



Division of Comparative Physiology and Biochemistry

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Message from the Chair

Joe Williams

With 1862 registrants, 765 oral presentations, and 570 total poster presentations, our meeting in Boston was one of the largest in the Society's history. In DCPB, students presented 67 and 82 talks and posters, respectively. DCPB sponsored a symposium on Biomaterials and co-sponsored one on Insect Evolution.

2009 Bartholomew Award recipient: Lynn "Marty" Martin

When Dr. Lynn "Marty" Martin won the 2009 George A. Bartholomew Award, he joined the ranks of a prestigious coterie of scholars including Katie Gilmour, Jim Gillooly, Steve Secor, Adam Summers, Peter Wainwright, Martin Wikelski, Sheila Petak, Sönke Johnsen, Douglas Altshuler, Gretchen Hofmann, Michael Dickinson, Tyrone Hayes, and Barbara Block. Named in honor of Professor George A. Bartholomew, this award is given annually by the Division of Comparative Physiology and Biochemistry to a young investigator for distinguished contributions to comparative physiology and biochemistry or to related fields of functional and integrative biology. Although Marty's research interests are varied, he mainly focuses on understanding how physiological systems, in particular the endocrine and immune systems, constrain the pace of life of rodents and songbirds. He has pioneered new studies in ecological immunity of wild vertebrates. Marty presented a lecture to the SICB on Sunday evening entitled, "Ecological Immunology: An Adaptationist Perspective on the Vertebrate Immune System." We thank you Marty for stimulating our thinking about how the vertebrate immune system is related to the pace of life.

On behalf of DCPB, I want to thank the Bartholomew award committee, Drs. Gilmour (Chair), Burnett, Gordon, Wainwright, and Secor for their efforts in selecting Dr. Martin as the Bart Award winner. Sable Systems generously sponsored the Bartholomew award



Joe Williams presenting
Marty Martin with
The Bartholomew Award



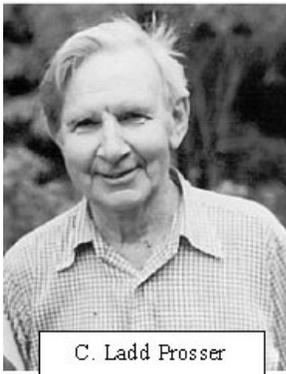
Marty Martin during his Bartholomew
Award lecture



with a cash prize of \$1,000.

Oral Presentation and Poster Presentation Award Winners

This year the DCPB student awards were named in honor of Dr. C. Ladd Prosser. Born in 1907, Ladd Prosser completed his doctorate in 1932 at The Johns Hopkins University. Later Ladd studied the crayfish nervous system as a postdoctoral fellow at Harvard, and thereafter spent a postdoctoral year at Cambridge University in the laboratory of E. D. Adrian, mapping sensory fields of earthworm segmental nerves. Ladd then joined the faculty at the University of Illinois in 1939. He was hired to teach a zoology course to agriculture students, but he also insisted on developing new courses in comparative and cellular physiology. C. Ladd Prosser's research career spanned over half a century and embraced the training of 45 doctoral students and numerous postdoctoral fellows. The first edition of his book, *Comparative Animal Physiology*, was published in 1950 and helped to define and establish the field of comparative physiology. Ladd Prosser served as head of the Department of Physiology and Biophysics at the University of Illinois (1960–1969), and president of the Society of General Physiologists (1958), the American Society of Zoologists (1961), and the American Physiologi-



C. Ladd Prosser

cal Society (1969). He was the editor of *Physiological Zoology*, which is now *Physiological and Biochemical Zoology*, from 1976 to 1988 and served on the editorial boards of *Comparative Biochemistry and Physiology*, the *Journal of Comparative Physiology*, and the *American Journal of Physiology*. In 1974 he was elected to the National Academy of Sciences. Over his long and productive career, Ladd produced seven books, more than 50 review papers and monographs, and nearly 150 research papers.

