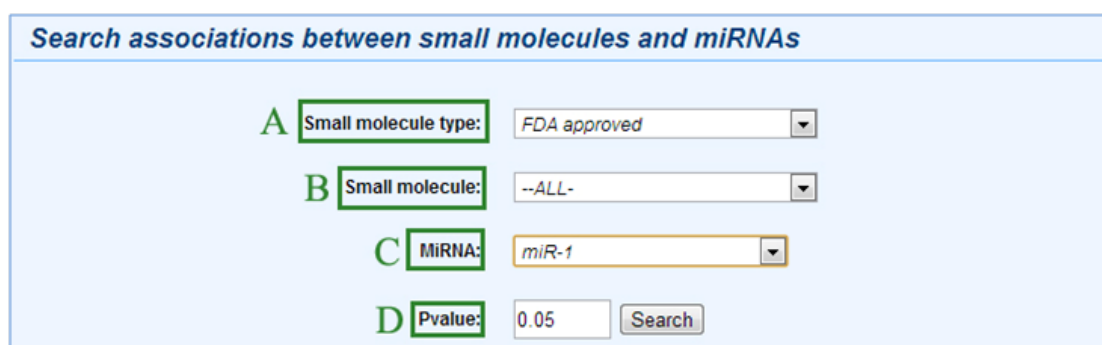


Combinational search by small molecules and miRNAs

Example: If you want to investigate the potential associations of small molecules and miRNAs, you can use the combination query. For example, we select small molecule type such as FDA-approved (FDA-approved or unapproved or both) in pull down menu (Figure 1A). Secondly, we should choose all (or one) of small molecules in pull down menu (Figure 1B). Thirdly, we can select one or all of miRNAs (such as miR-1) in menu (Figure 1C). Finally, we should input a desired *p-value* (the value of default is 0.05) and press search button (Figure 1D). The result page is retrieved about the predicted and statistically significant correlations between the miR-1 and small molecules across multiple conditions (Figure 2). Then click more, you can get the detailed information (Figure 3).



The image shows a search interface titled "Search associations between small molecules and miRNAs". It contains four labeled input fields (A, B, C, D) and a search button. Field A is "Small molecule type:" with a dropdown menu showing "FDA approved". Field B is "Small molecule:" with a dropdown menu showing "--ALL-". Field C is "MiRNA:" with a dropdown menu showing "miR-1". Field D is "Pvalue:" with a text input field containing "0.05" and a "Search" button next to it.

Figure 1 Search by a miRNA name

Psmir: 158 Records

Small molecule	FDA	MIRNA	Data source	Condition	Score	Pvalue	Detail
acebutolol	FDA approved	miR-1	GSE22002	12h	-0.723	0.002	more...
acenocoumarol	FDA approved	miR-1	GSE22002	32h	-0.568	0.022	more...
acetoexamide	FDA approved	miR-1	GSE22002	12h	0.583	0.036	more...
acetoexamide	FDA approved	miR-1	GSE22002	32h	-0.704	0	more...
acetylsalicylic acid	FDA approved	miR-1	GSE22002	32h	-0.281	0.019	more...
altretamine	FDA approved	miR-1	GSE22002	12h	0.568	0.022	more...
amikacin	FDA approved	miR-1	GSE22002	12h	-0.555	0.019	more...
amikacin	FDA approved	miR-1	GSE22002	32h	-0.603	0.007	more...
aminocaproic acid	FDA approved	miR-1	GSE22002	32h	-0.742	0.008	more...
amiodarone	FDA approved	miR-1	GSE22002	12h	-0.667	0.006	more...
astemizole	FDA approved	miR-1	GSE22002	32h	0.735	0	more...
azathioprine	FDA approved	miR-1	GSE22002	32h	-0.467	0.004	more...
azlocillin	FDA approved	miR-1	GSE22002	32h	0.499	0.047	more...
bacampicillin	FDA approved	miR-1	GSE22002	12h	0.592	0.026	more...

Figure 2 The basic information by selecting miR-1

Detail

microRNA: miR-1

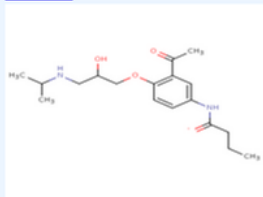
miRbase: [MIMAT0000416](#)

GEO: [GSE22002](#)

Condition: 12h

Small molecule: acebutolol

[DB01193](#)

DrugBank ID: 

FDA approved: YES

Description: A cardioselective beta-adrenergic antagonist with little effect on the bronchial receptors. The drug has stabilizing and quinidine-like effects on cardiac rhythm as well as weak inherent sympathomimetic action. [PubChem]

SMILES: CCCC(=O)NC1=CC(C(C)=O)=C(OCC(O)CNC(C)C)C=C1

Indication: For the management of hypertension and ventricular premature beats in adults.

Pathway: SMP00296: Acebutolol Pathway

PharmGKB ID: PA448011

CID: [1978](#)

ATC: C07AB04

*Score: -0.723

Pvalue: 0.002

Figure 3 The detail information by clicking 'more'