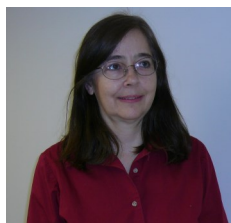


IBASM NEWSLETTER

Volume 18, Issue 2

February, 2016

Greetings from the President: Nancy Magill



Welcome back everyone. Hope you all had a great winter break and were able to relax after fall semester.

I hope that you are working hard at research as well as courses. Perhaps some of that work will be presented at our next meeting in Fort Wayne.

Our next annual meeting will be on April 1 and 2, up at IPFW in Fort Wayne. Hopefully, it will not still be winter way up there in the north of Indiana! The reservation forms and abstract forms as well as hotel information are available in this newsletter.

We have several speakers lined up for this meeting, Dr. Nancy Hanson who works on regulations of antibiotic resistance will be our guest; Dr. Timothy Donahue, ASM, Past-President, will be speaking to us about microbial sciences and biofuels, and the Allen County Health Commissioner will also be speaking as a career talk. Sounds like a great schedule and I am looking forward to hearing all of them.

The meeting will not be complete, however, without some students speaking to us and presenting posters. This meeting presents a great opportunity for undergrads, graduate students, as well as post-docs to put together posters and/or talks to present to us in that

friendly environment. If you will be looking for jobs in the near future, practice giving talks is very beneficial so we hope that you will plan on it.

(Continued on page 2)

In this issue:

Message from the President	1
Message from President-Elect	2
Message from the Student Representatives	3
New Journal Announcement	3
Abstract Guidelines	4-5
Meeting Abstract Form	6
Poster Guidelines	7-8
Meeting Agenda	9-10
Registration Form	11
Membership Form	12
Award Paper	13-14
Photos from 2015 Spring Meeting	15
Microbiology in the News	16
Important Dates	17

(Continued from page 1)

I hope too that faculty members will encourage their students to write and send in abstracts and present at this meeting. Presenting at meetings like this is a great start towards a career in science.

I look forward to seeing you all at this meeting!

Message from the President-Elect - Tanya Soule

I am excited that our spring meeting will be April 1 and 2 on the campus of Indiana University-Purdue University, Fort Wayne ([Driving Directions](#)). We will be hosting the meeting at the Steel Dynamics Keith E. Busse IPFW Alumni Center which is across the street from the Holiday Inn ([See SW Corner at E Coliseum Blvd and Paul Schaffer Dr](#)). This year we are pleased to announce that ASM Past-President Dr. Timothy Donohue will be speaking about "How microbial sciences can help produce fuels and chemicals from plant biomass" and our ASM lecturer will be Dr. Nancy Hanson from Creighton University who will be speaking about "The Regulation of β -Lactamase Production: How many variations can there be?" I am also pleased to have Dr. Deborah McMahan, the Allen County Health Commissioner, speak to us about public health issues and career opportunities.



The IBASM meeting is a wonderful opportunity for both graduate and undergraduate students to present their work. As a graduate student I attended branch meetings annually and was excited to see that Indiana offered the same opportunities. I encourage you to all submit abstracts for either a poster or oral presentation. For those of you working on a thesis, dissertation, senior, or honor's project this meeting is a great opportunity to present your research to microbiologists for valuable feedback.

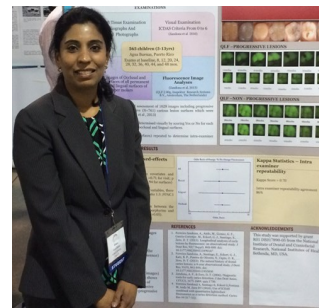
I would like to thank Dr. Eric Link, Dean of the College of Arts and Sciences at IPFW and Dr. Frank Paladino, Chair of the Department of Biology at IPFW for providing support for this meeting. I would also like to thank Dr. Becky Sparks-Thissen for her years of service as President of IBASM and Dr. Nancy Magill, our new President. I have enjoyed working with them through the transition and value their assistance. Thank you also to our student representatives, Jamison Law (IPFW) and Grace Gomez (IUPUI Dental School) for their work on the meeting forms and for their feedback.

