Supplementary Material

Table S1. Phytoconstituents profile of the hydroalcoholic extract of black coito quinoa-sprouts.

#	Tentative Compound [Reference]	Retention time (min)	Precursor m/z	ESI +/−	MS/MS spectrum	Formula	Chemical Group
1	3-Hydroxypalmitic acid [20]	3.46	271.2285	$[M-H]^-$	271(100%), 225, 69	$C_{16}H_{32}O_3$	Fatty acid
2	3,5-Dimethoxycinnamic acid [21]	4.01	207.066	$[M-H]^-$	207 (100%), 179,135	$C_{11}H_{12}O_4$	Organic acid
3	2-Ethyl-2-hydroxybutyric acid [20]	4.31	131.0714	$[M-H]^-$	131(100%), 85, 61	$C_6H_{12}O_3$	Fatty acid
4	Valine [20]	5.24	118.0869	$[M+H]^+$	118(100%), 72, 59	$C_5H_{11}NO_2$	Amino acids
5	Pyroglutamic acid [20]	8.34	128.0354	$[M-H]^-$	128(100%),82	$C_5H_7NO_3$	Alpha amino acids and derivatives
6	5-oxo-Proline [20]	8.66	128.0354	$[M-H]^-$	128(100%), 82	$C_5H_7NO_3$	Alpha amino acids and derivatives
7	Gluconolactone [20]	9.40	177.0402	$[M-H]^-$	129(100%), 99, 85, 71, 57	$C_6H_{10}O_6$	Medium-chain hydroxy acids and derivatives
8	2-Deoxyribose-5-phosphate [20]	9.41	213.017	$[M-H]^-$	213(100%), 184, 177,129, 61	$C_5H_{11}O_7P$	Sugar phosphate (pentose derivates)
9	NCGC00168839-02(2S,3R,5R,10R,13R,14S,17S)-2,3,14-trihydroxy-10,13-dimethyl-17-[(2R,3R)-2,3,6-trihydroxy-6-methylheptan-2-yl]-2,3,4,5,9,11,12,15,16,17-decahydro-	10.19	525.3083	$[M+FA-H]^-$	525(100%), 479, 319, 159	$C_{27}H_{44}O_7$	Steroid saponins

	1H-cyclopenta[a]phenanthren-6-one (N.R.)						
10	N-(2-Furoyl)glycine [20]	10.88	168.0337	$[M-H]^-$	168 (100%), 132, 124, 96	$C_7H_7NO_4$	Glycine derivative
11	Uridine [20]	11.68	243.0625	$[M-H]^-$	110(100%), 140, 152, 200,243	$C_9H_{12}N_2O_6$	Pyrimidine nucleosides
12	(2S,3S,4S,5R,6R)-6-[[(3S,6aR,6bS,8aS,14bR)-4,4,6a,6b,11,11,14b-heptamethyl-8a-[(2S,3R,4S,5S,6R)-3,4,5-trihydroxy-6-(hydroxymethyl)oxan-2-yl]oxycarbonyl-1,2,3,4a,5,6,7,8,9,10,12,12a,14,14a-tetradecahydropicen-3-yl]oxy]-3,4,5-trihydroxyoxane-2-carboxylic acid (N.R.)	11.72	793.4382	$[M-H]^-$	793(100%), 75	$C_{42}H_{66}O_{14}$	Triterpenoid saponins
13	Xanthine [20]	12.54	151.0261	$[M-H]^-$	151(100%). 108	$C_5H_4N_4O_2$	Xanthines
14	Chikusetsusaponin IV [20]	12.55	925.4829	$[M-H]^-$	925(100%)	$C_{47}H_{74}O_{18}$	Triterpenoid saponins
15	NCGC00180255-02_$C_{42}H_{66}O_{15}$_1-O-[(2alpha,3beta,5xi,9xi)-3-(Hexopyranuronosyloxy)-2-hydroxy-28-oxoolean-12-en-28-yl]hexopyranose (N.R.)	12.57	809.4362	$[M-H]^-$	809(100%), 113,85,75	$C_{42}H_{66}O_{15}$	Triterpenoid saponins
16	NCGC00385736-1_$C_{42}H_{64}O_{16}$ (N.R.)	12.95	823.4075	$[M-H]^-$	823(100%), 113,72, 85	$C_{42}H_{64}O_{16}$	Triterpenoid saponins
17	Xanthosine [20]	13.73	283.069	$[M-H]^-$	151(100%), 283	$C_{10}H_{12}N_4O_6$	Purine nucleosides
18	3-Glu-(1-2) Ara-28-Glu Hederagenin [8]	14.08	973.4968	$[M+FA-H]^-$	765(100%), 603, 927	$C_{48}H_{78}O_{17}$	Triterpenoid saponins
19	Purine [20]	14.34	119.0347	$[M-H]^-$	71(100%), 61, 119	$C_5H_4N_4$	Purine bases