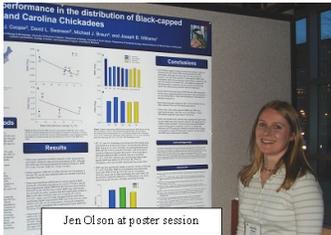
Oral Presentation Award Winner: Jeff Grim

For 2009, DCPB selected Jeff Grim as the winner of the best oral presentation competition at the SICB meeting in Boston. Jeff completed his BS degree at the University of Tampa, his MA degree at the University of West Florida, and is now working towards completion of his PhD degree at Ohio University with Dr. Lisa Crockett. Jeff's main interest is in the physiological ecology of fishes. The title of Jeff's talk was "Protection of elevated membrane PUFA contents by GPx4 in marine vertebrates" (with E.L. Crockett, T. Kriska, K.A. Hyndman, and A.W. Girotti). If you want to send a congratulatory note to Jeff, his email is grimj@ohio.edu.



Poster Presentation Award Winner: Jen Olson

The DCPB winner of the best poster presentation for 2009 was Jen Olson. After finishing

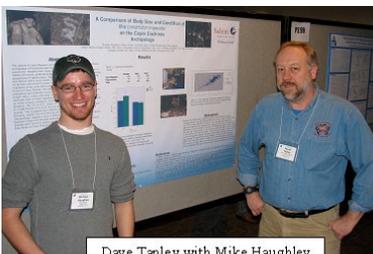


her undergraduate work at Illinois Wesleyan, Jen began work on her Ph.D degree at Ohio State University. Her main research interests are in evolutionary and ecological physiology. Currently she is studying how metabolic rate varies relative to environment in two species of chickadees, Black-capped and Carolina, and she is interested in how hybridization between these two species might alter metabolic rate. The title of her poster was "The role of metabolic performance in the distribution of Black-capped and Carolina Chickadees." If you want to congratulate Jen on her achievement, her email address is Olson.133@osu.edu.

Jeff and Jen will both receive a \$150 cash prize, and a year's subscription to the *Journal of Experimental Zoology*, both compliments of Wiley-Blackwell Press.

On behalf of DCPB, I wish to congratulate Jeff and Jen. Well done.

Judging posters:



Judging posters and oral presentations is near a Sisyphean task and I want to thank David Tapley and members of the awards committee for their service in judging presentations and posters. Forty volunteers from DCPB judged the oral and poster presentations. Thank you much. Dave, your efforts and the efforts of

the judges toward providing critical feedback and rewards for excellence for our young scientists are appreciated.

Advisory Committee on Fostering Undergraduate Participation in DCPB

DCPB has established an advisory committee on fostering undergraduate participation in DCPB. Members of this committee include Itzick Vatnick, Mark Hausman, Harry Itagaki, Chris Gillen, Bob Mauck, and Dave Tapley. As a first step in achieving its goal, the committee organized an undergraduate lunch at the Boston meeting, Sunday at noon. Forty undergraduate students attended from at least 17 different institutions, including Kenyon College, Lewis and Clark College, Arizona State University, University of Washington, University of New Hampshire, Hendrix College, Colby College, Bowdoin College, Holy Cross, Blackburn College, University of California Berkeley, Notre Dame, University of Portland, Pacific University, University of the Virgin Islands, Cornell University, and Harvey Mudd College. Anyone else who is interested in being involved with this committee, or who has ideas that would promote a positive experience for undergraduates at our meetings, please contact a member of the committee.

DCPB Symposia, 2010

DCPB will sponsor a symposium at the Seattle meeting in 2010 entitled, "Metabolism, Life-history, and Aging." Jim Harper, University of Michigan, will chair this symposium, and he tells me that the Glenn Foundation for



Jim Harper

Medical Research and the American Federation for Aging Research has provided a grant of \$2,500 to support this effort.

David Tapley, a member of the DCPB undergraduate steering committee, is organizing a symposium tentatively titled "Fostering an Undergraduate Research Culture" for the Seattle meeting; David welcomes suggestions for this symposium, and requests help in securing funding. David also plans to write an NSF proposal for this symposium over his spring break in March. He has commitments for speakers from NSF and CUR, as well as several faculty members at a variety of institutions who are em-

ploying innovative strategies to incorporate undergraduate research into their teaching and research programs. If anyone is interested in coming aboard as a co-organizer, please contact David: dtapley@salemstate.edu

Editorship of PBZ - shoes that need filling!

