

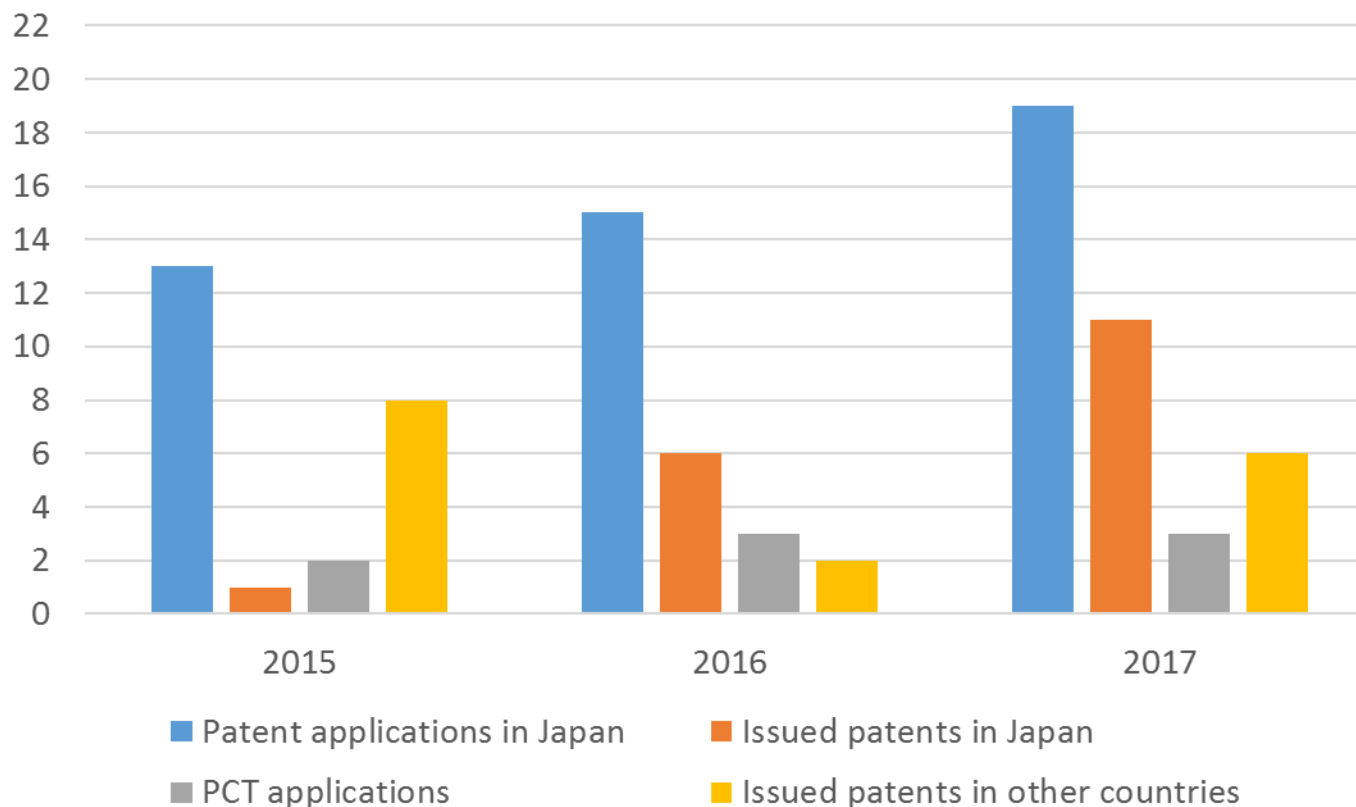
IP Management: Where to file Patents; other types of IP (Software, Copyright etc.)

Ryo Arashida,
Technical Director / Patent attorney, Biofuel
Development Department, euglena. Co.,
Ltd., Tokyo, Japan



The number of our patents

The number of patent applications and issued patents



Total number of filed patent applications: 76

Total number of issued patents in Japan: 23

Our strategy of patents (File or not File)

Know-how

Euglena powder producing process (culture, separation, etc.)

