

Table S3: Complete list of identified substances.

*CAS-Nr. for the Enzo collection and the sample identifier for the NIH collection

**Complete list of all changing pre-rRNAs ($\pm >1.5x$) for substances listed in Table 1

***Documented activity against cancer cells. Only listed for substances showing the strongest rRNA processing defects (see Table 1)

No.	Substance	collection	ID*	Screen	rRNA pprocessing defects**	(reference)***
1	Acivicin	ENZO	42228-92-2	both	all precursors gone	(43)
2	Streptonigrin	ENZO	3930-19-6	both	all precursors gone	(44, 45)
3	Idarubicin HCl	NIH	SAM001246676	both	7S $\uparrow$	(46, 47)
4	(+)-Usnic acid	ENZO	7562-61-0	both	27S, 27SA ₂ , 20S, 7S and A ₂ -A ₃ sp. $\uparrow$	(48, 49)
5	Antibiotic A-23187 (Calcimycin)	ENZO	52665-69-7	both	20S $\downarrow$	(50, 51)
6	Curcumin	ENZO	458-37-7	both	A ₂ -A ₃ sp. $\downarrow$	(52)
7	Tanshinone IIA	ENZO	568-73-0	both	27S A ₂ $\downarrow$, 23S $\uparrow$ 35S $\uparrow$	(53-55)
8	Morine	ENZO	480-16-0	both	35S $\uparrow$	(56)
9	Nonactin	ENZO	6833-84-7	both	20S $\downarrow$ and 35S $\uparrow$	(57)
10	Quercetin.2H ₂ O	ENZO	6151-25-3	both		
11	Kaempferol	ENZO	520-18-3	both		
12	Sinensetine	ENZO	2306-27-6	both		
13	Syringetine-3-glucoside	ENZO	40039-49-4	both	27S $\uparrow$	not documented
14	Berberine.HCl	ENZO	633-65-8	both	23S $\uparrow$	(58)
15	Senecionine	ENZO	130-01-8	both	35S $\uparrow$	not documented
16	Bleomycin sulfate	ENZO	9041-93-4	both	35S $\uparrow$	(59)
17	Carmofur	NIH	SAM001246692	60S	27S A ₂ and 23S $\uparrow$	(60-62)
18	Vulpinic acid	ENZO	521-52-8	60S	7S, 23S and A ₂ -A ₃ sp. $\uparrow$	(63)
19	Mycophenolic acid	ENZO	24280-93-1	60S	all precursors gone	(64, 65)
20	Sulfasalazine	NIH	SAM001246530	60S		
21	Epirubicin.HCl	NIH	SAM001246559	60S		

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22	Itraconazole	NIH	SAM001246679	60S		
23	Clotrimazole	NIH	SAM001247056	60S		
24	Parecoxib.Na	NIH	SAM001246773	60S	35S $\uparrow$	(66, 67)
25	Artemether	NIH	SAM001246799	60S		
26	Bromocriptine mesylate	ENZO	22260-51-1	60S		
27	Cantharidin	ENZO	56-25-7	60S		
28	Chelerythrine	ENZO	3895-92-9	60S		
29	Daunorubicin	ENZO	23541-50-6	60S		
30	Doxorubicin	ENZO	25316-40-9	60S		
31	Caryophylline	ENZO	1139-30-6	60S		
32	Zerumbone	ENZO	471-05-6	60S	35S $\uparrow$	(68)
33	Valsartan	NIH	SAM001246581	40S	27SA ₂ $\uparrow$	(69)
34	All trans retinoic acid	ENZO	302-79-4	40S	20S $\downarrow$	(70)
35	Visnagin	ENZO	82-57-5	40S	35S $\uparrow$	(71)
36	Rosiglitazone maleate	NIH	SAM001246610	40S		
37	Olanzapine	NIH	SAM001246652	40S		
38	Viramune (Nevirapine)	NIH	SAM001246551	40S		
39	Icariin	NIH	SAM001246560	40S		
40	Ipriflavone	NIH	SAM001246714	40S	27S and 27SA ₂ $\downarrow$	(72)
41	Sertraline	NIH	SAM001246666	40S		
42	Pantoprazole.Na	NIH	SAM001246591	40S		
43	Fluticasone Propionate	NIH	SAM001246583	40S		
44	Methyltestosterone	NIH	SAM001246682	40S		
45	Flubendazole	NIH	SAM001246685	40S	27SA ₂ $\downarrow$	(73)
46	Nifekalant HCl	NIH	SAM001246717	40S		
47	Rofecoxib	NIH	SAM001246617	40S		
48	Famciclovir	NIH	SAM001246732	40S		

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49	Megestrol acetate	NIH	SAM001246722	40S	20S and 27SA ₂ ↓	(74-76)
50	Trimebutine Maleate	NIH	SAM001246747	40S		
51	Mestanolone	NIH	SAM001246746	40S		
52	Zileuton	NIH	SAM001246738	40S	35S ↑	(77)
53	Fluphenazine.2HCl	NIH	SAM001246863	40S	7S and A ₂ -A ₃ sp. ↑	(78, 79)
54	Cefaclor	NIH	SAM001246884	40S	7S ↑	not documented
55	Desoximetasone	NIH	SAM001246885	40S	7S ↑	not documented
56	Nicotinamide	NIH	SAM001246860	40S		not documented
57	Rimcazole	NIH	SAM001247094	40S	A ₂ -A ₃ sp.	(80)
58	Itavastatin Ca	NIH	SAM001246803	40S		
59	Nialamide	NIH	SAM001246861	40S		
60	Donepezil	NIH	SAM001246627	40S		
61	GR 89696	NIH	SAM001247087	40S		
62	Irbesartan	NIH	SAM001246548	40S		
63	Levocetirizine	NIH	SAM001246575	40S	27SA ₂ ↑	not documented
64	Pancuronium	NIH	SAM001247003	40S		
65	Cinanserin	NIH	SAM001246974	40S	27SA ₂ ↑	not documented
66	Hexamethylenebisacetamide	NIH	SAM001247019	40S	35S ↑	not documented
67	Cisapride.H ₂ O	NIH	SAM001246975	40S		
68	Doxepin	NIH	SAM001246976	40S	27SA ₂ ↑	not documented
69	Tacrine.HCl	NIH	SAM001247002	40S		
70	Indatraline.HCl	NIH	SAM001246981	40S	35S ↑	not documented
71	Cytarabine	NIH	SAM001247012	40S	35S and 27SA ₂ ↑	(81-83)

