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**V-MIEX**

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**2022**

VIRTUAL-MELAKA INTERNATIONAL INTELLECTUAL EXPOSITION

ROAD TO COMMERCIALISATION

**V-MIEX BOOK**



# V - MIIEX BOOK

## 'ROAD TO COMMERCIALISATION'

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# FOREWORD

ASSOC. PROF TS. DR MOHD RASDI ZAINI  
Rector  
Universiti Teknologi MARA (UiTM) Cawangan Melaka



Welcome to Virtual-Melaka International Intellectual Exposition 2022 (V-MIIEEX 2022). It is an honour for me on behalf of UiTM Melaka Branch to thank all of you for joining the programme and we are proud to inform you that this is the 12th year consecutively, UiTM Melaka Branch is organizing this exposition.

V-MIIEEX 2022 is a platform to improve the commercialization collaboration among industries and communities and at the same time, we also give the opportunity to academicians and students to share ideas and increase their potential innovation products with the industries and communities through their projects. This exposition also serves as a platform to cultivate and upload the nation's innovation culture by presenting new ideas and research by young people, especially from academia, universities, college, high schools, and primary school students.

The economy and development of the country faced a challenging phase in 2021 due to the Covid-19 pandemic. We faced changes in business, education, society, and lifestyle. However, the pandemic proved to be a blessing in disguise as it somehow gave people ideas which would be beneficial to improve their lifestyle and solve problems that might occur in the future. Besides, the new digital landscape also inspires more innovation and new ideas that contribute to various activities such as business and industries. As a university that encourages the "Research, Innovation and Commercialization", this exhibition is organized to encourage more commercialization of products that are beneficial to scholars, industries, and communities to tackle such issues to improve our present and future life.

Since 2009, UiTM Melaka Branch has successfully become the organizer for this innovation exposition. We are not only successful in organizing the exposition, but I would proudly say that we have also successfully embarked on commercialized products. With the number of participants for this year's exhibition, we believe that more commercialized products will be produced in line with the theme for this year, "Road to Commercialisation".

This exposition would never happen without dedication, teamwork, and commitment. A round of applause should be given to the committee teams as the backbone of this exposition. Their hard work, effort, and time made this exposition possible.

Finally, I would like to conclude this brief remark by thanking all the participants and stakeholders for joining the exposition, we hope that this collaboration never ends here.

Thank you.



**DR. NUR HAYATI BINTI ABD RAHMAN**  
Deputy Rector Research & Industrial Linkages  
Universiti Teknologi MARA (UiTM) Cawangan Melaka

It is a great pleasure to welcome all the participants and presenters to the Virtual Melaka International Intellectual Exposition (VMIIEX 22). I am delighted that through this periodic event, we managed to bring together scholars and professionals from various fields to engage through this virtual platform where ideas and breakthrough are discovered and leveraged for commercialization potential.

Since 2009 UiTM Cawangan Melaka has held twelve Invention and Innovation Design competitions and this year we are very honoured to have the second year of VMIIEX organized in digital platform. This has proven that despite the global challenges due to the recent pandemic, it is never an issue for UiTM Melaka to continuously organize this yearly prestigious event and to support the ministry's aspiration in leveraging creativity and innovation in the new norm.

VMIIEX 22 is organized with no sole objectives of accomplishing the University's KPI but instead we are determined to make this programme as the place to help heighten commercialization collaboration in research and innovation with the industry and community through joint exhibitions from various external organizations.

Our aspiration is to also provide exposure and opportunities to academic staff as well as students from public and private universities to engage in direct excellent scholarly activities with the industry and community through activities that can be measured and assessed. As for the Research and Industrial Linkages Office of UiTM Melaka, this exhibition is seen as the platform that can encourage active collaboration and knowledge transfer with industries; objectively to support various activities that will benefit all stakeholders from the various government agencies, local and international universities, industries and communities.

Through the theme of "Road to Commercialization" this year, V-MIIEX 22 is committed to have this event as a boulevard to inspire and cultivate creativity and innovation to the numerous levels of inventors through exposure on latest technologies, astonishing ideas and creative designs with great potential to be commercialized. For this year, we proudly introduce a special category which is the "Endemic Challenge" as the provision to the government of Malaysia's goal of moving towards the endemic.

To ensure that the competing products in this exhibition is not exclusively for the purpose of competition, V-MIIEX 22 is dedicated for the commercialization of highly potential innovation products, which is attained through its active collaboration with tailored needs industries. The commercialization effort was not for income generation purpose only but it aimed to spearhead the development of quality products in line with industrial needs and community benefit.

Therefore, it is a great honour for me on behalf of the Research and Industrial Linkages Office as well as the organizing committee to have all participants in this competition and I would like to express my highest gratitude especially to the Rector of UiTM Melaka and all strategic partners and sponsors for supporting the event.