Patents

Use inventions of Euglena and paramylon

Culture



Separation



Drying



Euglena
powder

Culturing process



Know-how (not file)

Food, Cosmetic, Fiber, Feed, Fuel
(Use inventions)



File patent applications

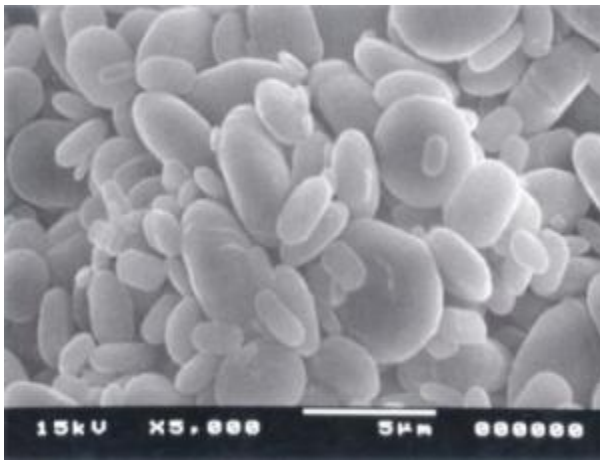


Introduction of our patent

Allergy Inhibitor (PCT/JP2011/055389)

Paramylon is generally known as β -1,3-glucan. It has been reported that β -1,3-glucan has an immunomodulatory function.

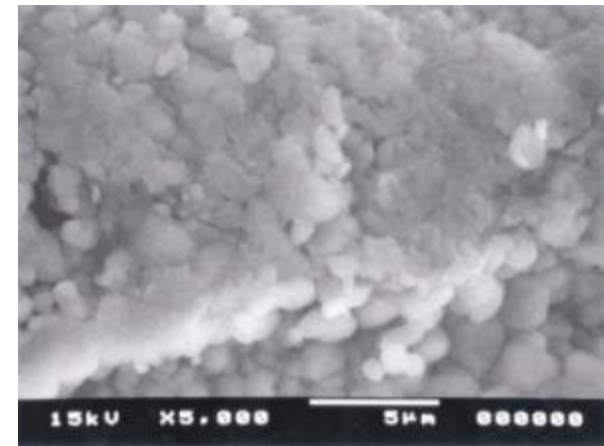
The present invention provides an allergy inhibitor using the efficacy of amorphous paramylon which is a substance obtained by changing the crystalline structure of paramylon.



Native paramylon
(Extracted from *Euglena* cells)



