

School of Biological Sciences
Faculty of Science
The University of Hong Kong
Food & Nutritional Science Major

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Since 1991 First Food & Nutrition Programme Established in Hong Kong



HKU nutrition scientist releases first report on Salt Content in Common Packaged Food Categories in Hong Kong and new food app to help Hongkongers make healthier food choices

Apr 19th 2018



Microwave food is indeed healthy to overturn the idea of causing carcinogenic

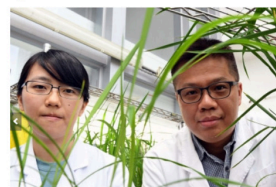
By Lily Ng
Nov 23rd 2018



Source: Sky Post

Increasing efficiency of cereal straw for biofuel production

May 04th 2017

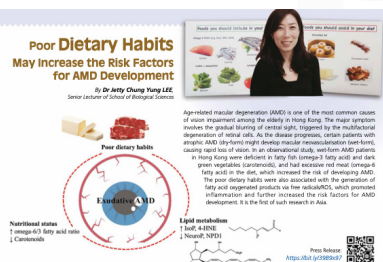


HKU researchers generate tomatoes with enhanced antioxidant properties by genetic engineering

Nov 09th 2017



Parasites found in raw fish meat in local sushi shops



10 JAN 2019

Connection of children to nature brings less distress, hyperactivity and behavioural problems – now measurable with a novel scale developed by HKU scientist

City lifestyle has been criticised for being an important reason for children being disconnected from nature. This has led to an unhealthy lifestyle in regards to active play and eating habits. Even worse, many young...

NEWS DETAIL →





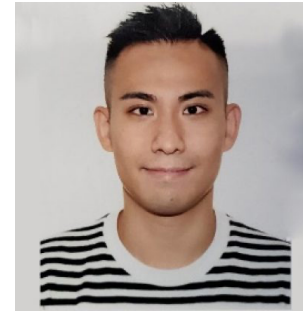
Dr. C.B. Chan



Dr. Hani El-Nezami



Dr. Olivier Habimana



Dr. Thomas Lam



Dr. Jetty Lee



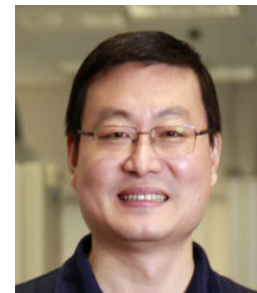
Dr. Jimmy Louie



Prof. Nagendra Shah



Dr. Tanja Sobko



Dr. Mingfu Wang



Dr. Lu Zhang

Food Science

TRANSLATE

Security
Sustainability

Health
Nutrition



FATTY LIVER - : NAFLD to LI

WHAT IS NAFLD
Non-alcoholic fatty liver disease (NAFLD) - a spectrum of liver disorders with **ACCUMULATION OF FAT** in liver due to cause other than alcohol use.

IN H
in
More child

HOW?
Excess amount of **DISEASEY FAT** will be stored as fat in liver.

FAT BUILT UP
Type 2 diabetes - promotes release of fat which will then be stored in liver.

HOW THINGS GO SERIC
Excess fat in liver brings oxidative stress & cause dysfunction of liver cells.

NAFLD/NAH
Injured cells are recognized and anti-inflammatory system, cause liver inflammation - NAFLD.

GOT SCAR
Death cells by inflammatory accumulate, blood and release cells resulting in fibrosis - cirrhosis.

THE WORST
Continuous cell death and leads to dysfunction of liver condition called **CIRRHOSIS**.

Cirrhosis NAH
Cirrhosis NAH is a severe liver disease where liver cells are replaced by scar tissue.

MECHANISM IS NOT COMPLETE AND COMPLICATED but it is well-healing processes in liver.

Matters of your liver on alcohol

ALCOHOLIC FATTY LIVER DISEASE

ALCOHOLIC FATTY LIVER DISEASE is a liver disease caused by excessive alcohol consumption. It is characterized by the accumulation of fat in liver cells, which can lead to liver damage and eventually liver failure.

CAUSES
Excessive alcohol consumption is the primary cause of ALD. Other risk factors include obesity, diabetes, and certain medications.

