

## The [CATALYST]



## [News &amp; Announcements]

## Future Mountaineer Family

A warm "**Welcome**" goes out to our future faculty members who are joining our Mountaineer Family in the upcoming months!



**Dr. Mioara Larion** will be joining the Biochemistry Department in the Fall 2015 semester! She was recruited from Ohio State University and will be joining us as an Assistant Professor with a specialization in kinetics of metabolic enzymes.



**Dr. Valery Khramtsov** will be joining the Biochemistry Department in the Fall 2015 Semester! He was recruited from Ohio State and will be joining us as a Professor with a specialization in Electron Paramagnetic Resonance and the use of EPR probes to image parameters in the tumor microenvironment, e.g. oxygen levels, in animal models.

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## Congratulations!

**Dr. Lisa Salati** has taken on a new role as the Assistant Vice President of Graduate Education. Congratulations Dr. Salati!



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## Upcoming Birthdays

Yeheneu Agazie	Jul	5
Brandon Jones	Jul	7
Eric Tucker	Jul	9
J. Mike Ruppert	Jul	11
Vishy Ramamurthy	Jul	21
Stephanie Shumar	Jul	25
Gina Mazzetti	Jul	26
Max Sokolor	Jul	28
Chen Chung Lin	Jul	31
Diana Beattie	Aug	11
Janelle Wearer	Aug	14
Xueli Gao	Aug	27
Marycharmain Belcastro	Sep	6
William Petros	Sep	7
Anna Kiseleva	Sep	18
Marilyn Evans	Sep	24
Satyabrata Sinha	Sep	29

*"The most exciting phrase to hear in science, the one that heralds new discoveries, is not 'Eureka!' but 'That's funny'..."*  
~Isaac Asimov

## [News & Announcements Cont'd]

### Congratulations!

"**Well Done!**" goes out to our MD/PhD students from the CCB program in Dr. Ruppert's lab who have given their defense:



**Mark Farrugia**, who completed the PhD portion of his MD/PhD on May 5, 2015. His dissertation was titled The diverse relationship of Kruppel-like factors in breast cancer.



Mark will now complete his 3rd & 4th year of Medical School. The clinical rotation he is most looking forward to is Internal Medicine. Congratulations Dr. Farrugia!

**Sriganesh Sharma** who completed the PhD portion of his MD/PhD on May 20, 2015. His dissertation was titled Kruppel-like factor 4 (KLF4) promotes protumorigenic signaling in triple-negative breast cancer (TNBC) cells.



Sri will now complete his 3rd & 4th years of medical school. He is extremely excited to start a new phase of his training in the clinic and though he aspires to be a surgeon, he is looking forward to all of his clinical clerkships. Congratulations Dr. Sharma!

**Daniel Vanderbilt**, who completed the PhD portion of his MD/PhD on June 4, 2015. His dissertation was titled Regulation of SCF- $\beta$ -TrCP E3 ligase activity by the transcription factor SOX9.



Dan will now complete his 3rd & 4th years of medical school. The clinical rotation he is most looking forward to next is Family Medicine, while his overall favorite thus far has been Internal Medicine. Congratulations Dr. Vanderbilt!

*"There is a single light of science, and to brighten it anywhere is to brighten it everywhere"*  
~ Isaac Asimov

### [Chair's Corner]

This issue of **The [CATALYST]** is full of welcomes, congratulations and thank-yous as we recognize two new hires, 3 dissertation defenses and a retirement. Welcome to Mioara and Valery, two new recruits to the Department who will join the faculty in August. Two different national searches, one through the Department and one through the WVCTSI, led to their recruitments. Coincidentally, they are both moving to WVU from Ohio State. We are all eagerly awaiting their arrival. Mark, Sri and Dan successfully defended their PhD dissertations and all three return to MSIII to complete the MD component of their MD/PhD program. These three gentlemen have

been key members of the Ruppert lab and they provided much of the impetus for the publication of 4 papers from the lab since last Halloween. Congratulations guys! Finally, Mary is retiring at the end of June after 37 years on the faculty. She is one of the most enthusiastic, engaging and caring professors that I have seen. Mary will be impossible to replace but her legacy will continue in the people she has trained and in her colleagues, whom she has inspired. She is an exemplary role model (and Tar Heel) and we will miss her. Very sincerely, I thank you Mary for all you have done for the Department and wish you only the best in your retirement. Congratulations!



