



# Food Safety Specialty Section NEWSLETTER



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## President's Message

Bob Roth

It was not too long ago that specialty sections struggled with what their roles were in the SOT. Over the past several years, these have not only become better defined, but the potential for sections to make the Society stronger has increased. At the specialty section presidents' meeting in San Francisco, Council Liaison Ken Wallace reviewed Council's hopes for how the sections will contribute to the Society.

**FS<sup>3</sup>: Nutrition for the Mind.** One important area is education. This begins with developing proposals for sessions at the annual meeting, including symposia, workshops and continuing education (CE) courses. The deadline for these is shortly after the March meeting, but developing a session proposal takes time, so please start early if you are thinking of submitting one. **Joel Mattsson** is this year's point person for proposal suggestions from FS<sup>3</sup> (see below), and he and other Executive Committee members will be glad to help guide you through the process. The CE Committee is especially interested in suggestions that interface with regulation/risk assessment, toxicogenomics/proteomics and safety pharmacology, but all suggestions are welcome.

Council is also interested in members developing short, national conferences dealing with "contemporary concepts in toxicology." Topic areas should be of current interest, "cutting-edge" and attract about 100 enrollees. Council

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## Congratulations 2001 Student Award Winners!



**Sandy Bigelow presents awards to students  
Hongjun Liu, Ofia Hodoh and Steve Yee.**

## Attention Students!

*FS<sup>3</sup> Offers both Abstract Merit Awards  
and Travel Awards*

*See Page 3 for complete awards  
information for the 2002 annual meeting*

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**Start preparing your proposals for the  
2003 Meeting now! Details are on Page 4**

encourages interdisciplinary topics that might be developed in conjunction with another specialty section and is hoping that each specialty section will sponsor such a conference every 2 or 3 years. Guidelines for this relatively new initiative are available on the SOT webpage.

Another education vehicle for FS<sup>3</sup> is this newsletter. Thanks again this year to **Keith Tolson** who has been willing to devote time to compiling, formatting and processing. It is my hope that the newsletter will be used increasingly as a forum for sharing information about food safety topics of current interest and for “debate” about scientific and regulatory issues pertaining to agents in foods. The former could include short, informational articles (approx. 1 page) about naturally occurring food-borne toxins, pesticides, changes in regulations and their impacts, risk perception, etc. A goal of these brief communications should be to raise awareness of FS<sup>3</sup> members about specific toxicants and emerging food-related issues and to provide a few pertinent references to which readers can turn for more detailed information. Such pieces might be particularly useful for students who may be developing an interest in food toxicology. If you have a contribution, please send it electronically to **Bryan Delaney**.

The student awards represent another important activity of FS<sup>3</sup>. This year we will have awards based on meritorious abstracts as well as awards that will help enable students to travel to the annual meeting. **Sandy Bigelow** is the contact person for the awards program (see article below).

#### **Nominate Your Colleagues for Far Too Much Work.**

In addition to its role in education, FS<sup>3</sup> has been asked by Council to suggest individuals who would make excellent members of NIH study sections. At stake is ensuring a member composition of review groups that maintains sensitivity to toxicology-oriented proposals. Council will review these and make appropriate nominations to the NIH. This is an opportunity for us to influence the composition of review groups that are critical to the success of our academic SOT members. Suggestions should be forwarded to any member of Council. FS<sup>3</sup> also responds to Council’s call for volunteers to serve on working groups to write position papers. **Mike Bolger**, **Bob Hollingworth** and **Steve Taylor** are FS<sup>3</sup> members working with others on a position paper related to genetically modified foods.

