







# Table of Content

Message from the Knowledge Exchange Office .....	2
Message from the Faculty of Science .....	3
Message from the DotAsia Foundation .....	4
About the Project .....	5
Participating Schools .....	6
Programme Rundown .....	7
Challengers and Their Research Topics (Presentation Orders) .....	8-9
Michelin Star Celebrity Chef, Master Chan Kwok Keung's Biography .....	10
Lecture 1-2 .....	11
Lecture 1    Good Fat, Bad Fat	
Lecture 2    Phenolics-containing Functional Foods for Disease Prevention	
List of Sponsors .....	12-13
Acknowledgements .....	14



## Organizing Committee

Project Directors: Dr. Benny C. H. Ng

Project Co-Directors: Dr. Jessica S. C. Leung, Miss Beatrice Chan

# Welcome SciChefs!

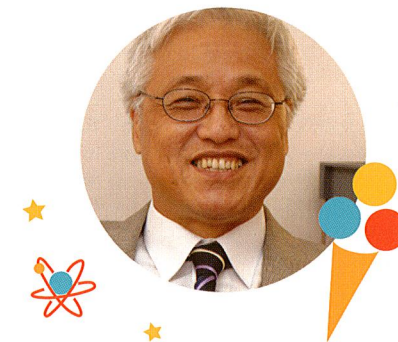
With recent food scandals on tainted lard oil and rotten meat being used in products that are sold to the public, there is a growing concern on food safety in society and people are becoming more conscious of healthy eating. However, what makes a healthy dish and how can we make healthy eating choices?

If you enjoy good food or cooking and want to make smart, healthy eating choices for yourself and your family, it is important for you to know something about the nutrition values of the ingredients in your food and the chemical reactions produced in the manufacturing and cooking processes. You may relate such knowledge to the subject of science, which may seem complicated and hard to understand to most people. Our faculty members in Science will show you that this is not necessarily the case. The "SciChef Cooking Challenge" will offer you a taste of food analysis and food experiments through interesting and engaging activities and introduce the scientific concepts involved in food making and cooking in an interactive way.

This competition is part of a project funded by the HKU Knowledge Exchange (KE) Fund. The event not only provides students with opportunities to have hands-on food experiments and analysis outside the classroom, but also inspires students to be creative, inviting them to design healthy dishes. Hopefully, the event will arouse participants' interest towards food science and their awareness in the global issues concerning nutrition and food safety.

Let me extend a warm welcome to all the participants of this KE event. Cooking is fun, and science makes it both fun and healthy.

Professor Paul K H Tam  
Vice-President and Pro-Vice-Chancellor (Research)  
Director of Knowledge Exchange Office  
The University of Hong Kong





## Message from the Faculty of Science

On behalf of the Faculty of Science, The University of Hong Kong (HKU), I would like to extend my warmest welcome to all of you for joining the *1st SciChef Cooking Challenge*.

Science and Culinary Art may be seen as two separate entities but they are in fact closely interlinked:

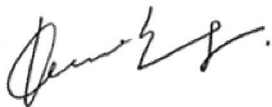
**Science enhances the manifestation of Culinary Art, whereas Culinary Art visualizes the taste of Science.**

Numerous chemical reactions essential to the taste, odor, aroma and appearance of food take place during the process of cooking. These chemical reactions often take place at a molecular level beyond the reach of our naked eyes. A better understanding of the science behind can bring a dish to its perfection, and make both cooking and dining more intellectual and fun activities.

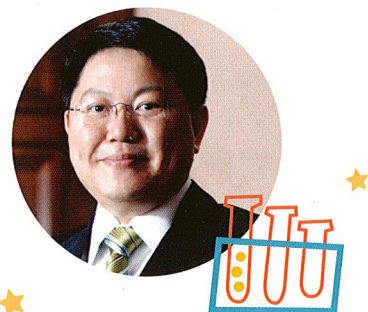
With this in mind, “SciChefs” are the ones with the passion of bringing the two seemingly separate disciplines, i.e., Science and Culinary Art, together. They constantly strive for perfecting their recipes and bringing innovations by exploring and incorporating scientific concepts and methods into cooking. They are eager to testify the old wives’ tales with the spirit of science and surprise their diners with an amazing sensational experience through the wonders of science.

Especially to our Junior SciChefs — *Welcome to this interdisciplinary zone of Science and Culinary Art!* Through this academically-engaging and eye-opening journey of the *SciChef Challenge*, I hope you will enjoy this event, learn a great deal from both science and cooking, and be able to appreciate the chemistry, scientific principles and connection between Science and Culinary Art!