To finish, I sincerely wish VMIIEX 22 a remarkable success. I believe that this will not be the only collaboration between UiTM Melaka and the respective partners and linkages, but a beginning of a long and fruitful cooperation in future.

Thank you very much.

*road to commercialisation...*

# FOREWORD

**WAN HASMAT WAN HASAN**

Project Director V-MIIEEX 2022

Universiti Teknologi MARA (UiTM) Cawangan Melaka



Assalamualaikum and Warmest Greetings.

It gives me an enormous pleasure, on behalf of the organizing committee to welcome all participants and presenters to the Virtual -Melaka International Intellectual Exposition 2022 (VMIIEX '22) with the theme "Road to Commercialisation". We are honoured and glad to welcome all participants to this biennial event.

This is the second time that we have organized this biennial event virtually. V-MIIEEX 22 is an innovation competition, in which, innovation products, ideas and systems related to various science and technological fields are exhibited as a solution for the presented problems.

V-MIIEEX22 expectantly will be a platform that gathers experts from academies, scientists, and researchers, locally and internationally, to contribute towards the growth of scientific and technological knowledge in each participant's specialisation and expertise.

The competition also serves as a platform to give fresh exposure to the various level of inventors, as well as to encourage the culture of innovation design focused on latest technologies and related to new norms technologies and inventions due to COVID-19.

V-MIIEEX 22 is also hoped to be an avenue for gathering and disseminating the latest knowledge on ideas and acquisition of innovation among the participants. It is hoped that the competition will be able to open the mind of the participants towards latest technologies and design. It is also in line with the government's aspiration to encourage innovation activities in Malaysia.

As a final note, I would like to congratulate my fellow committee members for their tremendous effort, which have been critical to the event's success. In addition, I would like to thank our co-organizer, event sponsors and supporters. Optimistically, we wish that all new knowledge that is discovered, invented, or innovated will drive towards our future sustainability.

Thank you.

# ABOUT V-MIIEEX

The world after COVID-19 is unlikely to return to the world that was. Despite the challenging pace during the pandemic, the strong rebound is expecting in this exciting year 2022. Malaysia is welcoming the great prospects ahead with positive impact on the country's economy and development. Hence, the hope for greater opportunities motivates for more creative thinkers to come up with innovative ideas that can be put forward to be harnessed to overcome similar problems in the future. V-MIIEEx 2022 is one of these platforms which contribute relevant ideas that could help communities of all walks of life cope with this pandemic.

UiTM has identified research, innovation, and commercialization to be among the core components and strategic effort towards becoming a well-known and prominent university. Aside from realizing this goal, with these components and efforts, fostering the development of knowledge, generating financial stability of the university, and producing knowledgeable academicians are also potentially achievable.

By having invention and innovation competition yearly, UiTM Cawangan Melaka is confident that it could further enhance creative and innovative abilities among staff and students. In support of the government notion which upholds the importance of innovation, UiTM Cawangan Melaka has taken the initiative of organising the Virtual Melaka International Intellectual Exposition (V-MIIEEx).

In instigating and nurturing the continuous culture of inventing and innovating, this event is an ideal platform for lecturers, administrative staff, students, and the public to showcase and commercialize their products or prototypes as well as novel ideas. The first IID which was held nationally in UiTM Cawangan Melaka in 2009, has successfully gathered and displayed more than 37 inventions and innovations. Accordingly, to continue this strong passion towards inventing and innovating, the IID competition should be continued and celebrated.

With that, the Division of Research and Industrial Linkages will be organising its 12th IID competition, the Virtual - Melaka International Intellectual Exposition (V-MIIEEx 2022) with the theme, 'Road To Commercialisation'. V-MIIEEx 2022 hopes to welcome 200 competing products to be showcased and commercialized, at the same time, attract attention of related and matching industry.

## Objectives

1. Encourage and instill passion towards inventing and innovating among UiTM Cawangan Melaka staff, students and academicians of local and international higher education institutions;
2. Highlight distinguished talents of skillful inventors and exhibit intellectual products, inventions and innovations among local and private tertiary institutions, government and private agencies, including international participants;
3. Become an effective Business Matching platform for participating research products, matching industries and partnering government agencies;
4. Recognise, inspire and promote invention and innovation products to be patented and commercialized;
5. Increase passion towards inventing and innovating through research and boost interests of government and non-government agencies to obtain consultancy services from a line up experts of higher education institutions and UiTM Cawangan Melaka.