Finally, I would like to remind you that abstracts are due **March 9** while the meeting registration is due **March 1** to align with the deadline for reserving rooms at the Holiday Inn. A block of rooms has been set aside and can be reserved for \$119 (plus tax) by March 1. To make booking reservations follow this link for our group block: [American Society of Microbiology 4-1--4-2-16](#). For more information see the Registration Form below.

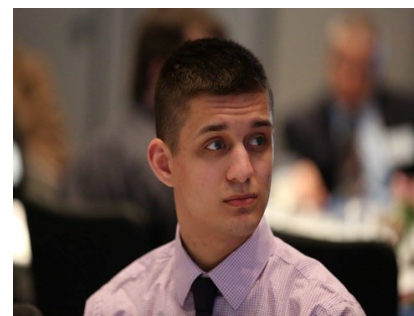
Thank you and I look forward to an educational, fun, and successful meeting!

Message from the Student Representatives

Wishing everyone that this new year brings great beginnings and successes in your research projects. Looking forward to meeting you at Indiana University-Purdue, Fort Wayne and learning about your specific areas of research. This is your time to showcase your hard work and enormous efforts through poster and oral presentation. Abstracts and posters are to be based on the proposed IBASM guidelines. If you have any questions related to this please contact student representatives, Jamison Law (lawjd02@ipfw.edu) and Grace F. Gomez (gfelixgo@iupui.edu). Though oral presentation is encouraged, presenting a poster is mandatory for competing for an award.



Please become a member of IBASM and register for the upcoming meeting on April 1-2, 2016, and also share the information with other students in Microbiology and encourage them to become members. I would like to reiterate till we meet again, Robert Frost's poem,
"But I have promises to keep
And miles to go before I sleep
And miles to go before I sleep"



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research

From the Desk of John McKillip...Educational Representative



ABSTRACT GUIDELINES BASED ON AMERICAN SOCIETY FOR MICROBIOLOGY (ASM) REQUIREMENTS

SUMMARY OF SUBMISSION STEPS

Step One: Submit the 2016 IBASM Membership Application/Renewal and Registration Forms.

Step Two: Affirmations

- Names of all the authors (primary and co-authors) will appear on the abstract.
- The submitted abstract representing your research has not been accepted for publication in a journal or in an international scientific journal based on the date submitted.
- Upon acceptance of the abstract, the prepared poster (see guidelines) will be placed on the scheduled day and time for viewing and only be removed after the scheduled time.
- Any changes in contact information should be corresponded with IBASM.

Step Three: Title

Please use a short and concise title that indicates the content of the abstract.

- Capitalize the first letter of each word except prepositions, articles and species names.
- Title is not included in the total character count of 2000.
- Do not place a period at the end of your title.
- Do not place hard returns in your title.
- Italicize scientific names (example: "Staphylococcus aureus" will appear as *Staphylococcus aureus*). For therapeutic agents, only generic names may be used (NO trade names are permitted in abstract titles).
- A title of 10 words will be appropriate.
- **Examples of a properly formatted title:**
 - * *Cryptococcus neoformans* in Black, White and Color
 - * Real Time PCR Assay for *G. destructans* Identification in Fungal Cultures and in Bat Tissues.
 - * *In Vitro and In Vivo* Characterization of Orf6, a Putative Thioesterase

Step Four: *Primary Presenting Author, Co-Authors, Affiliation*

- Authors, groups and institutions and spaces are not included in the 2000-character limit.
- Author's names will be displayed using first initial(s) and full last name. Presenting author will be printed with an asterisk (e.g. J. Smith*, W. S. Brown, and R. A. Jones).
- Each institution and author will be referenced with superscript numbers and include the institution's city, two letter state/province abbreviation and country.
- Please note that IBASM will correspond with the presenting author only. Changes in the presenting author must be communicated to IBASM. It is the responsibility of the presenting author to contact all co-authors with the disposition and scheduling of the abstract. The complete address of the presenting author is required in order to assure that correspondence arrives promptly and easily.

Step Five: *Keywords*

- Keywords are completely independent of each other and should be able to stand alone in the index.
- Words should be lowercase, except for genus names and proper nouns. For Greek characters, please spell out names.
- Organisms will be italicized in final publications.
- Enter up to three keywords.

