



**PACIFIC FISHERIES TECHNOLOGISTS**  
**56<sup>TH</sup> ANNUAL MEETING**  
**February 20 – 23, 2005 – Marriott Pinnacle Hotel, Vancouver, BC**  
[www.PFT2005.org](http://www.PFT2005.org)

**PROGRAM**

(S = Student presentation)

**Sunday, February 20<sup>th</sup> 4:00 pm to 6:00 pm — Registration**  
**6:00 pm to 9:00 pm — President's Reception**

**Monday, February 21<sup>st</sup>, 8:30 am to 8:45 am — Welcome**

- Ralph Drew, Canadian Fishing Company, PFT President.

**Monday, February 21<sup>st</sup>, 8:45 am 9:00 am — Opening Remarks**

- Honourable John van Dongen, Minister of Agriculture, Food and Fisheries.

**Monday, February 21<sup>st</sup>, 9:00 am to noon — Global Sustainability**

Session Chair – Ralph Drew, Canadian Fishing Company

- Keynote Speaker — Dr. John Nightingale, President, Vancouver Aquarium.
- Whose fish are they anyway? Salmon sustainability in an unsustainable world. Paul Kariya, Pacific Salmon Foundation.
- Status of Marine Stewardship Council fisheries certifications from Baja California, Mexico to Alaska. Jim Humphreys, Marine Stewardship Council.
- Seafood traceability in British Columbia, How ready are we? Brian Emmett, Jason Clarke, and Lynton Burger, Archipelago Marine Research Ltd.

10:30 am - 10:45 am — Break

- Sustainability, food security, and fish technology in ASEAN countries. Leonard G. Limpus, L.G. Limpus and Associates.
- Panel Discussion: Global Sustainability. Lucina Lampila (Prayon Inc.), Facilitator

**Monday, February 21<sup>st</sup>, 12:00 pm - 1:00 pm — Lunch**

## Monday, February 21<sup>st</sup>, 1:00 pm to 4:30 pm — Food Safety & Nutrition

Session Co-Chair – Pamela Tom, University of California Davis

- Process verification & HACCP monitoring considerations for cooked, ready-to-eat seafood products. Joe Frazier, National Food Processors Association.
- Norovirus gastroenteritis associated with oyster consumption in British Columbia in 2004. L. McIntyre<sup>1</sup>, L. MacDougall<sup>2</sup>, S. Berger<sup>2</sup>, K. Schallie<sup>3</sup>, E. Buenaventura<sup>3</sup>, S. Liem<sup>3</sup>, A. McNabb<sup>1</sup>, J. Isaac-Renton<sup>1</sup>, and M. Petric<sup>1</sup>; <sup>1</sup>Laboratory Services, BC Centre for Disease Control (BCCDC), <sup>2</sup>Epidemiology Services, BCCDC, <sup>3</sup>Canadian Food Inspection Agency.
- A direct-plating procedure for detecting *Vibrio parahaemolyticus*. Jingyun Duan<sup>S1</sup>, Chengchu Liu<sup>2</sup>, and Yi-Cheng Su<sup>1</sup>; <sup>1</sup>Oregon State University Seafood Laboratory, <sup>2</sup>College of Food Science and Technology, Shanghai Fisheries University, China.
- Minimizing *Vibrio parahaemolyticus* illnesses from oysters – BC's proactive approach to risk management. Klaus Schallié, Canadian Food Inspection Agency.
- Survival of *Listeria monocytogenes* on seafood processing gloves and its reduction with electrolyzed oxidizing water. Chengchu Liu<sup>1</sup> and Yi-Cheng Su<sup>2</sup>; <sup>1</sup>College of Food Science and Technology, Shanghai Fisheries University, China, <sup>2</sup>Oregon State University Seafood Laboratory.

2:30 am - 2:45 pm — Break

Session Co-Chair – Joe Frazier, National Food Processors Association

- Flourishing the seafood processing industry through certification. Johanna Oehling, National Seafood Sector Council.
- Occurrence of *Ichthyophonus* in Alaskan fish species. Don Kramer, University of Alaska.
- Metal packaging for salmon - Global needs and industry responses. Gerald Johnson, Metal Food Container Operations, Ball Corporation.
- Application of antimicrobial ice for the reduction of foodborne pathogens on the surface of fish. Dong-Hyun Kang, Joong-Han Shin, and Su-sen Chang, Department of Food Science and Human Nutrition, Washington State University.
- Omega-3 fatty acids of different Pacific fish species. David D. Kitts, Minh Dieu Huynh, and Chun Hu, Food, Nutrition, and Health Program, University of British Columbia.
- A survey to investigate the knowledge of the young generation in Turkey relating to health aspects of fish consumption. Sevim Kose, Gamze Can, and Serkan Koral, Karadeniz Technical University, Turkey.