After dissolution with alkali, it is neutralized with acid to recrystallize



Amorphous paramylon

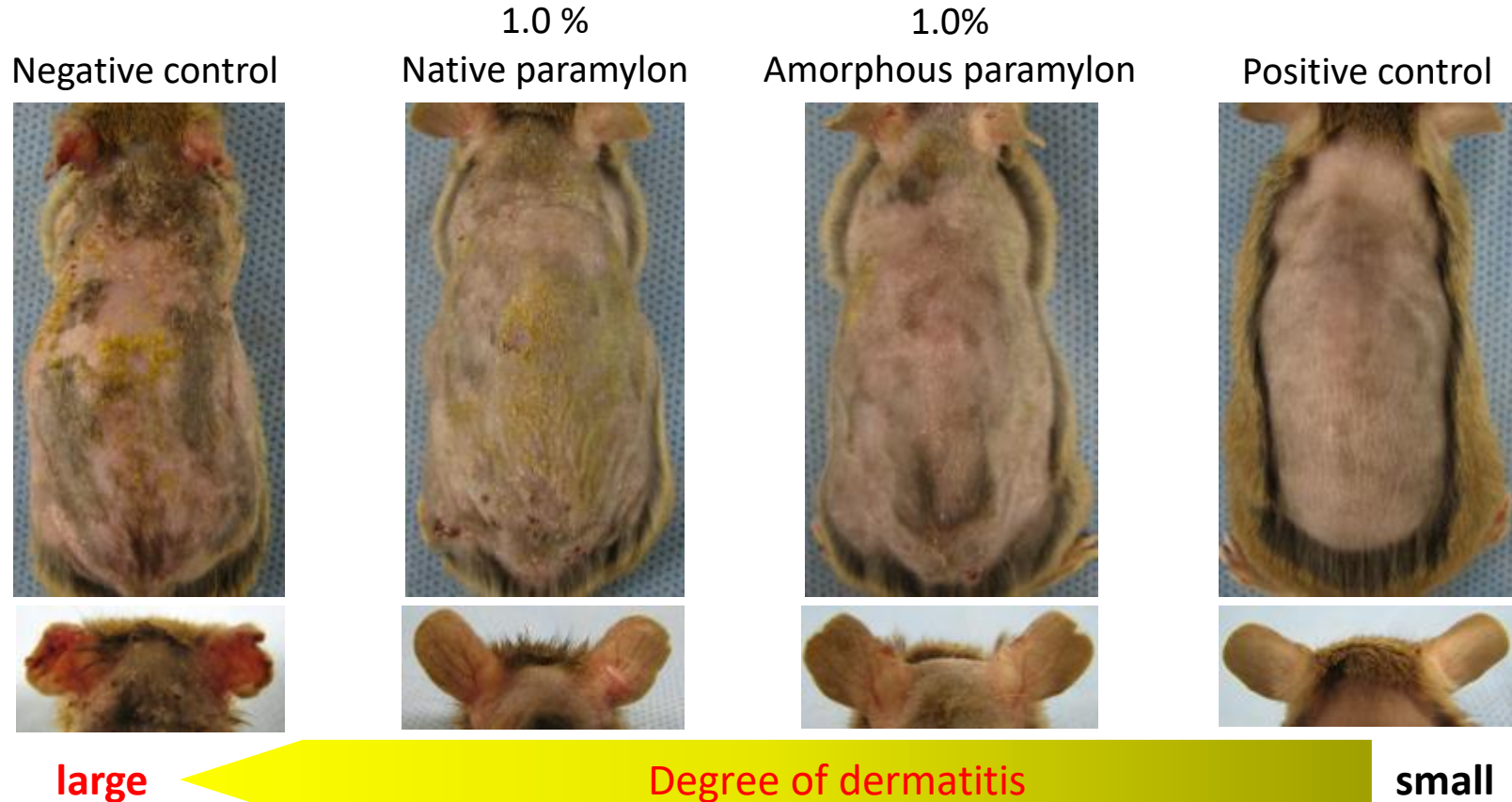
Amorphous paramylon obtained through amorphousization becomes an efficacious substance showing different physical properties (specific gravity, crystalline size, and the like) different from those of crystalline paramylon powder, and exhibiting, in particular an allergy inhibitory effect.

Introduction of our patent

Allergy Inhibitor (PCT/JP2011/055389)

Effects of Paramylon on TNCB-induced Dermatitis

2,4,6-Trinitrochlorobenzene(TNCB), which is a substance contact-sensitized to dermatitis, was applied to the chest, abdomen, hind leg (foot pad) of the mice for inducing sensitization.



This result suggests that amorphous paramylon efficaciously inhibits atopic dermatitis

Healthcare business



- United States (There are some competitor)
- China (There is a big market)
- South Korea (Nearest country from Japan)
- Singapore (Consumer preference resembles Japanese people)

Energy & Environment Business



We need following conditions

- Extensive land for culturing microalgae
- Abundant sunlight to do photosynthesis
- A temperate climate throughout the year



- South East Asia (Thailand, Malaysia, Indonesia, Philippines)
- United States
- Australia

Other types of IP (Trademark)



Company logo (house mark)
Most important trademark
File more than 10 countries



Bland logo (Pet mark)
Supplements



Other types of IP (Trademark)



Bland logo (Pet mark)
Protein powder



Bland logo (Pet mark)
Cosmetics



Other types of IP (Copyright)

Official character Yu-gurin



Character profile

Identity	Microalgae Euglena (Japanese name: Midorimushi) itself
Birthplace	Okinawa Prefecture Ishigaki Island
sex	secret
Favorite food	Water, carbon dioxide and sunlight
Skill	Cell division (one billion fold in one month!)
charm point	Beautiful eyes
age	500 million years old
size	50 microns (= 0.05 mm)
Personality	Always everyone's popular "Yugurin" My eyes turn red when I am moved with a gentle personality

↓ Business variation

- Goods sale (Stuffed doll etc.)
- Costume participates in events



Thank you
for your attention

