華美食品學會

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Chinese American Food Society

Quarterly Newsletter

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MESSAGE FROM THE PRESIDENT

Dear CAFS Members:

Time really flies. Before we know it, we will be seeing each other at the annual IFT meeting and our CAFS annual banquet meeting in Orlando during the last week of June. The day before our annual banquet meeting is a good time for all the current officers and all the chairs and members of the standing committees (Awards, By-laws, Conference and Workshop, Long-range Planning, Membership, Nomination, 2006 Annual Meeting, Web Communications, Membership Directory Editor, etc.) to meet for about an hour and a half to make short reports, and bring up any important items for discussion. I would like to suggest using the same time slot as in the recent past two years for the meeting at the International Lounge, 12:30 pm, Sunday, June 25, 2006.

Some of the activities and opportunities that warrant your attention:

- 1. Scholarships and Awards: As you will find in this issue of newsletter, Award Committee chair, Dr. Fu-hung Hsieh, is publishing a set of guidelines for three levels of scholarships and two awards in terms of purposes, eligibility, application process, and deadline. I urge all of our members who have sons and daughters in their high school junior or senior year, in college or graduate school to review the guidelines and take advantage of one or more of these scholarships through a CAFS friend as nominator. Also, I urge our members to nominate deserving members for the CAFS Professional Achievement Award or the Distinguished Service Award. The deadline for all the applications is April 21, 2006.
- 2. Nomination and Election: Nomination Committee chair, Dr. Steven Pao, has received nominations for CAFS offices for 2006-2007. A slate of nominees is shown in this newsletter with a call for all of you to send in your vote by the deadline indicated. I urge all of our members to exercise your duty to vote on the nominees for CAFS offices for the coming year.
- 3. Membership and Finance: Dr. Amos Wu is chair of our Membership Committee. I know he is working hard toward increasing our membership at all levels: student and professional. Please do your part by helping him find new members and renewing your annual membership (except those life-time members) by sending in your membership dues to Dr. Martin Lo. The income of CAFS is very limited. As I reported earlier, the balance in our account has been going down, meaning our expenses continue to exceed our income. And it looks like the situation will not improve in the near future, unless we have some generous donors to make contribution to CAFS. So paying your membership dues on time is very important to our treasury.

MESSAGE FROM THE PRESIDENT

- 4. Treasury: Dr. Vivian Wu was elected as our treasurer for 2005-06. However, due to a busy schedule, she was not able to carry out her duties. Dr. Martin Lo, who served as CAFS treasurer for several years, continues to serve in that capacity this year. For that, we are very grateful to him for his willingness and untiring effort in doing so. Dr. Vivian Wu agrees to serve as our treasurer for 2006-07 for which we are thankful. Dr. Martin Lo will become our president by the end of our 2006 annual banquet meeting, 2006. Last year, I reported to you that we would initiate using PayPal to collect membership fees. However, due to low receipts of membership dues, which translates to mean that the fee we will have to pay to PayPal is not cost-effective. So Dr. Lo recommends that we not use that service for now, which I agree.
- 5. By-laws: Dr. Yong Hang is chairing our By-laws committee this year, with Dr. Cathy Ang and Pamela Tom as committee members. They are reviewing our by-laws and see if any part of it should be amended.
- 6. Conference and Workshop: Dr. Yao-wen Huang chairs this committee. He is on an ad hoc planning committee for a symposium to be held two days before the 2007 IFT annual meeting in Chicago. Drs. Peggy Hsieh, Martin Lo and I are also on this planning committee. The theme of the symposium is, "Globalization of Chinese Health Foods." We are in the process of asking all the officers and standing committee members to review and decide whether or not CAFS should be a sponsor (or cosponsor) of this symposium. If we decide to be a sponsor, it will mean considerable amount of work on our part in the coming year to prepare for the symposium, such as finding and renting a suitable venue for the symposium, preparing a program and invitations, arranging local transportation for a field trip, and all the necessary equipment for the meeting, etc. We will need your help and participation.
- 7. Executive Committee and Standing Committee meeting on June 25, Sunday, 12:30 pm in the International Lounge at the Orlando Convention Center: This meeting is open to all of our members. Please feel free to join us for the meeting.
- 8. Annual banquet meeting: Our once-a-year big event is being planned by Dr. Martin Lo and his committee. It will be held at a suitable restaurant in Orlando in the early evening of Monday, June 26. Please plan to attend and register early.

Any comments, questions or suggestions regarding any items mentioned above are welcome. My e-mail address is ihmoy1@gmail.com Hope to see all of you in Orlando.

Warmest Aloha, JAMES H. Moy James H. Moy

2006-2007 CAFS Annual Election Official Ballot

Deadline to send in ballot: May 20, 2006

Please refer to another page for all the candidates' biographical sketches

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President-elect (Elect one)
Dr. Hongda Chen Dr. Hong Zhuang (Write-in candidate)
Secretary (Elect one)
Dr. Furchi Chen (Write-in candidate)
Executive Committee Directors (to serve from 2006 to 2008) (Elect two)
Dr. Jack Huang Dr. John Shi
(Write-in candidate)
Three ways of sending in your ballot: 1) Attach to your e-mail to Dr. Steven Pao: spao@vsu.edu 2) Fax to: 804/524-5186 3) Mail to: P.O. Box 9061, Petersburg, VA 23806 Your participation in the voting process is essential and is very much appreciated.

2006-2007 CAFS Annual Election Official Ballot

Candidates

(1) President-elect:

Candidate One: Dr. Hongda Chen is the National Program Leader for Bioprocess Engineering and Nanotechnology in Cooperative State Research, Education & Extension Service (CSREES) of USDA. He provides national leadership to develop, coordinate, and manage research, education and extension programs in the areas of value-added novel products for food and nonfood applications. He represents USDA in the National Science and Technology Council (NSTC) subcommittee on Nanoscale Science, Engineering and Technology (NSET), and NSTC Interagency Working Group (IWG) on Manufacturing R&D. He was frequently sought speakers on nanotechnology for agriculture and foods at professional conferences, symposia, and strategic planning meetings worldwide. Dr. Chen is also currently serving on the advisory boards of four outstanding academic and research programs, namely Department of Biological and Environmental Engineering (BEE) of Cornell University, Institute of Food Science and Engineering (IFSE) of Texas A&M University, Biological System Engineering (BSE) Department of Virginia Tech and State University, and Canadian Advanced Food Material Science Consortium. Dr. Chen has been active in professional societies including IFT, ASAE, AIChE, IBE, and CAFS. He has served many leadership roles in the committees of professional societies including IFT, and ASAE. Currently, he is the Chair of IFT Food Engineering Division of a membership more than 1000. He served as the treasurer of CAFS for two years in late 1990s. He received his Ph.D. in food processing engineering from University of California, Davis, and served as the professor of food engineering at the University of Vermont for more than 10 years before joining CSREES in December 2000.

