



Pusat Pengajian Sains Perubatan  
Universiti Sains Malaysia

KELULUNOMIC USM

@Advance National Honey Landmark (AnNaHL) Centre  
Pusat pengajian Sains Perubatan

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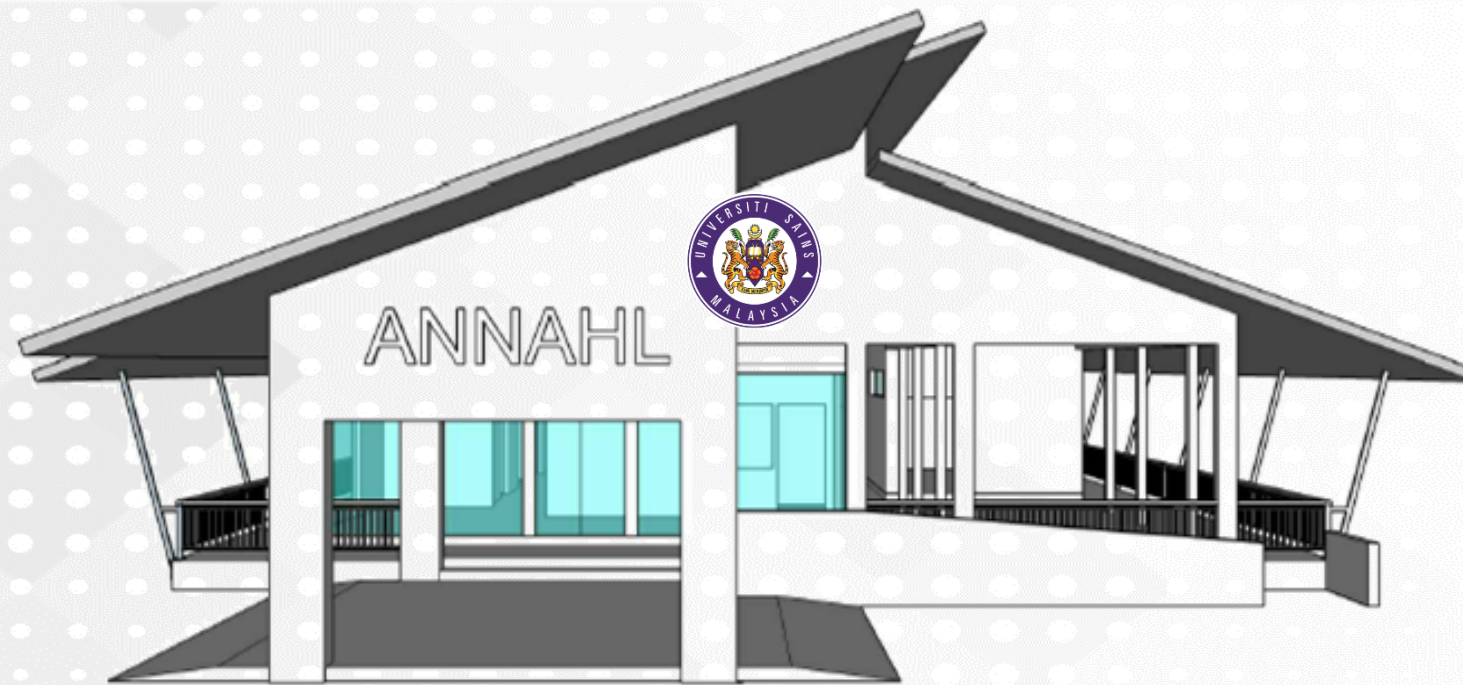


# AnNaHL

Advance National  
Honey Landmark  
Translational Centre USM







# Welcome to AnNaHL

Advance National Honey Landmark Translational Centre

Universiti Sains Malaysia, Health Campus, Kelantan, MALAYSIA

## Welcome to AnNaHL

AnNaHL is a prestigious initiative established under the Translational Strategic Research Grant (TRAM) by the Ministry of Higher Education of Malaysia. It serves as a dynamic stingless bee research and community hub within the campus, fostering direct collaboration between higher education, research, and industry. The center is dedicated to advancing the stingless bee honey industry, focusing on medicinal applications, community income generation, and positioning stingless bee honey as an emerging national commodity.

