

LAB NEWS FLASHES

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From: RobinL Cooper <robinlewiscooper1@gmail.com>
Date: Tue, Sep 11, 2018 at 7:53 AM
Subject: Research Lab news:

Lab news:

1. Well this paper was finally accepted for publication. It took a longtime in review and revisions: German exchange student Kristin Weineck helped to wrap this project up which I started while in Belize helping out on a Shrimp farm. Andrew and Leo are people at KY State Univ who raise Shrimp there. Meagan (EKU) and Nicole (WKU) were summer students Elena from the Belize project.

"Physiological changes as a measure of crustacean welfare under different standardized stunning techniques: Cooling and electroshock"

Kristin Weineck, Andrew Ray, Leo Fleckenstein, Meagan Medley, Nicole Dzubuk, Elena Piana, Robin Cooper

2. A review paper of YueChen's dissertation was also accepted.

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From: **RobinL Cooper** <robinlewiscooper1@gmail.com>
Date: Mon, Oct 16, 2017 at 10:13 PM
Subject: Lab news: Big Shout out for Christina Hermanns!!!

Christina was just accepted to UK medical school.
She applied a few others as well so not sure we can keep her here in KY .
But who knows for the horses she might stay .

CONGRATULATIONS CHRISTINA

!!!!!!

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date: Thu, Sep 21, 2017 at 5:25 PM
subject: MORE SUPER STUFF to hear about..... and see related to neuroscience

Hi lab gang,

These are so super

RadioLab episodes for Neuro:

1. "Colors" <http://www.radiolab.org/story/211119-colors/>
2. "Damn It, Basal Ganglia"
<http://www.radiolab.org/story/151639-damn-it-basal-ganglia/>
3. "Talking to Machines"
<http://www.radiolab.org/story/137407-talking-to-machines/>
4. "Stranger In the Mirror"
<http://www.radiolab.org/story/91967-strangers-in-the-mirror/>
5. "Where Am I? <http://www.radiolab.org/story/91524-where-am-i/>
6. "Memory & Forgetting"
<http://www.radiolab.org/story/91569-memory-and-forgetting/>
7. "Sleep" <http://www.radiolab.org/story/91528-sleep/>
8. "Who Am I?" <http://www.radiolab.org/story/91496-who-am-i/>
9. "Happy Birthday, Good Dr. Sacks"
<http://www.radiolab.org/story/305470-happy-birthday-good-doctor-sacks/>
10. "When Brains Attack!"
<http://www.radiolab.org/story/217555-when-brains-attack/>

On Thu, Sep 21, 2017 at 12:18 PM, RobinL Cooper

<robinlewiscooper1@gmail.com> wrote:

> Apparently there are a whole host of TED talks related to neuroscience

> available online

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> Neurological illness:

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> https://www.ted.com/talks/jill_bolte_taylor_s_powerful_stroke_of_insight

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> https://www.ted.com/talks/gregory_petsko_on_the_coming_neurological_epidemic

>

> https://www.ted.com/talks/oliver_sacks_what_hallucination_reveals_about_our_minds

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https://www.ted.com/talks/andres_lozano_parkinson_s_depression_and_the_switch_that_might_turn_them_off?language=en

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> https://www.ted.com/talks/lisa_genova_what_you_can_do_to_prevent_alzheimer_s?language=en

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> Psychiatric Illness:

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> https://www.ted.com/talks/joshua_walters_on_being_just_crazy_enough

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> https://www.ted.com/talks/sherwin_nuland_on_electroshock_therapy

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> https://www.ted.com/talks/andrew_solomon_depression_the_secret_we_share

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> https://www.ted.com/talks/vilayanur_ramachandran_on_your_mind

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> https://www.ted.com/talks/temple_grandin_the_world_needs_all_kinds_of_minds

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https://www.ted.com/talks/wendy_chung_autism_what_we_know_and_what_we_don_t_know_yet?language=en

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https://www.ted.com/talks/thomas_insel_toward_a_new_understanding_of_mental_illness?language=en

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> https://www.ted.com/talks/eleanor_longden_the Voices_in_my_head

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> Affective neuro:

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> https://www.ted.com/talks/david_anderson_your_brain_is_more_than_a_bag_of_chemicals

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https://www.ted.com/talks/rebecca_brachman_could_a_drug_prevent_depression_and_ptsd/footnote_s?language=en

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https://www.ted.com/talks/robert_sapolsky_the_biology_of_our_best_and_worst_selves?language=en

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> Cognitive neuro:

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> https://www.ted.com/talks/anil_seth_how_your_brain_hallucinates_your_conscious_reality?language=en

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https://www.ted.com/talks/mehdi_ordikhani_seyedlar_what_happens_in_your_brain_when_you_pay_attention

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> https://www.ted.com/talks/uri_hasson_this_is_your_brain_on_communication?language=en

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> https://www.ted.com/talks/daniel_wolpert_the_real_reason_for_brains?language=en

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> Neurogenesis, Brain repair:

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https://www.ted.com/talks/sandrine_thuret_you_can_grow_new_brain_cells_here_s_how?language=en

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> https://www.ted.com/talks/siddharthan_chandran_can_the_damaged_brain_repair_itself

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https://www.ted.com/talks/jocelyne_bloch_the_brain_may_be_able_to_repair_itself_with_help?language=en

