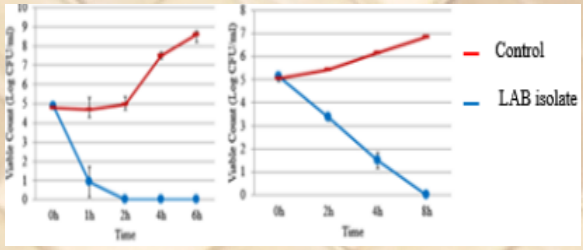
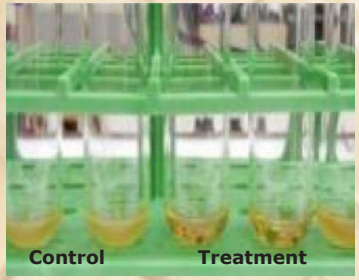
Poi is a symbiotic food, with both probiotic and prebiotic attributes.

Poi left at room temperature decreased in pH, resulting to an increase in a diverse population of lactic acid bacteria (Yoshioka, et al. 2015), confirming an earlier study (Huang et al. 1994).

Li et al. (2016) demonstrated the ability of some of the lactic acid bacterial (LAB) isolates to kill harmful bacteria like *Salmonella* and *Listeria*, common in many foodborne illnesses. The products from LAB were also capable of inhibiting *Salmonella typhimurium* and *Listeria monocytogenes* growth *in vitro*.



Salmonella and *Listeria* are two causes of leaky gut syndrome, which can lead to many human health issues. Poi is thus an excellent food to address leaky gut.



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Poi: A Superfood

Native Tradition, Nature's Gift

College of Tropical Agriculture and Human Resources
University of Hawai'i at Mānoa

Taro (*Colocasia esculenta*)

There are over 1,500 varieties of taro in the plant family Araceae.

It is used as a vegetable. All parts of the plant are edible, including the corm, stems, and leaves. The corm is used as a source of starch in many countries.

Taro is considered to be native to south India, Southeast Asia, and the western Pacific. Domestication in different areas appears to have been independent.

Sites of taro production are found throughout the world, including in Nigeria, China, Cameroon, and Ghana (Wikipedia 2017). Movement of taro to the Hawaiian islands is estimated to have been around 900–1000AD.

Kalo

The Hawaiian name for taro (*Colocasia esculenta* (L.) Schott; Bishop Museum) is kalo. Kalo has a special importance to the Hawaiian people in terms of cultural practices and beliefs.

Hawaiian mythology holds that kalo is the plant from which Hawaiian people originated, as described in the creation chant *Kumulipo* (Jacobs 2011).

See Cho et al. (2007) for a helpful overview of Hawaiian taro.

Modern-Day Poi

Commercial poi is produced by cooking corms under steam pressure, skinning them, and grinding them into paste. In recent years, some producers have begun peeling the corms first prior to cooking and pasteurizing the paste before placing it in plastic containers.

Fresh poi is sweet, but it ferments readily. After 30 hours poi has a mild, tangy flavor similar to plain unsweetened yogurt.

Pa'i 'ai is the cooked kalo corm that is peeled and pounded by hand with a stone pestle. It generally has less water than poi.

Taro/Poi Nutrient Value per 100 g

Principle	Nutrient Value
Energy	112 Kcal
Carbohydrate	26.46 g
Protein	1.50 g
Total Fat	0.20 g
Cholesterol	0 mg
Dietary Fiber	4.10 g
Vitamins	
Folates	22.00 µg
Niacin	0.60 mg
Pantothenic acid	0.30 mg
Pyridoxine	0.28 mg
Riboflavin	0.03 mg
Thiamin	0.09 mg
Vitamin A	76 IU
Vitamin B_6	0.27 mg
Vitamin C	4.50 mg
Vitamin E	2.38 mg
Vitamin K	1.00 µg
Electrolytes	
Sodium	11.00 mg
Potassium	591.00 mg
Minerals	
Calcium	43.00 mg
Copper	0.17 mg
Iron	0.55 mg
Magnesium	33.00 mg
Manganese	0.38 mg
Selenium	0.7 µg
Zinc	0.23 mg
Phosphorus	39.00 mg
Phytonutrients	
Carotene-β	35.00 µg
Cryptoxanthin-β	20.00 µg

Source: USDA Nutrient Database

Probiotics: Desirable bacteria that contribute to human gut health and immunity.

Prebiotic Foods (Jackson 2016): Plant foods whose fibers go through the gut without change and provide nutrients for probiotic bacteria.

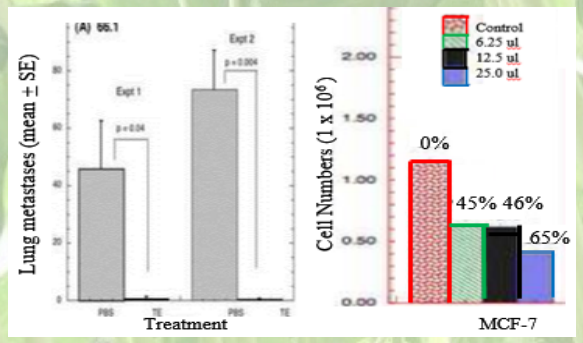
Symbiotic Foods: Foods that have both prebiotic functions and the presence of desirable bacteria.

Heath Benefits of Taro and Poi

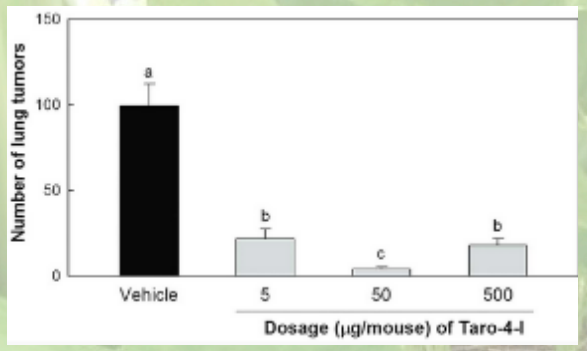
Taro has been used to boost immune function and counter the negative effects of cancer therapy in Chinese culture (Yu 2012, Zhang et al. 1989, Gao 1995). Taro extracts (TE) showed bioactive proteins that were immuno-stimulators of spleen and bone marrow cells in mice (Pereira et al. 2015).

It has also been shown to completely block metastasis and migration of mammary cells lines (Kundu et al. 2012).

The reduction of metastasis and colonization of mice mammary and human breast cancer cells by taro extracts. Source: Kundu et al.



Taro has a polysaccharide that has anti-metastatic properties deriving from enhanced immune stimulation in mice. Source: Park et al. 2013



Taro corms and leaves have shown high antioxidant activity and cytotoxicity in osteocarcoma (bone cancer) human cell lines (Chakraborty et al. 2015.)

Poi has also been shown to cause the death of colon cancer cells and to stimulate lymphocytes, which can lyse these cells, in *in vitro* studies with rat YYT colon cell lines (Brown et al. 2005).