Candidate Two: Dr. Hong Zhuang is a Research Food Technologist in the Quality Assessment Research Unit, at South Atlantic Area (SAA), Agriculture Research Service (ARS), USDA, Athens, Georgia. He received his B.S. in Plant Physiology from Northwestern University in Xi'an, China in 1982, and M.S. in Plant Physiology and Biochemistry in 1992 and Ph.D. in Nutritional Sciences Multidisciplinary in 1996 from the University of Kentucky, Lexington, KY. He has been working on research and development as senior research scientist and director of R&D in minimally-processed industry for more than 9 years before joining USDA research group this year and has accumulated experiences in new product development, processing improvement, modified atmosphere packaging, and new technology identification, evaluation and commercialization. Dr. Zhuang has been involved in various volunteer activities in recent years. He served as a member of the Graduate Poster Competition Committee of IFT Fruit and Vegetable Division for 3 years, Chair of the Registration for the Chicago 2004 and 2005 Supplier's Night, and abstract reviewer for the IFT Fruit and Vegetable Division. He also served as Secretary of Chinese American Food Society and Newsletter Editor from 2004 to 2005. He is currently the Secretary and Treasure of IFT Fruit and Vegetable Division and a Executive Committee Director of the Chinese American Food Society

(2) Secretary:

Dr. Chen is currently a Research Assistant Professor in the Institute of Agricultural and Environmental Research at Tennessee State University. He received his B.S. in nutrition from Chung-Shan Medical and Dental Collage, Taiwan, M.S. in food science from University of Wisconsin-Stout, and Ph.D. in food science from Auburn University. His research interests include developing rapid methods and biosensors for detection of toxins, allergens and microorganisms of food safety concerns. He has been a member of IFT since 1995 and a member of CAFS since 1996. He received an Outstanding Student Award from CAFS in 1997. He has been an active life time member of CAFS since 2005, and served on Public Relations/Fund Raising Committee from 2000-2001.

(3) Director Position One:

Dr. Huang is a member of Institute of Food Technologists since 1995, he also serves in subcommittee at the Product Development Division. In addition, he is a member of American Association of Cereal Chemist, a subcommittee member in Asian Foods Division, and American Dietetic Association. He has a bachelor degree in clinical nutrition at Chung-Shan Medical & Dental College and master degree in food science from Kansas State University. He received his Ph.D. in Food Science with a minor in Statistics from Oklahoma State University. His research interest is in the field of food microstructure of electronic microscopy and statistical model prediction of functional properties and processing parameters. Currently he is a Sr. Research Scientist in the department of Global Technology and Quality, Kraft Foods.

(4) Director Position Two:

Dr. Shi is a senior research scientist at the Federal Department of Agriculture and Agri-Food Canada, also an Adjunct Professor of Food Engineering, at the School of Engineering, University of Guelph. He was co-editors of three books: "Functional Foods II - Biochemical and Processing Aspects;" "Asian Functional Foods;" and "Functional Food Ingredients and Nutraceuticals: Processing Technologies" by CRC Press, USA. He graduated from Zhejiang University, China, and received a Master degree in 1985, and a Ph.D. in 1994 from Polytechnic University of Valencia, Spain. Dr. Shi is an editor of the international "Journal of Food Science and Nutrition" and "Nutraceuticals and Foods", also a member of the editorial broad of "Journal of Medicinal Foods", and "Journal of Agriculture, Food and Environment". As a post-doctoral fellow, he conducted research at North Dakota State University, USA; and as a visiting professor, conducted international collaborative research at the Norwegian Institute of Fishery and Aquaculture, Norway, and at Lleida University, Spain. He was invited as a keynote speaker in a number of international conferences in the USA, Canada, Japan, China, Korea, Thailand, Spain and Columbia. He has published more than 90 research papers in international scientific journals, and 20 book chapters. He is an active member of the CAFS, and Board Chair of the Chinese Canadian Association of Food Industry and Professionals (CCAFIP).

Awards CAFS Student Scholarship Award

Purposes:

- 1. To stimulate college-bound, high school juniors and seniors to consider majoring in food science and technology
- 2. To encourage diligence and excellence in the pursuit of undergraduate studies in food science and technology

 To promote quality and professionalism in scientific research and communication skills among graduate students in food science and technology

Eligibility:

- 1. Scholarships for high school juniors and seniors are available to sons and daughters of active CAFS members. Winners are selected based on their academic records, essay, recommendation letters (at least one from school counselor or teacher), and extracurricular activities.
- 2. Undergraduate student scholarships are available to undergraduate students who are enrolled in IFT accredited food science and technology programs and are or intend to become CAFS student members. Winners are selected based on their academic records, essay, recommendation letters (at least one from CAFS professional member), and extracurricular activities.
- 3. Graduate student scholarships are available to graduate students who are enrolled in IFT accredited food science and technology programs and are CAFS student members. Winners are selected based on their academic records, essay, recommendation letters (at least one from CAFS professional member), extracurricular activities, and the submission of an abstract for presentation at the upcoming IFT Annual Meeting.
- 4. Awards: All winners receive a cash prize, a commemorative certificate, and an invitation to the award ceremony at the CAFS annual banquet.

Application:

Applicants are required to submit a letter of application, an essay of career objective, current resume, academic records, IFT abstract (Graduate student scholarship only), and two recommendation letters to the Award Committee Chair, Fu-hung Hsieh, 248 Ag. Eng. Bldg., 1406 E. Rollins St., University of Missouri, Columbia, MO 65211-5200. Email: hsiehf@missouri.edu. <a href="https://doi.org/10.1001/journ.100

April 21, 2006

CAFS Professional Achievement Award

Purpose:

To recognize a professional member for his/her outstanding contributions

to the field of food science and engineering, as it relates to teaching, research, extension, administration, or leadership in the food industry.