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https://www.ted.com/talks/siddhartha_mukherjee_soon_we_ll_cure_diseases_with_a_cell_not_a_pill

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> Neuroendocrinology:

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> https://www.ted.com/talks/paula_johnson_his_and_hers_healthcare

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> Visualizing the brain, Allen Brain Atlas:

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> https://www.ted.com/talks/carl_schoonover_how_to_look_inside_the_brain

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> https://www.ted.com/talks/allan_jones_a_map_of_the_brain

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> Optogenetics:

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> https://www.ted.com/talks/ed_boyden

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> https://www.ted.com/talks/gero_miesenboeck

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> fMRI/EEG/Connectome:

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> https://www.ted.com/talks/christopher_decharms_scans_the_brain_in_real_time

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> https://www.ted.com/talks/read_montague_what_we_re_learning_from_5_000_brains

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> https://www.ted.com/talks/sebastian_seung

>

> https://www.ted.com/talks/ariel_garten_know_thyself_with_a_brain_scanner

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> https://www.ted.com/talks/nancy_kanwisher_the_brain_is_a_swiss_army_knife?language=en

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> Neuroprosthetics:

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> https://www.ted.com/talks/greg_gage_how_to_control_someone_elses_arm_with_your_brain

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> https://www.ted.com/talks/tan_le_a_headset_that_reads_your_brainwaves

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> https://www.ted.com/talks/gregoire_courtine_the_paralyzed_rat_that_walked?language=en

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> Computational Modeling & the brain:

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> https://www.ted.com/talks/henry_markram_supercomputing_the_brain_s_secrets

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> Brain Evolution:

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> https://www.ted.com/talks/suzana_herculano_houzel_what_is_so_special_about_the_human_brain

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> Genetics:

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> https://www.ted.com/talks/james_watson_on_how_he_discovered_dna?language=en

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https://www.ted.com/talks/riccardo_sabatini_how_to_read_the_genome_and_build_a_human_being?language=en

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> https://www.ted.com/talks/stephen_friend_the_hunt_for_unexpected_genetic_heroes
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> https://www.ted.com/talks/jennifer_doudna_we_can_now_edit_our_dna_but_let_s_do_it_wisely
>
> https://www.ted.com/talks/sebastian_kraves_the-era_of_personal_dna_testing_is_here
>
> https://www.ted.com/talks/richard_resnick_welcome_to_the_genomic_revolution
>
> https://www.ted.com/talks/francis_collins_we_need_better_drugs_now
>
> https://www.ted.com/talks/keolu_fox_why_genetic_research_must_be_more_diverse?language=en
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Epigenetics:
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https://www.ted.com/talks/moshe_szufi_how_early_life_experience_is_written_into_dna?language=en
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Cell biology:
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> https://www.ted.com/talks/david_bolinsky_animates_a_cell?language=en
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Sleep & Mental health:
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> https://www.ted.com/talks/russell_foster_why_do_we_sleep?language=en
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Animal Behavior:
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> https://www.ted.com/talks/carl_safina_what_are_animals_thinking_and_feeling?language=en
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>
https://www.ted.com/talks/laurel_braitman_depressed_dogs_cats_with_ocd_what_animal_madness_means_for_us_humans?language=en
>
> https://www.ted.com/talks/frans_de_waal_do_animals_have_morals
>
> https://www.ted.com/talks/joshua_klein_on_the_intelligence_of_crows

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> Cell culture:
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> https://www.ted.com/talks/geraldine_hamilton_body_parts_on_a_chip

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date: Wed, Oct 4, 2017 at 11:41 PM

Rachel was accepted with early submission to UK medical school.
As you might know her brother (Samuel), who also worked in the lab, is now a 2nd year
medical student at UK.

CONGRATULATIONS RACHEL !!!!!!



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Fri, Sep 1, 2017 at 9:54 PM

date:

Hi gang,

We were thinking of starting at 9:00 AM from the biology loading dock to then drive to Red River
... hikeMiguel's Pizza and back to Lex.

and do this hike

" Indian Stair Case"

<https://toredrivergorge.com/top-10-day-hikes/indian-staircase-area/indian-staircase/>

If you all are game let me know as we can work out transportation

I have my personal van which can hold 8 if we go tight (including driver).

Yours Robin

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Well some of us made it..... we had fun although challenging.

Photo attached.

Carly and Robin



On Wed, Aug 16, 2017 at 3:16 PM, RobinL Cooper <robinlewiscooper1@gmail.com> wrote:

Very cool !!!!!!!!

----- Forwarded message -----

From: CCTS <ccts@uky.edu>

Date: Wed, Aug 16, 2017 at 2:54 PM

Subject: Dr. Ken Campbell's 1000 Days of Running for a Cause!

To:

The Gill Heart & Vascular Institute invites you to join Dr. Ken Campbell on Saturday, August 26th for his 1,000th day of running! Dr. Campbell began his running streak on December 1, 2014, and has run a 5k every day since then. He is running to raise awareness and funds for the Campbell Muscle Lab and our VAD support group.

As many of you are aware, we often have patients who can't afford to seek the care they need or maintain regular follow up care after surgery because they do not have the funds to travel to UK.

Dr. Campbell is raising money to help provide transportation and meals to our VAD support group.

Please join us on August 26, 2017, at 10:00 a.m. in the courtyard between the Wethington Bldg and GHVI. Dr. Campbell would love to have you join him on his 1,000th 5k run or be there to cheer him on. Let us know if you can make it by sending your RSVP to cmcmu2@uky.edu.