Step Six: *Abstract Text (included in the 2000-character limit - spaces are not counted)*

- Your abstract may have up to 2000 characters, which does not include the title, authors, affiliations, and keywords. Spaces are not counted. Do NOT include abstract title, authors or keywords in the abstract text.
- Abstract text may be submitted using either of the following methods: Copy/paste or direct entry keystrokes.
- Your abstract may be written without the use of the following bolded headers (**Background, Materials, Results, Conclusion**). However, your abstract should include a one to two sentence introduction, the description of the methods used, the results obtained, and a conclusion with inclusion of its significance.

ABSTRACT FORM FOR THE 2016 IBASM ANNUAL MEETING

Complete all appropriate boxes of this form (downloadable version <http://ibasm.iweb.bsu.edu/>) and email it on or by **March 9th 5:00 pm** to Dr. John McKillip at jlmckillip@bsu.edu. **Late submissions will not be accepted.** Abstracts should be prepared according to the National ASM guidelines (see below). All abstracts should include the title, author(s), and institutional address. Accepted abstracts will be published in the meeting program if submitted by the deadline. Limited funding will be available to subsidize lodging and food for student presenters when requested in the registration form.

Presenting author information:

Name:	Phone:
Address:	Fax:
Subject Category:	Email:

Are you a student presenter? Yes or No (check one)

Oral and/or Poster presentation (check applicable boxes)

If you are not selected for an oral presentation, are you willing to present a poster?

Yes No Does not apply

Check if presenting author is a student competing for: Undergraduate MS Graduate or Ph.D. Graduate Student Award (a short paper is required from award winners). If competing for an award the student must present a poster. (If left blank, the student will not be judged in the competition).

Check if presenting student will also be presenting at the 2016 ASM General Meeting:

Are you competing for the national travel award to the 2016 ASM General Meeting? Yes No

ABSTRACT

POSTER GUIDELINES FOR THE SPRING 2016 IBASM ANNUAL MEETING

1. ABSTRACT

- Including an abstract on your poster is optional, although I would discourage it simply because the poster itself is already an abbreviated form of your research so having an abstract is like abbreviating the abbreviation. Other than being a tad redundant, abstracts take up precious space that could be used for including other information that one would otherwise not have the room for.

2. INTRODUCTION

- The introduction should give the reader a solid foundation on which to base their understanding of the rest of the poster. It should convey: the importance of the research, the problem you are trying to solve, why the research is necessary, your approach to the problem and the logic behind it, and your hypothesis.
- Be to-the-point and avoid being wordy. Nobody wants to read a novel! Instead of having one big clump of text try using bullet points to make things appear less word-heavy.

3. METHODS

- Give enough detail to where the reader understands what was done, but do not explain every detail! For example: instead of writing the entire protocol for running an SDS-PAGE, simply write, “We ran an SDS-PAGE on our protein.” Assume basic knowledge.
- Present methods in a way that is easy to follow.

4. RESULTS

- Some people (albeit very few) are colorblind and, as a result, do not derive the same information from figures because they cannot perceive the colors that the data is portrayed in- this leaves them at a great disadvantage! Therefore, try to make your figures, if possible, in black and white or colors that are colorblind friendly.
- Make sure to adjust the resolution on all of your figures, otherwise you may find that some of your images are pixelated, which can be quite embarrassing and frustrating for those trying to interpret your data!
- **DO NOT DISCUSS** your results in the Results section. You should merely state the observed results.

5. DISCUSSION

- This is where you interpret your results and discuss them.
- Refer to all of your figures when discussing the corresponding data!
- State your conclusions and future directions.

6. REFERENCES

- References are an important thing to include on a poster, especially if someone is curious about where a particular protocol, figure, or fact came from. If it is not an original work of yours- cite it!
- Space is limited so you should only include your top 3 most important references! You will have different formatting styles (THAT IS OKAY!), but make sure to be CONSISTENT!
- Author(s) last name and author(s) initial of first name. *Title*. Journal Name, Month and Year. **Volume** #(Issue #): pages. Digital Object Identifier (DOI).
- Law J and Gomez G. *Poster guide for the 2016 IBASM annual meeting*. Journal of Exampleology, January 2016. **10**(1): p. 103-107. doi: 10.1007/s02253-072-1135-4

7. ACKNOWLEDGMENTS

- It is always important to recognize those who helped you analyze data, conduct some of the research, your advisor/mentor who supervised the research, and especially those who provided you with funding, supplies, or organisms.
- Do not thank someone if they happen to be a coauthor of the poster!