#### **Fewer Potato Chips at the Next FS<sup>3</sup> Business Meeting?**

A note about an issue that could have an important impact on FS<sup>3</sup>: As you probably know, SOT Council has instituted fiscal changes for specialty sections. These included eliminating section responsibility for supporting speakers at the annual meeting, eliminating subsidies to sections and raising section dues. This action was taken by Council in part to force sections to be fiscally

responsible. Elimination of section support for speakers is good news for the sections, but the other actions entail challenges. Although our awards have been financed entirely through generous donations, other major expenditures such as for the business meeting (i.e., food, mostly), executive committee meeting and newsletter costs, have been financed through the annual SOT subsidy. We will now have to meet these expenses solely through dues income. I am in favor of encouraging fiscal responsibility; however, the new policy may bring difficulties, because the largest expenditures are out of the control of the sections. For example, room and food costs for the annual FS<sup>3</sup> business meeting are negotiated with the hotels by the SOT Office, and we have no control over what these will be. Inasmuch as these major expenditures are highly variable (e.g., business meeting food assessments were 40% greater in San Francisco than in Philadelphia) and not under our control, and since income is now fixed by dues, break-even budgetary planning will be a challenge. Since some of the costs are independent of membership size, the new policy promises to be especially difficult for smaller specialty sections such as FS<sup>3</sup>.

#### **A Membership Issue, Particularly Concerning Students.**

This fiscal issue is one of two reasons for finishing my message with a comment about membership. Membership in many of the specialty sections, including ours, has declined somewhat in the past several years. The recent establishment by Council of a specialty section dues increase for full members has the potential for a negative influence on section membership numbers. Since section income now depends on membership dues, one way FS<sup>3</sup> can deal successfully with the new fiscal arrangement is to increase membership. In addition to this fiscal prompt to do so, I believe we can be a more vital and contributory section with a greater impact on the Society by increasing the number of FS<sup>3</sup> members. I ask that you encourage colleagues to check the FS<sup>3</sup> box on the membership form this year and to participate in FS<sup>3</sup> activities (see above). Although this should be a general effort for current members, a group that we should target is trainees. For a relatively small section, we have had generous donors that have made FS<sup>3</sup> attractive from a student awards perspective. The section also provides students with an opportunity to meet and network with potential future employers and to gain industry and government perspectives on food safety issues that they may not receive in academia. However, the number of students in our section is small. Many students and faculty at academic institutions work with food-borne chemicals but do not seem to consider themselves aligned with “food safety.” We need to remind them of the relevance of their work and encourage them to join. Please join me in helping to increase FS<sup>3</sup> membership by encouraging your colleagues and students to become members of our section.

Thanks to those of you who have made contributions to the Society through FS<sup>3</sup>. If you have suggestions that will strengthen our section, please contact one of the members of the Executive Committee.

## FS<sup>3</sup> Graduate Student Research and Travel Awards

The Food Safety Specialty Section has several awards for students conducting research on food-borne xenobiotic agents. These will be awarded at the Annual SOT meeting in Nashville, Tennessee, in March, 2002, and are divided into two categories: 1. merit-based student abstract awards and 2. travel awards:

### Outstanding Graduate Student Research Awards

In 2002, FS<sup>3</sup> anticipates conferring two awards based on meritorious graduate student abstracts:

- a) *The Taylor & Francis Award*, sponsored by the Taylor & Francis Publishing Co., is a cash award and a plaque for an outstanding abstract submitted by a graduate student.
- b) *The Frank C. Lu Award for Outstanding Graduate Student* consists of \$500 cash, a \$100 gift certificate from Taylor and Francis and a recognition plaque.

The evaluation criteria for each of the above awards includes adequacy of the methodology/approach, uniqueness/creativity inherent in the project, thoroughness of investigation, statement of hypothesis, soundness of judgment used in interpretation of results, and relevance to food safety. Consideration for judging will be limited to the information presented at the 2002 meeting.

Graduate Student Research Award applications must include *four* copies of each of the following items: (1) abstract, (2) a short summary of the work presented at the annual meeting including its purpose, rationale, statement of significance and relevance to food safety and (3) a statement (no more than three sentences) describing the student's role in the project. The application should be signed by the student and cosigned by the student's major research advisor. The summary is limited to two pages (on 8 1/2" by 11" paper, no smaller than 10 point font—strictly enforced).