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Hi lab inmates,

See attached PR for UK related to undergrad research !!!
University wide distribution and to alumni !

Well the three in the middle are super at least !

Jennifer, Tristan and Carly
Congrats !

Yours, Robin



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date: Mon, Aug 7, 2017 at 7:53 PM

So Congrats to the lab newlywed !!!!!!!!!!!!!!!

The new Jennifer Marie Costa

What super photos !

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date: Thu, Jul 27, 2017 at 11:11 PM

Trying to find a place with water fall I just heard about and then the pinnicals hike to Buzzards roost .
Semi hard but all short

Them pizza at Papaleona in Barea

Leave 8 am to beat the heat at biology loading dock .We should be back by 2pm

Anyone interested ?

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date: Sun, Jul 16, 2017 at 10:12 PM

Hi guys and gals,

Ok we had a great hike today to natural bridge.
So we survived and now are heading to the next level.. a 4 hour hike
A long trail around Gray's arch .
Sunday they expect rain so we are going on Saturday .

1 hour drive down,
4 hr hike,
survivors get Miguel's Pizza
1 hour drive back.

It is going to be hot >90 F
And it is a semi-hard hike.

So we leave biology loading dock at 8 AM to avoid the heat of the day.

Who is game ? (So we can work out transportation)

Robin

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date: Mon, Jun 26, 2017 at 10:47 PM

Well good News

Viresh Dayaram's study in which he and I repeated all the class experiments for the neurophysiology class has been accepted for publication pending some minor revisions. The reviewers were very thorough, even more so than for top journals I feel. So our entire neurophysiology class are also co-authors. 16 in all.

CONGRATS Viresh !!!!!!!

" Stretch Activated Channels in Proprioceptive Organs of Crab and Crayfish are Sensitive to Gadolinium but not Amiloride, Ruthenium Red or Low pH, has been accepted pending revisions.
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Date: Thu, Apr 27, 2017 at 12:19 PM
Subject: More SUPER SUPER good lab news
Hi lab mates and future summer lab mates,

Well from last week's local neuroscience meeting two of your lab mates won best presentations and they each get \$ 100. I guess that means more coffee for the labuhm..uhm...

Congratulations Christina and Aya !!!!!!!!!!!!!!!

Christina Hermanns "Considerations In Repetitive Activation Of Light Sensitive Ion Channels For Long-Term Studies: Channel Rhodopsin In The Drosophila Model"

Aya Omar "Pharmacological Identification Of Cholinergic Receptor Subtypes In Modulation Of Drosophila Melanogaster Sensory-Motor Circuits"

All the best with everyone's final exams for the end of the semester... I'll see some of over the summer.

Yours, Robin

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Date: Fri, Apr 21, 2017 at 5:17 PM

Subject: More SUPER good lab news

Very good lab news.

Christina Hermanns was awarded the University of Kentucky Undergraduate Summer Research and Creativity Fellowship for summer of 2017. She gets \$2,000. So I bet she is thinking that she will be able to keep the lab stocked with coffee for the summer !

Congratulations Christina !!!

yours, Robin

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date: Sun, Apr 16, 2017 at 10:54 AM

Well Cole's paper (He wrote up himself. The rest of us just collected data) was just accepted for publication.

Malloy, C., Sifers, J., Mikos, A., Samadi, A., Omar, A., Hermanns, C. and Cooper, R.L. (2017) Using optogenetics to assess neuroendocrine modulation of heart rate in Drosophila melanogaster larvae. Journal of Comparative Physiology A. (In Press).

Congratulations COLE.

A job well done..... in pulling all the loose ends together.

The rest of us salve labors (me included) in collected data.... a hearty congrats for staring in microscopes for hours on end in a dark room on nice summer days last summer.

Yours, Robin

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Wednesday Dec 14, 2016

Now that this semester is over time to think about the next one.

We have 2 new people joining the lab who you might know. One returning student after taking a break enjoying 1st yr of med school and some who have been in the shadows helping with on line mentoring for high school students as well as one who is getting a lot of exercise on the basketball court who will be in the lab more as well. Recall we are also running 3 different sections of Bio199 and teaching Bio446/650 neurophysiology. The TA and Bio199 mentors may also be in and out of the lab.

I bring the lab list to your attention so you know who is around. Updated photos will be on our lab web page soon.

Samuel Potter is back while between med classes to work on some projects with Rachel Potter.

NEW: Andrea Cooper (not related to me) is a Bio395 who will help out with the Bio199 class on Thursday nights.

NEW: Matthew Mattingly is a Grad student (Bio795) who will be helping on some optogenetics and Bio199 class on Thursday nights.

NEW: Brittany Slabach is a grad student TA helping in the Bio199 labs but will also be in our research lab with organizing the Bio199ers content.

NEW: Meaghan Melody & Crysta Meekins (Bio199 mentors)

So the lab gang is:

List hide

Robin Cooper (RLCOOP1@uky.edu)

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Fri, Dec 9, 2016

Hi Lab gang,

LaShay and Eashwar applied for the Ribble award and they both got it !!!

\$1500 bucks each !!!

Think how much coffee that will buy us !

Congratulations !!!!!!!

Happy times for those two as they skip off for the winter break.

Good luck on everyone's final exams.

