Re: FW: USDA-ARS Meetings held April 27 & 28 Report

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This material is part of a collection that documents the harassment, discrimination, and retaliation perpetrated against Alaska's women research scientists by their supervisor, with full knowledge

(and arguably, "tacit approval") of their federal employer, the USDA Agricultural Research Service (ARS)

From: bower@sfos.uaf.edu

Subject: Re: FW: USDA-ARS Meetings held April 27 & 28 Report

Date: Fri, May 7, 2010 6:51 pm

To: "UFA Mark Vinsel" <ufa1@ufa-fish.org>

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Thanks Mark.
That's the first information I've seen from the meeting. I wasn't even
told who the ARS participants would be. It's really hard for women
scientists to get any traction in their ARS careers when so many of the
opportunities are automatically shunted to the men. But, we're hoping the
agency will get integrated eventually.
The report was great. Thanks for sending it my way!
Cheers,
Cindy
Cindy Bower, Ph.D.
USDA Agricultural Research Service
PO Box 757200
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Phone: (907) 474-6732
Email: Cindy.Bower@ars.usda.gov
> Hello Cindy,
> Here's a recap of the Juneau EDC meeting we discussed at Comfish.
> The ARS people referred to your work. This was more of them looking to
> get
> people thinking of ideas to work on than anything that I think would
> displace or lessen the importance of your work (from my perspective at
> least).
>
> -Mark V.
>
>
> ----Original Message----
> From: Kay Slack [mailto:kslack@mtaonline.net]
> Sent: Friday, May 07, 2010 1:55 PM
> To: clacroix@copperriverseafood.com; bgreen@copperriverseafood.com;
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> Kevin.OSullivan@alaska.gov
> Cc: dparrent@alaska.net; bholst@jedc.org
> Subject: USDA-ARS Meetings held April 27 & 28 Report
>
> On behalf of Juneau Economic Development Council, thank you for your
> interest in the Agricultural Research Service, USDA research and
> technology
> transfer program. <<...>> For those who could attend last week's meetings
> Anchorage and Juneau, we appreciate your questions and shared information.
> Attached is a report about the meetings with ARS for your reference. We
> have included contact information for the ARS scientists, JEDC contacts,
> industry representatives who attended the meetings.
> If you would like assistance pursuing a research agreement with ARS,
                <mailto:dparrent@alaska.net> Dan Parrent or
> contact JEDC:
> <mailto:kslack@mtaonline.net> Kay Slack.
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USDA Agricultural Research Service Meetings with Industry – April 27 & 28, 2010

Juneau Economic Development Council's (JEDC) SpringBoard Program hosted meetings in Anchorage and Juneau for four representatives from USDA Agriculture Research Service (ARS) in April 2010. Companies interested in fish by-product development and production were invited for an introduction to ARS' past research, research assistance program, Cooperative Research and Development Agreements (CRADA), and licensing and grant opportunities.

The four ARS scientists attending the meetings included Bill Orts, Greg Glenn, and Roberto de Jesus Avena-Bustillos from the ARS-USDA in Albany, California; and Alberto Pantoja from the Subarctic Agricultural Research Unit in Fairbanks, Alaska.

The Anchorage meeting was attended by six businesses, a State of Alaska Department of Environmental Conservation – Solid Waste Division representative, a Technology Research and Development Center (TREND) representative who also presented information about the SBIR grant program, and a representative from Alaska Manufacturing Extension Partnership. JEDC/SpringBoard staff and consultants included Dan Parrent, Amy Goodwin, and Kay Slack.

The Juneau meeting was attended by five businesses, three trade association representatives, and an Alaska Department of Commerce – Office of Economic Development representative. JEDC/SpringBoard staff and consultant included Dan Parrent, Heather Brandon, Margaret O'Neal, and Kay Slack.