Symptoms
Early symptoms of ALD are often mild and may include fatigue, loss of appetite, and weight loss. As the disease progresses, symptoms may include jaundice, abdominal pain, and swelling.

Diagnosis
ALD is typically diagnosed through a combination of blood tests, imaging studies (such as ultrasound or CT scan), and liver biopsy.

Treatment
The primary treatment for ALD is abstinence from alcohol. In some cases, weight loss and management of underlying conditions like diabetes may also be recommended.

Prevalence
ALD is a leading cause of liver disease and liver failure. It is more common in men than in women.

Health Nutrition

- WHAT A MAN NEEDS TO KNOW ABOUT - PROSTATE CANCER

Prostate is a walnut-sized gland located in front of the rectum and below the bladder. It is part of the male reproductive system that produces a thick fluid for semen production. Prostate cancer is resulted from an abnormal growth of the cells in the prostate. However, unlike other types of cancer, for men who diagnosed as having prostate cancer, one-third have a cancer that grows very slowly. [1]

1 out of 9 men will develop prostate cancer [2]

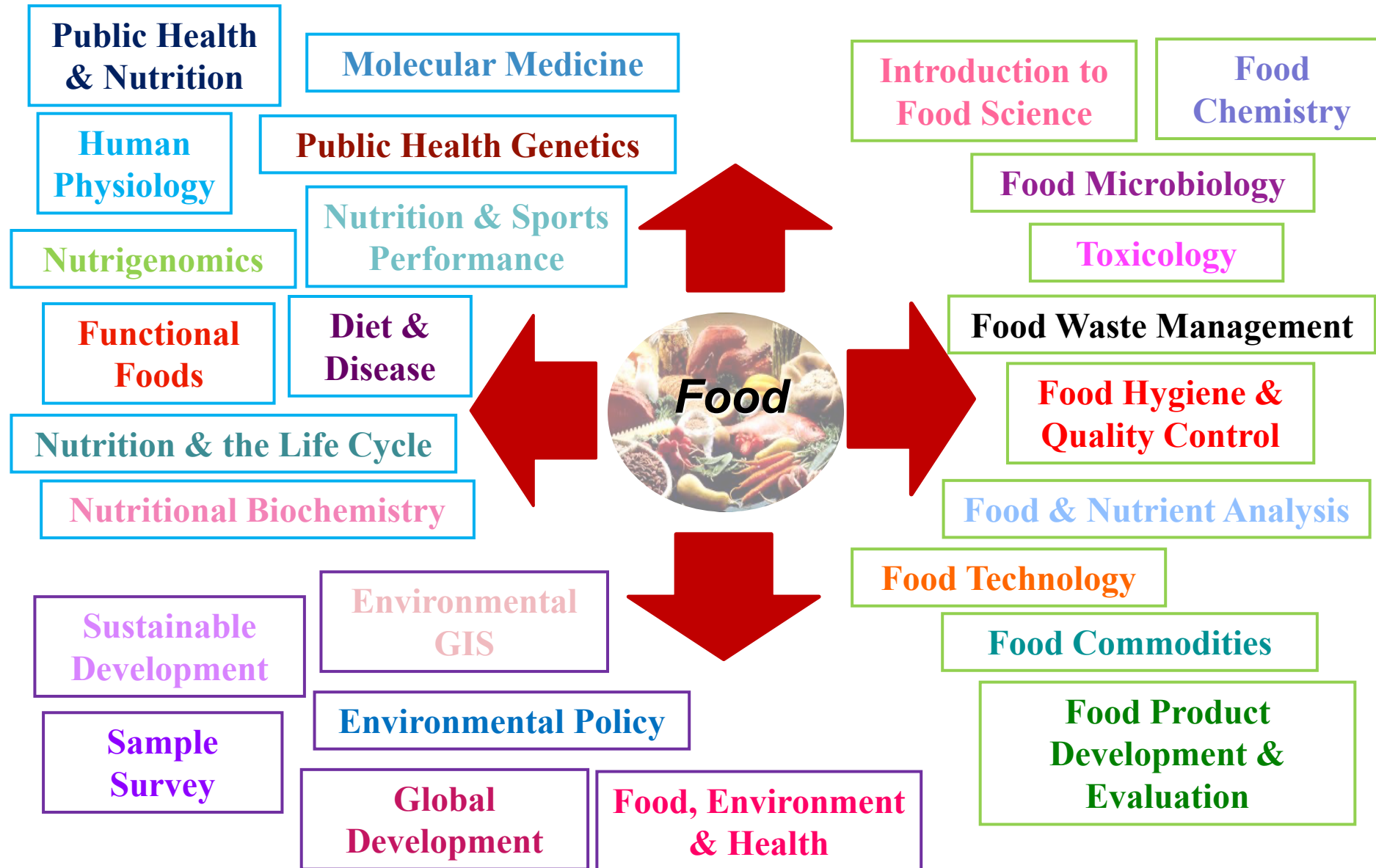
Prostate cancer is the **SECOND** most frequent malignancy in men [2]