Yours, Robin



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Lab Bird Party !!!!

Time to eat a Big Bird.



November 8, 2015 (SUNDAY)

6:00 PM

111 Shady lane, Lexington, KY

<https://www.google.com/maps/place/111+Shady+Ln,+Lexington,+KY+40503/@38.014806,-84.5152347,17z/data=!3m1!4b1!4m2!3m1!1s0x88425b522027436b:0xb10b30a24e854abb>

Food will be hot and ready to eat. Come and go as you please. We will also have lots of Veggie food also no pork present. Yes I will be cooking 2 birds in the oven and I promise I am not experimenting on you.

Let's have a fun time stuffing ourselves. Please bring significant other. Time to meet some new and old members of the lab as well.

No need to bring anything except an appetite.

Please RSVP so we can plan accordingly.

Hope all can come.

Yours, Robin and Hyewon

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Oct 30, 2015

Hi team,

Well we have some updates to keep you informed:

Yue Chen's paper from summer research with Emily, Jacob and Henry was reviewed and the reviewers suggested some textual modifications but no new experiments. Just need to re focus from ecological perspective to more of a physiological one and add some more references. So I feel we will be able to get this accepted with the next revision. **Congrats everyone.**

1. Zhu, Y.-C., Yocum, E., Sifers, J., Uradu, H. and Cooper, R.L. (2015) Modulatory effects on Drosophila larva hearts in room temperature, acute and chronic cold stress. (In Revision).

This paper was resubmitted and so far it appears to be accepted. This was a small part of my work with Esther in PT dept at UK. It is a neat study.

2. Jackson, J.R., Kirby, T.J., Fry, C.S., Cooper, R.L., McCarthy, J.J., Peterson, C.A., and Dupont-Versteegden, E.E. (2015) Reduced voluntary running performance is associated with impaired coordination as a result of muscle satellite cell depletion in adult mice (In Revision).

This paper is now in review. Keeping our fingers crossed.

3. Zhu, Y.-C., Uradu, H. Majeed, Z.R., and Cooper, R.L. (2015) Optogenetic drive of heart rate at different temperatures and Ca²⁺ concentrations. (In Review).

Ash's paper was reviewed by the new editor of the journal and he made a few comments for us. Minor changes. I feel this will not be a problem being accepted with the re-submission.

4. Thenappan, A., Dupont-Versteegden, E.E. and Cooper, R.L. (2015). An educational model for understanding acute deep tissue injury of motor units. (In Review).

So not bad this month. Thanks for the team efforts of everyone.

We all wish Ash good luck with her Med School interview tomorrow at UK !!!!!

We hope Ash and Samuel (already accepted) will be in the same med school class next year.

Yours, Robin

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July/01/2015

Hi gang,

I was a little delayed in getting this note out.

Congratulations to Cole Malloy for having his paper accepted pending minor revisions.

Malloy, C., Ritter, K., Robinson, J., and Cooper, R.L. (2015). Pharmacological identification of cholinergic receptor subtypes on *Drosophila melanogaster* larval heart.

We just need one more agonist to try and some text here and there. This should easily be turned around and accepted. Ritter and Robinson were two KBRIN summer students from last year.

Also this Saturday we have Felicitas Koch from Germany joining us. I guess we will not talk about the women's past soccer match with USA and Germany.....uhm...

All the best,
Robin

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5/7/2015

Dear Lab mates,

Many of you know **Samuel Potter**.

Well his paper was just accepted about 1 hour ago for publication as **1st author !**

Potter, S., Krall, R.M., Mayo, S. Johnson, D., Zeidler-Watters, K., and Cooper, R.L. (2015). Population dynamics based on resource availability and founding effects: live and computational models. (In Press, The American Biology Teacher).

And think he is only a junior undergraduate so no telling what accomplishments will come out by the end of next year !

Congratulations !!!!

All the best,
Robin

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4/23/2015

Lab mates,

So now we know about the summer undergraduate fellowships !!!

Both Conner English & Samuel Potter were awarded \$2,000 each to continue research over the summer.

Congratulations you two !!!!

All the best,
Robin

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4/22/ 2015

Check out the article in the Herald Leader Newspaper

http://www.kentucky.com/2015/04/22/3813704_while-working-with-fruit-flies.html?rh=1

CONGRATS CLARA !!!!!!!!!!!!!!!

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4/20/2015

Samuel was awarded the Summer Fellowship from UK from the office of undergrad Research for \$ 2,000.

Congratulations !!!!!!!

It will all go for wedding expenses I am sure !

Yours,
Robin

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4/14/2015

Look what Maddie Sanden from the lab got going !!!
<http://www.fcps.net/news/features/2014-15/ukmodules>

There is also a part about the muscle project by Michael Schultz

Here is her details on the project
<http://web.as.uky.edu/Biology/faculty/cooper/Imaging%20science-Stereology/Home-stereology.htm>

and Michael's muscle project

<http://web.as.uky.edu/Biology/faculty/cooper/Education-Muscle/Home.htm>

and the next one on fly population project by Samuel Potter
<http://web.as.uky.edu/Biology/faculty/cooper/Population%20dynamics%20examples%20with%20fruit%20flies/Home-population.htm>

Yours, Robin

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04/11/2015

Busy day for some in the lab:

1st. On Univ. of Ky campus was the Jr Kentucky Academy of Sciences (Jr KAS) meeting for High School Students. This is a competition in oral ppt presentation along with a journal report. This morning early Clara de Castro presented her research and won 2nd place in the state within her category. She was also elected to be Vice President of the Jr KAS for this following year.