With best wishes,



Professor Kenneth Mei Yee Leung  
Associate Dean (Research and Graduate Studies)  
Faculty of Science  
The University of Hong Kong



## Message from the DotAsia Foundation

*Eating is a Necessity but Cooking is an Art.* When you cook with love, you provide food for the soul. As the organizer of the Jamie Oliver’s Food Revolution in Hong Kong, Go.Asia not only launching numerous health and cooking activities for local public every May, but also establishing the very first systematic health and food education, *Think.Cook.Save*, for local students. Think.Cook.Save supports school teachers by providing free cooking classes and talks on food issues to students. Through our school program, we aim to inspire students to experience the world through cooking, and to cherish global resources, especially our food.

It is our honor to co-organize the *1st SciChef Cooking Challenge* with the Faculty of Science, The University of Hong Kong. Our vision on good cooking is “mastering simplicity”. The key to cooking well is to master the skill of selecting fresh ingredients and use appropriate basic cooking techniques. There is a lot of science behind cooking – such as how the Maillard reaction creates the flavor profile of a perfectly seared steak, and how osmosis is the theory behind brining a piece of meat. Understanding cooking through scientific theories can satisfy and reward both intellectual and gastronomic appetites!

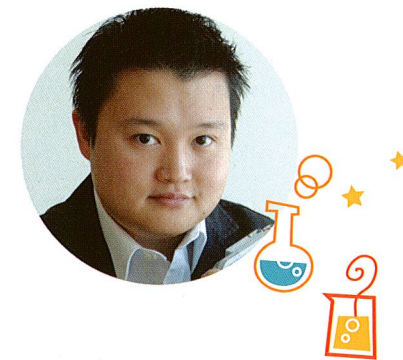
Lastly, we hope our Junior SciChefs will enjoy the *1st SciChef Cooking Challenge*, flex their academic muscle, whet their culinary curiosity, and bring lots of great food back to their families and friends.

With best wishes,



Edmon Chung  
CEO

DotAsia Foundation | DotAsia Organisation Limited



Go.Asia (<http://www.go.asia/>) is a platform under DotAsia Foundation (IRD 91/12820) that aims to initiate social innovation and charitable projects. Go.Asia has successfully brought Jamie Oliver’s Food Revolution and United Nations’ anti-food waste program to Hong Kong and has raised awareness across the region. Both initiatives promote using individual efforts to create positive changes to the society. “Think.Cook.Save.” (<http://frd.asia/>) is Go.Asia first school and community food & health education program focused on delivering free talks and cooking demonstrations to school kids.





# About the Project



The SciChef Cooking Challenge aims to foster food science, chemistry and nutrition knowledge to junior secondary school students, and arouse their interest towards science and healthy eating habits through a two-day event, which will include informative lectures, live cooking demonstrations, participants' proposed "healthy dish" presentations, and a cooking competition.

Taking advantage of this KE opportunity, we will leverage our disciplinary expertise and join forces with Go.Asia, which has successfully brought the British renowned chef Jamie Oliver's Food Revolution Day and United Nation's "Think.Eat.Save" to Hong Kong, to be a part of the larger global effort helping the younger generation to understand science-based cooking and healthy eating better, and continue the worldwide mission of better food and education for everyone.

這個計劃旨在培養初中生對食物科學、化學及營養的知識，通過為期兩天的活動，包括互動講座、即場烹飪示範、參選作品匯報及科學廚神挑戰賽，從而啟發他們對科學及健康飲食的興趣。透過是次知識交流平台，我們將與負責把英國著名廚師傑米·奧利佛發起的《為食起革命》及聯合國《思前·食後·厲行節約》計劃來香港的Go.Asia愛心起動合作，推動全球享應的食物革命概念，令年輕一代更深入了解健康飲食及體驗科學和食物之間微妙的關係。



# Participating Schools



- ★ Chiu Lut Sau Memorial Secondary School
- ★ CMA Secondary School
- ★ Confucian Tai Shing Ho Kwok Pui Chun College
- ★ Good Hope School
- ★ HKMA David Li Kwok Po College
- ★ HKUGA College
- ★ Holy Trinity College
- ★ Immaculate Heart of Mary College
- ★ NLSI Lui Kwok Pat Fong College
- ★ Shun Tak Fraternal Association Yung Yau College
- ★ Singapore International School (Hong Kong)
- ★ Stewards Pooi Kei College
- ★ The YWCA Hioe Tjo Yoeng College
- ★ Tsuen Wan Public Ho Chuen Yiu Memorial College
- ★ Tuen Mun Government Secondary School