## Monday, February 21<sup>st</sup>, 4:30 pm to 5:30 pm — Poster Session

Session Chair – Paulli Bodmer, J.S. McMillan Fisheries Ltd.

- Effects of aflatoxin B<sub>1</sub> and fumonisin B<sub>1</sub> on immune system in white shrimp (*Litopenaeus vannamei*). Ana Laura Mexia-Salazar<sup>S1</sup>, Jorge Hernández-López<sup>2</sup>, Armando Burgos-Hernández<sup>1</sup>, Mario O. Cortez-Rocha<sup>1</sup>, and Josafat Marina Ezquerra-Brauer<sup>1</sup>; <sup>1</sup>Universidad de Sonora, Mexico, <sup>2</sup>Centro de Investigaciones Biológicas del Noroeste, Mexico.
- Electronic monitoring - A new tool for sustainable fisheries. Brian Emmett and Howard McElderry, Archipelago Marine Research Ltd.
- Search for anti-mutagenic activity in marine species from the Sea of Cortes. Griselda Wilson-Sánchez<sup>S</sup>, Esri Juárez, Josafat-Marina Ezquerra-Brauer, Carlos Velásquez-Contreras, and Armando Burgos-Hernández, Universidad de Sonora, Mexico.
- Recovery and characterization of sardine oil extracted by pH shifting. Tomoko Okada<sup>S</sup> and Michael Morrissey, Oregon State University Seafood Laboratory.
- *Kudoa* spore counts as a potential indicator of processing characteristics of Pacific hake (*Merluccius productus*) fish mince. Anusha G.P. Samaranayaka<sup>S</sup>, Thomas C.W. Ho and Eunice C.Y. Li-Chan, Food, Nutrition, and Health Program, University of British Columbia.
- Autolysis-assisted production of protein hydrolysates with antioxidative properties from Pacific hake (*Merluccius productus*) muscle. Anusha G.P. Samaranayaka<sup>S</sup> and Eunice C.Y. Li-Chan, Food, Nutrition, and Health Program, University of British Columbia.
- Gonad meals from Alaska's seafood by-products. S. Plante<sup>1</sup>, S. Smiley<sup>1</sup>, A.C.M. Oliveira<sup>1</sup>, and P.J. Bechtel<sup>2</sup>; <sup>1</sup>Fishery Industrial Technology Center, University of Alaska Fairbanks, <sup>2</sup>USDA-ARS, SARU, University of Alaska, Fairbanks.
- Optimizing the production of enzymatic fish protein hydrolysates from Pacific hake (*Merluccius productus*). Mohammed Abu Ali Khan and Eunice C.Y. Li-Chan, Food, Nutrition, and Health Program, University of British Columbia.
- Investigation of *Kudoa* infection of Pacific hake using polymerase chain reaction (PCR). Guangtao Meng and Eunice C.Y. Li-Chan, Food, Nutrition, and Health Program, University of British Columbia.
- Evaluation of electrolyzed water processing on increasing quality and shelf life of raw oyster. Tingting Ren<sup>S</sup> and Yi-Cheng Su, Oregon State University Seafood Laboratory.
- Biochemical characterization of an isoform of chymotrypsin from the viscera of Monterey sardine (*Sardinops sagax caerulea*). Idania Emedith Quintero-Reyes<sup>S</sup>, Francisco Javier Castillo-Yáñez and Ramón Pacheco-Aguilar, Centro de Investigación en Alimentación y Desarrollo, Universidad de Sonora, México.
- Direct mercury analysis in the CFIA Burnaby Laboratory. Eloida Marcos, Greg Riddell, Crissa Villamayor, Lucilinda Pante, Harjite Grewal, and Laura Mervyn, Canadian Food Inspection Agency, Burnaby Laboratory.