Eligibility:

Active CAFS members only. The winner receives a commemorative plaque and an invitation to the award ceremony at the CAFS annual banquet.

Nomination:

Nominator should submit a nomination letter, current resume of the nominee, and two reference letters from current CAFS professional members to the Award Committee Chair, Fu-hung Hsieh, 248 Ag. Eng. Bldg., 1406 E. Rollins St., University of Missouri, Columbia, MO 65211-5200. Email: hsiehf@missouri.edu.

Deadline for 2006 Application:

April 21, 2006

CAFS Distinguished Service Award

Purpose:

To recognize a professional member for his/her outstanding and sustained contribution to CAFS.

Eligibility:

Active CAFS members only. The winner receives a commemorative plaque and an invitation to the award ceremony at the CAFS annual banquet.

Nomination:

Nominator should submit a nomination letter, current resume of the nominee, and two reference letters from current CAFS professional members to the Award Committee Chair, Fu-hung Hsieh, 248 Ag. Eng. Bldg., 1406 E. Rollins St., University of Missouri, Columbia, MO 65211-5200. Email: hsiehf@missouri.edu.

Deadline for 2006 Application:

April 21, 2006

Number of Awards per Year:

Scholarship awards: high school seniors (1-2), undergraduate (1), graduate (1)

Professional Achievement and Distinguished Service awards: one each. These awards will only be honored when qualified recipients are identified.

Selection Process:

- Upon receipt of all applications by the deadline, the Award Committee will review all applications and supporting documents. Each committee member will assign a numerical
- Rating on each candidate (3, 2, or 1 for each of the four criteria). Those candidates receiving the highest scores will be the winners. In case of tie in a given category, the committee chair can call for a re-vote.

CAFS Scholarship Criteria:

- 1. Applicant's stated goal consistent with the purpose of the CAFS scholarship
- 2. Superior academic achievements demonstrating diligence and intelligence
- 3. Research and extra-curricular activities demonstrating motivation and dedication in the pursuit of studies in food science and technology
- 4. Observations by professionals (faculty, members, etc.) in recommendation letters

A successful applicant may apply again in the following year

CAFS MEMBERS ARE WINNERS!

DANIEL Y. C. FUNG
LIFE MEMBER AND PAST PRESIDENT OF CAFS

I have been a member of CAFS for many years and truly enjoy the professional contacts and the friend-ships developed through this organization. Many dedicated members spent a lot of time and energy in making this a first class organization. The letter by Dr. Cathy Ang on the occasion of her retirement published in a recent CAFS Newsletter almost moved to tears!!

Why do I think CAFS members are winners? You would not have been interested in this organization if you have not been a first class student, researcher, professor, entrepreneur, manager, president, politician, import/export professional, book publisher, etc. related to food science and technology with the common Chinese heritage or interests in the glorious Chinese culture and cuisine. So you are a winner.

In 2000 Cathy Ang , Yao-wen Huang, and I constructed a history of CAFS for the 25th Anniversary Celebration and in that booklet we listed the awards and accomplishments of many CAFS members and certainly the list was impressive. Since that compilation many CAFS members won national and international awards and have taken high positions in and out of USA. A couple of nights ago my wife and I had the pleasure of eating dinner with Dr. Joe J. Jen in Manhattan, KS when he was visiting USDA Agricultural Research Service officials. It is quite an honor to know that Dr. Jen, the current US Under Secretary of Agriculture is the highest ranking Administrator in the Bush Administration who was born overseas! Dr. Jen is of course one of the founders of CAFS and an early president of CAFS.

I encourage all CAFS members to work hard and excel in whatever you do. I am pleased to tell you that I have graduated 32 Ph.D. and 64 M.S. students in my long professorial career. Quite soon I will complete my 100th graduate student. It will certainly be a milestone for any professor of any discipline, anywhere. I am proud of my students past, present, and future and do what ever I can to make them successful.



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CAFS MEMBERS ARE WINNERS!

DANIEL Y. C. FUNG LIFE MEMBER AND PAST PRESIDENT OF CAFS

I am please to inform you that I have won the 2006 Carl R. Fellers Award. The purpose of the Award is "to honor a member of IFT and Phi Tau Sigma who has brought honor and recognition to the profession of food science and technology through a distinguished career in that profession displaying exemplary leadership, service, and communication skills that enhance the effectiveness of all food scientists in serving society." I am not sure I fulfill all those criteria but I take the Award anyway!!

I am an IFT Fellow (1995) and winner of the IFT International Award (1997), the Macy Award given by IFT Minnesota Section (1997) and the IFT Distinguished Service Award in Food Microbiology (2004) and other awards. Incidentally, one of my former students, Dr. Dong-Hyun Kang of Washington State University, won the 2006 Samuel Prescott Award for Excellence in Research at an early age. So, the professor and his former student will both be honored on the same stage in Orlando, FL in June, 2006!!

I write this article to encourage you to be successful and if I can help you win awards at IFT or other organizations I would be pleased to do so. It is not easy to win these awards but if you do not try you will never win one.

Best wishes for a lovely spring season and may all you do become successful. CAFS members are indeed winners in the journey of Life.



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CONSUMER MAGAZINES DIGEST HIGHLIGHTS UPDATE

DR. KRISTEN MCNUTT



KRISTEN McNUTT, Ph.D., J.D. Kristen McNutt is President of Consumer Choices, Inc. and Editor of Consumer Magazines Digest.

http:// www.mcnuttwebsite.com/ ABMcNuttBio.html The purpose of **Consumer Magazines DIGEST** is to help food science, nutrition and other health professionals know what their customers and clients might be reading about *nutrition*, *food safety*, *functional foods*, *nutraceuticals and health-related topics*. This monthly electronic publication, edited by CAFS member Kristen McNutt, is now available as a professional education service for colleagues no subscription fee, no password and no advertising. Simply go to www.mcnuttwebsite.com. Students, trend-watchers and new readers might find useful at www.mcnuttwebsite.com/ McNuttEditorials.html a compilation of her editorials and highlights from all issues since January 2005. *Examples* of content since our last CAFS newsletter include:

JANUARY, 2006

The scary story is about Ana and Mia, teen website names for anorexia and bulimia (page 4). Commercial gyms for kids (page 7) is innovative.