AnNaHL proudly hosts the Kelulunomic initiative, a transformative socioeconomic development program centered around kelulut (stingless bees). This initiative is committed to producing AUTHENTIC, HYGIENIC, and HIGH-QUALITY stingless bee honey, empowering local communities through sustainable beekeeping practices. Beyond income generation, Kelulunomic acts as a catalyst for bee conservation, enhances pollination to support biodiversity, and contributes to the nation's food security.

Join us in shaping the future of stingless bee honey as a vital economic driver and a cornerstone of environmental sustainability.



Mohd Zulkifli Mustafa (PhD)  
Project Leader and  
Founder of Kelulunomic



Universiti Sains Malaysia (USM) Hospital  
 State: Kelantan  
 Country: MALAYSIA  
 Region: South East Asia

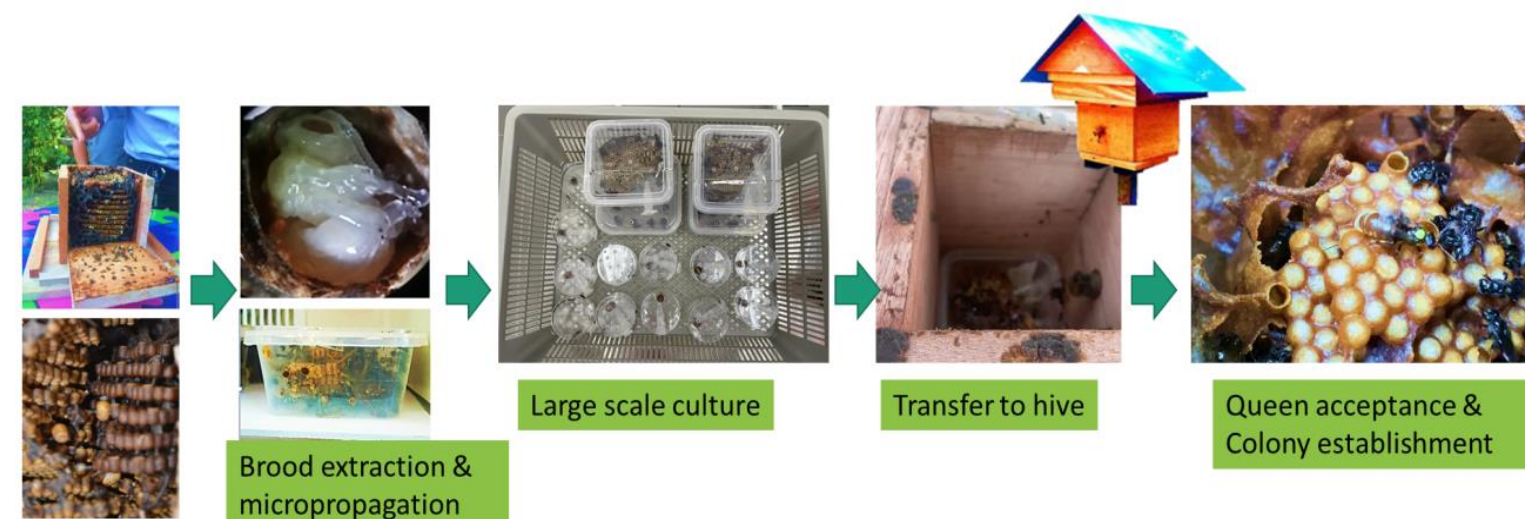


Our state-of-the-art Kelulunomic Laboratory works side-by-side with our teaching hospital, directly supporting clinical trials exploring the therapeutic potential of stingless bee products for various illnesses. Equipped with advanced research facilities, the laboratory serves as a vital hub for scientific inquiry, from honey composition analysis to pharmacological assessments. Ultimately, the lab aims to groom sustainable stingless bee honey production at an industrial scale while promoting rigorous clinical trials — paving the way for stingless bee honey to be recognized as a functional food for health and treatment for diseases.



## Upstream research: Stingless bee keeping and honey production

AnNaHL emphasizes upstream research in stingless bee keeping and honey production. Our research focuses on in-vitro colony production to boost bee population growth, the development of sustainable farms that harmonize productivity with environmental conservation, and the establishment of community honey hubs. These hubs serve as platforms for training local beekeepers in hygienic honey handling practices, ensuring product quality while strengthening community-based honey production.