## Monday, February 21<sup>st</sup>, 6:30 pm — “Taste of the Orient” Seafood Dinner

## **Tuesday, February 22<sup>nd</sup>, 8:30 am to 10:30 am — Consumer Awareness**

Session Chair – Randy Rice, Alaska Seafood Marketing Institute

- New marketing challenges for wild BC salmon. Grant Snell, BC Salmon Marketing Council.
- Evaluating consumer preference for Pacific Northwest raw oysters. Anna Marin, Preetha Jayasingh, and Koei Kudo, Oregon State University Food Innovation Center.
- Where the land ends and the ocean begins: The WCVI Aquatic Management Board and the edge of innovation. Andrew Day, West Coast Vancouver Island Aquatic Management Board.
- Smart Tag Project - Comparing salmon quality across Alaska. Mark Buckley, Digital Observer Inc.
- Effects of alternative dietary lipids on post juvenile sablefish (*Anoplopoma fimbria*). Erin Friesen<sup>S1</sup>, Shannon Balfry<sup>2</sup>, Dave Higgs<sup>2</sup>, Michael Ikonomou<sup>3</sup>, Santosh Lall<sup>4</sup>, and Brent Skura<sup>1</sup>; <sup>1</sup>Faculty of Agricultural Sciences, University of British Columbia, <sup>2</sup>West Vancouver Laboratory, Fisheries and Oceans Canada, <sup>3</sup>Institute of Ocean Sciences, Fisheries and Oceans Canada, <sup>4</sup>Department of Biology, Dalhousie University.
- Panel Discussion: Consumer Awareness. Michael Morrissey (Oregon State University Seafood Laboratory), Facilitator.

10:30 - 10:45 am — Break

## **Tuesday, February 22<sup>nd</sup>, 10:45 am to noon — Aquaculture**

Session Chair – Fernando García-Carreño, CIBNOR

- Technological changes in value-added aquaculture products. Speaker To Be Announced, BC Salmon Farmers Association.
- Culture conditions and food quality of cultured seafood. Josafat Marina Ezquerra-Brauer, Lorena Bringas-Alvarado, Armando Burgos-Hernández, Ofelia Rouzaud-Sández, Universidad de Sonora, Mexico.
- Use of remote sensing and GIS to examine shellfish aquaculture carrying capacity. Barron Carswell, BC Ministry of Agriculture, Food and Fisheries.
- Evaluation of the flesh quality of market-size farmed and wild BC salmon. M.G. Ikonomou<sup>1</sup>, D.A. Higgs<sup>2</sup>, B. Skura<sup>3</sup>, R. Devlin<sup>2</sup>, J. Oakes<sup>3</sup>, S. McKinley<sup>3</sup>, S.K. Balfry<sup>3</sup>, S. Jones<sup>4</sup>, and C. Dubetz<sup>1</sup>; <sup>1</sup>Department of Fisheries and Oceans (DFO), Institute of Ocean Sciences (Sidney, BC), <sup>2</sup>DFO - West Vancouver Lab, <sup>3</sup>Faculty of Agricultural Sciences, University of British Columbia, <sup>4</sup>DFO - Pacific Biological Station (Nanaimo, BC).

## **Tuesday, February 22<sup>nd</sup>, 12:00 pm - 1:00 pm — Lunch**

## **Tuesday, February 22<sup>nd</sup>, 1:00 pm to 4:30 pm — Seafood Processing**

Session Co-Chair – Barbara Rasco, Washington State University

- Physicochemical changes of raw giant squid mantle (*Dosidicus gigas*) subjected to two freezing treatments. Sergio Ignacio Farias<sup>S</sup>, Ofelia Rouzaud-Sández and Josafat Marina Ezquerra-Brauer, Universidad de Sonora, Mexico.
- Effect of previous chilled storage on rancidity development in frozen muscle of sierra (*Scomberomorus concolor*). Wilfrido Torres-Arreola<sup>S</sup>, and Josafat Marina Ezquerra-Brauer, Universidad de Sonora, Mexico.
- Collagenase and trypsin activity in viscera from Burrito grunt (*Sciaena fasciata*) from the Gulf of California. J.L. Cardenas-Lopez, M. de la Fuente-Ibañez, and J.M. Ezquerra-Brauer, Universidad de Sonora, Mexico.
- Effect of temperature during processing on functional properties of jumbo squid (*Dosidicus gigas*) proteins. Fernando García-Carreño, Gabriela de la Fuente, M. Angeles Navarrete del Toro, Julio Córdova Murueta, CIBNOR, Mexico.

