

**MINUTES OF THE NUTRITION COORDINATING COMMITTEE (NCC)
MEETING, NATIONAL INSTITUTES OF HEALTH (NIH)
Rockledge 2, Conference Room 9100-9104, Bethesda, MD
September 4, 2008 2:00- 4:00 PM**

WELCOME

Dr. Pam Starke-Reed, Deputy Director, NIH Division of Nutrition Research Coordination (DNRC), convened the meeting at 2:05 PM and welcomed participants. Participating via phone were CAPT Shirley Blakely, FDA; CAPT Tammy Brown, IHS; Dr. Paul Cotton, NIH NINR; Dr. Darla Danford, NIH NIDDK; Mr. Vincent DeJesus, FDA; Dr. Linda Duffy, NIH NCCAM; Ms. Jody Engel, NIH ODS; COL Karl Friedl, DoD; Dr. Deborah Galuska, CDC; RADM Van Hubbard, NIH DNRC; Dr. David Klurfeld, USDA; Dr. Molly Kretsch, USDA; Dr. Molly Lamb, CDC NCHS; Ms. Michele Lawler, HRSA; CAPT Margaret McDowell, CDC NCHS; Ms. Holly McPeak, OS ODPHP; Dr. Linda Nebeling, NIH NCI; Dr. Cynthia Ogden, CDC NCHS; Dr. Deborah Olster, NIH OBSSR; Dr. Marshall Plaut, NIH NIAID; Dr. Daniel Raiten, NIH NICHD; and Dr. Susan Welsh, USDA CRSEES. The agenda for the meeting is provided as Appendix A, and the list of attendees is provided as Appendix B.

APPROVAL OF MINUTES FROM THE JULY 3, 2008 NCC MEETING

Minutes from the July 3, 2008 NCC meeting had previously been sent to NCC members via email. Dr. Starke-Reed asked if there were any other corrections to the minutes. There were none. Dr. John Milner, National Cancer Institute (NCI), made a motion to approve the minutes, and Ms. Karen Regan, NIH Office of Dietary Supplements (ODS)/DNRC, seconded the motion. The minutes were thus approved and will be posted on the DNRC website, <http://www.dnrc.nih.gov>, along with the minutes from previous NCC Meetings.

ACCIDENT IN TRANSLATION: ASCORBIC ACID AS A PHARMACOLOGIC AGENT FOR DISEASE TREATMENT

CAPT Mark Levine, Chief of the Molecular and Clinical Nutrition Section at the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), gave a presentation on the potential use of ascorbic acid as a pharmacologic agent for disease treatment.

Ascorbic acid is an essential nutrient commonly regarded as an antioxidant. Prior to 2000, the Recommended Dietary Allowances (RDAs) for vitamin C were based on preventing deficiency with a margin of safety. However, instead of focusing on deficiency, CAPT Levine was interested in human vitamin C concentrations that would promote optimal function, and in 1986 he proposed a different way to determine RDAs by examining the concentration-dependent functions of the vitamin as well as studying the concentrations in humans that effect function across a wide dose range. Studies indicated that plasma vitamin C concentrations are very tightly controlled through mechanisms of bioavailability,

tissue transport, and renal re-absorption and excretion. Principles of tight control and pharmacokinetics data are now used for Vitamin C RDAs in many countries.

In addition to studying the mechanisms of tight control, CAPT Levine is extremely interested in studies that have revealed unexpected consequences of bypassing this tight control. Such consequences point to the potential of ascorbic acid and cancer treatment. CAPT Levine has shown that ascorbate at pharmacologic concentrations is a prooxidant, generating hydrogen-peroxide-dependent cytotoxicity toward a variety of cancer cells in vitro without adversely affecting normal cells. This action was tested in vivo, bypassing normal oral tight control by parenteral ascorbate administration. Real-time microdialysis sampling in mice showed that a single pharmacologic dose of ascorbate produced sustained ascorbate radical and hydrogen peroxide formation selectively within interstitial fluids of tumors but not in blood. Moreover, a regimen of daily pharmacologic ascorbate treatment significantly decreased growth rates of various tumors established in mice. Similar pharmacologic concentrations were readily achieved in humans given ascorbate intravenously. These data suggest that ascorbate as a prodrug may have benefits in cancers with poor prognosis and limited therapeutic options.