### Graduate Student Travel Awards

For 2002, cash awards will be given to at least three students to help defray travel expenses to the 2002 SOT Meeting in Nashville. A donation from Dr. George Burdock has made these awards possible. The travel awards are open to all full-time graduate students who will attend the Meeting and whose research interest involves the toxicology of food-borne agents. Students early in their graduate programs who have not yet attended an SOT meeting and who do not have funding to attend this year's meeting are particularly encouraged to apply.

This award, which offers up to \$500.00 to cover expenses not met by other funding, is **not dependent upon submission of an abstract and does not preempt a student from applying for other travel support**. However, if another award is received, the FS<sup>3</sup> travel award will supplement it up to but not to exceed the student's reasonable and documented travel and registration expenses. Also, if an award is made to a student not yet a member of FS<sup>3</sup>, the awardee must agree to join the Specialty Section for the succeeding year.

To apply for a travel award, the applicant must submit a letter of request stating (1) that the student is enrolled and in good standing in a doctoral training program, (2) whether the student and his/her major advisor is currently a member of FS<sup>3</sup>, (3) briefly (no more than 1/2 page), how the student's research relates to food

toxicology/food safety, (4) whether the student has received a travel award previously to attend an annual SOT meeting, and (5) if currently not a member of FS<sup>3</sup>, whether the student agrees to become an FS<sup>3</sup> member upon the next membership renewal deadline. The application letter should be signed by the applicant and cosigned by his/her major academic advisor.

**To apply either for a student abstract award or a travel award**, please send the required application materials to:

### Dr. Sanford Bigelow, Chair

FS3 Awards Committee  
Sandy Bigelow  
38 Dunbar Way  
Mahtomedi, MN 55115-2810

Please address questions to Dr. Bigelow at bigs928@aol.com. **The deadline for all submissions is Tuesday, January 15, 2002, and must be postmarked by this date.** The award committee will review the applications before the SOT Annual Meeting, and will announce the awardees at the FS<sup>3</sup> Business Meeting in March. The winners will be informed prior to the Meeting.

## Outstanding Graduate Students Awards Program Sandy Bigelow

The FS<sup>3</sup> student award winners for 2001:

Frank C. Lu Award: **Ofia Hodoh**, Univ. of Georgia. Ofia received \$500 cash, a plaque, and a blue ribbon for her poster entitled "Health risks to recreational hunters consuming radiocesium contaminated deer and hogs from the US DOE's Savannah river site".

Taylor & Francis Award: **Hongjun Liu**, Iowa State Univ. Taylor & Francis gave Honjun \$500 cash, a gift certificate for book purchases, a plaque, and a blue ribbon for the poster entitled "Feeding rats fumonisin B1 reacted with glucose doesn't promote hepatocarcinogenesis and maintains normal sphinganine:sphingosine ratio".

Burdock Award: three winners splitting \$2,500 three ways. **Steven Yee**, Michigan State Univ., \$833.34; **Ofia Hodoh**, Univ. of Georgia, \$833.33; **Hongjun Liu**, Iowa State Univ., \$833.33.

We had a successful year with regard to these awards. The Awards Committee is proud of the level and extent of work that was conducted by these students. FS<sup>3</sup> is grateful to **Dr. Lu** and **Ms. Labbate of Taylor & Francis** for their generosity and support of the FS<sup>3</sup> student awards program. The travel awards were established and generously funded by FS<sup>3</sup> member, **Dr. George Burdock**, Burdock & Associates, Inc., Vero Beach, FL. We also thank the students for their participation and look forward to another successful program in 2002.