2nd across town at Dunbar high school the MSTC students had presentations on their science projects for their fellow students, parents and mentors. Samuel Wycoff gave a great 20 minute presentation there.

3rd On the complete opposite side of town in the afternoon, 4th year and beyond graduate students gave presentation to faculty and fellow students. Zana Majeed performed with academic skill and presented the breadth of projects from primary research to educational modules.

Great job you three for wonderful presentations !!!

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02/23/2015

Hi lab gang,

We just had the KY-PHYS meeting (the KY chapter of the American Physiological Society) in Louisville today. Some of our gang presented there.

Everyone did an awesome job !!!

We had poster and oral presentations.

Danielle Middleton won 1st in undergrad division for poster presentation

Our high student Clara de Castro won 1st in the Undergrad division for oral presentation

Middleton, D., Krall, R.M., Zeidler-Watters, K., Johnson, D., Mayo, S., Cooper, R.L. (2015). The healthy flea model: Public health education with 7-12 grades. 3rd Annual meeting of the KY chapter of the American Physiological Society, Sullivan University College of Pharmacy, Louisville, KY. March 23, 2015. * won 1st place in poster presentation

deCastro, C., Titlow, J., Majeed, Z.R., Vaughn, M., King, K. and Cooper, R.L. (2015) Maintaining the Drosophila larval heart in situ: Modulators and stretch activated channels. 3rd Annual meeting of the KY chapter of the American Physiological Society, Sullivan University College of Pharmacy, Louisville, KY. March 23, 2015. * won 1st place in oral presentation

Now I think each will get \$100 for an award. So we can ask them for coffee money next time.

Yours, Robin



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Fri, Mar 6, 2015 at 11:02 AM

Subject: good lab news - Summer 2015

Hi Lab gang and friends,

Well we have good news to share.

Ms. Felicitas Koch will be joining us this summer from Germany. She was just awarded from the German Government a summer fully paid

internship to come study in the lab.

This is the same program Sandra Blümich came to us from last summer, but not only that Felicitas is also from Leipzig and attending the same Veterinary School as Sandra.

We are very happy to welcome Felicitas to the group and to Lexington.

We have educational projects, fruit fly and crayfish synaptic projects as well as our citizen science and muscle projects she might be interested in taking part in.

If she is like Sandra get ready to start hiking the outdoor trails around KY. I think she might be a very outdoor person as her attached photo has her on a camel somewhere in Egypt!

We will make a lab welcoming movie to send to her soon.

Her email is:

Felicitas Koch <felicitas.koch.my@gmail.com>

All the best,
Robin



On Sat, Feb 28, 2015 at 6:45 PM,

Hi lab gang and friends ,

>

> Well we had the regional science fair today .

> This is the one after the county fair .

- > Our high school students did very well .
- > The largest division in high school was animal sciences
- > Samuel Wycoff placed 2nd
- > and Clara DeCastro 3rd
- >
- > Great job you two !!!
- > Congratulations
- > Now on to the state fair next month .
- > Yours,
- > Robin

Subject: good lab news with National Science teachers

The National Science Teachers Association (high school science teachers across the USA use this group)

After publishing an article in their journal they wanted a YOUTUBE clip for their YOUTUBE channel
Samuel Wycoff's photo appeared in the original article (attached).

Josh added one now to the NSTA web site.

You can add some cool comment if you like.

(Recall this is NSTA linked for all sci teachers so behave.)

https://www.youtube.com/watch?v=v-eyw6_GC9M

Thinking about this maybe after each published paper making a short YOUTUBE clip about the paper from the authors would not be such a bad idea.. Good PR for all.

Kind of like our own JOVE articles...

Samples below but we would do ones more like what Josh did for NSTA after the papers:

<http://www.jove.com/video/51050/proprioception-tension-receptors-crab-limbs-student-laboratory>

<http://www.jove.com/video/50631/intracellular-recording-sensory-field-mapping-culturing-identified>

Nov. 25, 2014

Hi guys and gals,

Some good lab news to share.

Samuel Potter and **Michael Schultz** were both awarded this year's Ribble fellowships.
So each will receive \$ 1,500. Congratulations !!!!!

I think they are buying the beer/cokes next semester when we have a lab outing.
(just joking)

Samuel has another year in college and I think I already mentioned that Michael will be headed off to UK med school next academic year to join his sister which is already a 3rd yr medical student at UK.

More good news is that **Samuel Potter** and **YueChen Zhu** both placed at this past week KAS (Ky Academy of Science) meeting. Samuel had 3rd place in undergrad poster presentation and YueChen placed 3rd in graduate oral presentation. Congratulations !!!!!

As you know we have a packed lab next semester and exciting on going projects. I am looking forward to the chaos and meant activities. Spring is also a good time to go hiking or play tennis (i.e ASH lessons) when it warms up.

Have a good Thanksgiving and good luck with Final Exams.

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Nov. 9, 2014

Hi lab members for Spring 2015,

I am happy to say we are going to have another fun lab group for Spring 2015.

The new Bio395 students joining the lab are Rachel Potter, Maddie Sanden, Hannah L. Harris and Connor English.