Since 2001, Jim Hicks has served as editor of *Physiological and Biochemical Zoology*, but

now needs to focus his energies on other commitments. Jim's shoes will be difficult to fill, but we need to do so. DCPB and the University of Chicago Press are now undertaking a search for a new PBZ editor. *Proposals from*



Jim Hick's shoes

prospective editors should be sent to Joe Williams, the chair of the DCPB. Jim would like to terminate his editorial responsibilities by early summer, and therefore we need proposals from prospective editors by April 1, 2009. The DCPB executive committee along with Jim Hicks and current associate editors of PBZ will review proposals, select an editor, and submit its recommendation to the University of Chicago Press. The term of the editor's appointment is five years, with reappointment possible for one additional term. If you are interested in this position, please contact Joe Williams, Department of Evolution, Ecology and Organismal Biology, Ohio State University, 318 West 12th Avenue, Columbus, OH 43210, e-mail: williams.1020@osu.edu. Information for prospective editors can be found at <http://www.journals.uchicago.edu/doi/pdf/10.1086/597058>.

Elections for DCPB secretary

Steve Secor, chair of the DCPB nominating committee for secretary, has presented DCPB with the names of three persons willing to serve as DCPB secretary: Anna Ahn, assistant professor at Harvey Mudd College; Stephen Kinsey, associate professor at University of North Carolina at Wilmington; and David Tapley, associate professor at Salem State College. Thanks to these three folks for their willingness to serve. The election for this position will occur this spring.



Message from the Program Officer

Kathy Dickson

Dorothy M. Skinner Award to Jessica E. Garb

Jessica E. Garb was selected as this year's winner of the Dorothy M. Skinner Award (<http://www.sicb.org/students/skinnerawardee2009.php3>). The award was established to recognize women in the early stages of their careers who have demonstrated outstanding scholarship and show high potential for continued excellence in research. The award honors Dorothy Skinner, an exceptional scientist and an advocate for the promotion of women in scientific careers. Dr. Garb earned her Ph.D. in 2003 from the University of California, Berkeley and is currently a postdoctoral fellow at the University of Arizona. She presented her research on the evolutionary genetics of black widow spider venom at the Boston meeting.

Boston 2009

The Boston meeting was the largest ever, with over 1,350 talks and posters presented! The division had 223 abstracts, which were distributed among 97 oral and 129 poster presentations and included 33 symposium-related talks. DCPB sponsored the society-wide symposium on **Insect Evolution** organized by Tim Bradley and Adriana Briscoe, and the symposium, **Biomaterials: Properties, Variation, and Evolution**, organized by Brook Swanson and Mason Dean. Both symposia were well received. DCPB also hosted the reception following the Bartholomew Lecture by Lynn "Marty" Martin on Sunday, Jan.

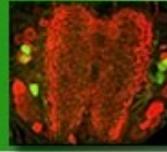
4th. The 2009 DCPB Best Student Paper awards were named in honor of C. Ladd Prosser. We congratulate Jeffrey Grim from Ohio University, winner of the best oral paper award, and Jennifer Olson from Ohio State University who won the best poster award (<http://www.sicb.org/students/bsp2009.php3>). Sincere thanks go to David Tapley who did an excellent job coordinating the judging and to all the members who volunteered as judges. I also want to thank Don Mykles for doing a great job as past DCPB Program Officer and lining up interesting symposia for the meetings. He has been and will continue to be a great help to me as I learn the job.

Seattle 2010

The next SICB meeting will be held January 3-7, 2010, at the Sheraton Seattle Hotel and Washington State Convention and Trade Center (<http://www.sicb.org/meetings/future.php3>). DCPB is sponsoring a symposium on **Metabolism, Life History, and Aging**, organized by James Harper, and is co-sponsoring a society-wide symposium on **Advances in Antarctic Marine Biology**, organized by James McClintock, Charles Amsler, Amy Moran, Art Woods, and Bill Baker.

