

Table 7. Fate of Immunomodulatory Polysaccharide Products Following Oral Intake

Category	Product	Metabolized by human gut bacteria?	Study type	Fate (method: tissues detected)	References
Arabinogalactans	<i>Larix</i> spp.	yes	<i>in vitro</i>	NA	[163-169]
Fucoidans	<i>Undaria pinnatifida</i>	no	<i>in vitro</i>	Ab: human plasma	[108,170]
Galactomannans	<i>Cyamopsis tetragonolobus</i> (partially hydrolyzed guar gum)	yes	<i>in vivo</i>	NA	[171]
	<i>Cyamopsis tetragonolobus</i> (guar gum)	yes	<i>in vitro</i>	NA	[167]
Glucans	<i>Hordeum vulgare</i>	NA	<i>in vivo</i>	Fluorescein-labeled: mouse M ϕ in the spleen, bone marrow, lymph nodes	[73]
	<i>Laminaria digitata</i> (laminarin)	yes	<i>in vitro</i>	NA	[29,170,172]
	<i>Sclerotium rofsii</i> (scleroglucan) glucan phosphate, <i>Laminaria</i> spp. (laminarin)	NA	<i>in vivo</i>	Alexa Fluor 488-labeled: mouse intestinal epithelial cells, plasma, GALT	[29]
	<i>Saccharomyces cerevisiae</i> (particulate)	NA	<i>in vivo</i>	Fluorescein-labeled: mouse macrophage in the spleen, bone marrow, lymph nodes	[73]
	<i>Trametes versicolor</i> (PSK)	NA	<i>in vivo</i>	¹⁴ C-labeled: rat and rabbit serum; mouse GI tract, bone marrow, salivary glands, liver, brain, spleen, pancreas	[173]
Mannans	<i>Aloe barbadensis</i> (aloemannan)	yes	<i>in vitro</i>	FITC-labeled: mouse, GI tract	[121,174]
	<i>Aloe barbadensis</i> (gel powder)	yes	<i>in vitro</i>	NA	[163]
	<i>Aloe barbadensis</i> (acemannan)	NA	<i>in vivo</i>	¹⁴ C-labeled: dog systemic, particularly liver, bone marrow, gut, kidney, thymus, spleen	(Carrington Laboratories, personal communication)
Mixed polysaccharide products	Ambrotose complex [®] , Advanced Ambrotose [®] powder	yes	<i>in vitro</i>	NA	[163,175]
Pectins	NA	yes	<i>in vitro</i>	NA	[165-167,176]
	<i>Bupleurum falcatum</i> (bupleuran 2IIc)	NA	<i>in vivo</i>	Ab bound: mouse Peyer's patch, liver	[109]