

Fishery Industrial Technology Center (FITC) Update
School of Fisheries and Ocean Sciences, University of Alaska Fairbanks
www.sfos.uaf.edu/fitc

Activities, January 2011

The FITC faculty and staff provide this monthly update for the SFOS Dean, FITC Policy Council members, UAF FITC task force and others interested in the teaching, research and public service provided at FITC.

News

The **Oscar Dyson Memorial Scholarship fund** has been established at the University of Alaska Fairbanks School of Fisheries and Ocean Sciences to support the Fishery Industrial Technology Center. The fund will support a \$1,000 scholarship annually in support of an SFOS student studying at FITC and other programmatic activities as FITC such as the Alaska Seafood Processing Leadership Institute. UAF thanks Peggy Dyson for making this fund available.

Upcoming

Brown Bag lunch series at FITC starts February 8th

FITC faculty are hosting a Brown Bag series of talks, every other Tuesday, beginning February 8th for the Kodiak community and other sites in Alaska via videoconference. Dr. Scott Smiley presented "Using Fish Guts: An Update on By-Product Research." The full brown bag series can be found on the FITC home page along with the video podcasts of each talk. The next talk, "Eating Safe Seafood: Avoiding the Botulism Toxin" will be offered by Dr. Chuck Crapo on February 22nd.

The Kodiak Marine Science Symposium

KAMSS, the first integrated community-based science conference for Kodiak will run from April 9-12. KAMSS is being organized by Marine Advisory Program faculty member, Kate Wynne, and is sponsored by Alaska Sea Grant, FITC and many other organizations and agencies. On Monday, April 11, an evening reception will be held at FITC with tours and seafood science demonstrations for the public.

<http://seagrant.uaf.edu/conferences/2011/kamss/index.php>

Teaching (teaching and student support by FITC faculty)

Classes being taught at FITC this semester:

FSN 673 ***Current Topics in Food Science and Nutrition*** (3 credits), Brian Himelbloom, instructor.

Fish 261 ***Introduction to Fisheries Utilization*** (3 credits) undergraduate course taught via video, Scott Smiley, instructor

Profitability of Seafood Operations and Economics of Food Security and Poverty - Quentin Fong is supervising two graduate level Independent Study classes.

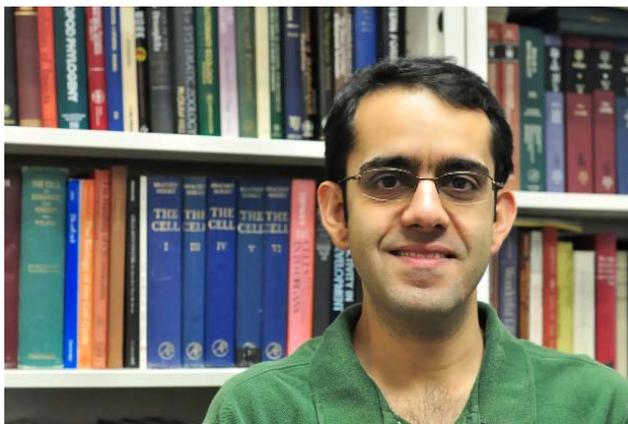
Better Process Control School was taught in Anchorage in late January by Chuck Crapo with help from Brian Himelbloom. BPCS is a three-day course that teaches principles of thermal processing, equipment requirements, closure evaluation and recordkeeping for glass jars and cans. The course satisfies FDA requirement needed by seafood canners around the state. One active seafood processor, three potential food processors and an ADEC employee composed the class roster.

Alex Oliviera provided laboratory training for Charlotte Regula-Whitefield, a PhD student of SFOS faculty member Dr. Sarah Hardy. Charlotte determined protein, carbohydrate and lipid content in sea cucumber tissues commercially harvested in Kodiak in the fall.

