5,H-7-8), 9.54 (s, br, 1H, NH).

Anal. Calcd. For $C_{17}H_{11}BrN_4O_2S$: C, 49.17; H, 2.67; N, 13.49. Found: C, 49.21; H, 2.65; N, 13.52.

Preparation of 6-Bromo-2-methyl-3-[4-(5-phenyl-1,3,4-oxadizole-2-yl)phenyl]-quinazoline-4(3*H*)-one **3(a-l)**.

To a solution of 3.73 g (0.01 mole) 2-(6-bromo-2-methyl-4-oxoquinazolin-3(4*H*)-yl)-benzohydrazide in ethanol (50 mL) was added benzoic acid 1.22 g (0.01 mole) in 100 mL beaker, acidic alumina (20 g) was added as a solid support catalyst. The reaction mixture was stirred well and dried in air. It was then placed in an alumina bath and subjected to microwave irradiation (MWI) intermittently at an interval of 30s for specified time (Table Ia). On completion of reaction, as monitored by TLC examination, the product was extracted into ethanol (3x15 mL). Removal of solvent under reduced pressure gave the desired product which was recrystallised from ethanol. The yield 4.25 g (85%), mp 192; ir (potassium bromide): 1695 (C=O), 1590 (C=N), 1339 (C-O-C) cm^{-1}; ^1H nmr (DMSO-d_6): δ 1.2 (s, 3H, Me), 7.05-8.18 (m, 12H, 2Ph & H-5, H-7-8).

Anal. Calcd. For $C_{23}H_{15}BrN_4O_2$: C, 60.15; H, 3.29; N, 12.20. Found: C, 60.12; H, 3.27; N, 12.18.

Conclusion.

Similarly 2-(6-bromo-2-phenyl-4-oxoquinazolin-3(4*H*)-yl)-benzohydrazide or 2-(6-bromo-2-phenyl-4-oxoquinazolin-3(4*H*)-yl)-acetohydrazide and other substituted quinazolone hydrazide can be prepared by using amino carboxylic acid in conjugation with acetyl or benzoyl chloride. All compounds were screened for their antifungal activity against *Candida albicans* and antibacterial against *S.aureus, B.subtilis, E.coli and P.aeruginosa*. Zone of inhibition were measured in millimeters. The antifungal activities were compared to the standard drug flucanozole (35-40 mm) with DMF as solvent. Ampicillin (40-50 mm), Amoxicillin (35-45 mm) and penicillin (38-48 mm) were used as standard drugs for antibacterial activity. Compounds 2**e**, **2h**, **2i**, **2j**, **3a**, **3f**, **3h** and **3k** showed significant antibacterial activity. Compound 2**d**, **2e**, **2f**, **2l**, **3a**, **3e**, **3f and 3l** showed moderate to good antifungal activity (Table-III).

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