# Programme Rundown



Time	Events
08:30 – 09:00	Registration (KB 223, 2/F, Knowles Building) ★
09:00 – 09:15	Opening Ceremony ★
09:15 – 09:20	Programme Briefing
09:20 – 10:35	SciChef Students' Presentations Theme: Gourmet & Meals
10:35 – 10:45	Break
10:45 – 12:00	SciChef Students' Presentations Theme: The Magic of Protein
12:00 – 12:15	Break
12:15 – 13:15	Cooking Demonstration by Master Chef Chan Kwok Keung (陳國強), Champion of the TV Programme "Apprentice Chef"
13:15 – 14:30	Lunch
14:30 – 15:45	SciChef Students' Presentations Theme: Sweet Appetite
15:45 – 15:55	Break
15:55 – 16:25	Lecture 1 – Good Fat, Bad Fat by Dr. Jetty C.Y. LEE
16:25 – 16:55	Lecture 2 – Phenolics-containing functional foods for disease prevention by Dr. Ming Fu WANG
16:55 – 17:00	Break ★
17:00 – 18:00	Result Announcement and Closing Ceremony ★

## Theme 1: Gourmet & Meals



- Cooking Vegetables in Alkaline Solution**  
LUI Ho Long Joseph, CHAN Tsz Tung Silvia & WONG Hon To Derek  
Stewards Pooi Kei College
- Amazing Chicken Wings with Rice**  
WONG Ho Ming, CHOW Ching Yan & HUANG Ke Ying  
CMA Secondary School
- Chicken Breast Salad**  
CHENG Dorothy Tin Lam, LAU Ariel Chi Ying & WU Tiffany Hiu Yan  
Holy Trinity College
- Molecular Gastronomy – Blueberry Caviar**  
LEE Tsz Ching & CHAN Hiu Tung Yuki  
TuenMun Government Secondary School
- Science Adventure in Food**  
SO Fiona Hoi Lam & YEUNG Priscilla Wan Yan  
Good Hope School

## Theme 2: The Magic of Protein



- Change of Protein Role**  
TING Ka Chun, WONG Yin Lam & WONG Tsz Lung  
The YWCA Hioe Tjo Yoeng College
- Smooth Steamed Egg**  
CHEUNG Nga Wai & SHI Jia Xuan  
NLSI Lui Kwok Pat Fong College
- Ginger Milk Curd**  
Zain-ul-abbadin, LEUNG Wan Yi & CHAN Wai Kit  
Shun Tak Fraternal Association Yung Yau College
- Macrobiotic Bean Milk Pudding**  
CHO Kwan Pui, AU Hoi Ching & WONG Naomi Ching Hei  
Chiu Lut Sau Memorial Secondary School
- Maillard Reaction in Egg White**  
CHAN Kat Shiu Joseph & GOLDSTONE Daniel Xiao Ming  
Singapore International School (Hong Kong)





## Theme 3: Sweet Appetite

### 11 Smiley Balls for Idiots

LEUNG Alison Wing Yee, WONG Wing Tung Tiffany & LIANG Peiying  
Immaculate Heart of Mary College

### 12 Vegetarian Cookies

LAM Tsz Yan & LEE Ngai Shan  
Tsuen Wan Public Ho Chuen Yiu Memorial College

### 13 Handmade Cheese & Mushroom

LI Tsun On, TSANG Tsz Chung & LEUNG Hoi Wing  
Confucian Tai Shing Ho Kwok Pui Chun College

### 14 Pumpkin Pie Science: It's Perfect (and Healthy!)

KAUR Saran Sarneet, MURILLO Michaela Bautista &  
TARIQ Tasphiya Tabassum Preeti  
HKMA David Li Kwok Po College

### 15 Sponge Sponge

CHEUNG Tsz Yuet Natalie, CHAN Pui Hei Karen & CHAN Yau Kwan  
HKUGA College



## Cooking Demonstration

### Michelin Star Celebrity Chef, Master Chan Kwok Keung



Master Chef Chan has over 24 years of culinary experience with expertise in Beijing, Huaiyang, Sichuan and Cantonese cuisine. Master Chan had been appointed as the Head Chef of Michelin-recommended Dong Lai Shun 《東來順》 in the five-star Royal Garden Hotel since 2004. He was the champion of the TVB show “Apprentice Chef” 《大廚出馬》 and had a TV Programme Show “Master Chef Kitchen” 《新派煮意—大廚教室》. He is also an instructor at the Chinese Cuisine Training Institute (Master Level). During his culinary journey, he has received many highest honors including “Top 10 Chinese Chefs” by the Golden Horse Award of Chinese Hotel and Gold Award with Distinction of the Best of the Best Culinary Award by the Hong Kong Tourism Board. Recently, he is also a consultant chef of a new restaurant Yuet Lai Shun 《粵來順》.

