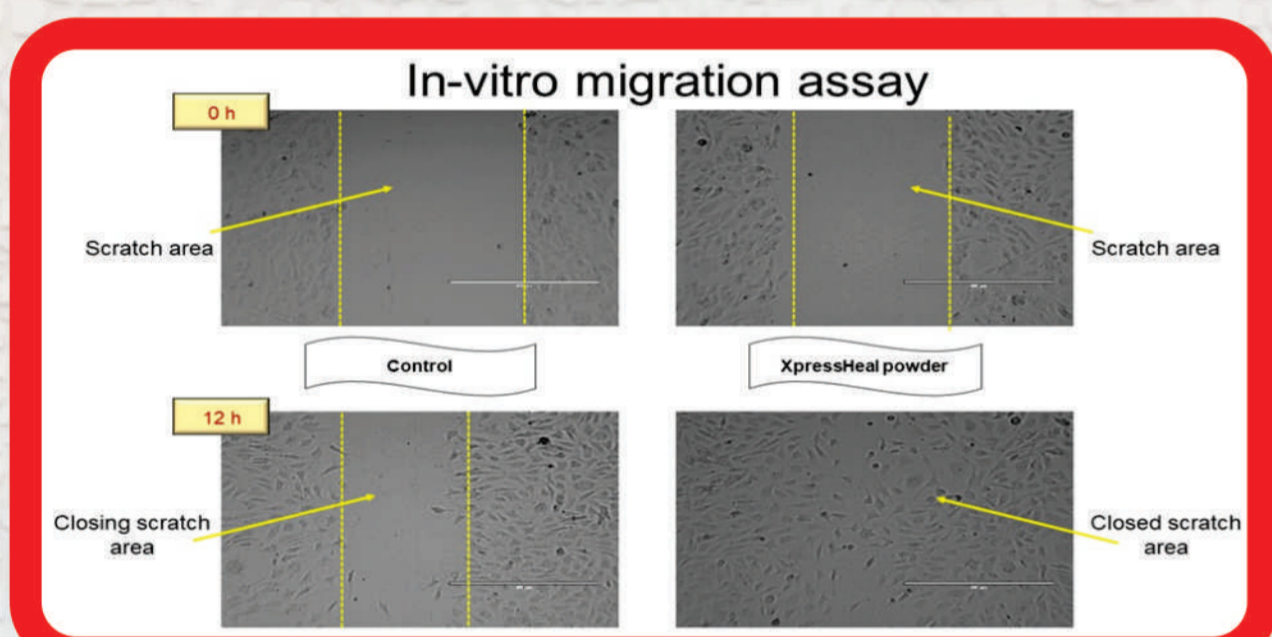




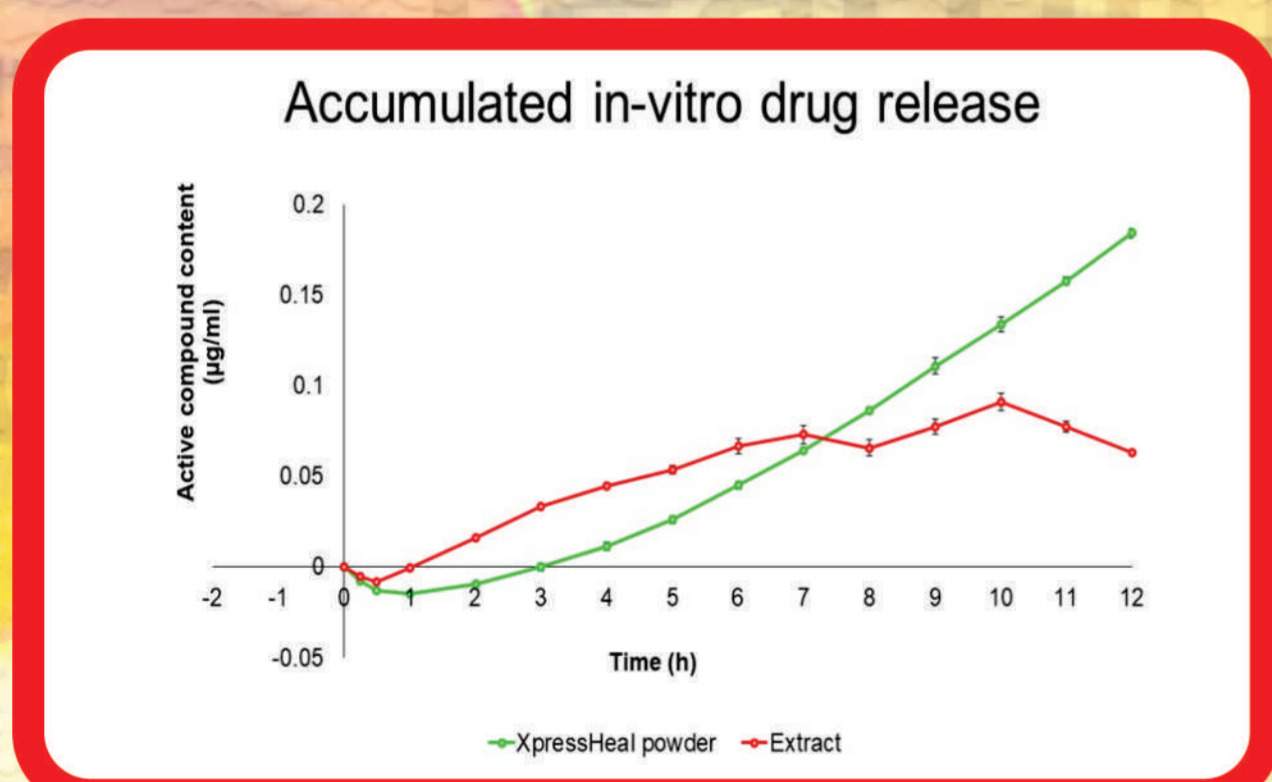