Student Profiles

Naim Montazeri

I am currently an MSc student in Seafood Science and Nutrition working under supervision of Dr. Himelbloom, Dr. Oliveira and Dr. Crapo. My research focuses on the application of liquid smoke to cold-smoked salmon. According to FDA, cold-smoked salmon is a ready-to-eat food product with a high risk of contamination with pathogenic *Listeria monocytogenes*. The main goal of the project is to apply liquid smoke as an intervention step to control the growth of *L. innocua* (a non-pathogenic species surrogates for *L. monocytogenes*).



I think my interest in food science and especially in seafood originates from the place I was born; the northern part of Iran in vicinity of Caspian Sea where the seafood industry is very dynamic and fish is one of the primary food sources. It instilled in me a desire to learn more about seafood. I have my BSc and MSs degree in fisheries in Iran and came to SFOS/FITC for a second masters in Seafood Science. I expect to graduate December 2011 and hope to pursue a career in this field, as seafood is now my non-negotiable food choice. You can reach me at n.mont@alaska.edu if you need further information.

Stuart Thomas

I am a graduate student at UAF based at the Fisheries Industrial Technology Center in Kodiak working on an MSc in Fisheries Science under the guidance of Dr. Alexandra Oliveira (UAF SFOS), Ray RaLonde (Alaska MAP), Dr. Chris Langdon (OSU and the Molluscan Broodstock Program [MBP]), and Dr. Ginny Eckert (UAF SFOS). My research project is a post-harvest quality assessment of selected Pacific oysters (*C. gigas*) raised in Kachemak Bay, Alaska compared with oysters raised in Thorndyke Bay, Washington. One of the goals of this project is an assessment of the suitability of Pacific oysters bred to perform in Washington for successful rearing in Alaska, with a view to developing an oyster breeding program designed specifically for Alaska. The project also provides new and in depth data on a number of attributes of quality of Pacific oysters grown in Alaska and Washington. This information is important in understanding the biology of oysters between different regions, and will also



be valuable to the Alaska shellfish industry in marketing their product.

My love for the marine environment has been lifelong - my respect for it gained from the diversity, pleasure and resources it provides me. My time and contact with the people and work at FITC, in the fishing community of Kodiak, and the aquaculture field in Alaska and the Pacific Northwest has further

inspired me. As a result it has become my goal to gain as much experience and information as possible within the aquaculture industry so as to be a part of a successful and sustainable future - one that works towards innovative, responsible and sustainable aquaculture solutions which are in the best interests of the health of the planet and the people and animals who live on it. I am aiming to graduate by the summer of 2011 and gain as much aquaculture experience as I can in the United States, before focusing on a career path related to aquaculture or setting out on my own venture. You can reach me at s.r.thomas2@liv.ac.uk

Research

Kate Wynne conducted her monthly aerial survey of marine mammals in northern Kodiak waters. She flew an additional leg Tugidak Island for monitoring. Kate also conducted land-based observations and brand-resighting on the Near Island Steller sea lion haulout.

Alex Oliviera processed data for a project aimed at investigating the storage stability of Alaska fishmeal and fish oils (salmon meals and oils from two processors and pollock meals and oils from two processors) over 18 months of storage at two different storage temperatures. This is a very large dataset that she will present at a conference later this year.

Alex and graduate student, Katie Brenner completed analysis on five years of data from a study to survey the proximate composition and fatty acid profiles of Pacific salmon in all major Alaska runs. The project will be summarized and the data downloaded onto an online database.

Public Service

Scott Smiley attended the Kodiak Borough/Kodiak City Councils Joint Work Session to answer questions about the ongoing UAF FITC review.

Quentin Fong produced a brief for Bruce Schactler, United Fishermen of Alaska member, on the potential for commercial harvesting and cultivation of seaweed in Alaska.

Kate Wynne gave a presentation to 15 Kodiak High School students on marine mammal research and conservation issues as the Ocean Science Discovery Lab.