Steve Yee, Bob Roth and Madhusudan Soni discuss the safety aspects of hops in San Francisco

### Update on FS<sup>3</sup> Program for SOT 2002 - Nashville

**Jim Pestka**

This past May, FS<sup>3</sup> submitted (sponsored or cosponsored) seven proposals for Symposia, Workshops, and CE Courses. Co-sponsoring sections included Comparative and Veterinary, Immunotoxicology, Metals, Regulatory and Safety Evaluation, and Toxicology and Exploratory Pathology Specialty Sections. Two proposals were approved.

One approved proposal will be a Workshop entitled "Approaches to the Assessment of Food Allergy" which is cosponsored with Immunotoxicology and co-chaired by GS Ladics (Haskell Laboratory, DuPont) and W Dong, (FDA): Presentations include: 1. Allergy Assessment of Genetically Modified and Novel Foods: What are the Issues?; 2. In Vitro and In Silico Approaches to the Assessment of Allergenic Activity; 3. Animal Models for Measurement of Allergenic Potential: The BALB/c Mouse; 4. Animal Models for Measurement of Allergenic Potential: The Brown Norway Rat; 5. Animal Models for the Measurement of Allergenic Potential: Non-Rodent Methods.

The second approved proposal will be a CE Course entitled "Toxicology of Naturally Occurring Toxins—Don't Mess with Mother Nature!" which is cosponsored with the Comparative and Veterinary Toxicology, and Exploratory Pathology Specialty Sections and co-chaired by F.Oehme

(Kansas State U.) and F.Coppock (Alberta Research Council). Lecture topics will include: 1. Rattlesnake and Gila Monster Envenomations; 2. Venomous Arthropods; 3. Plant Poisons; 4. Herbal Toxicity.

FS<sup>3</sup> members should remember that *proposals for the 2003 Annual Meeting are due immediately after the 2002 SOT Meeting*. So now is the best time to start discussing and fleshing out proposals with colleagues in FS<sup>3</sup> and other sections. These can be finalized into strong contenders next March. Please contact Joel Mattsson at [jlmattsson@dowagro.com](mailto:jlmattsson@dowagro.com) with your ideas and questions.

### Many Thanks to Our Supporters!

This year's contributors to the Food Safety Fund of the Toxicology Education Foundation (TEF) are: **James Bruckner, George Burdock, Koichi Ebino, Robert Krieger, Narender Kumar, Elise Malecki, Steven Mann, Timothy Pastoor, Kenneth Schrankel, Pi-Yun Tsai and Kenneth Voss.**

Donations are used to support student awards (unless otherwise specified) and can be sent to the SOT office or designated at the time of membership renewal.



**Bob Roth thanks outgoing FS<sup>3</sup>  
President Joe Scimeca for his service**

### A Word from the Treasurer

Elizabeth Jeffery

At the start of the year, we had a balance brought forward of \$5,404, about 40% of what we carried over 3 years ago. Income to the Section is as section dues and interest on the balance. Three grants for student scholarships pass through the Section without impact on the budget. Major expenses are for the newsletter, one executive committee meeting and refreshments for the general meeting. Unfortunately, refreshment costs have skyrocketed, leading to the slow decline of funds. We have two key ways in which to increase our budget: new members and donations. Our President, Bob Roth, has already emphasized the need for **new members**. As for **donations**, while we are not permitted to lobby industries that presently give to National SOT, if you or a colleague works for a company that is concerned about food safety and does not presently support National SOT, then please ask them if they would consider donating to our specialty section. We would be happy to thank them publicly.

### Newsletter Contacts

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Thanks to all the contributors. Know of an upcoming meeting, a new food toxicology book, something brewing at the FDA? Share it through the FS<sup>3</sup> Newsletter. The FS<sup>3</sup> Newsletter is available on the World Wide Web at <http://www.sot.org>.