Page 2 has an interesting article about how famous foods got their names.

As expected because of new labeling regulations, both allergens (page 6) and trans-fats (page 4) are widely covered this month.

Biodiesel fuel from canola and soy is new (page 7).

Page 6 explains how biodynamic food differs from organic, and the similarity among beefalo, zorses and ligers.

And . . . now you'll know how many calories a one-minute kiss burns (page 1).

FEBRUARY, 2006

The cover story article on **Asian Flu** is an interesting example of how journalists walk a fine line between getting their reader's attention without inappropriately frightening their audience.

Also impressive is *CONSUMER REPORTS* explanation of why we're confused about obesity and longevity (page 5).

Similarly, *EATING WELL* neatly separates the safety issue versus the trust question related to sucralose (page 8).

15 magazines write about *National Women's Heart Disease Awareness Month* (page 4 has several of these).

Two magazines, with slightly different linkages, summarize foods that fight cancer. (page 5) A physician who works with teenagers in a poor neighborhood doesn't think messages telling people to eat more fruits and vegetables will help solve the obesity problem. (page 5)

MARCH 2006

Coffee, always a popular item, is bigger than ever this month (page 6).

The real surprises are chewing gum (page 6) and two food safety risks of kissing (page 7).

Cereals containing yogurt (page 3) are also new.

Non-dietary approaches to weight loss such as mindfulness awareness, prayer, sleep and stress reduction are gaining media attention (page 5).

Columnists offer interesting advice about how to respond to overweight friends or spouses (page 6), and don't miss the British Heart Foundation survey of kids about where french fries come from (page 7).

The cover story is Clinical Trials: WHI, BWHS and NCEP ATP III

National Nutrition Month is covered in Canadian and U.S. magazines (page 2)

The clothing industry introduces new size system for overweight women with various body shapes (page 5)

Recent publications about Chinese and Food Science

Title: Herbs: challenges in chemistry and biology / Mingfu Wang, editor ... [et al.]; sponsored by the ACS Division of Agricultural and Food

Chemistry, Inc.

Add.Author / Editor: Wang, Mingfu, 1972-

Corp. Author: American Chemical Society. American Chemical Society., Anaheim, Calif.), 2004

Year: 2006

ISBN: 0841239304 (alk. paper)

Note: Developed from a symposium sponsored by the Division of Agricultural and Food Chemistry at the 227th National Meeting of the

American Chemical Society, Anaheim, California, March 28-April 1, 2004.

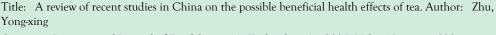
Title: Identification of polysaccharides from pericarp tissues of litchi (Litchi chinensis Sonn.) fruit in relation to their antioxidant activities.

Author: Yang, Bao

Citation: Carbohydrate Research Apr2006, Vol. 341 Issue 5, p634

Abstract: A large number of polysaccharides are present in the pericarp tissues of harvested litchi fruits. A DEAE Sepharose fast-flow anion-exchange column and a Sephadex G-50 gel-permeation column were used to isolate and purify the major polysaccharides from litchi fruit pericarp tissues. Antioxidant activities of these major polysaccharide components were also evaluated. An aqueous extract of the polysaccharides from litchi fruit pericarp tissues was chromatographed on a DEAE anion-exchange column to yield two fractions. The largest amount of the polysaccharide fraction was subjected to further purification by gel filtration on Sephadex G-50. The purified product was a neutral polysaccharide, with a molecular weight of 14kDa, comprised mainly of 65.6% mannose, 33.0% galactose and 1.4% arabinose. Analysis by Smith degradation indicated that there were 8.7% of $(1\rightarrow 2)$ -glycosidic linkages, 83.3% of $(1\rightarrow 3)$ -glycosidic linkages and 8.0% of $(1\rightarrow 6)$ -glycosidic linkages in the polysaccharide. Furthermore, different polysaccharide fractions extracted and purified from litchi fruit pericarp tissues exhibited strong antioxidant activities. Among these fractions, the purified polysaccharide had the highest antioxidant activity and should be explored as a novel potential antioxidant.

ISSN: 0008-6215



Citation: International Journal of Food Science & Technology Apr2006, Vol. 41 Issue 4, p333

Abstract: Tea is one of the most heavily consumed beverages in the world. The relationship between tea drinking and human health is becoming a subject of intense study by scientists throughout the world. In this paper, we first provide a comprehensive analysis of the medical literature on tea published in China during the past 20 years, and then highlight some recent studies in China on the relationship between tea and several human diseases. During the period 1982-2002, 691 research papers related to tea and health have been published in 290 Chinese journals. These studies showed that tea and tea constituents have various biological activities and suggested that tea drinking might be beneficial to human health. Tea has potential in the prevention or adjuvant treatment of several diseases including cancer, cardiovascular diseases and obesity. The trend and future direction in medical research on tea in China are also briefly discussed.

Subject: Camellia sinensis cancer obesity polyphenols prevention

ISSN: 0950-5423



Chinese American Food Society Quarterly Newsletter

Primary Business Address Yi-Chun Yeh 0112 Skinner Building University of Maryland College Park, MD 20742

Recent publication about Chinese and Food Science

Title: Feasibility study of quantifying and discriminating soybean oil adulteration in camellia oils by attenuated total reflectance MIR and fiber optic diffuse reflectance NIR.