20	Sorbose [17]	14.43	179.0557	$[M-H]^-$	71(100%), 59,89	$C_6H_{12}O_6$	Sugar alcohol
21	Phenylalanine [20]	15.15	166.0873	$[M+H]^+$	120(100), 166,131	$C_9H_{11}NO_2$	Amino acids
22	Betaine [20]	15.28	235.1645	$[2M+H]^+$	118 (100)	$C_5H_{11}NO_2$	Amino acids
23	Tryptophan [20]	15.33	205.0977	$[M+H]^+$	188 (100%), 159,146,144	$C_{11}H_{12}N_2O_2$	Amino acids
24	Isoleucine [20]	15.39	132.1019	$[M+H]^+$ adduct linked to 10996_$[M+H]^+$	86(100%), 132	$C_6H_{13}NO_2$	Amino acids
25	Glucose [17]	15.46	179.0557	$[M-H]^-$	71(100%), 59.89, 101, 113	$C_6H_{12}O_6$	Hexose
26	7-Hydroxy-4-methylcoumarin-3-acetic acid [21]	15.49	215.0333	$[M-H-H_2O]^-$	215 (100%), 89, 68	$C_{12}H_{10}O_5$	Coumarin
27	Choline [20]	15.69	104.1077	$[M]^+$	104(100%), 60	$C_5H_{14}NO$	Amino acids
28	Xylose [17]	15.72	149.0453	$[M-H]^-$	71(100%), 89,59, 149	$C_5H_{10}O_5$	Monosaccharide
29	Guanine [20]	15.90	150.0417	$[M-H]^-$	133(100%), 150, 126	$C_5H_5N_5O$	Purine bases
30	Adenine [20]	16.01	134.0472	$[M-H]^+$	136 (%)	$C_5H_5N_5$	6-Aminopurines
31	Proline [20]	16.09	116.0714	$[M+H]^+$	70(100%), 116	$C_5H_9NO_2$	Amino acids
32	Tyrosine [20]	16.22	182.0815	$[M+H]^+$	136 (100%), 147, 165	$C_9H_{11}NO_3$	Amino acids
33	N,N-Dimethylglycine [20]	16.81	104.0712	$[M+H]^+$	87(100%), 86, 104,69	$C_4H_9NO_2$	Amino acids
34	Sucrose [17]	17.34	341.1089	$[M-H]^-$	341(100%), 89,101, 179	$C_{12}H_{22}O_{11}$	Glycosyl glycoside
35	Glutamic acid [20]	20.46	146.0462	$[M-H]^-$	102(100%), 128,146	$C_5H_9NO_4$	Amino acids
36	Arginine [20]	22.30	175.1198	$[M+H]^+$	175 (100%), 158,182	$C_6H_{14}N_4O_2$	Amino acids

N.R.= non-referenced.

Table S2. Phytoconstituents profile of the hydroalcoholic extract of pasankalla quinoa-sprouts.