*"An expert is a person who has made all the mistakes that can be made in a very narrow field"*  
~ Niels Bohr

## [Alumni Spotlight]

### James B. Blair

**BS Chemistry** - WVU, 1966

**PhD Biochemistry** - University of Virginia, 1970

**Postdoctoral Fellow** - University of Wisconsin, 1972

**Rose through faculty ranks of Assistant Professor to Professor of Biochemistry** (1972-1990)

**What have you been up to since you left WVU?**

Head - Dept. of Biochemistry,  
Oklahoma State University (1990-2001)

Associate Provost and Interim Provost,  
Virginia Tech (1991-2006)

Retired - 2006

**What do you enjoy most about your current position, field of study, or your current life endeavors?**

The field of biochemistry has been a dream world for me, particularly as a university faculty position. Working with undergraduate and undergraduate students has kept me young. Carrying out original research funded by extramural sources allowed me to keep my mind sharp and also given me a chance to interact with others around the US as well as outside the country. Becoming a research administrator constantly reminded how nice it was to be a simple faculty member interacting with students daily and being engaged in research.

**What advice would you give to current or incoming graduate students here at WVU?**

Figure what you really want to do with your life and focus your education and training to meet that objective. Keep your nose to the grindstone but take some time to appreciate some of the finer sides of life including: arts, music, travel and family. Do not be afraid of working hard, it will be required to succeed.

Keep in mind that one of the lowest paid jobs you will have in your life is being a graduate student. So, why not make best of your time as a student to get your degree and move on with the more rewarding things in the future.

**How did your experience at WVU contribute to your professional career?**

As an undergraduate at WVU, I received a tremendous foundation in chemistry which held me through my career. I found I was better prepared for graduate school than many of my peers from other institutions.

As a faculty member, my career started at WVU and which gave me time to develop myself both as a researcher and a teacher. I



would not change anything about my career at WVU. Many people within Biochemistry and other departments at the Medical school really contributed to my personal development and I owe them a gratitude of thanks.

**What advice do you have for students getting ready to graduate during these difficult economic times?**

Know what you want to do and be persistent. If you have trouble finding the job you want then see what you can do to better prepare yourself for those positions. Do not give up.

**Any additional comments you'd like to include?**

WVU was my home for nearly 22 years of my life. It was a great place to mature in my profession. WVU has many great faculty and students who contributed to my own success and to my happiness. I only hope I had a similar effect on my students and colleagues. I will always treasure my WVU experience.

Since retiring, Daphna and I have been fortunate enough to travel to Egypt, Russia, China, Romania, Bulgaria, Turkey, Greece, Italy, Germany, Austria, Portugal, France, the Netherlands, Belgium, Switzerland and the Czech Republic.



***"Figure what you really want to do with your life and focus your education and training to meet that objective."***



## 10 Things you didn't know about:

### *Dr. Mary Wimmer*

#### The Basics

Title: Professor

Lab/Office: 3103a

1. **What was your very first job?**

Other than babysitting cousins, first bona fide job was waitressing at Eddie's Restaurant in Sylvan Beach, NY. Ran my tail off for the beach and amusement park crowds, but made lots in tips while getting to eat some great Italian food

2. **Favorite junk food?**

Currently, Snyder's Honey Mustard and Onion-flavored Pretzel Pieces

3. **Hands-down favorite movie?**

The Star Wars series, especially "The Empire Strikes Back."

4. **Any pet peeves or phobias?**

Three come to mind: religions, right-wing Republicans, and Monongalia County land developers/destroyers.



5. **Who was your favorite teacher/professor in school and why?**

I dedicated my Ph.D. Dissertation to my high school Chemistry teacher, Mr. Lewis, and Biology teacher, Mrs. Snyder, who solidified my love for science and helped me be the first in my family to go to college. But the greatest impact was in grad school from Dr. Ernest Eliel, my Organic Chemistry prof at UNC-Chapel Hill. Along with my Ph.D. mentor, John Harrison, he gave me the tools to be a good teacher. He wrote the book, literally, on the stereochemistry of carbon compounds, and he loved enzymes for their stereoselectivity. I once gave him copies of the ribonuclease reaction stereochemistry papers for some reading on his trip to a meeting in Germany, and he sent me a postcard, which I cherished for years! He was on my dissertation committee, and a past President of the American Chemical Society. We continued to communicate through holiday cards every year until his death.