Author: Wang, Li

Citation: Food Chemistry Apr2006, Vol. 95 Issue 3, p529

Abstract: Camellia oil is often the target for adulteration or mislabeling in China because of it is a high priced product with high nutritional and medical values. In this study, the use of attenuated total reflectance infrared spectroscopy (MIR-ATR) and fiber optic diffuse reflectance near infrared spectroscopy (FODR-NIR) as rapid and cost-efficient classification and quantification techniques for the authentication of camellia oils have been preliminarily investigated. MIR spectra in the range of 4000-650cm –1 and NIR spectra in the range of 10,000-4000cm –1 were recorded for pure camellia oils and camellia oil samples adulterated with varying concentrations of soybean oil (5-25% adulterations in the weight of camellia oil). Identifications is successfully made base on the slightly difference in raw spectra in the MIR ranges of 1132-885cm –1 and NIR ranges of 6200-5400cm –1 between the pure camellia oil and those adu Subject: NIR Adulteration Classification Quantifica-

tion MIR FORAGE plants NEAR infrared spectroscopy PATTERN perception SPECTRUM analysis

ISSN: 0308-8146

Title: Concentration of docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA) of tuna oil by urea complexation: optimization of process parameters.

Author: Liu, Shucheng

Citation: Journal of Food Engineering Apr2006, Vol. 73 Issue 3, p203

Abstract: Production of docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA) concentrates from tuna oil was optimized. In the process, the liquid recovery yield (Y 1) and the total content of DHA and EPA (Y 2) were response variables, respectively. A three-factor central composite rotatable design (CCRD) was used to study the effect of urea-to-fatty acid ratio (X 1), crystallization temperature (X 2) and crystallization time (X 3). Second order polynomial regression models for Y 1 and Y 2 were employed to generate response surfaces. The total DHA and EPA (85.02%) and the liquid recovery yield (25.10%) from tuna oil were obtained at a urea-to-fatty acid ratio of 15 (mole/mole), a crystallization temperature of -5 deg C, and a crystallization time of 20h.

Subject: Urea complexation Process optimization CRYSTALLIZATION OMEGA-3 fatty acids TUNA DOCOSAHEXAENOIC acid EICOSAPENTAENOIC acid

ISSN: 0260-8774

Title: The antioxidant activity of glucosamine hydrochloride in vitro.

Author: Xing, Ronge

Citation: Bioorganic & Medicinal Chemistry Mar 2006, Vol. 14 Issue 6, p1706

Abstract: The antioxidant potency of chitin derivative-glucosamine hydrochloride was investigated employing various established in vitro systems, such as superoxide (O 2 /ce:sup>)/hydroxyl (OH)-radical scavenging, reducing power, and ferrous ion chelating potency. As expected, we obtained several satisfying results, as follows: first, glucosamine hydrochloride had pronounced scavenging effect on superoxide radical. For example, the O 2 /ce:sup> scavenging activity of glucosamine hydrochloride was 83.74% at 0.8mg/mL. Second, the OH scavenging activity of glucosamine hydrochloride was also strong and was about 54.89% at 3.2mg/mL. Third, the reducing power of glucosamine hydrochloride was more pronounced. The reducing power of glucosamine hydrochloride was 0.632 at 0.75mg/mL. However, ferrous ion-chelating potency was soft. Furthermore, ferrous ion-chelating potency, the scavenging rate of radical, and the reducing power of glucosamine hydrochloride increased with their increasing concentration, and they were concentration dependent. The multiple antioxidant activity of glucosamine hydrochloride was evident as it showed considerable reducing power, superoxide/hydroxyl-radical scavenging ability. These in vitro results suggest the possibility that glucosamine hydrochloride could be effectively employed as an ingredient in health or functional food, to alleviate oxidative stress.

Subject: glucosamine hydrochloride (GH) nitro blue tetrazolium (NBT) phenazine methosulfate (PMS) hydrogen peroxide (H 2 O 2) thiobarbituric acid (TBA) ethylenediaminetetraacetic acid (EDTA) nicotinamide adenine dinucleotide-reduced (NADH) trichloroacetic acid (TCA) deoxyribose (DR)

ISSN: 0968-0896

Recent publication about Chinese and Food Science

Title: Evaluation of antioxidant property of extract and fractions obtained from a red alga, Polysiphonia urceolata.

Author: Duan, Xiao-Juan

Citation: Food Chemistry Mar 2006, Vol. 95 Issue 1, p37

Abstract: Antioxidant activity (AA), total phenolic content, and reducing power of the crude extract, fractions, and subfractions derived from a red alga, Polysiphonia urceolata, were evaluated and determined. The antioxidative activity was measured using the α , α -diphenyl- β -picrylhydrazyl (DPPH) radical scavenging assay and the β -carotene-linoleate assay systems, and compared with that of butylated hydroxytoluene (BHT), gallic acid (GA), and ascorbic acid (AscA). The results showed that the crude extract and the ethyl acetate-soluble fraction exhibited higher AA than BHT in the DPPH assay model, at all of four concentration levels tested (from 0.4 to $50\mu g/ml$), while, in the β -carotene-linoleate assay system, the crude extract and the ethyl acetate-soluble fraction exhibited similar or, in most cases, higher AA than GA and AscA at the same concentrations (from 10 to $200\mu g/ml$). The ethyl acetate-soluble fraction was further fractionated into seven subfractions F1-F7 by silica gel vacuum liquid chromatography. F1 was found to be the most effective subfraction in both assay systems. The total phenolic content and reducing power were determined using the Folin-Ciocalteu and the potassium ferricyanide reduction methods, respectively. Statistical analysis indicated a significant association between the antioxidant potency and total phenolic content as well as between the antioxidant potency and reducing power.

Subject: Antioxidant DPPH Total phenolic content Reducing power ANTIOXIDANTS LIQUID chromatography POLYSIPHO-

NIA LINOLEIC acid ISSN: 0308-8146

Title: Heterocyclic aromatic amines in domestically prepared chicken and fish from Singapore Chinese households.

Author: Salmon, C.P.

