

Supplemental table 1: Experimental effects observed for the small water soluble compounds

	<i>Inflammation</i>	<i>CV D</i>	<i>CKD-MBD</i>	<i>Fibrosis</i>	<i>Infection</i>	<i>Insulin resistance</i>	<i>Metabolic function</i>	<i>PEW</i>	<i>Neurotoxicity</i>	<i>Thrombogenicity</i>	<i>Hematology</i>	<i>Sum</i>
Guanidines*												5
ADMA												4
SDMA												2
Oxalate												3
PAG												0
MMA												1
DMA												1
TMA												2
TMAO												5
Lanthionine												1
Myoinositol												1
2PY												1
Polyamines**												7
Urea												3
Carbamylated compounds**												3
Cyanate												3
Ammonia												1
Uric acid												6
Xanthine												2
Hypoxanthine												2
Sum	10	11	3	3	5	4	8	0	5	2	2	

Metabolic function includes tubular function; the term fibrosis also covers progression of CKD; CVD: Cardiovascular Disease; CKD-MBD: chronic kidney disease – metabolic bone disease; PEW: protein energy wasting; ADMA: Asymmetric Dimethylarginine; SDMA: Symmetric Dimethylarginine; PAG: Phenylacetylglutamate; MMA: Monomethylamine; DMA: Dimethylamine; TMA: Trimethylamine; TMAO: Trimethylamine-N-Oxide; 2PY: N-Methyl-2-Pyridone-carboxamide; *: guanidines considered as one group with the exception of ADMA and SDMA; **: polyamines and carbamylated compounds considered as one group. Colored for demonstrated effect. Bold characters are used for groups of compounds.

Opm: sterretjes aanpassen? * en ** omwisselen om gelijk te trekken met figuur 2?

Supplemental table 2: Experimental effects observed for the protein bound compounds

	<i>Inflam- mation</i>	<i>CVD</i>	<i>CKD- MBD</i>	<i>Fibrosis</i>	<i>Infection</i>	<i>Insulin resistance</i>	<i>Metabolic function</i>	<i>PEW</i>	<i>Neuro- toxicity</i>	<i>Thrombo- genicity</i>	<i>Hemato- logy</i>	Sum
AGEs*												7
AOPPs*												3
CMPF												2
p-Cresyl sulfate												7
p-Cresyl glucuronide												2
Hippuric acid												3
p-OH hippurate												4
o-OH hippurate												2
Homocysteine												3
Indoxyl sulfate												6
Indole acetic acid												5
Indoxyl glucuronide												1
Kynurenines*												5
Phenyl sulfate												1
Phenyl acetic acid												5
Quinolinic acid												3
Sum	11	9	5	8	2	4	11	0	4	4	1	

Metabolic function includes tubular function; fibrosis includes progression of CKD; CVD: Cardiovascular Disease; CKD-MBD: Chronic Kidney Disease – Metabolic Bone Disease; PEW: Protein Energy Wasting; AGEs: Advanced Glycation End Products, AOPPs: Advanced Oxidation protein Products; CMPF: Carboxy Methyl Propyl Furanpropionic Acid; p-OH hippurate: p-hydroxyhippurate; o-OH hippurate: o-hydroxyhippurate; *: AGEs, AOPPs en kynurenines considered as one group. Colored for demonstrated effect. Bold characters are used for groups of compounds.

Neuropeptide Y												3
Orexin A												1
Parathyroid hormone												5
Pentraxin-3												4
Peptide YY												2
Prolactin												1
Resistin												2
Retinol binding protein												4
Visfatin												0
Sum	16	21	4	12	5	4	7	4	6	2	2	

Metabolic function includes tubular function; fibrosis includes progression of CKD; CVD: Cardiovascular Disease; CKD-MBD: Chronic Kidney Disease – Metabolic Bone Disease; PEW: Protein Energy Wasting; ANP: atrial natriuretic peptide, TNF- α : Tumor Necrosis Factor- α , IgLC: Immunoglobulin Light Chains; MCSF: Macrophage Colony Stimulating Factor; *: Immunoglobulin Light Chains and lipids and lipoproteins (modified) considered as one group; **: modified – post-translational. Colored for demonstrated effect. Bold characters are used for groups of compounds.