8. GENERAL NOTES

- Have poster dimensions set at 40 inches by 24 inches.
- Avoid having font smaller than 24 in Times New Roman (for example). If you can read your poster on an 8x11 print-off then you should be good!
- Make sure the formatting scheme is consistent!
- The poster should stand alone- it should tell the story of your research without you having to be there.
- Poster sections should be well organized and have a natural flow to them.
- All figures and sections should be properly titled.
- Make sure all edges line up properly.
- Give at least a 1 inch page margin on all sides or you may find your print off eating into your texts and figures!

2016 IBASM Spring Meeting

Tentative Agenda

Indiana University-Purdue University, Fort Wayne

Steel Dynamics Keith E. Busse IPFW Alumni Center

(See Attached Map: SW Corner at E Coliseum Blvd and Paul Schaffer Dr)

Friday April 1, 2016

5:00-7:00 Registration

6:00-7:00 Dinner (see registration form)

7:00-8:00 ASM Past-President- Timothy Donohue, Ph.D.
Department of Bacteriology, University of Wisconsin-Madison
"How microbial sciences can help produce fuels and chemicals from plant biomass".

8:00-10:00 Welcome Reception with Poster Viewing

Saturday April 2, 2016

7:30-8:30 Breakfast (provided)

8:30-10:30 Poster Judging and Viewing

10:30-11:30 **Allen County Health Commissioner- Deborah McMahan, MD**

11:30- 12:00 Student Oral Presentations

12:00-12:30 IBASM Business Meeting

12:30-1:30 Lunch (on your own)

1:30-2:30 Student Oral Presentations

2:30-3:30 ASM Branch Lecture- Nancy Hanson, Ph.D.