Citation: Food & Chemical Toxicology Apr2006, Vol. 44 Issue 4, p484

Abstract: Chicken and fish samples prepared by 42 Singapore Chinese in their homes were obtained. Researchers were present to collect data on raw sample weight, cooking time, maximum cooking surface temperature, and cooked sample weight. Each participant prepared one pan-fried fish sample and two pan-fried chicken samples, one marinated, one not marinated. The cooked samples were analyzed for five heterocyclic aromatic amine (HAA) mutagens, including MeIQx (2-amino-3,8-dimethylimidazo[4,5-f]quinoxaline); 4,8-DiMeIQx (2-amino-3,4,8-trimethylimidazo [4,5-f]quinoxaline); 7,8-DiMeIQx (2-amino-3,7,8-trimethylimidazo[4,5-f]quinoxaline); PhIP (2-amino-1-methyl-6-phenylimidazo[4,5-b])pyridine), and IFP (2-amino-(1,6-dimethylfuro[3,2-e]imidazo[4,5-b])pyridine). A paired Student's t-test showed that marinated chicken had lower concentrations of PhIP (p <0.05), but higher concentrations of MeIQx (p <0.05) and 4,8-DiMeIQx (p <0.001) than non-marinated chicken, and also that weight loss due to cooking was less in marinated chicken than in non-marinated chicken (p <0.001). Interestingly, the maximum cooking surface temperature was higher for fish than for either marinated or non-marinated chicken (p <0.001), yet fish was lower in 4,8-DiMeIQx per gram than marinated or non-marinated chicken (p <0.001). Fish was also lower in MeIQx and 7,8-DiMeIQx than marinated chicken (p <0.05). This study provides new information on HAA content in the Singapore Chinese diet.

Subject: 2-amino-3,4,8-trimethylimidazo[4,5-f]quinoxaline (4,8-DiMeIQx) 2-amino-3,7,8-trimethylimidazo[4,5-f]quinoxaline (7,8-DiMeIQx) heterocyclic aromatic amines (HAA) high performance liquid chromatography (HPLC) 2-amino-(1,6-dimethylfuro[3,2-e] imidazo[4,5-b])pyridine (IFP) 2-amino-3,4-dimethylimidazo[4,5-f]quinoline (MeIQx) 2-amino-1-methyl-6-phenylimidazo[4,5-b]pyridine (PhIP) propylsulfonic acid silica (PRS)

ISSN: 0278-6915

Title: PARTIAL PURIFICATION AND CHARACTERIZATION OF POLYPHENOL OXIDASE FROM FRESH-CUT CHINESE WATER

CHESTNUT

Author: LU, SHENGMIN

Citation: Journal of Food Biochemistry 30, no. 2 (2006): 123-137

ISSN: 0145-8884

Recent publication about Chinese and Food Science

Title: Butyltins compounds in molluscs from Chinese Bohai coastal waters. Author: Yang, Ruiqiang

Citation: Food Chemistry Aug2006, Vol. 97 Issue 4, p637

Abstract: Concentrations of butyltin compounds including tributyltin (TBT), dibutyltin (DBT) and monobutyltin (MBT) were determined in mollusc samples from Chinese Bohai coastal sites to evaluate the extent of contamination and potential adverse effects on health. Wide existence of butyltins was found in these samples with a detection rate of up to 90%, and the concentrations of the total butyltin (Σ BTs: TBT+DBT+MBT) ranged from <2.5 to 397.6ngSn/g wet weight (mean 63ngSn/g). Among BTs, TBT was the predominant compound in most of the samples, indicating ongoing usage of TBT-based antifouling agents in China. The different accumulation capabilities of BTs among various species were studied. The wide occurrence and serious pollution of BTs in seafood indicated a potential danger for the health of the local people who cared for these foods.

ISSN: 0308-8146

Title: The determination of total germanium in real food samples including Chinese herbal remedies using graphite furnace atomic absorption spectroscopy. Author: McMahon, Michael

Citation: Food Chemistry Aug2006, Vol. 97 Issue 3, p411

Abstract: This paper outlines the development of a method for the determination of total germanium in foodstuffs utilising graphite furnace atomic absorption. It was found that by varying the drying times interferences could be minimised. Metals including calcium, cobalt, copper, magnesium, nickel, lead and zinc were tested for potential interferences. It was found experimentally that none of the listed metals interfered with this method. The optimal furnace conditions were determined to be; drying for 80s (85 deg C for 30s, 95 deg C for 40s and 120 deg C for 10s), ashing at 700 deg C for 8s and atomisation at 2600 deg C for 3.3s followed by a tube clean for 2s at 2800 deg C and a lamp current of 5mA for analysis at 265.2nm. The method was found to have a linear range of $3.3-125\mu g/l$ with a limit of detection and a characteristic mass of 0.051 and 0.053ng germanium, respectively. The samples chosen for analysis include vegetables, fruit juices, Chinese herbal remedies and over the counter formulations. It was found that the aloe vera tablet, ginseng tablet and ginger tablet contained 20.83, 5.48 and $9.96\mu g/g$. Other foods found to contain germanium were potato, garlic and carrot, having 1.85, 2.79 and $0.60\mu g/g$ of germanium. The food found to contain the highest concentration of germanium was Soya mince having $9.39\mu g/g$.

Subject: ATOMIC absorption spectroscopy HERBS ~ Therapeutic use SPECTRUM analysis TRANSITION metals

ISSN: 0308-8146

Title: Isolation and characterization of thermo-acidophilic endospore-forming bacteria from the concentrated apple juice-processing environ-

ment.

Author: Chen, Shiqiong

Citation: Food Microbiology Aug 2006, Vol. 23 Issue 5, p439

Abstract: Forty-five thermo-acidophilic, spore-forming bacteria were isolated from a concentrated apple juice-processing environment. All of them were Gram-positive, rod shaped, and strictly aerobic that most likely belong to the genus of Alicyclobacillus. A fast identification method-16S rDNA PCR-RFLP was used to identify them. The results indicated that at the similarity level of 87%, apple juice isolates strains of 1-4 and 1-2-4 clustered with the reference strain of A. acidoterrstris DSM 3922 T, and 4-2-1, S-22 and 5-1 with A. cycloheptanicus DSM 4006 T, respectively. The other tested strains were different from all the reference strains in this study and may be new species of Alicyclobacillus genus or the other. In order to confirm this conclusion, we selected 7 16S rDNA PCR-RFLP identified strains and 5 type strains of Alicyclobacillus genus, carried on 51 kinds of phenotypic characteristics and analysis the data by unweighted pair group method with arithmetic mean (UPGMA). The results showed that the similarity degree between every two strains was lower than 80%. It also suggested that they may be different from each other and the unidentified strains may be new species. In addition, spoilage effects of them on 12 Brix apple juice were also studied. The result suggested that all 19 tested bacterial strains caused apple juice to become turbid, form a precipitate and off odor at varying rates when incubated at 37 deg C up to 12 days. It suggested that these bacteria are associated with the spoilage of apple juice during storage.