THE KEYSTONE CENTER FOOD AND NUTRITION ROUNDTABLE FRONT-OF-PACKAGE NUTRITION ICON PROGRAM

Ms. Rachel Fisher, DNRC, and Mr. Vinnie DeJesus, FDA, gave a brief update on the activity of the Keystone Food and Nutrition Roundtable, which is a group of food producers and distributors, consumer and health advocates, and nutrition and public health experts convened by the Keystone Center in 2007. The Keystone Center is a non-profit organization that seeks to solve environmental, energy, and public health problems by bringing together public, private and civic sector leaders to confront these issues. The issue this group aimed to address was the confusion in the marketplace caused by multiple front-of-package (FOP) nutrition icon labeling systems. Since its establishment, this group has been working to develop a uniform and universal (FOP) nutrition icon labeling system that identifies healthier choices of food and beverage products.

The program will be called Smart Choices, and qualifying products will begin to display the Smart Choices icon in the spring/summer of 2009. To receive the icon, food and beverage products will need to meet requirements for nutrients to limit as well nutrients to encourage. Certain product categories have food group requirements as well. Government representatives from various agencies (i.e. Centers for Disease Control and Prevention, the Food and Drug Administration, the National Institutes of Health, the US Department of Agriculture, and the US Federal Trade Commission) have also participated as observers to the Roundtable but did not vote or endorse the proceedings.

The Roundtable is preparing for several upcoming symposiums and conferences that will provide an opportunity for them to publically discuss the Smart Choices

program. The Roundtable will be presenting the program at the Tufts University - Friedman School Symposium on September 25th and at the American Dietetic Association's Annual Meeting on October 27th. They plan to do a larger media campaign next year when they officially roll out the program.

EXPERIMENTAL BIOLOGY NANOTECHNOLOGY SYMPOSIUM

Dr. John Milner, NCI, informed the NCC of a symposium on nanotechnology research and applications in nutritional sciences that was recently submitted by the NCC Nanotechnology and Nutrition Subgroup to the Experimental Biology annual meeting in April, 2009. New and emerging technologies have the potential to advance the science of nutrition by assisting in the discovery, development, and delivery of several intervention strategies to improve health and reduce the risk and complications of several diseases. As a result, the proposed symposium would be of likely interest to a large and diverse group of nutrition researchers tackling various health and disease challenges. Goals of the session will be to enhance the understanding of applications of nanotechnology for use in nutrition research; characterize issues related to targeting delivery of nutrients into the human body; discuss research and funding opportunities in nanotechnology, foods and health; and identify safety/regulatory issues in nanotechnology, foods and health. This session will be chaired by Dr. Sharon Ross (NCI) and Dr. Pothur Srinivas (NHLBI). For more information about the symposium see the full proposal in Appendix C.

If you are interested in learning more about the NCC Nanotechnology and Nutrition Subgroup or would like to be involved, contact Dr. Pam Starke-Reed (starkep@mail.nih.gov) or Dr. Crystal McDade-Ngutter (mcdadengutterc@mail.nih.gov) at the DNRC.

REPORTS FROM NCC MEMBERS AND LIASONS

Ms. Elaine Trujillo, NCI, announced the next Stars in Nutrition and Cancer Seminar, which will be taking place on October 1, 2008 at 3:00 in the Lipsett Amphitheater, Building 10, NIH main campus. Dr. Olufunmilayo Olopade, from the University of Chicago, will be speaking on a family based approach to breast cancer prevention. The event is free and registration is not required.