Salt Lake City 2011 - Call for Symposia

I encourage you to think about proposing a symposium topic for the 2011 SICB meeting. Please feel free to discuss ideas with me (kdickson@fullerton.edu or 714-278-5266, but the area code will change to 657 on May 30, 2009). Information on how to prepare a proposal is available at



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<http://www.sicb.org/meetings/2002/nsfinstructions.pdf>

Other upcoming meetings (in chronological order):

Experimental Biology 2009 New Orleans, LA, April 18-22, 2009. <http://www.eb2009.org>

FASEB Summer Research Conferences
<https://secure.faseb.org/FASEB/meetings/summrconf/>

The First International Conference of Hydrogen Sulfide in Biology and Medicine (H2S Biology 2009). Shanghai, China, June 26-28, 2009. <http://www.h2sbiology2009.org>

Society for Experimental Biology Glasgow, Scotland, June 28-July 1, 2009. <http://www.sebiology.org/meetings/Quicklinks/Registration.html>

Joint Meeting of Ichthyologists and Herpetologists, Portland, Oregon, July 22-27, 2009 <http://www.dce.k-state.edu/conf/jointmeeting/>

36th International Congress of Physiological Sciences Kyoto, Japan, July 27-August 1. <http://www.iups2009.com/>

11th International Congress on Amino Acids, Peptides and Proteins. Vienna, Aus-

tria, August 3-7, 2009. <http://www.meduniwien.ac.at/ICAAP09/index.html>

25th Conference of the European Society for Comparative Physiology and Biochemistry "Environmental stimuli and their impact on homeostasis and gene regulation" Innsbruck, Austria, September, 2008. <http://escpbnew.ambra.unibo.it/images/ESCPB.Ibk.2009.folder.1st.Announcement.gif>

The Crustacean Society Summer Meeting Tokyo, Japan, September 20-24, 2009. <http://wwwsoc.nii.ac.jp/cs4/TCSFirstPage1.html>

APS Intersociety Meeting: The Integrative Biology of Exercise V Hilton Head, SC, September 24-27, 2008. <http://www.the-aps.org/meetings/aps/hiltonhead08/index.htm>

For other meetings, consult the web sites for SICB (<http://www.sicb.org/meetings/other.php3>) and the American Physiological Society (<http://www.the-aps.org/meetings/related/index.htm>)



Message from the Secretary

Allen Gibbs

Student Paper and Poster Winners

Jeff Grim won the award for best student talk, for a presentation on *Protection of elevated membrane PUFA contents by GPx4 in marine vertebrates*. Jeff is an Ohio native, but received his bachelor's (Marine Biology) and master's (Fish Physiology) degrees from the University of Tampa and the University of West Florida, respectively. He selected Lisa Crockett's laboratory at Ohio University for his PhD research because he wanted to gain a more mechanistic understanding of organismal and system-level responses to temperature. His goal is to approach eco-physiological questions of animal physiology from both organ and cellular levels. Jeff's non-science interests include SCUBA, hiking, live music and playing drums.



Jen Olson was the winner of this year's poster competition, for her poster titled *The role of metabolic performance in the distribution of Black-capped and Carolina Chickadees*. Jen will soon complete her PhD in Joe Williams' lab at Ohio State University. Her interest in physiological ecology was sparked while working with Steve Julian as part of a joint undergraduate research program at Illinois Wesleyan/Illinois State University. In fact, she presented that work at her first SICB



meeting in 2002 (Olson, JR*; Tillman, EG; Hatle, JD; Juliano, SA: *A threshold for initiating the canalized phase of reproduction in the lubber grasshopper*), When she isn't in the lab or spending time with her family, Jen bikes, hikes, and teaches sky diving.

Minutes of the DCPB Business Meeting, Jan. 4, 2009, Boston, MA

Divisional Chair Joe Williams called the meeting to order at 5:19 PM.

Joe called for approval of the changes in the bylaws, which the executive committee had sent to the membership for review. A motion was made and seconded, and then passed by acclamation.

Joe announced that the executive committee has decided that this year's Best Student Paper award would be named in honor of C. Ladd Prosser.

Joe announced that Jim Hicks would be leave as Editor at PBZ, and expressed appreciation to Jim for his leadership at the journal. Jim Hicks then gave a brief summary of statistics regarding PBZ. The journal is in good shape, with recent impact factors of 2.23 to 2.3, a significant increase. Subscriptions are up, and the special focus issues have attracted submissions and interest, including some media attention. He suggested that anyone interested in serving as editor should talk to him at the meeting. The position does require a significant commitment of time, but an effective Managing Editor makes the job much easier. He praised Andrea Canfield for her performance in that role during his editorship. The University of Chicago Press



has suggested moving all the Managing Editors to their main offices, but Jim feels it is better for the Managing Editors to remain at the Editors' institutions. Applications for Editor are being accepted now, and the new Editor should be in place by July, 2009.

