

1 **Ontology-based systematical representation and drug class effect analysis**  
2 **of package insert-reported adverse events associated with cardiovascular**  
3 **drugs used in China**

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24 **Summary of Supplemental Materials:**

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26 **Page 2 Supplemental Table S1.** CVD class effect based on 36 CVD ingredient  
27 classification.

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29 **Page 3 Supplemental Table S2.** The numbers of drugs and ingredients corresponding to  
30 different Mechanisms of Action (MoA) classes.

34 **Supplemental Table S1. CVD class effect based on 36 CVD ingredient classification**  
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Ingredient class	AE	C-PRR	$\chi^2$	PCR
Fatty Acids (including 3 specific drugs: Atorvastatin, Fluvastatin, Fenofibrate)	insomnia AE	2.88	5.22	1
	abdominal pain AE	3.00	5.54	1
	transaminase level increased AE	9.86	19.41	1
	myopathy AE	34.50	41.95	1
	myalgia AE	3.45	6.67	1
	blood creatine phosphokinase level increased AE	9.86	19.41	1
	myositis AE	34.5	41.95	1
	rhabdomyolysis AE	23.00	34.43	1
Glycosides (including 3 ingredients: digoxin, deslanoside, and adenosine)	vision blurred AE	5.31	10.96	1

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 37 **Note:** Each of the three drugs is statistically significantly associated with each of AEs, which  
 38 is the meaning of the class effect.  
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41 **Supplemental Table S2.** The numbers of drugs and ingredients corresponding to different  
 42 Mechanisms of Action (MoA) classes  
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MoA classes	No. of drugs	No. of ingredients
Cellular or Molecular Interactions [MoA]	166	65
Biological Macromolecular Activity [MoA]	1	1
Enzyme Interactions [MoA]	33	15
Enzyme Inhibitors [MoA]	31	14
Nucleic Acid Synthesis Inhibitors [MoA]	4	2
Nucleoside Synthesis Inhibitors [MoA]	4	2
Phosphodiesterase Inhibitors [MoA]	1	1
Protease Inhibitors [MoA]	11	4
Angiotensin-converting Enzyme Inhibitors [MoA]	11	4
Sterol Synthesis Inhibitors [MoA]	11	5
Cholesterol Synthesis Inhibitors [MoA]	11	5
Physiochemical Activity [MoA]	19	3
Receptor Interactions [MoA]	97	39
Active Transporter Interactions [MoA]	8	4
Neurotransmitter Transporter Interactions [MoA]	3	1
Norepinephrine Transporter Interactions [MoA]	3	1
Small Ion Transport Pump Interactions [MoA]	2	2
G-Protein-linked Receptor Interactions [MoA]	32	20
Adrenergic Receptor Interactions [MoA]	25	16
Adrenergic Agonists [MoA]	13	8
Adrenergic alpha-Agonists [MoA]	4	2
Adrenergic Antagonists [MoA]	10	6
Adrenergic alpha-Antagonists [MoA]	4	2
Adrenergic beta-Agonists [MoA]	3	1
Ion Channel Interactions [MoA]	57	17
Calcium Channel Interactions [MoA]	38	10
Calcium Channel Antagonists [MoA]	37	9

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