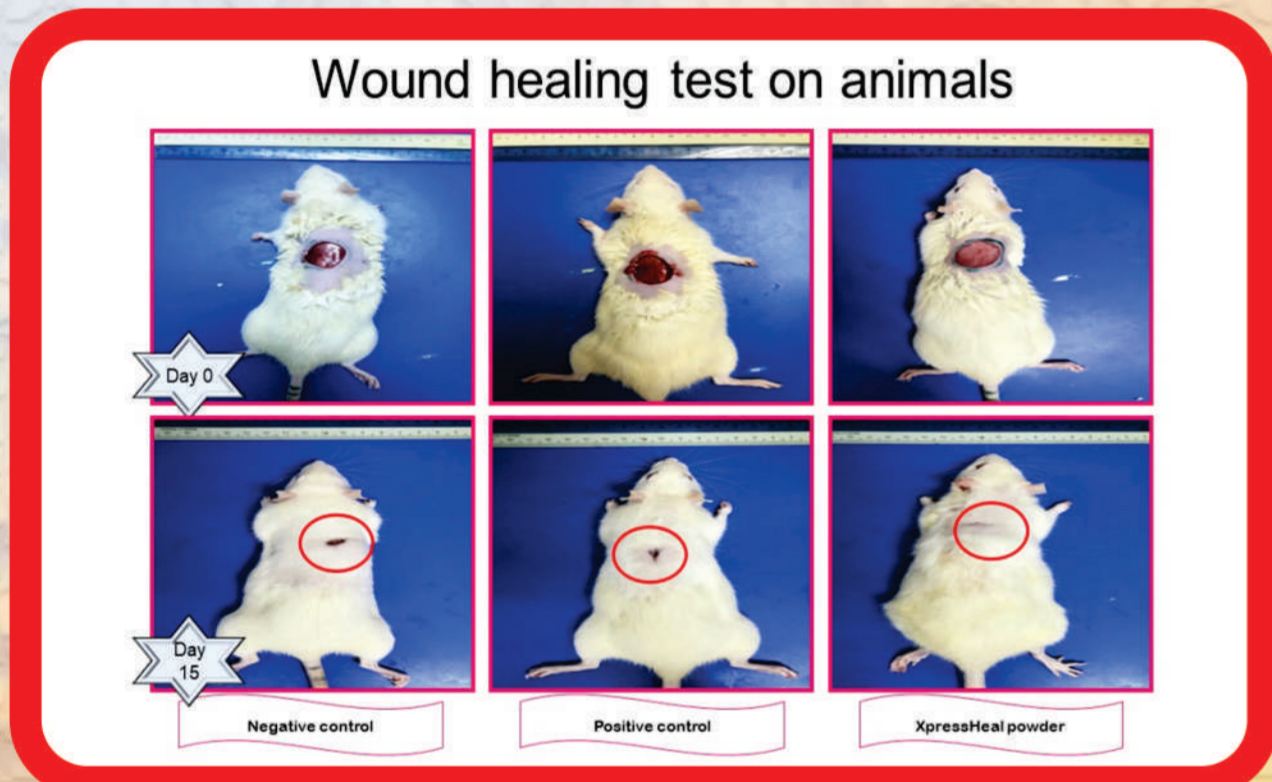
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# XpressHeal Drink