Dr. John Milner (NCI) informed the NCC that Dr. Cindy Davis, a Program Director in the Nutritional Sciences Research Group at NCI, will be giving a presentation titled "Update on Cancer & Vitamin D. New Surprises? What's Around the Corner?" at the Tufts University Friedman School Symposium on September 26, 2008.

Dr. Pam Starke-Reed announced that a briefing by ODPHP/HHS staff on the launch of the Physical Activity Guidelines for Americans will take place on September 9th at 1:30. The briefing will cover what is new about the Guidelines, how they will be launched, and how to get involved. Kay Loughrey, the Team Leader for the Physical Activity Guidelines Communication Team will be

conducting the briefing. The call-in number will be provided to anyone interested in participating. Contact Dr. Starke-Reed for more information (starkep@mail.nih.gov).

Dr. Starke-Reed reminded everyone that the NIH Nutrigenomics Working Group will be holding their next meeting on September 17th from 1:00-2:00 PM in Democracy 2, Conference Room 701. The group will be meeting with Dr. Jim Kaput who has recently joined the National Center for Toxicological Research (NCTR) at FDA and is leading the Division of Personalized Nutrition and Medicine. Anyone interested in attending is welcome.

Dr. Starke-Reed also announced that the NIH portion of the contract with the Institute of Medicine (IOM) to reexamine Vitamin D and Calcium requirements has been completed. Once the IOM secures the necessary 2/3 of the total study cost, the review will begin.

Dr. Dan Raiten, NICHD, reported on a meeting organized and sponsored by the Bill and Melinda Gates Foundation on Micronutrient Assessment Methodology that took place this past August in Seattle. The workshop was successful at educating the Gates Foundation staff and identifying several opportunities for further effort. If anyone is interested in engaging in future discussions with the Gates Foundation, contact Dr. Raiten (raitend@mail.nih.gov).

Dr. Raiten also announced an upcoming workshop on the NIH campus that will explore ways to design complex protocols for systems biology research. Three cases studies looking at the impact of exposure to biomass fuels on maternal and child health, obesity, and the impact of micronutrient malnutrition on infant and young child health and cognitive/behavioral development will be presented. In addition to the case studies, experts in computational modeling and systems biology will be present to contribute to the discussions and help formulate research recommendations. For more information, contact Dr. Raiten.

UPDATE FROM THE DHHS OFFICE OF DISEASE PREVENTION AND HEALTH PROMOTION (ODPHP)

Ms. Kathryn McMurry provided several updates from ODPHP:

Dietary Guidelines for Americans 2010

Nominations for the Dietary Guidelines Advisory Committee were accepted through May 24, and a slate has been forwarded to the USDA and HHS Secretaries for signature. The first meeting is expected to be held sometime in the fall of 2008. USDA has the administrative lead for this edition. Information about the process will be available at www.dietaryguidelines.gov.

Healthy People 2020

The federal advisory committee is holding its 5th meeting via webinar on September 4-5. The plans are on track for the Health People 2020 vision,

mission, overarching goals, and framework to be released in January, 2009. More information about Healthy People 2020 is available at www.healthypeople.gov.

Institute of Medicine (IOM) Sodium Strategies Study

The IOM intends to establish an ad hoc committee to review and make recommendations about various means that could be employed to reduce dietary sodium intake to levels recommended by the *Dietary Guidelines for Americans*. Primary funding for the study is being provided by CDC with additional funding from FDA and ODPHP.

ODPHP Staff

Ms. McMurry introduced several new ODPHP staff members to the NCC. Dr. Eve Essery recently joined ODPHP on a 1-year fellowship. Dr. Michael Donovan will be with ODPHP from September through December as a Presidential Management Fellow from NCI. CAPT Shirley Blakely will also be on detail to ODPHP from FDA to work on the *Dietary Guidelines for Americans*.

UPDATE FROM THE NIH OFFICE OF DIETARY SUPPLEMENTS (ODS)

Ms. Karen Regan, ODS/DNRC, provided the ODS updates.