### Ballot Outcome for the 2001-2002 FS<sup>3</sup> Executive Council

For those individuals that may have missed this year's business meeting in San Francisco, the following were the newly elected officers:

*Vice President-Elect*

Joel Mattsson [jlmattsson@dowagro.com](mailto:jlmattsson@dowagro.com)

*Secretary/Treasurer*

Elizabeth Jeffery [ejeffery@uiuc.edu](mailto:ejeffery@uiuc.edu)

*Councilor*

Tom Vollmouth [thomas.vollmuth@pepsi.com](mailto:thomas.vollmuth@pepsi.com)

Bryan Delaney [Bryan\\_Delaney@cargill.com](mailto:Bryan_Delaney@cargill.com)

Congratulations to these individuals and thanks to our outgoing president Joe Scimeca and Councilors Richard Lane, Ken Voss and Lori Fix for their service to FS<sup>3</sup>.

My wife left me, my dog died of food poisoning, I lost my job, my truck broke down, but I'll see you in Nashville!



## FOOD SAFETY NEWS

### Dioxin Measures in Foodstuffs Proposed by the European Commission

by Frans Verstraete<sup>(a)</sup>, Marcus Cooke<sup>(b)</sup>, and George Clark<sup>(c)</sup>

"This article expresses exclusively the author's personal opinions and does not, in any case, bind the European Commission."

The European Commission (EC) has proposed a comprehensive set of dioxin measures designed to limit the presence of dioxin-like compounds in feed and foodstuffs. Backed by several years of monitoring<sup>(1,2)</sup> and risk evaluation<sup>(2,3)</sup>, the European Commission proposed a set of limits in foodstuffs shown in Table I as part of this comprehensive strategy.

TABLE I. PROPOSED EC DIOXIN/FURAN LEVELS IN FOOD

<u>EU Food Measures, pg/g TEQ<sup>(4)</sup></u>	<u>Maximum Levels</u>	<u>Basis (Notes)</u>	<u>Action Levels</u>	<u>Basis</u>
<b>Meat and meat product originating from</b>				
Ruminants (bovines, sheep, goats, <i>etc.</i> )	<b>3</b>	Fat <sup>(5,6)</sup>	<b>2</b>	Fat
Poultry and farmed game	<b>2</b>	Fat <sup>(5,6)</sup>	<b>1.5</b>	Fat
Pigs	<b>1</b>	Fat <sup>(5,6)</sup>	<b>0.6</b>	Fat
Liver and derived products	<b>6</b>	Fat <sup>(5,6)</sup>	<b>4</b>	Fat
Muscle meat of fish and fishery thereof	<b>4</b>	Fresh Weight <sup>(5,6)</sup>	<b>3</b>	Fresh Weight products and products
Milk and milk products	<b>3</b>	Fat <sup>(5,6)</sup>	<b>2</b>	Fat
Hen eggs and egg products	<b>3</b>	Fat <sup>(5,6)</sup>	<b>2</b>	Fat
<b>Oils and fats</b>				
Animal fat				
From ruminants	<b>3</b>	Fat <sup>(5)</sup>	<b>2</b>	Fat
From poultry and farmed game	<b>2</b>	Fat <sup>(5)</sup>	<b>1.5</b>	Fat
From pigs	<b>1</b>	Fat <sup>(5)</sup>	<b>0.6</b>	Fat
Mixed animal fat	<b>2</b>	fat <sup>(5)</sup>	<b>1.5</b>	Fat
Vegetable oil	<b>0.75</b>	Fat <sup>(5)</sup>	<b>0.5</b>	Fat
Fish oil intended for human consumption	<b>2</b>	Fat <sup>(5)</sup>	<b>1.5</b>	Fat
<b>Fruit</b>	<b>None</b>		<b>0.4</b>	Product
<b>Vegetables</b>	<b>None</b>		<b>0.4</b>	Product
<b>Cereals</b>	<b>None</b>		<b>0.4</b>	Product

These draft measures were announced in a press release on July 20, 2001<sup>7</sup>. The goal of the EC dioxin strategy is to bring European dietary exposure below a Tolerable Weekly Intake value (TWI) for dioxin-like compounds, 14 pg TEQ/kg bw/week (SCF)<sup>3,8</sup> or a Tolerable Monthly Intake (TMI) of 70 pg TEQ/kg bw/month (FAO/WHO, JECFA)<sup>8</sup>.