ISSN: 0740-0020

Recent publication about Chinese and Food Science

Title: Effect of oxalic acid on control of postharvest browning of litchi fruit.

Author: Zheng, Xiaolin

Citation: Food Chemistry Jul 2006, Vol. 96 Issue 4, p519

Abstract: Litchi (Litchi chinensis Sonn.) fruit, cv. Huaizhi, was treated with 2 and 4mM oxalic acid and stored at room temperature to investigate the effect of oxalic acid on pericarp browning. The results showed that the pericarp browning indices of the fruit, treated with both oxalic acid concentrations, were significantly lower than that of the control, due to increase of membrane integrity, inhibition of anthocyanin degradation, decline of oxidation, and maintanance of relatively low peroxidase activity in the fruit during storage. It appears that application of oxalic acid can effectively control the pericarp browning of litchi fruit during postharvest storage.

Subject: BABY foods FOOD ~ Analysis LITCHI OXALIC acid

ISSN: 0308-8146

Title: Crystallography, morphology and thermal properties of starches from four different medicinal plants of Fritillaria species.

Author: Shujun, Wang

Citation: Food Chemistry Jul 2006, Vol. 96 Issue 4, p591

Abstract: To fully understand the medicinal plant, Fritillaria, and its species, we investigated the physical properties of starch contained in four Fritillaria species, Fritillaria thunbergii Miq., Fritillaria ussurensis Maxim., Fritillaria pallidifloca Schrenk and Fritillaria cirrhosa D.Don, by means of various analytical methods. The crystal type of the former three kinds of Fritillaria starches was in characteristic B-type, which was in agreement with the crystal type of potato starch. However, the cirrhosa F. starch showed a typical C B -type pattern. The degrees of crystallining of the four Fritillaria starches were about 43.2%, 40.5%, 44.8% and 41.8%, corresponding to thunbergii F. starch, ussurensis F. starch, pallidifloca F. starch and cirrhosa F. starch. The granule sizes of the former two Fritillaria starches ranged from 5 to 40µm, and were cycloidal or elliptic-shaped. However, the latter two Fritillaria starch granules had granule sizes ranging from 5 to 50µm, and the granule shape varied from oval to irregular or cuboidal. From the thermogravimetric analysis, it was concluded that the thermal stabilities of the four kinds of starch differed from each other, due to their different structures.

Subject: CRYSTALLOGRAPHY FRITILLARIA LILIACEAE MEDICINAL plants

ISSN: 0308-8146

Title: A systematic survey of antioxidant activity of 30 Chinese medicinal plants using the ferric reducing antioxidant power assay.

Author: Wong, Chi-Chun

Citation: Food Chemistry Aug2006, Vol. 97 Issue 4, p705

Abstract: The antioxidant activities and total phenolic contents of 30 Chinese medicinal plants were evaluated using the ferric reducing antioxidant power assay and the Folin-Ciocalteu method, respectively. The Chinese medicinal plants were extracted by the traditional method, boiling in water and also in 80% methanol. A significant and linear correlation coefficient between the antioxidant activity and the total phenolic content was found in both aqueous (R 2 =0.7917) and methanol (R 2 =0.7584) extracts. Phenolic compounds are thus a major contributor of antioxidant activity. Comparing the extraction efficiency of the two methods, the boiling water method extracted phenolic compounds more efficiently, and antioxidant activity of the extract was higher. It was found that the Chinese medicinal plants Rhodiola sacra Fu, the stem of Polygonum multiflorum Thunb. and the root of P. multiflorum Thunb. possessed the highest antioxidant activities and thus could be potential rich sources of natural antioxidants.

ISSN: 0308-8146

Recent publication about Chinese and Food Science

Title: Species identification in salted products of red snappers by semi-nested PCR-RFLP based on the mitochondrial 12S rRNA gene sequence.

Author: Zhang, Junbin

Citation: Food Control Jul 2006, Vol. 17 Issue 7, p557

Abstract: A molecular approach was developed to distinguish species of red snappers among commercial salted fish products. The specific fragments of the mitochondrial 12S rRNA gene, which were about 450bp, were obtained using the semi-nested polymerase chain reaction (semi-nested PCR). Subsequently, PCR amplicons were sequenced, aiming to select restriction endonucleases that generated species-specific restriction fragment length polymorphism (RFLP) profiles. Discrimination of red snappers Lutjanus sanguineus, Lutjanus erythopterus from Lutjanus argentimaculatus, Lutjanus malabarius and other morphologically similar fishes such as Lethrinus leutjanus and Pinjalo pinjalo was feasible by one restriction digestion reaction with three endonucleases Hae III, Sca I and SnaB I, however, for discrimination of L. sanguineus and L. erythopterus, another restriction digestion reaction with single restriction endonuclease Mae II was needed. The semi-nested PCR-RFLP was demonstrated to be reliable in species identification of salted fish products in this study.

Subject: INDIGESTION LUTJANUS RED snapper ENDONUCLEASES

ISSN: 0956-7135

Title: Antioxidant activities of five Chinese rice wines and the involvement of phenolic compounds.

Author: Que, Fei

Citation: Food Research International Jun 2006, Vol. 39 Issue 5, p581

Abstract: Chinese rice wine has been claimed to have health-promoting effects, which may be related to the antioxidant activity in vivo. In this study, total antioxidant, reducing, free radical scavenging, and superoxide anion radical scavenging activities were determined in five Chinese rice wines (Guyuelongshan, Hongqu, Shousheng, Foshou, and Nuomi) comparing with synthetic antioxidants, such as butylated hydroxyanisole (BHA) and butylated hydroxytoluene (BHT). Ten individual phenolic compounds including caffeic acid, syringic acid, and rutin, (–)-epicatechin, (+)-catechin, gallic acid, vanillic acid, p-coumaric acid, ferulic acid and quercetin, were identified and quantified by HPLC. Results indicated that rice wines exhibited high antioxidant power, and that total antioxidant activity, reducing capacity and free radical scavenging activity were highly correlated with total phenolic content. Nuomi with the highest content of phenolic compounds showed the highest antioxidant activity, while Foshou had the lowest content with lowest activity. Syringic acid and (+)-catechin contributed most to the phenolic compounds and were highly correlated with all antioxidant properties (r 2 >0.75). However, vanillic acid, p-coumaric acid and quercetin showed little contribution to the antioxidant function.