Mary Chamberlin gave a brief presentation regarding two "Dear Colleague" letters that are now on the NSF web site. These letters introduce two new initiatives: Life in Transition (LIT) and Microbial Systems in the Biosphere (MSB). Proposals should be submitted through the regular divisions, but preface the title with LIT or MSB to indicate inclusion in these initiatives. The target dates are the same as for regular proposals.

Mary also mentioned that NSF is looking for program officers, both rotating and permanent. Current openings for permanent POs are in neurobiology and physiology.

Joe related matters Bill Zamer raised at the Executive Council meeting regarding a request by NSF that SICB develop three or four "large mandate" ideas focusing on the question, *Where is organismal biology headed?* They would like this within the next three or four weeks. The Obama administration is reviewing Bush policies at NSF, and it is important that organismal biology present a coherent vision of future directions. Peter deFur commented that this is very important. He emphasized that changes in administrations often bring about major shifts in emphasis, including at NSF, and that now is the time to act if we are going to have an influence on this change in direction. He feels that organismal biology has not been

very vocal recently, whereas other fields, such as geology, have presented unified visions of their fields.

Peter then announced that the COPUS/AIBS Year of Science would be rolling out their new web site (<http://www.yearofscience2009.org/home/>) on January 5. He encouraged everyone to visit the site, and especially to watch for regional media training and other workshops that would be held during the coming year. He suggested it is important that we learn to talk to the public and the media, in part to get the ideas of integrative and organismal biology into the public consciousness.

Joe adjourned the meeting at 5:45 PM.

Note: Because of issues regarding building renovations that significantly impacted my lab, I was unable to attend the business meeting. David Tapley took notes in my place. Thanks, David!

Message from the Graduate Student Representative

Jen Ro

Hello to fellow DCPB graduate students and postdocs.

What a great meeting we had in Boston, MA this year! I hope everyone enjoyed it.

During the 2009 annual meeting Student/Postdoctoral Affairs Committee (SPDAC) hosted a workshop entitled *"How to Find a Postdoc Position; How to Apply for an Academic*



Job". Amongst SPDAC members, we had a lively discussion on how to improve this workshop in the future. Some of the ideas were:

1) Increase the diversity in the panel members so that more students and postdocs can relate to answers from the panel.

2) Modify the format of the workshop. For example, break audiences into several groups with each panel member and have group discussions.

3) Shorten the time for the workshop to 1 hour.

If you have additional suggestions, please forward them to me ro.25@osu.edu.

Here are some funding opportunities:

-Sigma Xi Grants-in-Aid

Applications are due March 15 and October 15 annually

This program awards up to \$1,000 to students from all areas of the sciences and engineering, and designated funds from the National Academy of Sciences allow for grants of up to \$5,000 for astronomy research and \$2,500 for vision related research.

Visit: <http://www.sigmaxi.org/programs/giar/index.shtml>

-Traveling Fellowships from The Company of Biologists

Four journals (*Development*, *Journal of Cell Science*, *Journal of Experimental Biology* and *Disease Models and Mechanisms*) from the Company of Biologists offer fellowships of up to

US\$3750 / £2500 to graduate students and Postdocs wishing to make collaborative visits to other laboratories.

Applications are due April 30, August 31, and December 31.

Visit: <http://www.biologists.com/index.html>

-National Science Foundation Postdoctoral Research Fellowships in Biology

Full proposals are due November 2, 2009

Visit: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12720

The NSF also has Doctoral Dissertation Improvement Grants. Visit <http://nsf.gov> for details.

-Postdoctoral position in the Photosynthesis Research Unit, Urbana, Illinois

The research project is seeking a postdoctoral research associate for up to three years to study the mechanistic basis for plant responses to environmental stress and global change. This position will be supported by United States Department of Agriculture (USDA) and Agricultural Research Service (ARS).

Application deadline is continuous. There are no specific closing dates. Candidates will be considered as applications are received.

Please visit following website for more information.

<http://www.afm.ars.usda.gov/divisions/hrd/hrdho>



2009 Elections

Candidates for Secretary

We have three candidates for the position of DCPB Secretary. The election will be held later this spring.