The agenda for both meetings included:

- Presentations by each of the four ARS scientists who presented their research and that of their colleagues on various products related to seafood, as well as products created from fish byproducts. They also described the structure of ARS and the personnel and research that occurs in Alaska.
- 2. Discussion of cooperative research opportunities between fish byproduct companies and ARS researchers.
- 3. Presentation of the Small Business Innovative Research (SBIR) grant program and how these grants may be utilized by small businesses as it relates to collaboration with ARS.
- 4. A question and answer session.

A morning tour in Anchorage was arranged with Copper River Seafoods for the four ARS scientists. Others on the tour included JEDC/SpringBoard staff and consultant, Dan and Kay; and, Eric Downey, Client Relations Manager Alaska Manufacturing Extension Partnership. Copper River Seafoods could not attend the afternoon meeting with ARS; however, Chris LaCroix, Director of Quality Assurance & Government Compliance, and Billy Green, Plant Manager provided the tour at Copper River Seafoods' headquarters and plant. Quality time was spent with the scientists with discussions about packaging, processing, and byproduct opportunities.

# **How ARS Helps Industry Partners**

- ARS is "hard-funded", so they can do research and CRADAs without receiving funding from the partner, as long as the partner contributes something, such as equipment, man-hours, etc. ARS can also do work and research without a CRADA, if the work is more simple. ARS referred to such work as "Pre-CRADA" research.
- A producer could go to the ARS facility in Albany, CA and use their equipment at no or little cost. For
  example, one business has a slower, smaller-production extruder, while ARS has a faster, continuous
  extruder (for pet treats as an example) on which the business could test its product prior to purchasing its
  own equipment.
- ARS can partner on grant writing such as SBIR grant applications. ARS can also be a research component on grant applications.
- ARS supplies assistance with patent writing and protection. The process of patenting is about an \$80,000 value, and ARS can provide that at little or no cost, while the company can get an exclusive patent license with the right of first refusal.

 Trade secrets and proprietary information remain confidential and is written into the CRADA developed for the business partner.

#### **ARS Research**

ARS is open to receiving questions that they can research and try to answer. It is up to industry to pose the questions. Some of the interesting products ARS staff developed include:

- Thin film food wraps made of fruits and vegetables, increasing vitamin and nutrient values with exposure to UV light.
- Nanofibers from fish byproduct source for wound dressings and other thin layer applications.
- · Starch/fiber bowls and plates that rapidly biodegrade
- · Replacements for wax board and Styrofoam.
- Flower pots containing nutrients and fertilizer that can be planted in the ground and will biodegrade.
- Autoclaving garbage to recover paper/pulp
- Fish gelatin from cold water fish (better oxygen barrier than other gelatin sources) for pharmaceutical uses.
- · Chondroitin sulfate for neutraceutical uses.
- Packages with antimicrobial properties.

#### **Meeting Attendees & Interests**

Each of the private business representatives had an opportunity to tell ARS what they were interested in and what ideas/products they have already tried.

<u>Copper River Seafoods (CRS)</u> – Their number one issue is finding a replacement for Styrofoam currently used to ship their products. CRS has developed a new box to replace the wax board which they hope to begin using within the next year. Copper River Seafoods has plans to do oil extraction, but would like a new process to extract the oil and eliminate the chemicals in a cost-effective manner. Although minor, there are naturally occurring traces of arsenic and other chemicals in fish.

<u>Arctic Paws (producer of Yummy Chummies pet treats)</u> – Their interest is in how to reduce the fish odor in their product.

<u>Scientific Fisheries</u> – They currently have an SBIR grant for utilization of fish byproducts and are interested in research for stabilizing the byproduct to extend the holding time before it is processed into other products.

<u>Taku Reds</u> – They discussed the creation of fuel from fish oil and opined that it was not carbon neutral, did not meet certain EPA standards, and would have to be mixed with large quantities of vegetable oil to meet those standards. Taku Reds is interested in the fiber material that could be used in place of Styrofoam, and asked about the R value insulating properties of that fiber material, which was estimated to be about 85% of Styrofoam. FAA regulations require Styrofoam to be wrapped in cardboard to protect the Styrofoam from catching fire and giving off poisonous fumes in the event of fire. The fiber material that ARS has researched would likely not have to be wrapped and would not have the same dangers in flight as Styrofoam.