Department of Medical Microbiology and Immunology
Creighton University

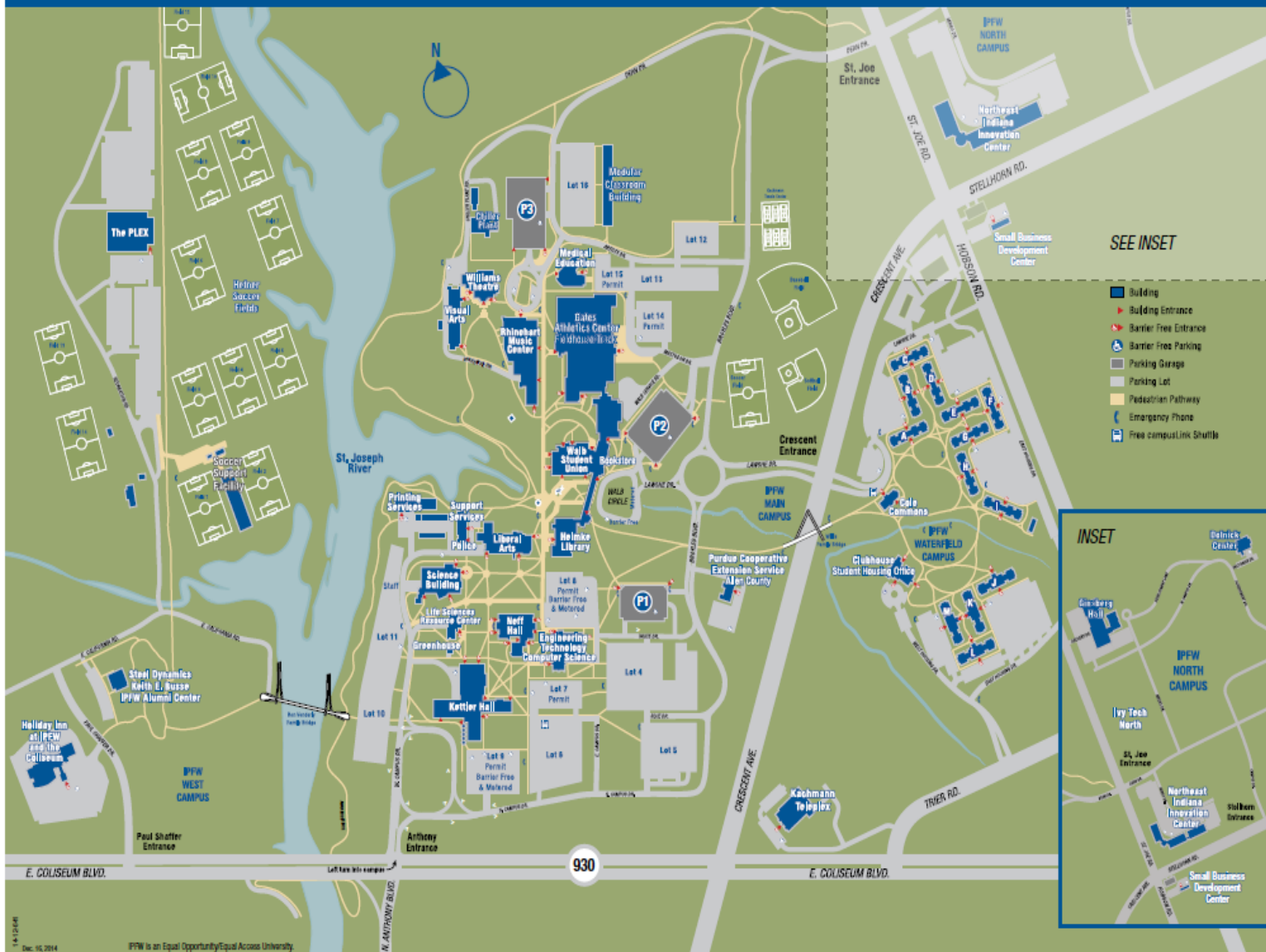
"The Regulation of β -Lactamase Production: How many variations can there be?"

3:30-4:00 Announcement of Student Award Winners
Closing Remarks



INDIANA UNIVERSITY
PURDUE UNIVERSITY
FORT WAYNE

CAMPUS MAP



SEE INSET

- Building
- Building Entrance
- Barrier Free Entrance
- Barrier Free Parking
- Parking Garage
- Parking Lot
- Pedestrian Pathway
- Emergency Phone
- Free campusLink Shuttle



IBASM Annual Meeting Registration and Meal Reservation Form

April 1-2, 2016 at the Steel Dynamics Keith E. Busse Alumni Center on the campus of
Indiana University-Purdue University, Fort Wayne

Please use this form (downloadable version <http://ibasm.iweb.bsu.edu/>) to register for the IBASM meeting and to reserve your room and meals. The meeting registration fee is \$30 for regular members and \$7 for student members. You must be an IBASM member to participate in the meeting. Family members are encouraged to attend, however, they do not have to pay registration fees. Upon completion, email (or mail) this form to Tanya Soule (soulet@ipfw.edu) no later than **March 1, 2016**. If necessary, forms may also be mailed to Tanya Soule at the address given on the Membership Form below. Payment can be in the mail with a check payable to IBASM (do not send cash) or provided at the meeting (cash or check). Registrations received after March 1 will be subject to a \$7.00 late fee (regular members) or a \$4.00 late fee (student members). Please feel free to contact Tanya Soule at the email address provided above if you have any questions. **Remember, meeting abstracts are due March 9, 2016.**

Please fill in the requested information.

Name:	#Adults:	#Children:
Address:		
Phone:	Fax:	Email:

If you are not a member, you will need to become a member and include your dues with your payment for the meeting.

IBASM member: Yes No

Please indicate which sessions you plan to attend:

Friday evening session Saturday morning session Saturday afternoon session

If you are a student presenter, do you request travel assistance? Yes No

Lodging:

A block of rooms at the rate of \$119.00 has been reserved at the Holiday Inn Ft. Wayne- IPFW which is across the street from the Alumni Center. To make booking reservations follow this link for our group block: [American Society of Microbiology 4-1--4-2-16](#). Should you need to stay additional nights, you will need to call the hotel directly at (260) 482-3800.

