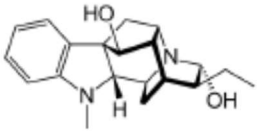
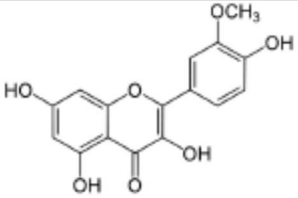
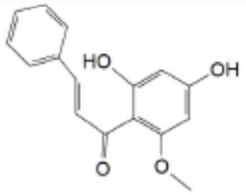
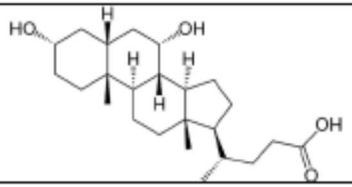
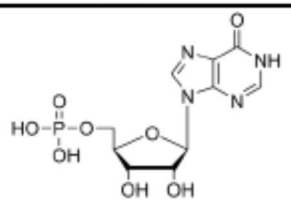
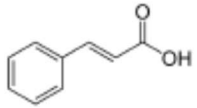
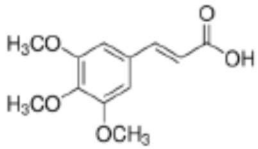
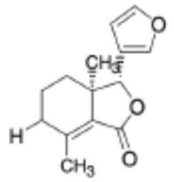
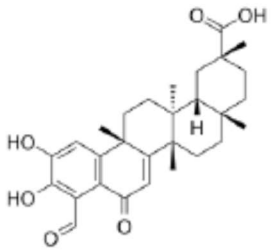
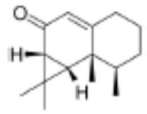
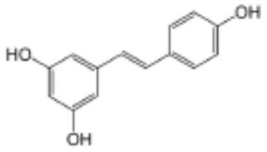
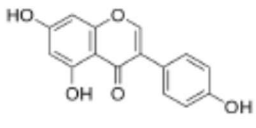
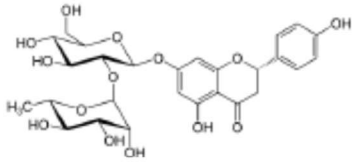
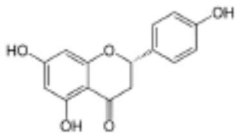
Appendix II. Flavonoids and Terpenoids Found in Advanced Fulvic and their Health Benefits.

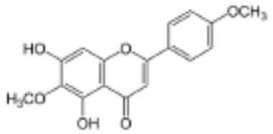
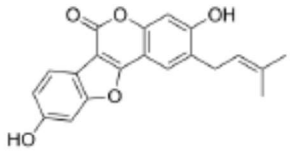
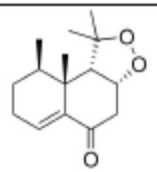
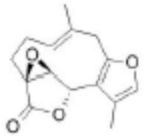
The table summarizes the name of the identified fulvic acids (flavonoids and terpenoids), the structure of the identified molecules, the chemical definition, the common source, and the biological activity identified by Mass Spectroscopy at Invitrox Labs by scientists Travis Kirkpatrick and Weslyn Friely, Ph.D. in 2019, USA.

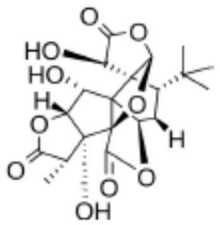
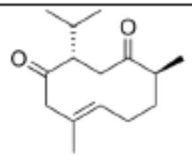
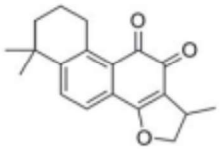
Compound	Structure	Chemistry	Common Source	Biological Activity
Ajmaline		Alkaloid	*Rauvolfia serpentine* [1] (Milkweed)	Anti-arrhythmic agent [2-4] Brugada syndrome diagnostic [5, 6]
Isorhamnetin		O-methylated flavon-ol	*Allium cepa L.* [7] (Onion)	Hepatoprotective [8-10] Anti-inflammatory [11, 12] Antioxidant [10, 13] Mitochondrial biogenesis [14]
Cardamonin		Chalconoid	*Alpinia katsumadai* [15] (Ginger)	Anti-inflammatory [16-18] Antioxidant [19, 20] Vasodilator [21, 22] Antifungal [23, 24] Antitumor [25, 26]
Chenodeoxycholic acid		Bile acid	*Liver* [27]	Hypercholesterolemia [28-30]

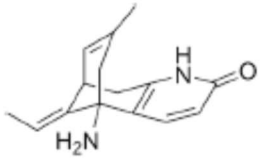
Compound	Structure	Chemistry	Common Source	Biological Activity
Inosinic acid		Nucleoside monophosphate	*Mitochondrion* [31]	Flavor enhancer [32-34] Taste receptor ligand [33, 34] Purine metabolism [35, 36]
Cinnamic acid		Phenolic acid	*Cinnamomum verum* [37] (Cinnamon tree)	Antibiotic [38, 39] Antioxidant [40-42] Antitumor [43-45]
3,4,5-Trimethoxycinnamic acid		Phenolic acid	*Polygalae radix* [46] (Milkwort)	Anti-fungal [47] Anti-seizure [46] Insomnia therapy [48] Anti-stress [49, 50]
Fraxinellone		Triterpenoid	*Dictamus dasycarpus* [51] (Burning bush)	Vasorelaxant [51] Antioxidant [52, 53] Anti-colonic inflammation [54] Neuroprotective [53, 55] Anti-inflammatory [56-58]