## Nasi Arab Arnab D'Qaseh

Nur Syuhada binti Muhammad<sup>1</sup>, Aemillyawaty binti Abas<sup>2</sup>, Ummi Kalsum binti Hassian<sup>3</sup>,  
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### Abstract

The Malaysian Livestock Industries contributes 10.38 billion or 11.6% of 8.1% of Malaysia's GDP in 2016 with the Poultry Industry's 6.4% growth which contributes 95% of the total Livestock Industries GDP contribution. This shows the dependence of single supply of meat in Malaysia, therefore, there is an increasing need to diversify the protein source to the Malaysians. Recognizing this problem, the consumption of rabbit meat as an alternative source of food to substitute for chicken is very much recommended to the government to look for. Furthermore, among any other meats, rabbit meats are considered the healthiest because they contain the richest calcium and phosphorus and also the lowest cholesterol (Nistor, E., et al, 2013). Recommended by nutritionists over other meats, rabbit meat is valued for it is being lean, rich in proteins of high biological value, minerals, and vitamins. Besides, it has low concentrations of saturated fatty acids, cholesterol, and sodium (Gabriela et al., 2014). Therefore, introducing the new ready-to-eat product of Nasi Arab Arnab D'Qaseh would definitely encourage more people to consume rabbit meat in the most convenient way, healthy, and delicious. As Arabic Rice (Nasi Arab) has gained much popularity in Malaysia and is served with either lamb, mutton, beef or chicken, Nasi Arab Arnab D'Qaseh comes with special menú, which is not only the aromatic spice-infused baked rice oozes, but also the tender **grilled rabbit meat** with dipping sauce. Besides that, this pre-packed Nasi Arab is using retort processing technique to ensure the food product quality, especially in terms of its freshness, taste, aromas, its extended shelf life (can be consumed up to 2 years from the production date), the packaging is easy to be handled by customers and it ensures no deterioration in terms of the content quality by moisture, oxygen, ultraviolet, light, etc. within these two years of product consumption period. Therefore, with these benefits, Nasi Arab Arnab D'Qaseh would not only be the first to retort Nasi Arab with rabbit meat but also as a means to secure national food security.

Keywords: Nasi Arab Arnab, Retort, Rabbit Meat, Healthy Food, Nutritious Meat

### 1. INTRODUCTION

Among any other meats, rabbit meats are considered the healthiest because they contain the richest calcium and phosphorus and also the lowest cholesterol (Nistor, E., et al, 2013). Recommended by nutritionists over other meats, rabbit meat is valued for it is being lean, rich in proteins of high biological value, minerals, and vitamins. Besides, it has low concentrations of saturated fatty acids, cholesterol, and sodium (Gabriela et al., 2014). Despite of all these nutritional facts, unfortunately, rabbit meat consumption has less tradition in Malaysian food

culture. However, this drawback can become an opportunity for the domestic market by reorienting the offer towards rabbit meat and rabbit meat products as “new products”, “new entry”, or Functional Foods (Petracci et al., 2018). Therefore, we innovate this new product of ready-to-eat Nasi Arab Arnab D’Qaseh to attract Malaysians to try consuming rabbit meat as it comes with tasty menú and convenience to be handled.

## **2. OBJECTIVE**

The objective of this innovation is not only to encourage Malaysians to eat rabbit meat, but also to provide alternative sources of food to Malaysians as an effort toward securing the national food security. Besides that, this new product promotes healthy and nutritious food to the community and spread a wider market size of rabbit meat consumers. This would further encourage the B40 community to be actively involved with rabbit breeding as their income generation and strengthen Malaysia’s economy

## **3. NOVELTY & INVENTIVENESS**

In the current market, most of the packages are either mainly for paste, or dishes or rice only. However, Nasi Arab Arnab D’Qaseh offers a full set of ready-to-eat “Nasi Arab” along with the marinated rabbit meat and dipping sauce. Furthermore, the fact that most Nasi Arab are served with Lamb, mutton, beef or chicken, we came out with the new exotic menú, which is marinated rabbit meat.

## **4. PRACTICALITY & USEFULNESS**

Retorting is heating low acid food and beverages prone to microbial spoilage in hermetically sealed containers to extend their shelf life. The retort process makes it very practical and convenient for customers to store the product at room temperature for quite a long time without spoiling the product quality. The advantages of retort packaging are the product shelf lives of retort foods are similar to canned products, and products need not to be refrigerated required, cost-saving in terms of transportation and storage expenses because it can be transported at room temperature instead of cold storage. Retort packaging also improves product taste and appearance, and increased the retention of vitamins, minerals, and other nutrients. Therefore, the products maintain fresh and suitable to be eaten at all times. Due to these benefits, without any hassle to cook or pre-heat the product, customers can simply tear the pouch, and enjoy eating Nasi Arab Arnab D’Qaseh just anywhere and anytime. It is very much convenient for everyone especially working mothers, travelers, and stay-at-hostel students or workers.

## **5. CONCLUSION**

Rabbit is still perceived as pet and the meat consider not well preferred by many due to culture, social and norms of the people. Hence, attempts or promotion to eliminate such impression should be encouraged (Priyanti & Raharjo, 2012). To answer this call, Nasi Arab Arnab D’Qaseh was created as part of rabbit based product innovation. It is hoped that, this producto innovation will encourage Malaysians to taste, to like and to develop interest towards purchasing and consuming rabbit meat as an alternative source of meat and protein.



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