#	Tentative Compound [Reference]	Retention Time (min)	Precursor m/z	ESI +/−	MS/MS spectrum	Formula	Chemical group
1	3-Hydroxypalmitic acid [20]	3.74	271.2285	$[M-H]^-$	271(100%), 225, 69	$C_{16}H_{32}O_3$	Fatty acid
2	4-Hydroxybenzaldehyde [20]	3.83	121.0296	[M-H]-	121 (100%), 65	$C_7H_6O_2$	Hydroxy benzaldehydes
3	Glutaric acid [20]	4.70	131.035	[M-H]-	87(100%), 131	$C_5H_8O_4$	Dicarboxylic acids and derivatives
4	Pyroglutamic acid [20]	8.30	128.0355	[M-H]-	128(100%),82	$C_5H_7NO_3$	Alpha amino acids and derivatives
5	2-Deoxyribose-5-phosphate [17]	9.39	213.0172	[M-H]-	213(100%), 184, 177,129, 61	$C_5H_{11}O_7P$	Sugar phosphate (pentose derivates)
6	Gluconolactone [20]	9.97	177.0402	[M-H]-	129(100%), 99, 85, 71, 57	$C_6H_{10}O_6$	Medium-chain hydroxy acids and derivatives
7	NCGC00168839-02 (2S,3R,5R,10R,13R,14S,17S)-2,3,14-trihydroxy-10,13-dimethyl-17-[(2R,3R)-2,3,6-Trihydroxy-6-methylheptan-2-yl]-2,3,4,5,9,11,12,15,16,17-decahydro-1H-cyclopenta[a]phenanthren-6-one (N.R.)	10.21	525.308	[M+FA-H]-	479(100%), 525, 159, 67	$C_{27}H_{44}O_7$	Steroid saponins
8	NCGC00381031-01_$C_{36}H_{56}O_{10}$_Olean-12-en-28-oic acid, 3-(beta-D-glucopyranuronosyloxy)-23-hydroxy-, (3beta,5xi,9xi,18xi)- [20]	10.97	647.3783	[M-H]-	647(100%), 113, 85, 75	$C_{36}H_{56}O_{10}$	Triterpenoid saponins
9	Uridine [20]	11.66	243.0626	[M-H]-	110(100%), 200, 243	$C_9H_{12}N_2O_6$	Pyrimidine

							nucleosides
10	NCGC00347541-02_$C_{42}H_{66}O_{15}$_beta-D-Glucopyranose, 1-O-[(3beta,5xi,9xi,18xi)-3-(beta-D-glucopyranuronosyloxy)-29-hydroxy-28-oxoolean-12-en-28-yl]- (N.R.)	12.49	809.4361	[M-H]-	823(100%), 113, 72, 71, 85, 193	$C_{42}H_{66}O_{15}$	Triterpenoid saponins
11	Chikusetsusaponin IV [20]	12.52	925.483	[M-H]-	925(100%)	$C_{47}H_{74}O_{18}$	Triterpenoid saponins
12	Choline [20]	12.78	104.1079	[M]+	104(100%), 60	$C_5H_{14}NO$	Amino acids
13	NCGC00385736-01_$C_{42}H_{64}O_{16}$ (N.R.)	12.90	823.4182	[M-H]-	823(100%), 113,72, 85	$C_{42}H_{64}O_{16}$	Triterpenoid saponins
14	Isoleucine [20]	13.63	132.1021	[M+H]+	130(100%). 61	$C_6H_{13}NO_2$	Amino acids
15	Purine [20]	14.34	119.0348	[M-H]-	71(100%), 61, 119, 59	$C_5H_4N_4$	Purine bases
16	Fructose [17]	14.52	179.0558	[M-H]-	59(100%), 71, 89, 101	$C_6H_{12}O_6$	Monosaccharide
17	Xylose [17]	14.55	149.0453	[M-H]-	71(100%), 89,59, 149	$C_5H_{10}O_5$	Monosaccharide
18	3-Hydroxy-3-methylglutarate (N.R.)	14.57	161.0455	[M-H]-	71(100%), 113, 85, 95,160	$C_6H_{10}O_5$	Organic acid
19	Phenylalanine [20]	15.04	166.0865	$[M+H]^+$	120(100), 166,131	$C_9H_{11}NO_2$	Amino acids
20	Valine [20]	15.27	118.087	$[M+H]^+$	118(100%), 72, 59	$C_5H_{11}NO_2$	Amino acids
21	Ribose (N.R.)	15.47	149.0453	[M-H]-	149(100%), 89, 71, 59	$C_5H_{10}O_5$	Sugar
22	7-Hydroxy-4-methylcoumarin-3-acetic acid (N.R.)	15.47	215.0334	[M-H-H_2O]-	215 (100%), 89, 68	$C_{12}H_{10}O_5$	Coumarin
23	Lyxose [17]	15.69	149.0453	[M-H]-	149(100%), 89, 71, 131	$C_5H_{10}O_5$	Monosaccharide
24	Glucose [17]	15.71	179.0558	[M-H]-	71(100%), 59.89, 101, 113	$C_6H_{12}O_6$	Monosaccharide
25	Proline [20]	16.03	116.0715	$[M+H]^+$	70(100%), 116	$C_5H_9NO_2$	Amino acids
26	Tyrosine [20]	16.17	182.0814	$[M+H]^+$	136 (100%), 147, 165	$C_9H_{11}NO_3$	Amino acids
27	Leucine [20]	16.61	130.0871	[M-H]-	130(100%), 61, 69	$C_6H_{13}NO_2$	Amino acids
28	N,N-Dimethylglycine [20]	16.80	104.0712	$[M+H]^+$	87(100%), 86, 104,69	$C_4H_9NO_2$	Amino acids

