A review of biologically active oxime ethers

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Table S1. Minimal inhibitory concentrations (μg/mL) of the selected antifungal oxime ethers inhibiting growth of 80% and 90% of fungal strains (MIC_{80} and MIC_{90}, respectively).

	MIC_{80}			MIC_{90}	
	11a	**11b**	**11c**	**12a**	**12b**
C. albicans	0.004	0.016	0.016	2	16
C. parapsilosis	0.004	0.0625	0.0625	>128	>128
T. rubrum	0.0625	0.016	0.0625	-	-
A. niger	-	-	-	2	2
A. fumigatus	1	1	1	-	-
C. tropicalis	0.001	0.0625	-	-	-
C. krusei	0.0625	0.25	0.25	-	-
C. neoformans	0.016	0.001	0.004	32	16

Table S2. Minimal inhibitory concentrations (μg/mL) of the selected oxime ethers with antifungal activity.

MIC	**5a**	**5b**	**5c**	**6**	**7a**	**7b**	**7c**	**8a**	**8b**	**9**	**10a**	**10b**	**13a**	**13b**	**14**	**38**
C. albicans	4	2	1	2	4	16	16	0.25	0.5	>64	1	1	6.25	64	1	31.25
C. glabrata	0.5	1	0.06	4	-	-	-	-	-	-	-	-	-	-	-	-
C. parapsilosis	1	0.25	0.004	8	-	-	-	-	-	-	-	-	-	-	2	-
A. fumigatus	8	2	32	>128	-	-	-	-	-	-	-	-	-	-	-	-
A. flavus	32	8	32	>128	-	-	-	-	-	-	-	-	25	32	-	-
T. mentagrophytes	8	4	4	64	-	-	-	-	-	-	-	-	-	-	-	-
T. rubrum	8	2	2	64	-	-	-	-	-	-	-	-	-	-	-	-
S. cerevisiae	-	-	-	-	8	>64	32	0.5	2	-	-	-	-	-	-	-
A. niger	-	-	-	-	64	1	64	8	4	-	-	-	50	>128	-	-
M. gypseum	-	-	-	-	8	1	16	1	8	-	-	-	-	-	-	-
C. gatti	-	-	-	-	-	-	-	-	-	0.5	-	-	-	-	-	-
A. fumigatus	-	-	-	-	-	-	-	-	-	32	-	-	-	-	-	-
E. dermatitidis	-	-	-	-	-	-	-	-	-	64	-	-	-	-	-	-
C. krusei	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
Candida-51	-	-	-	-	-	-	-	-	-	-	-	-	6.25	32	-	-
Rhizopus	-	-	-	-	-	-	-	-	-	-	-	-	25	-	-	-

Table S3. Minimal inhibitory concentrations (μg/mL) of the selected oxime ethers with antibacterial activity.

	30	**31**	**32a**	**32b**	**36a**	**36b**	**37**	**38**	**40**	**41a**	**41b**	**42a**	**42b**	**42c**	**43**
S. aureus	0.19	0.781	32	32	62.5	62.5	1	7.81	6.25	3.125	12.5	0.5	0.5	0.5	-
MRSA	>100	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. epidermidis	0.19	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B. subtilis	0.39	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E. coli	0.39	0.391	32	32	125	125	-	125	12.5	50	25	>64	>64	>64	-
K. pneumoniae	0.19	1.563	-	-	-	-	>64	62.5	-	-	-	-	-	-	-
P. aeruginosa	25	>50	-	-	-	-	>64	-	6.25	>100	50	>64	>64	>64	-
S. pyogenes	-	-	32	32	-	-	-	-	-	-	-	-	-	-	-
S. typhimurium	-	-	32	64	-	-	-	-	-	-	-	-	-	-	-
A. baumannii	-	-	-	-	-	-	>64	-	-	-	-	-	-	-	-
M. tubercuosis	-	-	-	-	-	-	32	-	-	-	-	-	-	-	0.04
S. typhi	-	-	-	-	-	-	-	-	25	-	-	-	-	-	-
B. cereus	-	-	-	-	-	-	-	-	-	3.125	6.25	-	-	-	-
B. subtilis	-	-	-	-	-	-	-	15.62	-	-	-	-	-	-	-

MRSA: methicyllin-resistant *Staphylococcus aureus*

Table S4. Cytotoxicity (IC_{50}, μM) of the selected oxime ethers against selected human cancer cell lines

Line	**80a**	**80b**	**83**	**87**	**88**	**89a**	**89b**	**91a**	**91b**	**92a**	**92b**	**93**
K562	0.37	0.11	-	-	-	-	-	-	-	-	-	-
A549	-	-	-	2.0	-	40.2	47.4	-	-	-	-	-
HT-29	-	-	-	3.3	-	-	-	-	-	-	-	-
HeLa	-	-	8.43	22.6	5.63	-	-	6.6	7.5	-	-	-
MCF-7	-	-	11.06	>100	>30	-	-	6.6	7.5	-	-	0.075
MDA-MB-231	-	-	12.63	4.7	-	28.7	40.4	5.1	7.2	-	-	-
G-361	-	-	-	8.9	-	-	-	-	-	-	-	-
A431	-	-	-	-	13.25	-	-	-	-	-	-	-
A2780	-	-	-	-	25.05	-	-	-	-	-	-	-
PC-3	-	-	-	-	-	47.8	43.6	-	-	-	-	-
DU145	-	-	-	-	-	-	-	9.5	9.0	-	-	-
Ishikawa	-	-	-	-	-	-	-	6	12	-	-	-
SMMC-7721	-	-	-	-	-	-	-	-	-	0.64	0.63	-

Table S5. Selected mechanisms of action of the oxime ethers with the anticancer activity.

	Mechanism of action
80a, 80b	inhibition of tubulin polymerization
87	apoptosis
88	decrease in the G1 phase
92a, 92b	inhibition of migration and DNA replication, inducing irreversible apoptosis by regulating the expression level of apoptose-related proteins
91b	apoptosis, inhibition of migration and invasion, inhibition of cancer stem cell population, abrogation of EGF-induced proliferation, migration, and tyrosine kinase (TK) signaling in breast cancer cells
93	estrogen receptor agonist, antiproliferative activities via ER-independent mechanism