ODS Strategic Planning: ODS has been guided by successive strategic plans since we were first created in 1995. The ODS background paper, A Report to the Public, has been circulated to the ODS Strategic Planning Steering Committee and the ODS staff for review. That paper is the basis for the next ODS strategic plan for 2010 - 2014. We expect that the report will be posted later this fall on the ODS website for public feedback. For further information, please contact Dr. Julia Freeman in ODS (freemanjb@mail.nih.gov).

Vitamin D Initiative: The proceedings of last year's conference "Vitamin D and Health in the 21st Century: An Update" were published as a supplement to The American Journal of Clinical Nutrition in August (AJCN 88:483S-592S, 2008). Also part of this supplement is the summary of research needs proposed during a roundtable discussion following that conference. These recommendations will form the basis for discussions at NIH about future research initiatives on vitamin D. There will be a meeting of the Federal Vitamin D Working Group on October 14, 2008. Please contact Dr. Mary Frances Picciano in ODS (piccianm@mail.nih.gov) for further information.

ODS Seminar Series: ODS is now in the 6th year of its seminar series (See Appendix D for fall schedule). The fall 2008 series kicks off with a talk on September 10 by Dr. Scott Smith from NASA on "Vitamin D and beyond: Lessons from the International Space Station and other remote environments". All ODS seminars are held from 11 AM - 12 noon in Executive Plaza North, Conference Room J. Please contact Dr. Mary Frances Picciano in ODS (piccianm@mail.nih.gov) for further information.

Dietary Supplement Label Database: ODS, in collaboration with National Library of Medicine, has awarded a contract to Abt Associates to build on an existing NLM database a repository of label information from the universe of dietary supplements available to American consumers

<http://ods.od.nih.gov/News/DSLDPilotAnnouncement.aspx>). ODS and other federal partners have long had an interest in research on the assessment of dietary supplement use by consumers. NLM is committed to providing consumers with ready access to valuable information about products available in the marketplace. The current contract is for a one-year feasibility study. Please contact Mr. Rich Bailen (bailenr@mail.nih.gov) or Dr. Johanna Dwyer (dwyerj1@mail.nih.gov) for further information.

UPDATE OF DNRC ACTIVITIES

Nutrition Education Subcommittee (NES). CAPT Jean Pennington, DNRC, provided an update of the activities of the NIH NCC NES. Since January 2008, the NES has reviewed (or forwarded for joint DHHS/USA review) 18 documents, 11 from NIH (1 each from ODS and WIN; 2 each from NHLBI, NICHD, and NCI; and 3 from NIA). Materials reviewed/forwarded since the last NCC meeting are:

- *How to Buy Series* (USDA/AMS)
- *Get Smart Tip Sheets* (CDC)
- *Core Nutrition Messages* (USDA/FNS)
- *Handbook for Dietary Guidance Review Process* (OPPHP)
- *Helping Your Overweight Child* (Spanish version) (WIN)

The DNRC listing of NIH nutrition education materials is available on the DNRC website (http://dnrc.niddk.nih.gov/nutrition_education/index.shtml). NCC members are requested to check the information on the website and provide any needed changes or new materials to Ms. Karen Regan, DNRC. The DNRC would appreciate receiving 10-20 copies of newer NIH nutrition-related publications for display in the DNRC Office. Please send them through interoffice mail to CAPT Pennington, Democracy 2, Room 629.

NEXT NCC MEETING

The next meeting will be October 2, 2008

ADJOURNMENT

The meeting was adjourned at 3:50 PM

LIST OF APPENDICES

Appendix A: NIH NCC Meeting Agenda for September 4, 2008

Appendix B: NIH NCC Meeting Attendees for September 4, 2008

Appendix C: Nanotechnology Research: Applications in Nutritional Sciences – Late-breaking symposium proposal, EB 2009