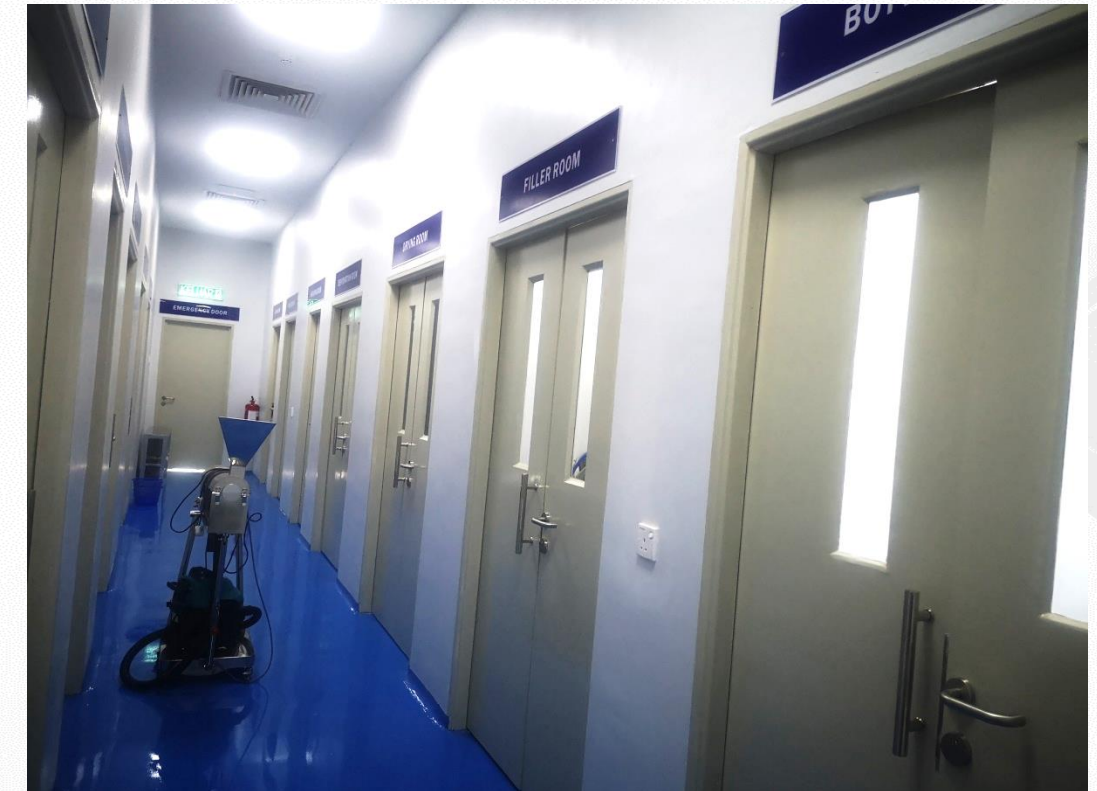


## Downstream research: stingless bee honey production

AnNaHL houses a cutting-edge downstream honey product development facility, built with a GMP-certified production plant. The laboratory is equipped with specialized machinery, including a capsule-making machine, honey dehydration system, honey bottling unit, and finished product packaging line, enabling seamless product prototype development. Our commitment to quality is reinforced by certifications such as ISO22000, HACCP, and Halal, ensuring the highest standards in food safety and product integrity which support for high quality stingless bee honey production to be used in clinical trial.

To further support innovation, we have integrated an eye-tracking system used in neuromarketing, allowing us to refine product designs and enhance community product packaging strategies. This technology empowers local entrepreneurs by improving the market appeal of their stingless bee honey products, fostering both economic growth and brand recognition.

### Production plant certifications





As a one-stop center, AnNaHL empowers university students, local communities, stingless bee industry players, and government agencies, serving as a vital platform for knowledge sharing and innovation. Anchored in the quadruple-helix collaboration model, AnNaHL drives the growth of the stingless bee honey industry by uniting academia, industry, government, and society. Ultimately, AnNaHL aligns with the United Nations Sustainable Development Goals (SDGs) and proudly stands as a flagship initiative under USM's APEX University, reinforcing its commitment to sustainable innovation and inclusive economic development.







University: [www.usm.my](http://www.usm.my)  
Program: [www.kelulunomic.com](http://www.kelulunomic.com)  
Spin-off company: [www.brainey.my](http://www.brainey.my)  
Kelulut product: [www.kelulutelixir.com](http://www.kelulutelixir.com)