29	Sucrose [17]	17.56	341.109	[M-H]-	341(100%), 89,101, 179	$C_{12}H_{22}O_{11}$	Glycosyl glycoside
30	Arginine [20]	22.20	173.1045	[M-H]-	175 (100%), 158,182	$C_6H_{14}N_4O_2$	Amino acids

N.R.= non-referenced.

Table S3. Phytoconstituents profile of the hydroalcoholic extract of yellow maranganí quinoa-sprouts.

#	Tentative Compound [Reference]	Retention Time (min)	Precursor m/z	ESI +/−	MS/MS spectrum	Formula	Chemical Structure
1	Val-Gly-Arg (N.R.)	3.91	331.2092	$[M+H]^+$	331(100%), 68	$C_{13}H_{26}N_6O_4$	Peptides
2	Pyroglutamic acid [20]	8.31	130.0505	$[M+H]^+$	128(100%),82	$C_6H_{10}O_6$	Alpha amino acids and derivatives
3	Gluconolactone [20]	9.77	177.0403	$[M-H]^-$	129(100%), 99, 85, 71, 57	$C_6H_{10}O_6$	Medium-chain hydroxy acids and derivatives
4	(2S,3S,4S,5R,6R)-6-[[(3S,6aR,6bS,8aS,14bR)-8a-carboxy-4,4,6a,6b,11,11,14b-heptamethyl-1,2,3,4a,5,6,7,8,9,10,12,12a,14,14a-tetradecahydropicen-3-yl]oxy]-3,4,5-trihydroxyoxane-2-carboxylic acid (N.R.)	9.79	631.3864	$[M-H]^-$	631(100%), 75, 85, 113	$C_{36}H_{56}O_9$	Triterpenoid saponins
5	NCGC00168839-02_(2S,3R,5R,10R,13R,14S,17S)-2,3,14-trihydroxy-10,13-dimethyl-17-[(2R,3R)-2,3,6-trihydroxy-6-methylheptan-2-yl]-2,3,4,5,9,11,12,15,16,17-decahydro-1H-cyclopenta[a]phenanthren-6-one (N.R.)	10.22	525.3082	$[M+FA-H]^-$	525(100%), 479, 159,525, 319	$C_{27}H_{44}O_7$	Steroid saponins
6	(2S,3S,4S,5R,6R)-6-[[(3S,6aR,6bS,8aS,14bR)-8a-carboxy-4-(hydroxymethyl)-4,6a,6b,11,11,14b-	10.88	647.3781	$[M-H]^-$	647(100%), 75, 648, 113, 85	$C_{36}H_{56}O_{10}$	Triterpenoid saponins