Please be sure to ask for the American Society for Microbiology group block. **Reservations must be made by March 1, 2016 in order to be guaranteed and to receive the event room rate.**

Payment:

Registration: Member (\$30) Student (\$7) \$ _____

Dues (if applicable; see following page): Non-student (\$15) Student (\$5) \$ _____

Friday Night Dinner (\$11.00, vegetarian option available) \$ _____

Late fees (if applicable) \$ _____

Total Enclosed \$ _____

2016 Membership Application/Renewal

If you have not done so already, it is time to pay your IBASM dues for 2016. You can do it either online when you pay your dues to the ASM National Organization (www.asm.org) or by using this form (downloadable version <http://ibasm.iweb.bsu.edu/>). Dues are \$15.00 for non-students and \$5.00 for students (per year). Please return the completed form with payment to either the IBASM meeting (cash or check) or by mail with a check (do not send cash), payable to IBASM, to:

Dr. Tanya Soule
Department of Biology
2101 E Coliseum Blvd
Indiana University-Purdue University, Fort Wayne
Fort Wayne, IN 46805
Phone: (260) 481-0229; e-mail: soulet@ipfw.edu

Please check: New Member Application or Renewal for 2016

Please check: Student Member in 2016 (\$5) or Full Member in 2016 (\$15)

Name:

Current Position & Title:

Institution:

Mailing Address (new address Yes / No?):

Phone:

Email:

Fax:

National ASM Member # (if applicable):

Background

Highest Degree:

Institution:

Professional Interests:

Biochemical Studies on a Mycobacterial Protein Potentially Involved in Fatty Acid Transport

Audrey Martin and Jaiyanth Daniel

Department of Biology, Indiana University-Purdue University Fort Wayne, Fort Wayne, IN

Tuberculosis, an emerging infectious disease, steals thousands of lives each year while latently infecting millions of individuals. Adding to the death toll, dormant *Mycobacterium tuberculosis* (*Mtb*) reactivates when the immune system is suppressed. Drugs used to treat *Mtb* include rifampicin, isoniazid, ethambutol, and pyrazinamide; however, phenotypically drug resistant TB, or latent TB, does not respond to rifampicin or isoniazid, and current drug treatments for latent TB are longer, more expensive, toxic, and unsuccessful in eradicating or curing *Mtb* [1]. It is known that survival of *Mtb* within the host macrophage is dependent upon a fatty acid-enriched environment, and recent studies have proven the accumulation of such fatty-acids within *Mtb* cells in the form of triacylglycerols when *in vivo* conditions are replicated *in vitro* [2]. Furthermore, previous studies have indicated that the transport of fatty acids from the host macrophage into the *Mtb* cell and their storage as triacylglycerols plays a very important role in enabling *Mtb* to become dormant and tolerant to antibiotics [3]. However, *Mtb* proteins involved in such fatty acid transport remain to be characterized.

We have identified an *Mtb* adenosine triphosphate binding-cassette (ABC) transport protein that potentially transports fatty acids based on its 30% amino acid sequence identity with a known fatty acid transporter in *Rhodococcus jostii* (Figure 1) and designate this protein as mycobacterial ABC transporter (mABCT) [4]. Conserved domains between mABCT and known ABC transporters also suggests mABCT acts as a membrane-localized transport protein (Figure 2). We have cloned the *mABCT* gene from the genome of *Mtb* and expressed the protein in *Escherichia coli* cells: wild type and LS6164 cells which lack the native fatty acid transport protein (FATP). PCR, restriction digestion, and sequencing confirm the integrity of the cloned *mABCT* gene. Likewise, SDS-Page after induction confirms gene expression.