2:20 pm - 2:30 pm — Break

Session Co-Chair – Eunice Li-Chan, University of British Columbia, Food Nutrition & Health

- Effects of antifreeze proteins (AFPs) on protein structure of frozen ling cod (*Ophiodon elongatus*) mince. A. Liceaga-Gesualdo<sup>S</sup> and E.C.Y. Li-Chan, Food Science Graduate Program, University of British Columbia.
- Hydrolysate meals from Alaskan pollock, salmon & flatfish processing byproducts. S. Smiley, S. Plante, A.C.M. Oliveira, and P.J. Bechtel, Fishery Industrial Technology Center, University of Alaska Fairbanks.
- Methods for making dried powders from the solutes in stickwater. S. Plante, S. Smiley, A.C.M. Oliveira, and P.J. Bechtel, Fishery Industrial Technology Center, University of Alaska Fairbanks.
- Post-mortem biochemistry in Pacific white shrimp (*Penaeus vannamei*). F.L. García-Carreño, L.M. Díaz-Tenorio, and R. Pacheco-Aguilar, CIBNOR, Mexico.
- Alternative use of the fishery of jumbo squid (*Dosidicus gigas*) in the Cortez Sea as an enrichment element. J.E. Ramirez-Hernandez<sup>S</sup>, D.O. Corona-Martinez, L.A. Armenta-Ayon, A. Gandara-Woongg, M.I. Tapia-Lopez, M.V. Fernandez-Ramirez, R. Ramirez-Olivas, J.C. Ramirez-Suarez, and R. Pacheco-Aguilar, Universidad de Sonora, Mexico.
- Ozone applications with new technology for cleaning, sanitizing and extended production. Barry McKeown, Ozone International.
- Microcanneries in the Pacific northwest – An overview. Sergio Almonacid<sup>S</sup> and Michael Morrissey, Oregon State University Seafood Laboratory.

**Tuesday, February 22<sup>nd</sup>, 4:30 pm to 5:00 pm — PFT General Business Meeting (all members)**

**Tuesday, February 22<sup>rd</sup>, 6:00 pm to 9:00 pm — Annual Banquet, Vancouver Aquarium**

## **Wednesday, February 23<sup>rd</sup>, 8:30 am to noon — Regulations**

Session Chair – Lyle Reid, Canadian Food Inspection Agency

- Top ten seafood HACCP violations. Charles Breen, U.S. Food and Drug Administration.
- CFIA's Office of Food Safety and Recall - An overview. Ron Ramdeholl, Office of Food Safety and Recall, Canadian Food Inspection Agency.
- U.S. Bioterrorism Act and border risk. Barbara Rasco, University of Washington.
- Traceability – Applications for aquaculture and living with C.O.O.L. and FDA recordkeeping requirements. Gleyne Bledsoe and Barbara Rasco, University of Washington.
- On-board handling techniques for troll-caught albacore tuna (*Thunnus alalunga*) incorporating electronic data capture for traceability and marketing. Michael Thompson<sup>1</sup>, Gil Sylvia<sup>2</sup>, and Michael Morrissey<sup>3</sup>; <sup>1</sup>Oregon State University (Corvallis), <sup>2</sup>Coastal Oregon Marine Experiment Station (Newport), <sup>3</sup>Astoria Seafood Laboratory (Astoria).

10:20 am - 10:35 am — Break

- Performance measurement of HACCP systems. Rick Grant and Laura Hull, Canadian Food Inspection Agency.
- Histamine and seafood: Thoughts on FDA regulations. Michael Morrissey, Oregon State University Seafood Laboratory.
- Species identification of fish oils using fatty acid methyl ester profiles. David McLachlan, Canadian Food Inspection Agency, Dartmouth Laboratory.
- Lessons learned – The laboratory perspective on the *Vibrio parahaemolyticus* monitoring program in British Columbia. Enrico Buenaventura, Jennifer Liu, Katie Christensen, Diana Xu, Alvin Chong, Jenny-Marie Lomas, Chantal Mutanda, Ken Skibinski, Frances VanderKwaak, Jennifer Flynn, Zein Jiwani and David L. Graham, Canadian Food Inspection Agency, Burnaby Laboratory.
- Responding to the challenges of microbiology laboratory support of food safety regulatory activities. David L. Graham, Jennifer Liu and Enrico Buenaventura, Canadian Food Inspection Agency, Burnaby Laboratory.

## **Wednesday, February 23<sup>rd</sup>, 12:00 pm — Closing Remarks**

- Ralph Drew, Canadian Fishing Company, PFT President

## **Wednesday, February 23<sup>rd</sup>, 1:30 pm – 3:00 pm — Plant Tour**

- Ball Packaging Products Canada Corp., Richmond