<u>Pacific Seafood Processors Association</u> – Mary McDowell is interested in the Fibrogen high-value product of fish gel made from fish skin of cold water fish, because the pollock fishery does skin the fish for the production of surimi. Few salmon products require removal of the skin.

<u>Ocean Beauty</u> – Tom Marshall said they have a salmon burger product which removes the skin. Ocean Beauty barges fish waste to Seattle from Excursion Inlet to further process it.

<u>United Fishermen of Alaska</u> – Mark Vinsel indicated that herring bodies from the herring roe fishery would be a good candidate for fish meal or some other product made from fish waste. He also opined that a micro-converter of fish waste to fish oil would be something that every fishing boat could utilize and would be an excellent development for Alaska's fishing fleets.

<u>Alaska Fisheries Development Foundation</u> - Ian Fisk suggested that fish "waste" or "byproduct" should be referred to as "co-product" to help move our thinking towards utilization. He also indicated that the state government could mandate use of a certain percentage of co-product, but then government would also have to put major funding into research and development to help meet mandates.

There was interest in the work that ARS has been done with Salinas Valley's garbage dump. They have autoclaved garbage, sieved it, and sorted it to recover the paper fiber for re-use. ARS suggested we could do that with our garbage, and during the times of year when we have a pulse of fish waste that can also be treated in the autoclave. In other words, if you build something to deal with garbage, it can also deal with other waste, including fish waste. The discussion of the pulse of fish waste production in July led to questions about how to store, stabilize, and treat the waste. One suggestion was to create a methane producing system using anaerobic digestion, which could contribute to electricity generation, and use the remaining waste as either fertilizer or for gasification. Juneau area processors would likely have to collaborate on such an endeavor.

# **Meeting Follow-up**

- Send an e-mail to participants offering the ARS PowerPoint slides and put the presentations on the JEDC website.
- Contact each of the attendees to find out their level of interest in working with ARS and letting them know
  that SpringBoard is able to help with coordination. For those companies that are interested, suggest a visit
  to the ARS facility in Albany or the Kodiak research lab.
- Contact Mary McDowell at PSPA about having an ARS representative call-in or go to one of their board meetings in Seattle. (She indicated interest in that.)
- Contact Molly Boyer, Valley Recycling Solutions, regarding the autoclave garbage system. ARS is looking
  for partners to pilot test the equipment and they have prepared grant applications that are ready to submit
  for funding pilot projects.

#### Recommendations

Dan and Kay develop a plan to reach out to both agriculture and fish processors for introduction to ARS capabilities.

#### **Meeting Attendees**

#### **Attendees at Anchorage Meeting:**

 Copper River Seafoods – Chris LaCroix, Director of Quality Assurance & Government Compliance, and Bill Green, Plant Manager

CRS is a fish processing company in Anchorage. CRS was not able to attend the afternoon session, but had direct contact with ARS during the tour of their facility. <a href="www.CopperRiverSeafood.com">www.CopperRiverSeafood.com</a>

# 2. Yummy Chummies, Brett Gibson

Yummy Chummies are pet treats made from salmon byproduct. Brett 's main question for ARS is whether or not they have any research for reducing the fish odor of fish products. Brett said they have been in business for 12 years and are finally getting fairly well known. He has some new equipment that will be going on line later this spring. Brett commented on the expense of doing manufacturing in Alaska - like so many other manufacturers know. Shipping is a major cost of doing business. Another issue fish by-product producers find is the timeliness of transferring the product to his site in Anchorage. www.yummychummies.com

#### 3. Taco Loco, Adam Galindo

Manufacturer of corn and flour tortillas, chips and taco shells and a distributor of Hispanic can food items. Taco Loco is one of the largest and oldest food manufacturers in Alaska and is still family owned and operated. Taco Loco recently introduced its Alaska Wild Salmon Wrap for institutional food service and retail markets.