In this study, we examined the ability of the mABCT protein to enhance fatty acid transport and affect lipid metabolism in heterologous host cells. Fatty acid uptake assays using ^3H -oleic acid show increased uptake into cells with the expression of mABCT protein compared to cells lacking their native fatty acid transport protein (Figure 3). Preliminary data from metabolic incorporation of ^3H -oleic acid into phospholipids in wild type *E.coli* and a fatty acid transport protein mutant with and without expression of mABCT shows no significant differences. Future aspirations include performing growth analysis assays, radio-labeled fatty acid uptake assays, and radiolabeled incorporation assays in a minimal media with fatty acids as a sole carbon source not only using ^3H -oleic but also ^{14}C -acetate, ^{14}C -oleic, and ^{14}C -palmitic. Our research on understanding the role of this mycobacterial protein is expected to aid the development of novel antibiotics to treat latent tuberculosis disease.

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Query: 402 XXXXXXXXXXXXXXXTEPAERRSRRWAVAGTSLEIEPGQLAAVFGPSGAGKTTLCYLVP 461
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Sbjct: 417 -----SLVAEPGSTVAIVGPTGAGKTTLVNLLMR 445

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Sbjct: 446 FYEIGSGRILIDGVDIASVSRQSLRSRIGMVLQDTWLYDGTIAENIAYGRPEATTDEIVE 505

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Query: 582 TVSERLVQALGEVMRGRRTLAIAHRLSTIQHADVIFVIDEGTLIERGTHTELLARQGLY 641
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Sbjct: 566 TRTELLIQRAMRELRDRSFTIIAHLSTIRDADHILVVQTGQIVERGNHAEELLARRGVY 625

Query: 642 ARL 644
          ++
Sbjct: 626 YQM 628

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Figure 1. The amino acid sequence of mABCT shows 30% identity with that of the *Rhodococcus josti* fatty acid transporter.