6. **Any special talents?**

I've learned that one's abilities and

skills in the lab and classroom can be extended quite productively to other arenas. Scientists are usually quite good at collecting and analyzing facts, putting forth conclusions/arguments, and communicating the results, orally and written. Public speaking and interacting with colleagues are key parts of our academic culture. From 1984 to now, I have done much environmental advocacy work at state, regional and national levels, primarily through WV Sierra Club, Coopers Rock Foundation, WV Environmental Council, WV Wilderness Coalition, and Canaan Valley and Governor's Groundwater and Brownfields task forces (founding member of each).

7. **Favorite vacation spot and why?**

In addition to our National Parks, Emerald Isle, NC, and New England, the wildlands of our Monongahela National Forest. Wilderness soothes and relaxes me, letting me experience the forces of nature, refresh in her pristine streams, and study WV's ecologically diverse flora and fauna, far away from the ever-increasing damaging effects of humans. It's my "church."





8. **If you have a Facebook page, where was your profile picture taken?**

On top of Hawk Mountain, near Norway, Maine in 2009 while visiting Postdoc friend, Barb Werner, at her camp on Lake Penneesseewassee (yes, it's spelled right!).

9. **Do you keep in touch with any friends from graduate school?**

Yes! Paul and Lesa in Kingsport, TN and Lucy in Boston, MA. Paul spent his



career as an organic chemist with Tennessee Eastman, Lesa was a biochem lab assistant at East Tennessee State Univ., and Lucy has been a lab tech for several analytical companies. Besides many Thanksgiving dinners (and my being "aunt" to their two daughters), Paul, Lesa and I did a great 9-day trip out West with my son Ben during his spring break in 2010. In 2013, Ben and I took the history tour of Boston with Lucy during a New England trip. Strong bonds, never broken.

10. **New Question: What is your favorite book genre/author?**

I enjoy several genres. Love nature adventure books involving the Himalayas (Everest, K2, Annapurna, etc.), through which I can vicariously meet the challenges and rewards of climbing the high peaks. Alaska, as well. Latest favorites are the 3 Dan Buettner books on living long and happy lives (2 Blue Zones and Thrive), based upon his National Geographic research on centenarian-rich populations around the world (can you tell I am retiring?!). A new Steve Jobs biography also makes my current list, along with Poisonwood Bible, and a couple other "religion" books.



## [A Special Tribute to Dr. Mary Wimmer]

"Dr. Wimmer is a fabulous educator. She is the type of teacher all medical students would like to learn from, but only those at WVU are fortunate enough to have her expertise. I had the privilege of having Dr. Wimmer as my small group facilitator and enjoyed interacting with her beyond the typical lecture-hall. She greeted our small group with bagels on the third day of medical school. Dr. Wimmer encouraged our group mates to continue to share our lunch each week to spend a little time getting to know each other before tackling

that week's session. She helped cultivate a welcoming environment where we were free to communicate openly and have stimulating discussions about the cases we were solving. I know, without a doubt, that our group had the most fun that semester while managing to learn a great deal about different disorders and relate them to our coursework.

Dr. Wimmer is beloved by not only my small group, but by generations of medical school classes who have had her as a facul-

ty leader. She will be greatly missed by all. Future classes will hear about how amazing she is and wish that they had had the chance to learn from such a stellar educator."

~ **Charolte Ballentine**  
Student

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"As former Chair of the Department of Biochemistry, I remember Mary Wimmer as an enthusiastic and dedicated teacher. Her



## [A Special Tribute to Dr. Mary Wimmer]

explanations of the complexities of biochemistry, especially enzymology, were clear to all students. In addition, Mary demonstrated leadership skills in her role as Coordinator of the Biochemistry course for Dental and Pharmacy students. Her caring nature attracted students to come to her office for extra help, so that students were often waiting outside her office to see her. She will be missed."

*~ Diana Beattie, Ph.D.*

*Professor Emeritus, Biochemistry*

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"Best wishes to you for a great retirement. You have had a huge impact on several decades of young physicians with your impact on the education mission as an instructor in biochemistry and a leader in problem based learning. Thanks for all your hard work. Generations of West Virginians will benefit from your efforts."