Anna N. Ahn

Current Position: Assistant Professor of Biology, Harvey Mudd College



Education: B.A. UC Berkeley, 1992; Ph.D. UC Berkeley, 2000

Professional Experience: Barbara Stokes Dewey Assistant Professorship, Harvey

Mudd College; NIH Postdoctoral Fellow, Dept. of Organismic & Evolutionary Biology, Harvard University; Visiting Scientist, Dept. of Mechanical Engineering, MIT; 1998, Best Student Paper Award, Division of Comparative Physiology and Biochemistry

SICB Activities: Best Student Paper Judge, Division of Comparative Physiology and Biochemistry (2004); Panel Participant on "How to Get an Academic Job," Student & Post-doc Affairs (2006)

Other Memberships: American Physiological Society

Research Interests: Comparative muscle physiology, animal locomotion.

Statement of Goals: As we continue to support and encourage recruitment of young women scientists with various awards and scholarships, we should also implement other

creative ways to support women in science. We at SICB might consider childcare options to allow registered attendees to take their children for family vacation during the holiday season while still enjoying the meeting.

Steven Kinsey

Current Position: Associate Professor of Biology and Marine Biology, University of North Carolina Wilmington (Professor effective August 2009)



Education: B.S. Old Dominion University (1987); M.S. University of South Florida (1991); Ph.D. Florida State University (1996)

Professional Experience: National Institutes of Health postdoctoral fellow at the National High Magnetic Field Laboratory (1996-1997), Assistant Professor of Biology and Marine Biology, University of North Carolina Wilmington (1997-2003)

SICB Activities: Meeting session chair, 2006, 2007, 2009; Best student poster judge, 2009; Officer nominating committee, DCBP, 2007; Since 2001, I have brought >25 undergraduate and graduate students to SICB meetings, and they have authored or co-authored 23 presentations, 3 of which received best student paper awards.

Other Memberships: American Physiological Society; Sigma Xi

Research Interests: Our lab focuses on the influence of O₂ and metabolite transport processes on muscle metabolic design and



function, and how these factors interact with animal behavior and development. We apply a variety of experimental approaches and develop mathematical models to interpret our metabolic data. A key aspect of our work is that we examine muscle design properties as they relate to animal function throughout development. In many cases, cell level design in juvenile animals only makes sense in the context of what the animal must be able to do as an adult.

Statement of Goals: SICB has been extremely important to my professional development, and the annual meetings have been an excellent venue for my undergraduate and graduate students to present their findings. As such, a central goal would be the continued expansion of opportunities for participation in SICB by both new professionals and students.

David Tapley

Current Position: Associate Professor of Biology, Salem State College



Education: B.S. Oregon State University 1979; M.S. University of Maine, 1988; Ph.D. University of Maine, 1992

Professional Experience: Assistant Professor, University of Maine, 1996; Instructor, Auburn University, 1994-1995; ONR Postdoctoral Associate, Auburn University, 1993-1994; Postdoctoral Fellow, Friday Harbor Laboratories, University of Washington, 1992-1993; Best Student Paper Award, American Society of Zoolo-

gists, Division of Comparative Physiology and Biochemistry, 1991; Visiting Graduate Intern, Bermuda Biological Station, 1988

SICB Activities: Co-organizer, Symposium, "Fostering an Undergraduate Research Culture" SICB Annual Meeting, 2010; Member, SICB Educational Council, appointed 2009; Member, DCPB Undergraduate Steering Committee, 2008-present; Chair, DCPB Best Student Paper Committee, 2004-present; Judge, 2002-2003; Best Student Paper Judge, DIZ, 2002-2003.

Other Memberships: American Microscopical Society; AAAS; Sigma Xi; ABLE.

Research Interests: Biochemical and physiological adaptations to oxidative stress; integrative biology of intracellular symbioses; pedagogy of undergraduate research experiences.

Statement of Goals: I have been involved with SICB (ASZ) since early in my graduate studies. SICB was very supportive of me in those formative years, and I have worked to reciprocate this support since arriving on the tenure track. Clearly, SICB is an organization that nurtures its younger members, especially graduate students. If I am elected Secretary, I will support this institutional value within and beyond DCPB. Furthermore, I will work with the other Divisional officers to ensure that DCPB continues to be a thriving part of SICB