دولة ليبيا

وزارة التعليم العالي والبحث العلمي جامعة طرابلس

إدارة شؤون أعضاء هيئة التدريس

السيرة الذاتية

أولا: البيانات الشخصية

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ثانيا: المؤهلات الدراسية

الشهادة	التخصص	الجهة المانحة لها	التاريخ
الدكتوراه	علوم وتكنولوجيا الأغذية والطب الحيوي	جامعة فكتوريا استراليا Victoria University, Australia.	2015
الماجستير	التقنيات الحيوية ميكروبيولوجي الأغذية	جامعة ار.ام.أي.تي استراليا RMIT University, Australia.	2009
الشهادة الجامعية	الطب البيطري	جامعة طرابلس ليبيا	1997

ثالثا: التخصص ومجالات الاهتمام

التخصص العام	الطب البيطري والرقابة الصحية على الاغذية
التخصص الدقيق	الرقابة الصحية على الأغذية الطب الحيوي والعلوم الحيوية
مجالات الاهتمام العلمية	Food microbiology Food biotechnology Health and Biomedicine Food, Immunity and immune-modulation.

رابعا: عنوان وملخص أطروحة الدكتوراه

Short Chain Fatty Acids as Immune-modulators in Inflammatory Disorders

Abstract

Short chain fatty acids (SCFAs); acetate, propionate and butyrate are the main products of dietary fibre fermentation by intestinal microflora and have long been known to confer health benefits to the host, through the regulation of many physiological functions including immune response. The overall objective of this study was to investigate immune modulatory effects of SCFAs in inflammatory disorders. The research involved the screening of fermentation activities by 6 probiotic strains (*Lactobacillus* and *Bifidobacterium*) in reconstituted skim milk supplemented with prebiotics (inulin, hi-maize or β-glucan). Bacterial growth and SCFAs production were determined after 24 hours of fermentation. *Lactobacillus rhamnosus* GG ATCC 53013 (LGG) and *Bifidobacterium animalis* subsp. lactis (BB 12) with inulin or hi-maize significantly enhanced the production of SCFAs. These bacteria were further used for the production and purification of SCFAs. Acetate,

propionate and butyrate were extracted by centrifugation followed by separation and purification using Preparative High-Performance Liquid Chromatography and Atmospheric Pressure Chemical Ionisation/Mass Spectrometer. The purified bacterial SCFAs were assessed for their immunomodulatory effects, including *in vitro* determination of the viability and growth of intestinal epithelial cells as well as the determination of viability, proliferation and differentiation of human peripheral blood mononuclear cells (PBMCs). Cytokines secreted by PBMCs and intestinal epithelial cells (IECs) were also determined using ELISA. SCFAs showed inhibitory effects on colon cancer cell line HT-29 growth, whilst they enhanced the growth of normal IECs. SCFAs exhibited regulatory effects on the production of pro-inflammatory cytokines and up regulatory effects on antiinflammatory cytokines, in addition to, the promotion of Treg cell differentiation of PBMCs. In general, SCFAs exhibited various effects in different cells involved in immune and inflammatory responses. They did not only affect the function of leukocytes but also induced apoptosis to tumour cells.

خامسا: عنوان وملخص رسالة الماجستير

Occurrence and significant of *Staphylococcus aureus* in Soft cheeses

Abstract

Food-borne diseases are of major concern worldwide. Nowadays, according to the Food and Agricultural Organization (FAO) about 250 different food-borne diseases have been described, and bacteria are the causative agents of two thirds of foodborne disease outbreaks. Among the predominant bacteria involved in these diseases, *Staphylococcus aureus* is one of the common causes of gastroenteritis resulting from the consumption of contaminated food. Staphylococcal food poisoning is due to the absorption of staphylococcal enterotoxins which are performed in contaminated food. The study is briefly reviewing some

information on staphylococcal enterotoxins and the interactions between *S. aureus* and the food matrix; in particular soft cheeses including environmental factors that affecting staphylococcal enterotoxin production and subsequently food poisoning. A group of 100 samples of retail fresh soft cheese made from raw or pasteurized milk were collected randomly from small scale factories, groceries and restaurant in western suburbs and examined for the presence of coagulase positive *S. aureus.*

The methods of examinations were those according to Association of Official Analytical Chemists (AOAC 1999) and American Public Health Association (APHA, 1993). The cheeses were evaluated according to Australian and ISO standards as well as European Commission Recommendations 2004/24/EC The result showed that there was a high count of *S. aureus* in 90% of samples the cheeses were considered as unsatisfactory quality due to high levels of *S. aureus.* These results emphasize the need for applying and maintaining good hygiene practices throughout the food chain to prevent contamination and/or bacterial growth. Also labelling of cheeses with clear information on whether the cheese was prepared from raw milk should be mandatory.

سادسا: الأبحاث العلمية المنشورة

Scientific papers:

1:

Short-chain fatty acids produced by synbiotic mixtures in skim milk differentially regulate proliferation and cytokine production in peripheral blood mononuclear cells.

M. Asarat, V. Apostolopoulos, T. Vasiljevic & O. Donkor

International Journal of Food Sciences and Nutrition
Volume 66, 2015 - Issue 7 Pages 755-765 | Received 27 Jan 2015, Accepted 12 Aug 2015, Published online: 23 Sep 2015.

https://www.tandfonline.com/doi/abs/10.3109/09637486.2015.1088935

2:

Short-Chain Fatty Acids Regulate Cytokines and Th17/Treg Cells in Human Peripheral Blood Mononuclear Cells *in vitro*.

M. Asarat, V. Apostolopoulos, T. Vasiljevic & O. Donkor

Immunological Investigations

A Journal of Molecular and Cellular Immunology

Volume 45, 2016 - Issue 3 Pages 205-222 | Published online: 28 Mar 2016

https://www.tandfonline.com/doi/abs/10.3109/08820139.2015.1122613

3:

Short-Chain Fatty Acids Regulate Secretion of IL-8 from Human Intestinal Epithelial Cell Lines *in vitro*.

M. Asarat, T. Vasiljevic, V. Apostolopoulos & O. Donkor

Immunological Investigations

A Journal of Molecular and Cellular Immunology

Volume 44, 2015 - Issue 7 Pages 678-693 | Received 18 Mar 2015, Accepted 17 Jul 2015, Published online: 05 Oct 2015

https://www.tandfonline.com/doi/abs/10.3109/08820139.2015.1085389

4:

Extraction and Purification of Short-chain Fatty Acids from Fermented Reconstituted Skim Milk Supplemented with Inulin.

M. Asarat, T. Vasiljevic, M. Ravikumar, V. Apostolopoulos & O. Donkor

Food Analytical Methods

Volume 9, pages 3069–3079 (2016) Published: 04 April 2016

https://link.springer.com/article/10.1007/s12161-016-0471-0

سابعا : المشاركة في المؤتمرات والندوات العلمية

اسم المؤتمر	الجهة المنظمة	وتاريخ مكان الانعقاد	نوع المشاركة
AIFST Summer School	Australian Institute of Food Science and Technology (AIFST)	2012 Melbourne Australia	Presentation
AIFST Summer School	Australian Institute of Food Science and Technology (AIFST)	2012 Melbourne Australia	Presentation

ثامنا: العضوية في الهيئات والجمعيات العلمية المهنية

: 1

Australian Institute of Food Science and Technology (AIFST)

: 2

نقابة الأطباء البيطريين .