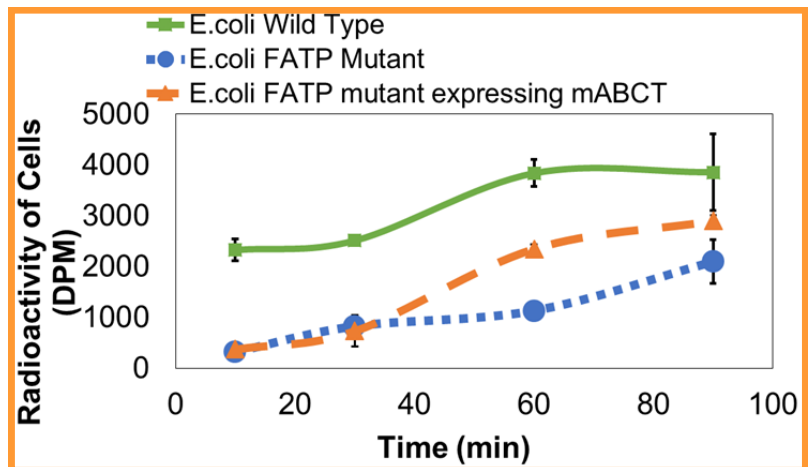
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Sequence Alignment:
mABCT
E.c. MalK
E.c. MsbA
Walker A
Q Loop
LSGGQ
Walker B
H Motif
361 NALQSGVASAERFVFLVDEPEESPEPELNLTRGRVEFHNFAIIPG--TPVIRDLSLVAEPGSTVAIVGPTGAGKTT 438
1 -----MASVQLQNVTKAW--G-EVVSKDINLDIHEGEFVWVFGPSGCGKST 44
306 AQFQRGMAAQCFTFLTLDSEQEKDEGKRVIERATGDVEFRNVTFTY-PGrDVPALRNINLKIPAGKTVALVGRSGSGKST 384
439 LVNLLMRFYEIGSGRILIDGVDIASVSRQSLRSRIGMVLQDTWLYDGTIAENIAYGRPEA-TTDEIVEAARAAHVDRFV 516
45 LLRMIAGLETITSGDLFIGEKRMNDTPPAE--RGVGMVFGSVALYPHISVAENMSFGKLAGAKKEVINQRVNVQAEVL- 121
385 IASLITRFYDIDEGEILMDGHDLREYTLASLRNQVALVSNMHLFND-TVANNIAYARTEQYSREQEEAARMAYMDFI 463
517 NTLPAGYQTRVSGDGGSSISVGEKQLITIAARAFARPQLLILDEATSSVDTRTELLIQRAMREL--RRDRSFTIIAHL 593
122 ----QLAHLDRKPKALSGGQRQRIAGRTLVAEPSVFLLEPLSNLDAALRVQRIEISRLHkRLGRMIVYTHQVE 196
464 NKMDNGLDVTYIGENGVLISGGQRQRIATARALLRDSPILLIDFATSALDTESERAIQAALDEL--QKNRTSLVIAHL 540
594 TIRDADHILVWQTGQIVERGNHAEELLARRGVVYQMTA---- 631
197 AMTLADKIVVLDAGRVAQVKGPLELY----HYPADRFVAGF[138] 371
541 TIEKADEIVVVEDGVIVERGTHNDLLEHRGVYAQLHKMQFGQ 582

```

Figure 2. The sequence alignment between mABCT and other proven ABC transporters shows conserved motifs in membrane transport proteins.

Figure 3. The mABCT protein increases radiolabeled fatty acid uptake in *E. coli* cells lacking their native fatty acid transport protein.



References:

- Zumla A, George A, Sharma V, Herbert RH, Baroness Masham of I, et al. (2015) The WHO 2014 Global tuberculosis report-further to go. *Lancet Glob Health* 3: e10-12.
- Deb C, Lee CM, Dubey VS, Daniel J, Abomoelak B, et al. (2009) A novel in vitro multiple-stress dormancy model for *Mycobacterium tuberculosis* generates a lipid-loaded, drug-tolerant, dormant pathogen. *PLoS One* 4: e6077.
- Daniel J, Maamar H, Deb C, Sirakova TD, Kolattukudy PE (2011) *Mycobacterium tuberculosis* uses host triacylglycerol to accumulate lipid droplets and acquires a dormancy-like phenotype in lipid-loaded macrophages. *PLoS Pathog* 7: e1002093.
- Villalba MS, Alvarez HM (2014) Identification of a novel ATP-binding cassette transporter Involved in long-chain fatty acid import and its role in triacylglycerol accumulation in *Rhodococcus jostii* RHA1. *Microbiology* 160: 1523-1532.

Photos from the 2015 Annual Meeting



Hannah Komanapalli receiving her award (High School Division participation) from IBASM's past President **Dr. Becky Sparks-Thissen**



Audrey Martin receiving her award (2nd place, M.S. Division) from IBASM's past President **Dr. Becky Sparks-Thissen**



1st place Undergraduate Division winner **Thomas Nero** receiving his award from IBASM's past President **Dr. Becky Sparks-Thissen**

MICROBIOLOGY IN THE NEWS

<http://www.eurekalert.org/bysubject/index.php?kw=33&start=0>

Hepatitis virus-like particles as potential cancer treatment

Nanomedicine

February 3, 2016

UC Davis researchers have developed a way to use the empty shell of a Hepatitis E virus to carry vaccines or drugs into the body. The technique has been tested in rodents as a way to target breast cancer, and is available for commercial licensing through UC Davis Office of Research.

New insights into the function of the main class of drug targets

Nature

February 3, 2016

About thirty percent of all medical drugs such as beta-blockers or antidepressants interact with certain types of cell surface proteins called G protein coupled receptors. In collaboration with researchers from the Paul Scherrer Institute, the group of Prof. Stephan Grzesiek at the Biozentrum of the University of Basel has now elucidated in detail how the structure of such a receptor changes when drugs bind and how the structural change transmits a signal to the cellular interior. These results have recently been published in "*Nature*".

Discovery of mechanism that enables bacteria to elude antibiotics

PLoSone

January 29, 2016

The Molecular Microbiology Research Group in the UAB's Department of Genetics and Microbiology describes for the first time, in a work published in *PLoSone*, a model of behavior of a bacterial colony that shows how the colony protects itself against toxic substances, like antibiotics, during the colonization process.

Important Dates

March 1, 2016:	Registration form due for Annual IBASM meeting
March 9, 2016:	Abstract form due for Annual IBASM meeting
April 1-2, 2016:	Annual IBASM meeting, Alumni Center, Indiana University-Purdue University, Fort Wayne
June 16-20, 2016:	116 th Annual Meeting of the ASM, Boston, MA

2015-2016 IBASM OFFICERS

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