Appendix D: ODS Seminar Series, Fall Schedule

**APPENDIX A: NIH NUTRITION COORDINATING COMMITTEE MEETING
AGENDA**

1. **Welcome**..... Pam Starke-Reed
2. **Approval of Minutes of the July 3, 2008 meeting**.....Pam Starke-Reed
3. **Accident in translation: Ascorbic acid as a pharmacologic agent for disease treatment**.....Mark Levine, NIDDK
4. **The Keystone Center Food and Nutrition Roundtable Front-of-Package Nutrition Icon Program**.....Rachel Fisher, DNRC
Vincent DeJesus, FDA
5. **EB Nanotechnology Symposium** John Milner, NCI
6. **Reports from NCC Members and Liaisons**.....NCC Members
7. **ODPHP Activities Update**.....Kathryn McMurry, ODPHP/OS
8. **ODS Activities Update**Karen Regan, ODS/DNRC
9. **Current DNRC Update of Activities**.....DNRC Staff
 - Nutrition Education Subcommittee Update.....Jean Pennington*
 - International Committee Information.....Pam Starke-Reed/Dan Raiten*
 - HNRIM Update.....Jim Krebs-Smith/Karen Regan

Next Meeting - October 2, 2008

APPENDIX B: NCC MEETING ATTENDEES FOR SEPTEMBER 4, 2008

	Members Present	Members Absent	Alternates Present
<u>Chairperson:</u>	V Hubbard		P Starke-Reed
<u>NIH Members:</u>			
NCI	J Milner		
NHLBI	D Danford		
NIDCR		R Nowjack-Rayner	
NIDDK	C Miles		
NINDS		M Mitler	
NIAID	M Plaut		
NIGMS		S Somers	
NICHD	G Grave		D Raiten
NEI		N Kurinij	
NIEHS		E Maull	
NIA		J Hannah	
NIAMS		J McGowan	
NIDCD		B Wong	
NIMH		W Riley	
NIDA		G Lin	
NIAAA	R Breslow		
NINR	P Cotton		
NCCAM	L Duffy		
NCMHD	D Tabor		
NCRR	K Arora		
FIC		M Levintova	
NHGRI		S Basaric	
<u>NIH Liaison Members:</u>			
CC	N Sebring		
CIT		J Mahaffey	
CSR	S Kim		
NLM		S Phillips	
OBSSR	D Olster		
OC			
ODS		P Coates	
OD/ODP	B Portnoy		
OLPA			
ORWH			
PRCC		M Vogel-Taylor	
<u>Agency Liaison Representatives:</u>			
AHRQ		I Mabry-Hernandez	
CDC/NCCDPHP	D Galuska		
CDC/NCHS	M McDowell		
FDA	K Ellwood		S Blakely
HRSA	M Lawler		
IHS	T Brown		
ODPHP	K McMurry		
USDA	M Kretsch		D Klurfeld
DOD	K Friedl		

DNRC: R Fisher, S Frazier, K Regan

Guests: R Ballard-Barbash (NCI), C Davis (NCI), M Donovan (OS/ODPHPI), A Ershow (NHLBI), E Essery (OS/ODPHP), M Evans (NIDDK), T Smith (NIAMS), H McPeak (OS/ODPHP), E Trujillo (NCI), and S Welsh (USDA /CRSEES)

APPENDIX C

Nanotechnology Research: Applications in Nutritional Sciences Late breaking symposium proposal EB 2009, New Orleans

1) The title of this proposed symposium is “Nanotechnology Research: Applications in Nutritional Sciences” (see page 4 for draft proposal with presentation titles and suggested speakers).