age 67
Average age of diagnosis the prostate cancer [3]

127 MILLION
new cases of prostate cancer were reported world wide in 2018 [4]

How Much Do You Know about Hepatitis B? What are the mechanisms behind HBV? The food you eat matters!

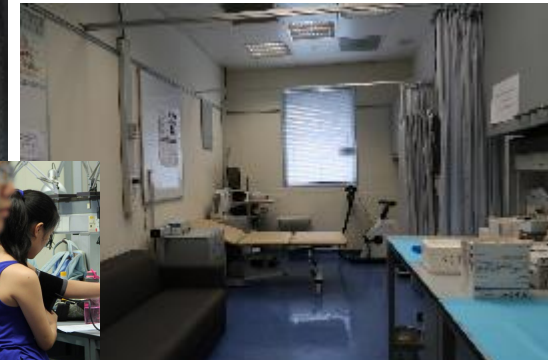
Etiology How does it cause? If left untreated...	Transmission <p>Hepatitis B is bloodborne infectious diseases!</p> <p>1 Sexual contact unprotected sex [3] 2 Parental transmission</p>	Rick Factors <p>1 Age > 40/ male [5] 2 Family history of cirrhosis and HCC [5] 3 Co-infection with HIV [6,7]</p>
<p>A serious liver infection caused by Hepatitis B virus (HBV)</p> <p>Acute Hepatitis B: less than 6 months</p>	<p>Symptoms to be aware of:</p> <p>Major risk factors:</p>	<p>Prevalence</p> <p>Breast cancer is one of the most popular cancers, especially in Western and developed countries.</p> <p>1:22</p>

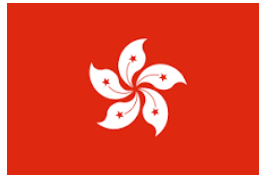


Food & Nutritional Science Lab

The Kadoorie Biological Sciences Building

- FNS Teaching Laboratory (1/F)
- Kitchen & Nutrition Room (5/F)
- Analytical Laboratory (5/F)





FNS CAPSTONE



- Project (Final year and directed studies)
- Internship (hospital, food companies, NGO, field course research)
- Food Product Development & Evaluation



Jobs (Past Graduates)



Education Bureau

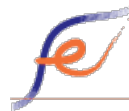
The Government of the Hong Kong Special Administrative Region

Jobs

- Manufacturing
- Marketing
- QA/QC
- R&D
- Marketing
- Food Services (e.g. hotels, restaurants, catering)
- Logistics
- Procurement
- Nutritionists
- Health Inspectors
- Clinical Trial Unit
- Hospital Laboratory Technicians
- Research Laboratory
- e-Retail

city'super

Dairy Farm



Food and Environmental Hygiene Department
The Government of the Hong Kong Special Administrative Region



Food and Health Bureau
The Government of the Hong Kong Special Administrative Region

Spoonful

CATHAY PACIFIC
CATERING SERVICES



醫院管理局
HOSPITAL
AUTHORITY



HKU
Med

LKS Faculty of Medicine
Clinical Trials Centre
香港大學臨床試驗中心



We Lead Students to a Career Path

Disciplinary core courses

- 6 Foundation courses

Disciplinary electives

- 2 Courses (depends on Specialization)

Advanced Disciplinary electives

- Food microbiology
- Nutritional biochemistry

Advanced disciplinary electives

- Principles of toxicology
- Food hygiene and quality control
- Food technology
- Food waste management