*~ Norman D. Ferrari III*

*Vice Dean for Education & Academic Affairs  
Professor & Chair, Medical Education*

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"My working relationship with Mary Wimmer began in 2001. Mary served as the basic science representative on our Curriculum Management Committee. She played a pivotal role in the revision of the basic science portion of the dental curriculum and headed the innovative approach of designing clinical correlations between basic science theory and dental practice."

Students consistently remark that Mary is an outstanding teacher. Recurring comments on course evaluations include, "Dr. Wimmer is wonderful; she is one of the best teachers EVER! She is awesome; her great notes helped guide me through this difficult, but interesting course! I hear that Dr. Wimmer is retiring; this will be a disadvantage for future students. Dr. Wimmer really cares about teaching; she is so organized. We loved the clinic correlations!

On behalf of the School of Dentistry we extend our profound gratitude for the positive and lasting influence Dr. Wimmer has made on dental students during her tenure as course director for Biochemistry 705. We will be forever grateful to her for her enthusiasm and commitment.

With sincere appreciation and best wishes for a fulfilling retirement,"

*~Christina DeBiase, MA, Ed.D.*

*Associate Dean for  
Academic & Postdoctoral Affairs  
WVU School of Dentistry*

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"To obtain input on how to improve the teaching of biochemistry in the first year medical curriculum, I ask the first year medical students in my problem-based learning class for their opinion of the Human Function course. One comment that I hear every year is that Dr. Wimmer is an "awesome" teacher. From my perspective, Mary is not only a great teacher but also a dedicated student advocate who is deeply interested in helping students succeed in their academic pursuits. Mary leaves very big shoes to fill in the teaching mission of the Department of Biochemistry. Congratulations on your remarkable career. I wish you all the best in future years."

*~ Brad Hillgartner, Ph.D.*

*Professor, Biochemistry*

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"Dr. Wimmer is arguably one of the best examples of a complete professor I have experienced. There was a simplicity and ease in how she conveyed advanced biochemical principles that not only made these concepts easy to understand, but invoked my own curiosity as well. Furthermore, her enthusiastic delivery inspired students to master the subject matter and attain an understanding of the science that far extended memorization. Dr. Wimmer's questions required an in-depth knowledge of biochemistry and were by no means easy. However, in many ways

these rigorous questions facilitated the academic maturation necessary to succeed in medical school. In addition to academic growth, Dr. Wimmer also fostered professional and interpersonal skills during my time with her. Through her guidance, the group discussions in PBL always allowed for a free exchange of ideas in a respectful manner, promoting camaraderie amongst the students.

Lastly, in working with Dr. Wimmer you always had the sense that she genuinely cared about you, whether it that meant your performance in class or as a person in general. I greatly enjoyed my time with Dr. Wimmer, and I wish her the very best."

*~ Mark Farrugia, Ph.D.*

*Student*

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"In the 25 years that I have been in the Department of Biochemistry, Mary Wimmer has been my closest colleague and one of my closest friends. We have similar scientific interests in the structure and function of proteins and enzymes; we have similar recreational interests in hiking, biking, canoeing, and other outdoor activities; we have similar views on a lot of the political issues of the day; and we've both developed a strong interest in pedagogy. But the thing that really stands out in my memory is that we've almost always been close in proximity too.

When I first started at WVU, Mary's lab was right across the hall from my office. My first impression that August of 1990 was of the constant stream of students going into her office. I later learned that they were medical students eager to benefit from Mary's well-deserved reputation as being capable of explaining almost anything in a face-to-face meeting. I also benefited from Mary's enthusiasm as she would frequently drop in to my office to discuss science and teaching, and these conversations would often devolve into gripe sessions on politics (university, state, and/or national). These conversa-

## [A Special Tribute to Dr. Mary Wimmer]

tions led to the development of the “Advanced Proteins & Enzymes” course that we taught jointly for several years. They also led me to develop a cynical view of politics (you probably won’t believe this, but I used to be a sunny optimist).