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No.	Substance	collection	ID*	Screen	rRNA pprocessing defects**	(reference)***
72	Naltrindole	NIH	SAM001247004	40S	35S $\uparrow$	(84, 85)
73	Methotrexate.H ₂ O	NIH	SAM001246985	40S		
74	Urapidil.HCl	NIH	SAM001247001	40S	35S $\uparrow$	not documented
75	Maprotiline.HCl	NIH	SAM001246989	40S		
76	Piribedil	NIH	SAM001246994	40S		
77	(-)-Cotinine	NIH	486-56-6	40S		
78	Pizotyline	NIH	SAM001247038	40S		
79	Pramipexole	NIH	SAM001247006	40S		
80	β -Estradiol	NIH	SAM001247032	40S		
81	DuP 697	NIH	SAM001247101	40S	35S $\uparrow$	(86)
82	Vindesine sulfate	NIH	SAM001246568	40S	35S $\uparrow$	(87-89)
83	Clobenpropit	NIH	SAM001247107	40S	35S $\uparrow$	(90)
84	Pergolide Mesylate	NIH	SAM001247070	40S	7S and 35S $\uparrow$	(91)
85	Ginkgolide B	ENZO	15291-77-7	40S		
86	Kainic acid	ENZO	487-79-6	40S		
87	($\pm$)-Kavain	ENZO	500-64-1	40S		
88	3-Beta-Indoleacrylic acid	ENZO	1204-06-4	40S		
89	Parthenolide	ENZO	20554-84-1	40S		
90	Prostaglandin E1	ENZO	745-65-3	40S		
91	Radicicol	ENZO	12772-57-5	40S		
92	Rosmarinic acid	ENZO	20283-92-5	40S		
93	Rotenone	ENZO	83-79-4	40S	20S $\downarrow$	(92-94)
94	Thapsigargin	ENZO	67526-95-8	40S	A ₂ -A ₃ sp. $\uparrow$	(95)

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95	Troleandomycin	ENZO	2751-09-9	40S	A ₂ -A ₃ sp. ↑	not documented
96	Tunicamycin B	ENZO	11089-65-9	40S	7S ↓	(96)
97	Catalpol	ENZO	2415-24-9	40S	7S ↓ and 35S ↑	(97)
98	Veratramine	ENZO	60-70-8	40S	A ₂ -A ₃ sp. and 35S ↑	(98)
99	Ivermectin	ENZO	70288-86-7	40S	35S ↑	(99)
100	(-)-Nicotine	ENZO	54-11-5	40S	A ₂ -A ₃ sp. and 35S ↑	not documented
101	L-Penicillamine	ENZO	1113-41-3	40S	A ₂ -A ₃ sp. ↑	(100-103)
102	Picrotoxinin	ENZO	17617-45-7	40S	A ₂ -A ₃ sp. ↑	not documented
103	Tryptanthrin	ENZO	13220-57-0	40S	35S ↑	(104-106)
104	Yohimbine·HCl	ENZO	65-19-0	40S		
105	(-)-Eburnamonine	ENZO	4880-88-0	40S		
106	Celastrol	ENZO	34157-83-0	40S	35S ↑	(107)
107	Condorphine	ENZO	7633-69-4	40S		
108	Isorhoifolin	ENZO	552-57-8	40S	35S ↑	not documented
109	Picropodophyllin	ENZO	447-47-4	40S		
110	Narigenin-7-O-glucoside	ENZO	529-55-5	40S	35S ↑	not documented
111	Aloe-emodine	ENZO	481-72-1	40S		
112	Trans-4-Cotininecarboxylic acid	ENZO	33224-01-0	40S	27SA ₂ ↑	not documented
113	Gitoxigenin	ENZO	545-26-6	40S	27SA ₂ ↑	(108)
114	Harmane	ENZO	486-84-0	40S		
115	Leucomisine	ENZO	17946-87-1	40S	35S ↑	not documented
116	Tetrahydropapaverine·HCl	ENZO	6429-04-5	40S	35S ↑	not documented

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117	Caffeine	ENZO	58-08-2	40S		
118	Lasalocid A	ENZO	25999-20-6	40S		
119	Cephadrine	ENZO	38821-53-3	40S		
120	Vasicine	ENZO	50591-64-5	40S		
121	Tetrahydrolipstatin (Orlistat)	ENZO	96829-58-2	40S	35S ↑	(109, 110)
122	Oleanolic acid	ENZO	508-02-1	40S		
123	Phlorizine	ENZO	60-81-1	40S	35S ↑	not documented
124	Diosmin	ENZO	520-27-4	40S	35S ↑	(111, 112)
125	Minocycline.HCl	ENZO	13614-98-7	40S		
126	16-Oxocafestol	ENZO	108664-98-8	40S		
127	Yangonin	ENZO	500-62-9	40S	23S ↑	(113)
128	Arbutin	ENZO	497-76-7	40S		