I know it feels like the Potter's are taking over the lab now with Samuel and his younger sister Rachel. They will both be busy examining the role of cAMP in synaptic vesicle recruitment in motor nerve terminals of flies and crayfish.

Hannah, a high school classmate of Samuel's from Pikeville, is also joining the lab. So I am sure we will hear lots of stories of the good ole high school days. Hannah will be addressing diet in fruit flies and synaptic function. This is a hot topic with prolonging life with a restrictive diet but what happens with endurance in synaptic function?

Maddie is our resident "go to person" for all mathematical problems as she is a math major. She is also a neuroscience minor. She will help with some of our educational activities in math and biology as well as conducting experiments in synaptic transmission related to pH. Her and Michael have a neat project in determining some analysis issues in quantifying synaptic mini's.

Conner will primary be working with Cole on acetylcholine (Ach) actions and receptor subtypes in the *Drosophila melanogaster* central nervous system. This will be an interesting project to define receptor subtypes.

Some of the drugs which Cole and Conner will be using are toxic to us humans so when we are using these drugs in the lab we will have to be a bit careful in the lab with food and touching solutions or pipette tips etc... One can always ask if you are not sure.

I know, the dreaded part is the lab safety tests but they now say we have to take it each year.

At least it is on line instead of having to go to a classroom to take it.

So we have **three tests** and each one you can keep taking it until you get it right (100%). Some are kind of confusing how to fill out the information so we can do these in the lab when you have time.

<http://ehs.uky.edu/classes/>

1. **Chemical Hygiene Plan/Laboratory Safety**---- if you are new

Chemical Hygiene Plan/Laboratory Safety (annual refresher) if you did last semester

2 Fire Extinguisher Training

3 Hazardous Waste

Also exciting news is that Ash Thenappan is coming back after defecting for a semester. Her main role will be to teach us all how to play tennis. (I am joking.) She is a tennis pro from "Up North" (Ohio). She is continuing her project from last semester on physiology of injured muscle fibers having an effect on healthy surrounding tissue.

The High school students will be very busy completing their science fair projects for competitions coming up in early Spring. So we might have some mad rushes and late nights in getting their projects ready for presentations.

I think I have the lab web pages updated (still need minor tweaks) with everyone's photos so you can share with family and friends.

<http://web.as.uky.edu/Biology/faculty/cooper/StudentsPage1.htm>

OK the big news is TURKEY DAY in coming!!!

So we plan to have a turkey meat and veggies along with all kinds of goodies for a lab Thanksgiving dinner at our home (111 Shady Lane). Which is close to Central Baptist hospital on Nicholasville road as you head away from campus. 8 min bike ride or a 20

minute walk from campus (its close). We are thinking Nov 21st at 5:30 PM to whenever.

You don't need to bring anything but an appetite and your significant other. Good time to eat and relax. Maybe Ash can start giving us serving lesions in tennis if we are waiting for food to finish up.

If you can't make this Big Bird eating party we will try to have a Winter Solstice party in December as well.

In the next email I will send out the lab phone and email list which you want to file away in case you need to contact anyone (locked out of building, the crayfish have escaped and they are all over the lab).

Yours, Robin

August 21, 2014

This paper was just accepted.

It is a way to analyze mini's statistically. This was part of a MS project for a student in Statistics.

Szczesniak, R., Viele, K. and Cooper, R.L. (2014) Mixtures of Self-Modeling Regressions. Journal of Biometrics and Biostatistics. In Press.

June 30, 2014

Good lab news

Stephanie Biecker was elected as Under Rep for the local neuroscience chapter.

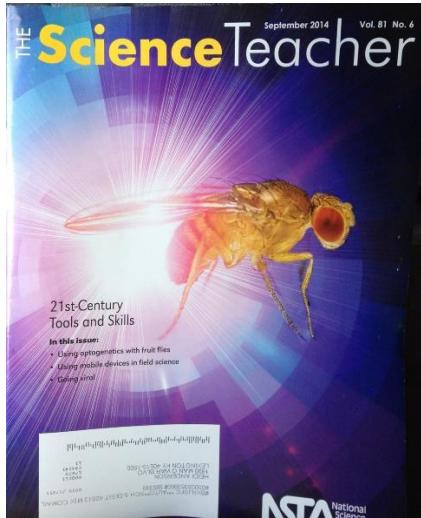
Thank you for voting for her

Robin

July 2, 2014

Titlow, J.S., Anderson H. and Cooper, R.L. (2014). Lights and Larvae: Using optogenetics to teach recombinant DNA and neurobiology. (In Press. The Science Teacher).

The journal editors/production team the article a cover feature...



May 27, 2014

Good news today.

Josh's paper "Lights and Larvae: Using optogenetics to teach recombinant DNA and neurobiology" will be accepted to "The Science Teacher". They only wanted minor revisions so easy fix. This is an educational teaching module Josh developed. He ran the activity with our Bio350 students last year as well as a high school class with Dunbar.

Our very own Samuel Wycoff has his photo in paper as well !!!

Congratulations JOSH !!!!!!!!!!!!!!!

Now off to Oxford soon.... Maybe cooler weather there.

Yours, RLC

May 14, 2014

Dear Current and past lab mates,

GREAT news .

Ellen Burns was accepted to UK med school for next year.

Tania Bovechko and Audra Stacy

These three will rock the 1st year med class next year !!!

CONGRATULATIONS !!!!!!!