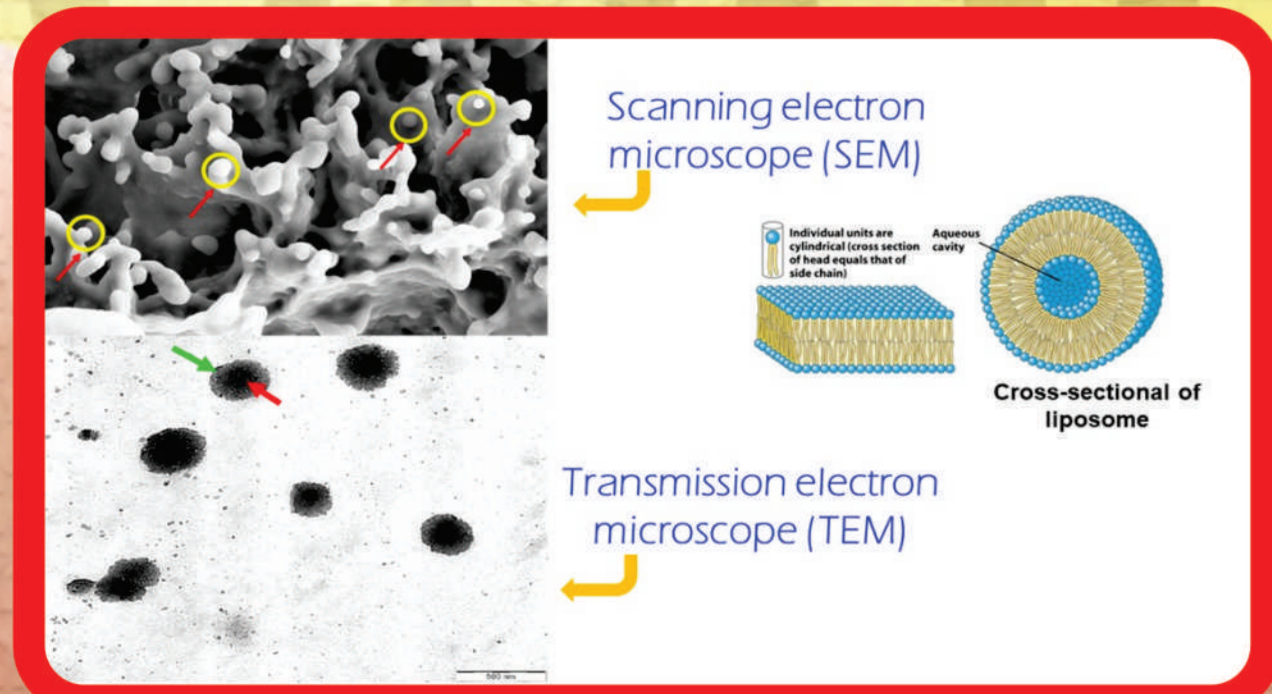
▶ TRADEMARK: BetaHealth™



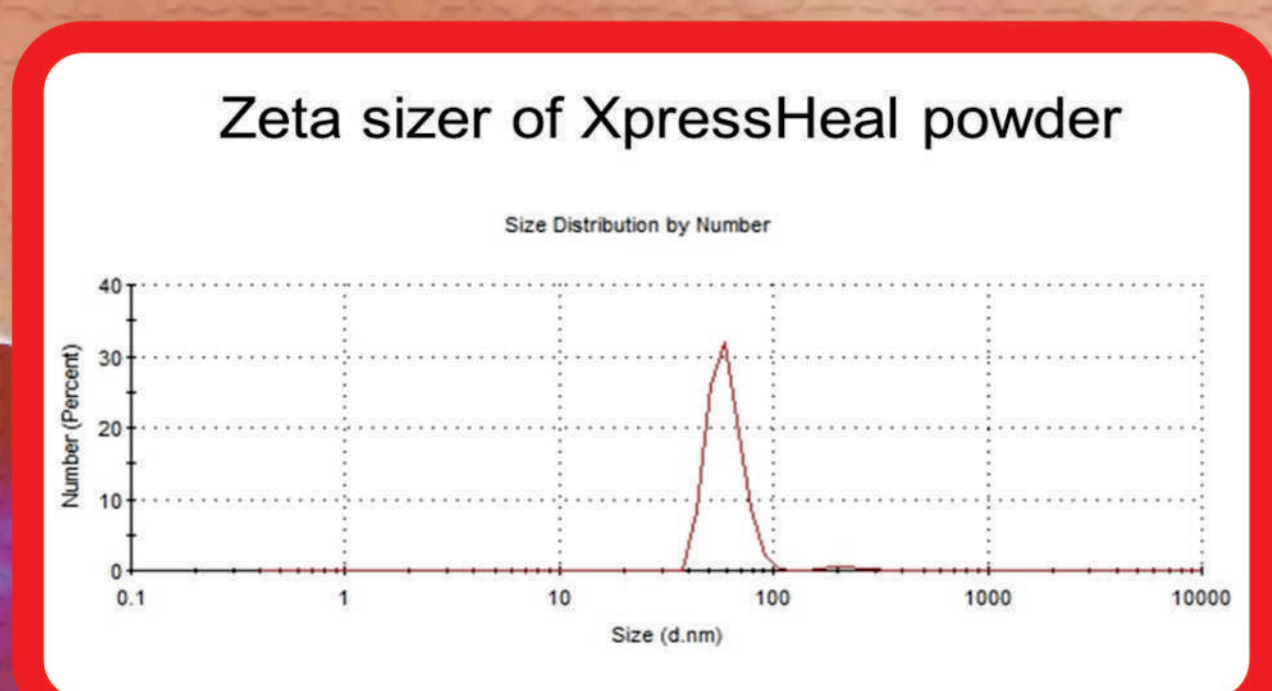
XpressHeal drink shows better improvement in wound healing activity in rats.