# 4. Alaska Sausage and Seafood, Cameron Vivian

Wild Alaskan smoked salmon, gourmet sausages with Reindeer, custom game and fish processing, and Alaska gift packages. <a href="www.alaskasausage.com">www.alaskasausage.com</a>

#### 5. Floriponics, Joel Florian

Joel invented foam panels which are panel sheets with water droplets inside designed to insulate green houses. He is interested in assistance with an SBIR grant application for his invention.

#### 6. <u>Scientific Fisheries, Patrick Simpson</u>

Patrick has been a successful SBIR grant recipient and is currently engaged in a project funded by USDA utilizing fish byproducts.

#### 7. NZR, LLC, Nugget Patrick

A fish byproduct company. Nugget is working with Patrick Simpson, Scientific Fisheries on a byproduct project in Kenai. www.alaskafishby-products.com

# 8. Alaska Department of Environmental Conservation, Lori Aldrich

ADEC Solid Waste Program regulates land disposal of fish waste, as well as some fish waste treatment processes. This has become a more prevalent issue in the past few years, and I would like keep informed about projects and processes that are on the forefront in the industry.

# 9. Alaska Manufacturing Extension Partnership, Chris Buckholdt and Eric Downey

The Alaska Manufacturing Extension Partnership, Inc. is committed to developing the state's economy through the provision of technical, business and economic training and assistance to Alaska's small manufacturers and to rural Alaskans producing, marketing, and distributing Native art and other home-based manufactured products. Eric Downey, Client Relations Manager, participated in the tour and Chris Buckholdt, AMEP Director, attending the afternoon meeting.

#### 10. Small Business Innovation Research, Carolyn Pratt

Carolyn works for the Small Business Administration TREND program and provided information about SBIR grants that are available to businesses and that could be used in conjunction with a CRADA.

- 1. Jim Browning, Alaska Fisheries Development Foundation
- 2. <u>Joan Herrmann, Alaska Project Solutions</u>
- 3. Mike Presley, Budget Feed & Farm
- 4. Robin Richardson, Global Food Collaborative

# **Attendees at Juneau Meeting:**

# 1. <u>Alaska Fisheries Development Foundation, Inc. – Ian Fisk, Board President</u>

AFDF is a state-wide non-profit organization representing the fishing industry with a mission to work with fisheries management agencies, the fishing industry, and the scientific community to find ways to bring greater economic value and conservation to Alaska's fisheries. They have done some research in the fish by-product realm: <a href="http://www.afdf.org/past\_research/index.html#byproducts">http://www.afdf.org/past\_research/index.html#byproducts</a>. Ian Fisk, current board president, is a salmon and prawn harvester located in Juneau.

# 2. Pacific Seafood Processor Association – Mary McDowell

PSPA - <a href="http://www.pspafish.net/members.htm">http://www.pspafish.net/members.htm</a> - represents several large shore-side processors (primarily pollock) in Alaska, including UniSea in Dutch Harbor. UniSea and a few other land-based processors utilize fish waste to run their processing plants.

# 3. Alaska Seafood Company - Dick Hand and Tim Armstrong

Alaska Seafood Company does secondary processing of seafood, and has worked with Taku Reds on byproduct experimentation. They are interested in developing product to go into MREs for the military, and they already have several specialty products (such as pet treats) that go into the Alaska tourism/gift shop market.

### 4. Taku Renewable Resources, Inc. – Heather Hardcastle and Len Petersen

Taku Reds is a direct marketer of salmon to restaurants in the lower-48 states. During the winter, they also experiment with turning fish waste into biodiesel, under the name Taku Renewable Resources. They have a grant from the Alaska Energy Authority for this research and development work.

#### 5. Ocean Beauty - Tom Marshall

Ocean Beauty is a Seattle-based processing company. They operate in seven locations in Alaska, including Excursion Inlet near Juneau, which Tom manages in the summertime. Ocean Beauty has a fishmeal plant in Kodiak, and they are looking to more fully utilize fish byproduct.