Compound	Structure	Chemistry	Common Source	Biological Activity
Demethylzeylasteral		Triterpenoid	*Tripterygium wilfordii* [59] (Thunder duke vine)	Anti-cancer [60-64] Anti-tumor [62, 65] Anti-viral [66] Anti-atherosclerotic [67] Anti-inflammatory [68, 69]
Aristolone		Sesquiterpenoid	*Nardostachys chinensis* [70] (Spikenard)	Antioxidant [71-73] Anti-diabetic [74] Anti-cancer [72]
Resveratrol		Stilbenoid	*Vitis vinifera* [75] (Common grape vine)	Anti-cancer [75, 76] Antioxidant [75-77] Anti-inflammatory [75-77] Anti-diabetic [76, 78] Anti-neurodegenerative [76] Anti-obesity [78]

Compound	Structure	Chemistry	Common Source	Biological Activity
Genistein		Isoflavone	*Genista tinctorial* [79] (Dyer's broom)	Anti-Alzheimer's [80-82] Anti-hypertensive [83-85] Anti-atherosclerotic [83, 86, 87] Anti-cancer [79, 83, 86, 88-90] Anti-dyslipidemia [88, 91] Antioxidant [79, 86, 87, 89, 91] Anti-osteoporosis [87, 92, 93] Phytoestrogen [87, 94]
Naringin		Flavanone	*Citrus paradise* [95] (Grapefruit)	Antioxidant [96-99] Anti-inflammatory [96-98, 100, 101] Anti-atherosclerotic [96, 100, 102, 103] Anti-diabetic [97, 98, 100, 104] Anti-osteoporosis [98, 100, 105] Anti-cancer [98, 100, 106] Neuroprotective [98-100, 107-109] Gastrointestinal health [110, 111] Anti-hypertensive [112]
Naringenin		Flavanone	*Citrus paradise* [95] (Grapefruit)	Antioxidant [113-116] Anti-inflammatory [113, 114, 117, 118] Cardioprotective [113, 116, 119-121] Anti-diabetic [113, 114, 120, 122-124] Anti-cancer [113, 114, 125] Neuroprotective [113, 114, 116, 126, 127] Weight management [128-130]

Compound	Structure	Chemistry	Common Source	Biological Activity
Pectolinarigenin		Flavone	*Cirsium chanroenicum* [131] (Plume thistle)	Hepatoprotective [132] Antioxidant [132] Anti-cancer [133-137] Osteoprotective [138] Anti-inflammatory [131]
Psoralidin		Coumestan	*Psoralea corylifolia* [139] (Babchi)	Anti-inflammatory [140-142] Anti-cancer [140, 141, 143, 144] Antioxidant [140, 141] Estrogenic [140, 145] Neuroprotective [140, 146] Osteoprotective [147-150]
Nardosinone		Sesquiterpenoid	*Nardostachys chinensis* [151] (Spikenard)	Neurotrophic [151-153] Anti-inflammatory [154, 155] Osteoprotective [156] Cardioprotective [157]
Linderane		Sesquiterpene	*Lindera aggregate* [158] (Japanese evergreen spicebush)	Anti-inflammatory [159] Hepatoprotective [158] Anti-diabetic [160] Antioxidant [161]

Compound	Structure	Chemistry	Common Source	Biological Activity
Ginkoglide B		Diterpenoid	*Ginkgo biloba* [162] (Maidenhair tree)	Neuroprotective [163-167] Anti-cancer [168, 169] Anti-inflammatory [170-173] Cardioprotective [162, 174, 175] Antioxidant [176]
Curdione		Sesquiterpenoid	*Curcuma wenyujin* [177] (Turmeric)	Anti-cancer [177-179] Neuroprotective [180] Hepatoprotective [181, 182] Cardioprotective [183]
Cryptotanshinone		Diterpene	*Salvia miltiorrhiza* [184] (Red sage)	Anti-inflammatory [185-187] Neuroprotective [185] Anti-cancer [184, 188-190] Osteoprotective [191, 192] Cardioprotective [193, 194] Mitochondrial biogenesis [195]

Compound	Structure	Chemistry	Common Source	Biological Activity
Huperzine A		Sesquiterpene alkaloid	*Huperzia serrata* [196] (Toothed clubmoss)	Cognitive enhancement [196-199] Neuroprotective [196, 200] Acetylcholinesterase inhibitor [201, 202] Antiseizure [198, 203, 204] Analgesic [198, 205] Anti-Alzheimer's [206-209] Antioxidant [210-212]

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