After about 10 years Mary gave up her research lab to concentrate on teaching and she moved away (about 80 feet down the hall). She was enticed away by an office with a window (who could blame her for abandoning me to my windowless fate). But a few years after that I moved to the office right next door (with a window of my own!). I also began teaching in all of

the courses that Mary also taught in (Human Function, PBL, and Dental Biochemistry). Mary’s drop-in visits to my office became more frequent as we discussed issues involving these courses, which often led to broader discussions of pedagogy. I learned a lot about teaching from these conversations, especially the teaching of professional students. Our political gripe-fests also continued and they got even grippier (I just made that word up) as the issues that Mary was most passionate about (the environment, social justice, and civil rights) continued to take a beating.

Once Mary retires I will miss her frequent drop-in visits. But I would like to think that over the years our conversations have helped me learn some of the things that make her a great teacher. Things like making time for your students; letting the student talk so you can find their misconceptions; asking a lot of questions to find out what the student knows and where the knowledge gaps are; and most importantly, putting the student’s interests first and finding satisfaction in the student’s success.”

~ **Drew Shiemke, Ph.D.**

*Assistant Professor, Biochemistry*

## [Recent Publications]

- Murphy D, Singh R, Kolandaivelu S, **Ramamurthy V, Stoilov P.** “Alternative Splicing Shapes the Phenotype of a Mutation in BBS4 To Cause Nonsyndromic Retinitis Pigmentosa”. *Mol Cell Biol.* 6459 May 59
- Rahman SH, Kuehle J, Reimann C, Mlambo T, Alzubi J, Maeder ML, **Riedel H**, Fisch P, Cantz T, Rudolph C, Mussolino C, Joung JK, Schambach A, Cathomen T. “Rescue of DNA-PK Signaling and T-Cell Differentiation by Targeted Genome Editing in a *prkdc* Deficient iPSC Disease Model”. *PLoS Genet.* 2015 May 22

### Med School “Mad Scientists” Students Dressed Up For A Mission

Pictured (dressed up) from left to right are **Brennen Pappenberg** (Weed lab), **Yuya Kudo** (Salati’s MS in Health Science students), **Marshall Naimo** (Ex. Phys), **Dylan Boehm** (Micro.), **Mackie Newman** (new first year student this fall), **Ray Anderson** (Smith lab), **Russell Hardesty** (Neuro), **Dudley McNitt** (Micro.), **Cody Nicholson** (Hollander lab).

Benefiting the **Relay for Life Penny Wars!**





## [A Day in the life of the Leonardi Lab]

by *Stephanie Shumar & Debbie Corbin*

I really didn't realize how difficult this would be until I actually sat down to write. Trying to explain a day in our lab is no simple task because every day is different. I suppose the best way to describe what a day in our lab is like, is that it is an adventure! Our lab studies Coenzyme A, a cofactor that is involved in numerous reactions.

the liver and kidney—Nudt7 and Nudt19. Being that our lab is relatively new, we have been optimizing a variety of techniques to study these enzymes. We are working with so many techniques right now that work never gets boring. And because we have been using these new techniques,

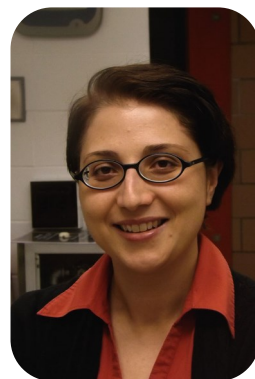
own but has an open door policy in case we need her. She has taught me a lot about time management, presenting my research to my peers, and how to be a top-notch researcher. We usually meet with Roberta once a day to talk about what our research plans are, to discuss data, and troubleshoot. We also have group meeting once a week with the Salati, Hillgartner, and Stoilov labs so we are able to get great input from people outside of our own lab.



For the most part, we focus on how it is involved in metabolism and diabetes but we also are looking into how it is involved in neurodegeneration. Right now, we are studying two enzymes that degrade CoA and acyl-CoA species in the peroxisomes of

I have really become an expert in troubleshooting, developing protocols, and being an independent researcher. Roberta has been a really great to work with. She really pushes Debbie and me to think outside the box and learn to figure things out on our

Right now, we have three main metabolic projects going on in the lab. We are in the process of generating two knock-out mouse models for Nudt7 and Nudt19 to look at the effects of loss



of CoA degradation and we have a project on overexpression of Nudt7 in diabetic mice. We also will hopefully have a small side project in the future looking at the increase in degradation of CoA in the brain as a model for a childhood neurodegenerative disease called PKAN. At the beginning of June, we had our first article published in PLoS One dealing with CoA and neurodegeneration, which we are very excited about! We have learned a lot about the biochemistry of the Nudt7 and Nudt19 over that past year and their relationship to metabolism, which we hope to publish in another paper by the end of the year.