星級表演嘉賓陳國強師傅：米芝蓮一星餐廳總廚、世界中國烹飪聯合會國際中餐大師、中華廚藝學院大師級中廚師、東來順顧問及總廚、TVB《大廚出馬》「總冠軍」、《新派煮意—大廚教室》節目主持，獲獎無數，包括中國飯店金馬獎「中國十大廚神」、中國全國烹飪技能競賽清真專項比賽「金獎」、香港旅遊發展局美食之最大賞「至高榮譽金獎」等等。



## Lecture 1

### Good Fat, Bad Fat



Assistant Professor  
School of Biological Sciences,  
The University of Hong Kong  
Dr. Jetty C.Y. Lee

The revolution of nutritional science and food industry has become a web of delusion and confusion in quality of food products, in particular fat. The role of good fat and bad fat in food products are important as it contributes to texture and flavor. In general population, saturated and trans fat are considered bad fat and unhealthy for our body whereas unsaturated fat is healthy. However people have little understanding which unsaturated fat is good and the sources of it. Many of these unsaturated fat are also essential component to the human body. Through this lecture, students will learn food chemistry and nutrition on different fat found in food, and their advantages and disadvantages in food products.

## Lecture 2

### Phenolics-containing functional foods for disease prevention



Associate Professor  
School of Biological Sciences,  
The University of Hong Kong  
Dr. Ming Fu Wang

Traditionally, phenolic compounds, one major class of secondary metabolites produced by plants, are considered as anti-nutritional compounds, mainly due to their adverse effects on protein digestibility. The current concept is that they are favorable for development into bioactive agents to prevent age-related diseases. The speculated health-promoting effects of phenolic compounds are generally attributed to their antioxidative action to directly scavenge reactive oxygen species. However other biological mechanisms must be involved and have been explored. In the current presentation, we would like to discuss the popular phenolic-containing functional foods in the market.

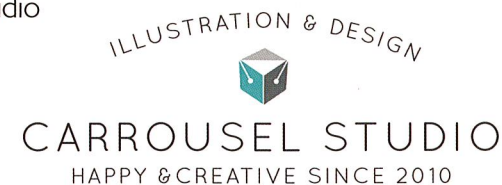


## List of Sponsors

DotAsia Organization



Carousel Studio



et press



Kabushikigaisha Group



## Venue Sponsor

Home Management Centre







日本 Shabu Shabu 放題 專門店

www.moumouclub.com f MouMouClub

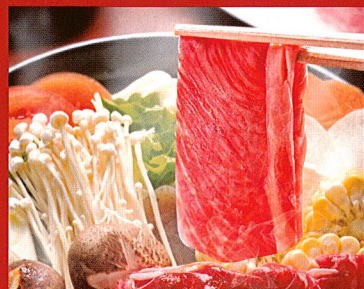


新店舗にて  
新しい雰囲気!  
New Look!

Nice to Meat you

“新追加!” 一人様 Shabu Shabu + Salad & Dessert Bar

\*只適用於新店, 包括奧海城、淘大商場及藍灣廣場店



銅鑼灣世貿中心 2882 7811  
尖沙咀海港城 2153 1801  
旺角家樂坊 2154 1618  
樂富廣場 3101 0928

黃埔新天地 3904 1298  
荃灣廣場 2498 7228  
葵芳新都會廣場 3693 4288

西九龍奧海城 2702 8268  
九龍灣淘大商場 2506 2883  
小西灣藍灣廣場 3580 0088

Managed by  
KABUSHIKIGAISHA  
株式会社

所有圖片為產品於某一狀態下拍攝, 僅顯示產品大概外觀, 如對產品有任何查詢, 歡迎與店員聯絡

## Acknowledgements



Bluer (Event Photography)  
Miss ANG Hwee Ting  
Mr CHEUNG Man Him Felix  
Miss HENG Sue Chin Grace  
Mr LAU Ka Lap Alex  
Miss LAU Ying Chi Peony  
Miss LEE Man Kuen Alice  
Miss LEE Yin Huan  
Miss LUI Kar Yin Clarins  
Mr PUN Hok Sum Thomson  
Mr TSE Yiu Ki Kyzis  
Mr WONG Lok Hin Wallace  
Miss WONG Pui Ling Jenny  
Miss YEUNG Yu Chun Jane  
Miss YEUNG Yuk Sheung May



## Thank You!







Faculty of Science  
The University of Hong Kong