ISSN: 0963-9969

Title: Effect of gamma irradiation on microbial decontamination, and chemical and sensory characteristic of lycium fruit.

Author: Wen, Hsiao-Wei

Citation: Radiation Physics & Chemistry May2006, Vol. 75 Issue 5, p596

AbstractLycium fruit, popular traditional Chinese medicine and food supplement generally is ingested uncooked, was exposed to several doses of gamma irradiation (0-14kGy) to evaluate decontamination efficiency, changes in chemical composition, and changes in sensory characteristic. In this study, lycium fruit specimens contained microbial counts of 3.1X10 3 -1.7X10 5 CFU/g and 14kGy was sufficient for microbial decontamination. Before irradiation, the main microbe isolated from lycium fruit was identified as a strain of yeast, Cryptococcus laurentii. After 10kGy of irradiation, a Gram-positive spore-forming bacterium, Bacillus cereus, was the only survivor. The first 90% reduction (LD 90) of C. laurentii and B. cereus was approximately 0.6 and 6.5kGy, respectively. After 14kGy irradiation, except the vitamin C content, other chemical composition (e.g., crude protein, β-carotene, riboflavin, fructose, etc.) and the sensory characteristic of lycium fruit specimens did not have significant changes. In conclusion, 14kGy is the optimal decontamination dose for lycium fruit for retention of its sensory quality and extension of shelf life.

ISSN: 0969-806X

Job Announcements

QA Manager Position:

Some one that is a strong hands on leader to oversee a department of a high volume consumer products plant, candidate should be capable of promotion, Degree is preferred, supervisory experience and candidate should have documented success within their career. Salary is open depending on back-ground and experience. Please contact:

Murray L. Ostrin
Director
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Main Line: 310-477-4433
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Project Leader, Meat - Job Description:

International Fiber Corp., headquartered in North Tonawanda, NY with 5 manufacturing plants around the world, is the world leader in fiber ingredients. IFC is actively seeking an innovative, high energy meat application scientist to join our team at the IFC's R&D Center located in North Tonawanda, NY. Qualifications for this position include a Ph.D. degree in Meat/Food Science. Any industry experience will be a plus. Good communications ability is essential. Responsibilities include planning, coordinating and implementing research and development activities undertaken by IFC in the meat application area. Will also be responsible for developing and communicating technical information to assist in the marketing of IFC products to food and other related industries. Another function is to conduct research in the development of new and innovative fiber ingredients for food and non-food applications. Based on the above job requirements, this Project Leader should have advanced technical skills in meat applications. In addition, since a significant portion of IFC's business is in the meat industry, the Project Leader should also be able to conduct independent application research on the use and development of novel ingredients that can deliver added benefits when applied to meat products.

Project Leader, Dairy - Job Description:

International Fiber Corp., headquartered in North Tonawanda, NY with 5 manufacturing plants around the world, is the world leader in fiber ingredients. IFC is actively seeking an innovative, high energy dairy scientist to join our team at the IFC's R&D Center located in North Tonawanda, NY. Qualifications for this position include a Ph.D. degree in Dairy Science. Any industry experience will be a plus. Good communications ability is essential. Responsibilities include planning, coordinating and implementing research and development activities undertaken by IFC in the dairy area. Will also be responsible for developing and communicating technical information to assist in the marketing of IFC products to food and other related industries. Another function is to conduct research in the development of new and innovative fiber ingredients for food and non-food applications. Based on the above job requirements, this Project Leader should have advanced technical skills in dairy science. In addition, since a significant portion of IFC's business is in the dairy industry, the Project Leader should also be able to conduct independent application research on the use and development of novel ingredients that can deliver added benefits when applied to dairy products. Interested individuals should contact:

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About CAFS ...

The Chinese American Food Society was created from an idea generated by a group of passionate Chinese food professionals at the IFT Convention in New Orleans in 1974. One year later, at the IFT Annual Meeting in Chicago, the CAFS as we know it today was born and Professor Bor S. Luh was elected as the first President of the group. Today CAFS continues to grow and serves as the only professional organization for oversea Chinese food professionals. CAFS remains as an active subdivision of the IFT and maintains close relationships with food science societies in Mainland China, Taiwan, and Hong Kong. Currently, the CAFS community has close to 300 Student Members, Members, and Life-Time Members spread over North America, Mainland China, Taiwan, Hong Kong, and other areas of the world.

The opinions expressed in this newsletter are the opinions of the contributors and do not necessarily represent the official position of CAFS and should not be interpreted as such.

Welcome to CAFS' new members page. We appreciate your interest in joining our society. To become a member, you can either download the <u>CAFS</u> membership application/renewal/update form (PDF; double-sided) or use the follwing page, and send it in with your membership due to:

Chinese American Food Society cc: Dr. Martin Lo P.O. Box 194 Ashton, Maryland 20861

Special Thanks to contributors for this newsletter

Dr. James Moy
Dr. Kristen McNutt
Dr. Daniel Y. C. Fung
Judy C. K. Chan

NOTE FROM THE EDITOR

Dear readers,

Spring is here and the cherry blossoms in the capital of USA are blooming from now on. I really encourage every member to come to Washington D.C. and join the National Cherry Blossom Festival. You can find more information in this website: http://www.nationalcherryblossomfestival.org/cms/index.php? id=390. Besides enjoying the beautiful weather and blossoms, I also wish you can enjoy this issue of CAFS newsletter. In this issue you can find Dr. Daniel Y. C. Fung, the winner of 2006 Carl R. Fellers Award from the Institute of Food Technologists, talks about his life and CAFS. The other member Dr. Kristen McNutt kindly shared her Consumer Magazines DIGEST with us and you also can find many newly published scientific articles which might trigger you some new research ideas. This year the IFT meeting will be in sunny Orlando and I will be there presenting my poster. Wish I can see everyone there and learn more new food technologies together~

Yours truely,

Afra Yeh

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