In case the new people might not be sure who is who... go to lab archives

<http://web.as.uky.edu/Biology/faculty/cooper/PastStudentsPage1.htm>

Yours,
Robin

Cooper, Robin L

Sent: Wednesday, May 07, 2014 2:34 PM

Hi Gang,

Congratulations to Emily Holsopple !!!!!!!!!!!!!!!

<http://www.ukathletics.com/sports/c-rifle/spec-rel/050714aaa.html>

"After graduation, Holsopple plans to move to Colorado Springs, Colo., to train at the **Olympic Training Center in preparation for the 2016 Summer Olympic Games in Rio de Janeiro Brazil**. Following the games, Holsopple plans to head back to school and work toward a PhD in sports psychology."

Wow.... "The Olympics" Go Emily !!

Robin

April 28, 2014

Hi lab gang,

Well today I received in the mail a letter from the Tennessee Academy of Sciences and an award for Kristin Cornwell.

Kristin worked in the lab last year with Zana Majeed and presented her work at meeting. The event was last year but they finally mailed the awards.

She won 3rd place for her poster presentation.

Good job Kristin and Zana!!!!

<http://web.as.uky.edu/Biology/faculty/cooper/PastStudentsPage1.htm>

Yours,
Robin

April 26, 2014

At "a teacher that made a difference" get together today (nomination by Kayla King) we had a fun time. The "UKacusta cats" performed as well as high school kids from SCAPA. Then we got a plaque ... Kind

of cool (photo attached).

It was fun to see Kayla again and chit chat. She graduates in 2 weeks !!!
Also so do others in our lab.



Congratulations Kayla, Douglas, Esraa, Madison, Taylor !!!!!!!!
Maybe there are more so Congrats to all for surviving another semester and good luck with finals.

Robin

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April 19, 2014

Hi lab,

We just had the science fair for the junior Kentucky Academia of Sciences. This is an oral presentation 10 min and 5 min of questions. This is state wide and there are various divisions. In total this year there were 150 students.

Samuel Wycoff placed 1st in Biological Sciences !!!
Congratulations Samuel.

Yours, Robin

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April 18, 2014

Congratulations is in order to Dr. Josh Titlow.

He just successfully completed his defense today and will graduate this semester. He will start a postdoctoral position at Oxford, England this summer with full funding for 3 years.

Josh completed a B.S. in Chemistry at Marshall University in 2008. Then he went on for a MS in Biology also at Marshall University. He completed his MS in 2010 and researched on "Interactions Between Serotonergic and Dopaminergic Modulation of the Crayfish Lateral Giant Circuit".

He joined the UK Biology PhD program in 2011 and quickly moved through his course work and passing qualifying exams. After completing the laboratory rotations he rapidly proceeded with his dissertation research and has been successful in publishing most of the dissertation research in multiple manuscripts. A few more papers are in the works to be wrapped up in the next year.

Also during his time as a graduate student he became very involved in helping to develop teaching protocols for the new Neurophysiology course here at UK. Three of the laboratory procedures are now published in video as well as text format in JOVE which helps promote UK and Biology as a neurophysiology entity in teaching in this area. Next week Josh is headed to Cornell University in NY to give a guest lecture and teach lab exercises in their Neurophysiology course, and has been invited to teach this optogenetics lab module at the Faculty for Undergraduate Neuroscience workshop at Ithaca University this summer. He has developed two versions of this exercise, one for undergraduates that has already been beta tested in Bio350 lab at UK and one for high school students that has been tested at Dunbar in Lexington. The latter module is now under peer review for publication in a teaching journal associated with the NSTA (National Science Teachers Association) while the other will be submitted after student feedback data are collected from the Cornell course and FUN workshop.

Josh has been very well liked by the students he taught while a TA for Bio350 (Animal Physiology) and Histology. He has mentored high school students working in the lab as well as numerous Bio395 students. To date, he has 7 peer reviewed publications with new ones in the review process. He has authored and participated on over 40 abstracts since starting his doctoral studies. In his spare time he has dedicated himself to various outreach activities such as judging at science fairs and helping to teach at middle school science camps.

We wish Josh the best in his overseas postdoctoral studies.

Robin Cooper

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April 17, 2014

Hi lab,

I presented our muscle education project that Michael Schultz (bio395 student) has been working on for

a summer teacher's work shop for our FY county teachers this summer and during next school year.
Content is on a new web page
<http://web.as.uky.edu/Biology/faculty/cooper/Teacher%20training.htm>

The idea/concept was agreed on to be funded by a Toyota manufacturing grant !!! Yeah.

Small amount (~14 K) but 9 teachers will now be paid to take days off to develop and implement the educational modules for their students.

Yours, Robin

April 13, 2014

Hi lab,

Samuel (or 3rd yr high school student) is preparing to give an oral presentation (10min) this Saturday for the a competition at the Jr KAS (Kentucky Academy of Sciences).

Clara is as well, but she is still working on her video recording.

There are 4 people that can win a FREE to the AAAS meeting in San Diego, CA And present a poster there with scientist from around the world.

So we are looking for constructive feedback on these short presentations.

Now Samuel's is ready.

Just email me back and I will compile so the feedback can be anonymous. I will compile and send to Sam.

Maybe in a day or two we will get Clara and we can add feed to this one as well. They are both going to be super.