- 6. <u>Alaska Department of Commerce, Community, and Economic Development, Office of Economic Development Kevin O'Sullivan (listened by teleconference)</u>
- 7. <u>United Fishermen of Alaska Mark Vinsel</u>

Salmon harvester group interested and supportive of greater utilization of wild harvested fish.

8. Alaska Glacier Seafoods - Peter Hochstoeger.

Peter manages processing at Juneau-based Alaska Glacier Seafoods. They do not utilize fish byproduct, but rather grind it and dump it off-shore. Grinding and dumping have a cost, albeit a low cost. Alaska Glacier Seafoods is interested in the products that could be made from byproduct.

Other attendees were the four ARS scientists – Bill Orts, Greg Glenn, Alberto Pantoja, Roberto de Jesus Avena-Bustillos - and JEDC staff: Anchorage – Dan Parrent, and consultants Amy Goodwin, and Kay Slack. Juneau – Margaret O'Neal, Dan Parrent, Heather Brandon, and consultant Kay Slack. Below are short bios on each of the ARS scientists:

Dr. Orts is Research Leader for the Bioproduct Chemistry and Engineering research unit at the Western Regional Research Center, ARS-USDA, in Albany, CA. has over 25 years experience in research related to bioproducts, biofuels and nanotechnology, with more than 200 publications in the field. Since 1995, Dr. Orts has been with USDA-Agricultural Research Service where he leads research on biopolymers, nanotechnology, nanocomposite and biorefinery development.

Dr. Glenn is a Lead Scientist in the Bioproduct Chemistry and Engineering research unit at the Western Regional Research Center, ARS-USDA, in Albany, CA. He has done research on bioproducts for nearly 20 years and has developed products that include food service containers, building materials, control-release devices, personal hygiene products, and various other consumer goods.

Dr. Pantoja is Research Leader and Location Coordinator for the Subarctic Agricultural Research Unit in Fairbanks Alaska. He has been Research Leader for the Aquaculture program in Alaska since 2003. He received his Doctorate degree from Louisiana State University, Baton Rouge.

Dr. Avena-Bustillos is a scientist in the Processed Foods Research unit at the Western Regional Research Center, ARS-USDA, in Albany, CA and is Staff Scientist in the Biological and Agricultural Engineering Department at University of California, Davis, in Davis, CA. At ARS-USDA, Roberto conducts research related to converting Alaska fish by-products into value-added ingredients and products, development of antibacterial edible films, nanoemulsion edible films, and enhancement of nutritional value of fruits and vegetables through ultraviolet radiation abiotic stress and novel drying technologies for fish products, fruits and vegetables.

# **Invited for Juneau meeting, did not attend:**

- 5. <u>Douglas-Island Pink & Chum, Inc. (DIPAC) Eric Prestegard</u>, Executive Director of the local fish hatchery, run as a non-profit organization.
- 6. <u>Alaska Protein Recovery Sandro Lane</u>, fish oil for human consumption/dietary supplement. Unlikely to attend due to schedule conflict, has done a CRADA with ARS in the past.
- 7. <u>Silver Bay Seafoods Richard Riggs</u>, Sitka fish meal, oil, gelatin (In partnership with Peter Stitzel, Montlake Mining Company and potentially funded by Jim Hemsath, Alaska Industrial Development and Export Authority)
- 8. Marine Conservation Alliance Tom Gemmel pollock fishing industry group

# Anchorage Meeting Participants - Tuesday, April 27 USDA Agricultural Research Services Meeting Anchorage Economic Development Corporation Offices

Name	Organization	Telephone	E-mail
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Brett Gibson	Arctic Paws (Yummy Chummies)	907-348-8811	brett@yummychummies.com
Adam Galindo Jr.	Taco Loco Products	907-561-1648	Taco.loco@acsalaska.net
Cameron Vivian	Alaska Sausage and Seafood	907-562-3636	aks@ak.net
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# Juneau Meeting Participants - Wednesday, April 28 USDA Agricultural Research Services Meeting Juneau Economic Development Council Offices

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