It is expected that these measures will be approved in autumn 2001, and if approved they will be implemented starting January 1, 2002.

*EC measures in food consist of three parts: Maximum Levels, Action Levels, and Target Levels.*

**Maximum Levels** - Maximum Levels in food are shown in Table I. Maximum Levels will be set by amending Commission Regulation EC/466/2001 on certain contaminants in foodstuffs. The limits are proposed at a strict but feasible level, and any foodstuff exceeding these maximum limits would be considered unsuitable for consumption. Maximum Levels would be in force from January 1, 2002 and a revision clause is foreseen with the aim of setting lower levels by the year 2006.

**Action Levels** - Action Levels in food are also shown in Table I. Action Levels are to be considered as an “early warning” tool of higher than desirable levels of dioxin in foodstuffs, levels that trigger investigations to identify, then reduce, or eliminate sources of contamination.

**Target Levels** - Target Levels are levels to be achieved to bring human exposure below a Tolerable Weekly Intake value of 14 picogrammes dioxins per kg body weight. Target levels will be set as soon as sufficient scientific data become available.

The European Commission is proposing a very broad set of standards for dioxin and furan in foods. At the current time coplanar PCB are not included in the proposed regulations, but it is foreseen that the proposed Maximum Limits would be reviewed in 2004 with a view of including coplanar PCB.

There has been and there will be extensive discussion of these dioxin measures by everyone involved: food safety professionals, government officials, food industry representatives, and consumers. This set of regulations is a new and comprehensive way the European Commission has chosen to address the presence of dioxin-like substances in human foodstuffs.

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2. "Assessment of Dietary Intake of Dioxins and Related PCBs by the Population of EU Member States", Reports on Tasks for Scientific Cooperation Report of Experts Participating in Task 3.2.5, June 7, 2000, 115 pp. Brussels, Belgium.  
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and  
"Opinion of the Scientific Committee on Food on the Risk Assessment of Dioxins and dioxin-like PCBs in Food – Update based on new scientific information available since the adoption of the SCF opinion of 22<sup>nd</sup> November 2000" European Commission, Health and Consumer Protection Directorate, Scientific Committee on Food, May 30, 2001. [http://europa.eu.int/comm/food/fs/sc/scf/out90\\_en.pdf](http://europa.eu.int/comm/food/fs/sc/scf/out90_en.pdf)
4. Upperbound concentrations are calculated assuming that all values of the different congeners less than the limit of determination are equal to the limit of determination.
5. These maximum levels shall be reviewed for the first time before 31 December 2004 in the light of new data on the presence of dioxins and dioxin-like PCBs, in particular with a view to the inclusion of dioxin-like PCBs in the levels to be set and will be further reviewed before 31 December 2006 with the aim of significantly reducing the maximum level.
6. The maximum levels are not applicable for food products containing < 1 % fat.
7. "Commission proposes strategy to reduce dioxin in food and feed", Press Release, European Commission, Brussels, July 20, 2001.  
[http://europa.eu.int/comm/dgs/health\\_consumer/library/press/press169\\_en.pdf](http://europa.eu.int/comm/dgs/health_consumer/library/press/press169_en.pdf)
8. Report of the 57<sup>th</sup> meeting of the Joint FAO/WHO Expert Committee of Food Additives (JECFA), Rome, June 5-14, 2001), p. 24 -40.  
<http://www.who.int/pcs/jecfa/Summary57-corr.pdf>

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**George C. Clark, Ph. D.**, is the President of XDS Inc., a company specializing in developing new and innovative bioassays like CALUX (Chemically Activated Luciferase Expression) for a broad range of species, including dioxin ([georgeclark@dioxins.com](mailto:georgeclark@dioxins.com)).