Try here:

<http://web.as.uky.edu/Biology/faculty/cooper/INTERNATIONAL%20OUTREACHING/SAMWjkas.mp4>

If this does not work then go here and download to your Computer (45 mB) Right click and save

<http://web.as.uky.edu/Biology/faculty/cooper/INTERNATIONAL%20OUTREACHING/Science%20without%20borders.htm>

Schedule

You can email me your topic then I will post it on the www site so others will know what topic you choose.

2014 projects:

04/13/2014: Mr. Samuel Wycoff, preparing for the irKAS meeting for high school students.

Oral presentation followed by a series of questions. ([MP4 movie download](#))

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April 10, 2014

Hi gang,

It just gets better by the day.....

This paper was just accepted for publication:

"Anatomical and genotype-specific mechanosensory responses in *Drosophila melanogaster* larvae." in **Neuroscience Research.**

Authors:

Titlow, J.S., Rice, J., Majeed, Z.R., Holsopple, E., Biecker, S., and Cooper, R.L. (2014)

CONGRATULATIONS !!!!!!!!!!!!!!!

-Robin

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

April 10, 2014

Good news;

Samuel Potter was just awarded summer funding from a UK medical school program for his undergraduate summer research in our lab.

He will continue with his current project on *Drosophila* population dynamics to develop educational material which integrates math, biology and environmental factors for middle and high school sciences classes as well as introductory college courses.

He will then move on to a problem related to physiological factors around the drug rapamycin which is gaining a lot of attention currently. This drug is being advocated for treating elderly people to extend life span and people with cardiac hypertrophy, but it also has an effect of skeletal muscle which is being ignored in the literature. Mr. Potter could really make a large contribution by examining the effects of this drug on cardiac development in larval *Drosophila* as well as acute and chronic effects on larval hearts. In addition, he can conduct larval and adult behaviors to examine skeletal muscle function and learn some electrophysiology of neuromuscular transmission to see if synaptic transmission is altered.

Congratulations Samuel !!!

Yours,
Robin

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March 29, 2014

Hi lab members,

Today was the STATE LEVEL INTEL affiliated science fair held at EKU.

This is for all the competing HIGH SCHOOLS in the state.

Samuel Won 1st Animal sciences
Clara Won 2nd place in Biochemistry

but in addition
out of the all the Life Science categories Samuel Wycoff placed 3rd in OVERALL BEST OF FAIR.

He won a free trip to the INTEL INTERNATIONAL FAIR. Also he gets to compete at the INTEL FAIR with other high school students from 50 different countries. Here is their web page or Youtube
[...http://www.youtube.com/watch?v=FhTSioqC0WQ](http://www.youtube.com/watch?v=FhTSioqC0WQ) There are 5 or 6 Nobel Prize winners which will talk with students and interact with them. This will be held in LA, California this year.

High school students **CONGRATULATIONS !!!!!!!!!!!!!!!**
Great Job.

Yours, Robin

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Date: March 1, 2014 at 5:40:23 PM EST

Subject: MORE GOOD LAB news

Hi lab members,

Today was the INTEL affiliated Regional science fair at the University.
<http://web.as.uky.edu/Biology/faculty/cooper/CKYscience/>

Samuel Won 1st Animal sciences
Elizabeth Won 2nd place in Animal sciences
Clara Won 2nd place in Biochemistry

All these students will now proceed to the State level Science and Engineering fair
Only 1st and 2nd place go to state level.

Now the bar is raised very high for the state level as Louisville students will now participate as well.

Stay tune.....

High school students **CONGRATULATIONS !!!!!!!!!!!!!!!**

Yours,
Robin

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Feb 28, 2014

Hi Lab gang,

Great news lab members.

We were awarded a fellowship by a German Academic Exchange Service for a undergrad from Germany

to come over to the lab for 12 weeks.

She has all expenses paid, including airfare from the German Gov. !

What I find interesting is she is from Universität Leipzig (former East Germany). This is where Sir Bernard Katz came from. He was a big name in synaptic transmission and was awarded the Nobel Prize for describing the ionic currents which make up the action potential. He also came up with the quantal hypothesis for synaptic transmission.

This student's name is Sandra Blümich.

We will make a short video to send to her welcoming her to the lab.... practice up your German !

Also, more big news. We have a faculty member (professor) coming from South Korea (Korean Military Academy). He is also in the Korean Military !!!

He will be here for a 6 month sabbatical with all expenses paid from the Korean Gov. His project will also be on synaptic transmission.

Yours,
Robin

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Feb 28, 2014

Hi lab mates,

Good news today.

Sarah Kenney who used to work in the lab was accepted to UK med school.

CONGRATULATIONS SARAH !!!!!!!

Sarah made the nice quantal recording movies with me for the Neurophysiology labs

You can see her here in action: (click on the movies)

<http://web.as.uky.edu/Biology/faculty/cooper/Bio450-AS300/Quantal%20physiology%20lab/LAB-quantal.htm>

So Sarah will be joining **Tania** , and **Audra** in this next years med class at UK.

Audra is in the movie shown here for EEG recordings

<http://www.youtube.com/watch?v=lsDLbXH9e4Q&feature=youtu.be>

And Tania is on our lab web site:

<http://web.as.uky.edu/Biology/faculty/cooper/PastStudentsPage1.htm>

Three great students... so we know when they finish med school we will be in good hands if they are taking care of us.

Yours, Robin