	hexamethyl-1,2,3,4a,5,6,7,8,9,10,12,12a,14,14a-tetradecahydropicen-3-yl]oxy]-3,4,5-trihydroxyoxane-2-carboxylic acid (N.R.)						
7	(2S,3S,4S,5R,6R)-6-[[(3S,6aR,6bS,8aS,14bR)-4,4,6a,6b,11,11,14b-heptamethyl-8a-[(2S,3R,4S,5S,6R)-3,4,5-trihydroxy-6-(hydroxymethyl)oxan-2-yl]oxycarbonyl-1,2,3,4a,5,6,7,8,9,10,12,12a,14,14a-tetradecahydropicen-3-yl]oxy]-3,4,5-trihydroxyoxane-2-carboxylic acid (N.R.)	11.57	793.4384	$[M-H]^-$	793(100%), 75, 794, 85, 113	$C_{42}H_{66}O_{14}$	Triterpenoid saponins
8	NCGC00180255-02_$C_{42}H_{66}O_{15}$_1-O-[(2alpha,3beta,5xi,9xi)-3-(Hexopyranuronosyloxy)-2-hydroxy-28-oxoolean-12-en-28-yl]hexopyranose (N.R.)	12.49	809.4357	$[M-H]^-$	809(100%), 75, 113, 85, 71	$C_{42}H_{66}O_{15}$	Triterpenoid saponins
9	NCGC00385736-01_$C_{42}H_{64}O_{16}$ (N.R.)	12.94	823.4078	$[M-H]^-$	823 (100%), 113, 72, 85, 193, 59	$C_{42}H_{64}O_{16}$	Triterpenoid saponins
10	Phenylalanine [20]	15.05	166.0866	$[M+H]^+$	120(100), 166,131	$C_9H_{11}NO_2$	Amino acids
11	Isoleucine [20]	15.09	132.1024	$[M+H]^+$	86(100%), 132	$C_6H_{13}NO_2$	Amino acids
12	Tryptophan [20]	15.18	205.0983	$[M+H]^+$	188(100%), 146, 159, 118	$C_{11}H_{12}N_2O_2$	Amino acids
13	Valine [20]	15.23	118.0866	$[M+H]^+$	118(100%), 59	$C_5H_{11}NO_2$	Amino acids
14	Betaine [20]	15.25	235.1655	$[2M+H]^+$	118(100%)	$C_5H_{11}NO_2$	Amino acids
15	Choline [20]	15.58	104.1079	$[M]^+$	104(100%), 60	$C_5H_{14}NO$	Amino acids
16	Guanine [20]	15.87	152.0569	$[M+H]^+$	152(100%), 153, 128, 110	$C_5H_5N_5O$	2-aminopurine
17	N,N-Dimethylglycine [20]	15.94	104.0716	$[M+H]^+$	104 (100%), 60	$C_4H_9NO_2$	Amino acids
18	Proline [20]	16.01	116.0715	$[M+H]^+$	70(100%), 116	$C_5H_9NO_2$	Amino acids
19	4-guanidinobutanoic acid (N.R.)	16.15	146.0932	$[M+H]^+$	146(100), 151, 147	$C_5H_{11}N_3O_2$	Organic acid

20	Tyrosine [20]	16.16	182.0815	$[M+H]^+$	136 (100%), 147, 165	$C_9H_{11}NO_3$	Amino acids
21	Glutamic acid [20]	17.48	148.0609	$[M+H]^+$	102(100%), 128,146	$C_5H_9NO_4$	Amino acids
22	Histidine [20]	21.89	156.0772	$[M+H]^+$	110 (100%), 156	$C_6H_9N_3O_2$	Amino acids
23	Arginine [20]	22.12	175.1199	$[M+H]^+$	175 (100%), 158,182	$C_6H_{14}N_4O_2$	Amino acids
24	Histamine [N.R.]	23.88	112.0877	$[M+H]^+$	95(100%), 112, 83	$C_5H_9N_3$	Amina

N.R.= non-referenced.