The spherical shape of the powder observed in SEM and TEM was due to the molecular structure of emulsifier where it contained both hydrophilic and hydrophobic region.



The zeta potential XpressHeal powder was -28.3mV, it is stated as stable dispersion



## What is XpressHeal drink?

- *Ocimum tenuiflorum* L., commonly known as *ruku* in Malaysia, is an underused plant cultivated as ornamental plant in Malaysia.
- XpressHeal Drink invention is a plant-based product formulations of water extract of leaves of *Ocimum tenuiflorum* and food grade emulsifier powder that showed wound healing properties *in vitro* and *in vivo* study.
- *Ocimum tenuiflorum* contained high antioxidant (Rabeta & Lai, 2013), antimicrobial (Mousavi et al., 2014), lowering blood glucose (Mousavi et al., 2016), anti-cancer (Lam et al., 2018), sucrose inhibitory and non-enzymatic glycation properties (Antora et al., 2018), low side effects for methanol extract in the histology studies (Mousavi et al., 2018), 3,4-dimethoxycinnamic acid, caffeic acid, diosmetin, luteolin, kaempferol, rosmarinic acid, apigenin, and genistein that control the blood glucose in diabetic rats (Mousavi et al., 2018) and wound healing properties (Rohini et al., 2019).

## Problem statement

- The morbidity rate of diabetic foot amputation is high in Asia.
- Every 30-second leg is lost due to diabetes in some part of the world.
- The costs of treating diabetic foot complications are higher than the treatment costs for many common cancers.
- It shows the failure of current treatment methods of wound healing.
- Religious and vegetarian lifestyle choices may prohibit certain consumer groups from taking animal-based wound healing products.

## How XpressHeal drink address wound healing problem?

- XpressHeal powder treated cells migrated and closes the scratch area almost 100% within 12 h at optimized concentration when compared to negative control and other treatment groups.

## Technical description

- Increased content of the active compounds in formulation indicates that, improved in bioavailability (availability up to 10h).

## Inventiveness and novelty

- First and novel drink from plant source to promote wound healing.
- This product also suitable to people who do not like snakehead fish and sea cucumber, which are a popular species with wound healing properties.

## Comparison to competing product

	XpressHeal drink	Snakehead fish tablet	Sea cucumber drink
<b>Price</b>	RM27.00/box (10sachets/box)	Snakehead Fish Tablet 450mg (60s) RM 88.00	Sea Cucumber Jelly 350ml RM101.50
<b>Cost per day</b>	RM2.70	RM6	RM3.4

## Commercialization

- Market ready for diabetes, foot ulcer and any injuries consumers.
- Potential application: functional drink, functional food, pharmaceutical, anti-aging cosmetics.

## Impact of product

- Supportive of the use of natural products in wound care.
- Increasing the consumption of ruku leaves, extra income to the farmer.
- *Ocimum tenuiflorum* showed high activity of antioxidant, thereby providing protection from diabetic complications.
- Diabetic patient is at high risk of minor cuts or injuries that can develop into foot ulcers if not treated properly.

## Intellectual Property Status

- Under trademark BetaHealth™ (Application No. 2018062582 in Class 32).
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