Capstone

- Internship e.g. quality assurance, quality control



- *Quality control/quality assurance*
- *Hygiene inspector*
- *Food safety*
- *HACCP auditor license*

We Lead Students to a Career Path

Disciplinary core courses

- 6 Foundation courses

Disciplinary electives

- 2 Courses (depends on Specialization)

Advanced Disciplinary electives

- Food microbiology
- Nutritional biochemistry

Advanced disciplinary electives

- Principles of toxicology
- Functional foods
- Food technology
- Food & nutrient analysis
- Sample survey methods

Capstone

- Food product development and evaluation



- *Product development in industry*
- *Research and analytical laboratory e.g. centre of food safety, consumer council*

We Lead Students to a Career Path Dietitian (HKUSPACE & Australia)

Disciplinary core courses

- 6 Foundation courses

Disciplinary electives

- 2 Courses (depends on Specialization)

Advanced Disciplinary electives

- Food microbiology
- Nutritional biochemistry

Advanced disciplinary electives

- Nutrition and the life cycle
- Human physiology
- Molecular medicine
- Diet and disease
- Public health and nutrition

Additional courses (not in the curriculum)

- 3 Courses

Capstone

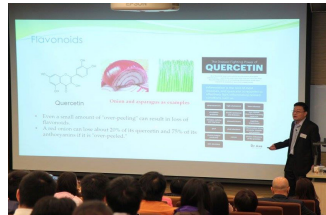
- Final Year Project
- Food and nutritional science internship e.g. public health, community nutrition, health company, hospital authority, NGO

***Application
(July-
September
for Australia)***



We endorse your strength
Specialization Certificate *(issued by School of
Biological Sciences)*

- **Specialization areas:**
 - **Nutrition and Public Health:** help students to prepare for further studies or career related to dietetics, public health and/or nutrition.
Indicates your strength as a nutritionist for a community.
 - **Food Security:** interdisciplinary studies on global development related to food, environment, health and sustainability.
Indicates your strength as a potential advisor, stakeholders and/or contributor in global policy.



What is **desirable** to users?

What is **possible** (to the community) with technology?

INNOVATION

What is **viable** (nutrition & health) to the marketplace?



Encourage Undergraduates to research: Innovation & Entrepreneurship



Clean label product examples



Massey Bolson De Soya
Tea (Singapore, Feb 2015)
Clean Label Feature: Made with non-genetically engineered soybeans.



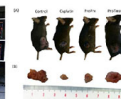
Nature's Cuppa Organic Ceylon
Tea (Malaysia, Mar 2015)
Clean Label Feature: Unbleached, chlorine-free tea bags, GMO-free.



Owl Nutfield Soy Seaweed
Pudding (Singapore, Apr 2015)
Clean Label Feature: Non-GMO organic.



HKU develops "Prohep" that may offer potential therapeutic effects on liver cancer
港大醫學院研製對肝癌具潛在療效的"Prohep"實為低成成本治療方案



A research team led by Dr. Hari El-Nezami and Dr. Gianni Panagiotou, of the HKU School of Biological Sciences, in collaboration with the HKU Li Ka Shing Faculty of Medicine and the School of Medicine, University of Eastern Finland, develops a novel probiotic mixture "Prohep" that may have potential therapeutic effects on Hepatocellular carcinoma. The findings have been published in the Proceedings of the National Academy of Sciences (USA), a top international journal.

由港大生物科學系的Hari El-Nezami博士及Gianni Panagiotou博士領導的科研團隊，與港大醫學院及康諾斯大學醫學院合作，研製出一種對肝癌具潛在療效的混合益生菌Prohep。研究結果已發表於國際權威學術期刊《美國科學院院刊》。



SBS have undergraduates from local and international cities

Undergraduates' Life at SBS



Student-Teacher
Interaction



Innovation



Experiential
Learning




Undergraduates of FNS Students: We CONNECT



**>400 group members
since 2015 (current
and former students)**



 **HKU Information Day for
Undergraduate Admissions**
Oct 29, 2016 09:00-18:00

HKU Information Day 2015 JUPAS Admissions Talk Highlights