2) Overall description and rationale for late breaking symposium: “Nanotechnology” is defined as the creation of functional materials, devices and systems through control of matter at the scale of 1 to 100 nanometers, and the exploitation of novel properties and phenomena at the same scale. This emerging field is on the forefront of breakthroughs for new and effective tools in the medical sciences, including personalized nutrition. New advances in nanotechnology offer the possibility of examining biological processes influenced by diet when limited by sampling issues. Uses for nanotechnology include development of nanoparticles for diagnostic and screening purposes (i.e., early detection of cancer), development of artificial receptors, DNA and protein sequencing using nanopores and nanosprays, manufacture of unique drug (and perhaps nutrient) delivery systems, as well as gene therapy and tissue engineering applications. It is conceivable that nanomachines able to circulate through the bloodstream, kill microbes, supply oxygen to hypoxic organs, or undo tissue damage could one day be delivered to the human body through medicines or even foods. Significant progress in the development of sensors for rapid detection of pathogens in foods or the environment has been made in part due to discoveries and tools of nanotechnology. For example, a real-time PCR-detection approach provided significant advancements to PCR-based methods for the rapid detection of food pathogens. Nanotechnology applications in nutrition research may assist with obtaining accurate spatial information of a nutrient or bioactive food component in tissue and low-level detection of essential and non-essential nutrients and metabolites, as well as increasing an understanding of nutrient and biomolecular interactions in specific tissues. In theory, such new technologies have the potential to improve nutritional assessment and measures of bioavailability and may help to identify and characterize molecular targets of nutrient activity and biomarkers of effect, exposure, and susceptibility. Specific applications of nanotechnology use in food and nutrition could include: modifying taste, color and texture of foods, detection of food pathogens and spoilage microorganisms, enhancing nutrition quality of foods, and novel vehicles for nutrient delivery.

We propose to invite four speakers with expertise in nanotechnology. The first speaker will provide an overview to set the stage about the application of nanotechnology in research, particularly focusing on how nanotechnology will be used to guide new prevention and therapeutic strategies for nutrition scientists. The second speaker will discuss the use of quantum dots to visualize cellular processes. Our third presentation will focus on nanotechnology applications for increasing bioavailability of bioactive food components in new food products. The last invited speaker will discuss targeted delivery

of dietary factors using nanotechnology. A panel will follow the invited speakers from various federal agencies to discuss research opportunities and challenges in nanotechnology, foods and health.

The learning objectives that are likely to be achieved by this symposium include: enhancing the understanding of applications of nanotechnology for use in nutrition research, characterizing issues related to targeting delivery of nutrients into the human body, discussing research and funding opportunities in nanotechnology, foods and health, and identifying safety/regulatory issues in nanotechnology, foods and health.

3) Timeliness and breadth of interest to membership:

New and emerging technologies have the potential to advance the science of nutrition by assisting in the discovery, development, and delivery of several intervention strategies to improve health and reduce the risk and complications of several diseases. Some of the research areas that might benefit from learning about these emerging technologies include research that aims to: 1) identify sites of action (molecular targets) for bioactive food components, 2) characterize biomarkers that reflect exposure, response, and susceptibility to foods and their components, and 3) identify new target delivery systems for optimizing health. Thus, we believe the proposed symposium would be of interest to a large and diverse group of nutrition researchers tackling various health and disease challenges. We believe that several Research Interest Sections (RIS) will be interested in this session. Both the Dietary Bioactive Components RIS and the Nutrition Translation from Bench to Consumer Research RIS have agreed to co-sponsor this symposium.

4) Uniqueness and need to cover the topic:

To highlight emerging nanotechnologies and to encourage collaboration between various disciplines, with the aim of advancing nutritional sciences, we propose a symposium to be convened at Experimental Biology 2009 on the topic “Nanotechnology Research: Applications in Nutritional Sciences.” This session will present a cross-section of exciting and emerging nanotechnology approaches for the study of nutrition and chronic disease prevention.

A symposium entitled “New Technologies for Nutrition Research” was selected for the 2003 Experimental Biology Meeting on April 14, 2003, San Diego, CA. That meeting highlighted emerging technologies and approaches for nutrition science research, including nanotechnology and did not focus entirely on the topic of nanotechnology, foods and health. Recent advances in nanotechnology and nanomedicine make this proposed symposium timely and of importance to nutrition researchers so that they may become familiar with the approaches that may soon be available for use.

5) ASN Research Interest Group: Both the Dietary Bioactive Components RIS and the Nutrition Translation from Bench to Consumer RIS have expressed an interest in sponsoring the symposium.