Chuck Crapo met with Kodiak fishermen interested in starting a quality program for jig caught cod; he will follow up with quality talks to fishermen in May. Chuck assisted a Wasilla canned salmon packer in evaluating a thermal process deviation and determining product safety. He had discussions with a Sealaska development specialist about oyster growing in Yakutat and will travel there in February to teach HACCP.

Chuck also provided technical information to a Soldotna based processor on caviar production, discussed processing retort pouches with a processor in Ninilchik, provided lipid data on red salmon to the Alaska Seafood Marketing Institute, reviewed a HACCP plan for pickled crab tails for a processor in Kodiak, and worked with Fairbanks hot sauce manufacturer to review processing methods and recommend changes.

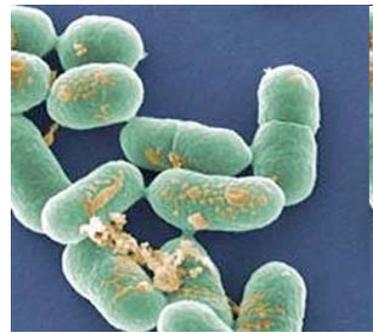
Alex Oliviera calculated estimates of nutritional value of smoked Copper River salmon product for

Wayne Carpenter (Cordova) so he could enter this info in the entry form of Alaska Symphony of Seafood for his product. She provided information to Peter Pan's Director of Quality Assurance, Mr. Hart Schwarzenbach about salmon oil /heads (Valdez plant). Alex also met with Richard Thummel, Operations Manager Alaskan Leader Fisheries (Kodiak) to speak about oil content, fish oil recoveries and quality of Pacific cod liver oils. She provided him with detailed information about the composition of Pacific cod livers pre- and near-spawning and highlighted the influence spawning has in the amount of oil that may be recovered from livers.

She also provided average weight and ranges of sockeye salmon heads (values preferred for Bristol Bay fish) for Liz Best, Quality Assurance Manager Alaska General Seafoods (AGS) and provided information to Bruce Odegaard, seafood sensory expert for Seafood Products Association, about quality and deterioration of Pacific cod muscle and its relationship to spawning cycle.

Brian Himelbloom participated in the Alaska Department of Environmental Conservation's (ADEC) teleconference as a member of the Alaska Food Safety Advisory Committee <http://www.dec.state.ak.us/eh/fss/establishments/AFSAC/afsacmembers.htm>

Brian responded to a request from ADEC (Anchorage HQ) to serve as a third-party advisor between the regulatory agency and a Alaska smoked seafood processor implicated in a recall of ready-to-eat product contaminated with *Listeria monocytogenes*. Subsequent to a teleconference, phone calls and e-mails were exchanged for conveying information for controlling the food pathogen in the processing plant for the company to eventually resume its permit to operate.



Brian Himelbloom participated as a member of the **Kodiak Workforce Regional Advisory Council (KWRAC)**. The KWRAC is a 16-member group formed by the Kodiak Island Borough with the mission to "define regional priorities for workforce development, and show how they are linked to employer demand, economic development, and education or training strategies." <http://www.kodiakschools.org/subsite/dist/page/kodiak-workforce-regional-advisory-council-3170>

Professional Service

Quentin Fong acted as a peer reviewer for the journal, "Aquaculture Economics and Management."

Brian Himelbloom peer-reviewed a manuscript for the journal "Applied Microbiology and Biotechnology".

University Service

Quentin Fong conducted interviews for finalists for Marine Advisory Program in Kodiak. Chuck Crapo conducted interviews for the MAP Bering Straits Agent position. Both positions will be named in February.

Chuck Crapo participated in the University-wide Promotion and Tenure Committee as the SFOS representative. Forty four applications for promotion and tenure were reviewed by the committee.

Alex participated in the monthly meeting of UAF Faculty Senate sub-committee 'Faculty Development, Assessment and Improvement Committee'. She also participated in the first meeting of the University of Alaska Fairbanks Pre-Tenure Review Committee. Sixteen files were evaluated.