6) Symposium Organizer:

NIH Nutrition Coordinating Committee (NCC), Nanotechnology and Nutrition Subgroup members:

Dr. Crystal McDade-Ngutter (NIH/DNRC); Dr. Pamela Starke-Reed (NIH/DNRC); Dr. Van Hubbard (NIH/DNRC); Dr. Nancy Miller (NIH/OD); Dr. Pothur R Srinivas (NIH/NHLBI); Dr. Joseph Betz (NIH/OD); Dr. Johanna Dwyer (NIH/OD); Dr. John Milner (NIH/NCI); Dr. Sharon Ross (NIH/NCI); Dr. Karl Friedl (DoD).

Co-Chairs:

Dr. Sharon Ross
Program Director
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Division of Cancer Prevention
National Cancer Institute
National Institutes of Health
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Email: srinivap@mail.nih.gov

7) Budgetary plan: This symposium will be supported by funds from the participating federal agencies.

Nanotechnology Research: Applications in Nutritional Sciences
Late Breaking Symposium
EB 2009 New Orleans
Co-Chairs: Pothur Srinivas (NHLBI) and Sharon Ross (NCI)
Tentative Agenda

1. Introduction: co-chairs (5 minutes)
2. “Nanotechnology and Nanomedicine for Developing New Prevention and Therapeutic Strategies, including Nutrition.” Dr. Mark Ratner, Northwestern University (25-30 minutes)
3. “Quantum Dots and Individual Response to Nanoparticles.” Speaker to be determined (15- 20 minutes)
4. “Development of Systems for Increasing Bioavailability of Bioactive Food Components in New Food Products.” Speaker to be determined (15-20 minutes)
5. “Targeted Delivery of Dietary Factors Using Nanotechnology.” Speaker to be determined (15- 20 minutes)
6. Panel Discussion: “Research Opportunities and Challenges in Nanotechnology, Foods and Health.” Federal government representatives (NIH/DNRC- Dr. Pamela Starke-Reed, DoD- Dr. Karl Friedl, USDA- Dr. Hongda Chen, FDA-Dr. Mitch Cheeseman (or designee)). (25-30 minutes)

**Office of Dietary Supplements
National Institutes of Health
2008 Fall Seminar Series Schedule**

Wednesday, September 10, 2008

Name: **Scott M. Smith, PhD**
Nutritionist, Manager for Nutritional Biochemistry, NASA Johnson Space Center,
Houston, TX

Topic: "Vitamin D and beyond: Lessons from the International Space Station
and other remote environments"

Location: Executive Plaza North (EPN) 6130 Executive Blvd, Room J, Rockville, MD 20852

Time: 11:00 am – 12:00 pm

Wednesday, October 15, 2008

Name: **Kenneth D. Setchell, PhD**
Professor of Pediatrics, Clinical Mass Spectrometry facility at Cincinnati
Children's Hospital Medical Center, Cincinnati, OH

Topic: "Unique Equol metabolites of soy isoflavones--Biological properties physiological
behavior and clinical significance"

Location: Executive Plaza North (EPN), 6130 Executive Blvd. Room J, Rockville, MD 20852

Time: 11:00 am – 12:00 pm

Wednesday, November 5, 2008

Name: **Eckhard E. Ziegler, MD**
Professor of Pediatrics, University of Iowa Children's Hospital, Iowa City, IA

Topic: "Vitamin D Status of Infants"

Location: Executive Plaza North (EPN), 6130 Executive Blvd. Room J, Rockville, MD 20852

Time: 11:00 am – 12:00 pm

Wednesday, December 3, 2008

Name: **Christopher T. Sempos, PhD**
Nutritional Epidemiologist, Office of Dietary Supplements, National Institutes of
Health, Bethesda, MD

Topic: "PTH and 25(OH) Vitamin D: The Search for an Inflection Point"

Location: Executive Plaza North (EPN), 6130 Executive Blvd. Room J, Rockville, MD 20852

Time: 11:00 am - 12:00 pm