Currently, there are only three main members in our lab; Roberta, Debbie (Lab Manager) and me, Stephanie (Graduate Student) but we also have had two undergraduates that have completed some work in past summers (Trevor and Elisha). If you would like to know more about our lab, feel free to stop by anytime... someone is always here!!





# [More Than Science: Lessons I Learned in Grad School]

by *Amanda Suchanek*

For this issue of the newsletter, I was asked to write a retrospective piece on my years in graduate school as my time here at WVU comes to an end. I thought this would be easy, but I've been staring at a blinking cursor for the better part of a day. The last six years have consisted of some of the highest highs and the lowest (and I mean lowest) lows I have experienced to this point in my life. I've decided to share a few of the lessons that I have learned, related to both science and life in general, that will hopefully be useful to future grad students.

## **Lesson 1: Take some time for yourself for at least a few hours every week.**

This was especially hard for me to do in my first couple of years, as most of my time was spent just trying to keep my head above water. As a graduate student you are under constant pressure to prove yourself in both your bench work and scientific intellect. I skipped out on a lot of social events to stay home and study and canceled plans with friends so I could spend those extra hours in lab. Don't get me wrong, studying and long hours in the lab are both necessary to maintain your academic standing, but maintaining your mental/emotional well-being is just as important. It took me until very late in this journey to realize that. Go for a sanity walk, paint some pottery, go to the zoo, read a fun book, have a weekly game night. Anything to get your mind on something else for a little while.

## **Lesson 2: "You are the smartest person in the room."**

This bit of wisdom came from my advisor, Dr. Lisa Salati, in April of 2011 when I was nervously preparing to give my first presentation at research forum—or, the last time I felt genuinely afraid to give a talk about my project. Lisa told me that I just needed to remember one thing: "When it comes to your project, you are the smartest person in the room." I don't know why that resonated with me so much, but it was like a light bulb



flipped on in my head at that moment. It's okay to be nervous, but nobody knows more about your project and what you're doing in the lab than you. It really helps with the nerves, and it's probably the most valuable piece of advice I've received to date.

## **Lesson 3: Don't measure your success against anyone else's.**

I know this is easier said than done, but nothing good comes from measuring your successes and/or failures against those of others. Though, I am still guilty of doing this from time to time. If you happen to be having a bad day in lab, and you begin to compare your progress to others, just remember—it doesn't matter what particular struggle you are having on a given day, someone else will be having a more difficult one. On that note...

## **Lesson 4: Complaining is pointless.**

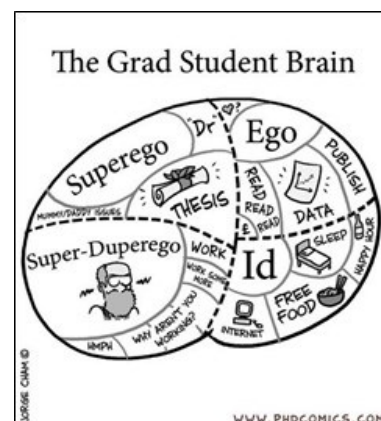
Seriously. Nobody cares if you were in the lab for 14 hours today or that you spent the whole weekend working. There are no bonus points awarded for being overly vocal about it. Besides, as a wise advisor once said to me: A Ph.D. is not earned based on time

served. Let your work speak for itself.

## **Lesson 5: Work smart.**

When you're 100+ and on your deathbed, you will not say to yourself "I wish I had skipped that dinner with my family and finished that Western blot." You just won't. Manage your time well and the work-life balance thing will be slightly easier to manage, too.

These are just a few of the many things that I have learned. To write everything down would take weeks, and I have a dissertation to finish writing. Finally!



## States Birds

Circle birds representing each state



AMERICAN GULL  
BALTIMORE ORIOLE  
BLUE HEN CHICKEN  
BLUEBIRD  
BROWN PELICAN  
BROWN THRASHER  
CACTUS WREN  
CALIFORNIA QUAIL  
CARDINAL  
CHICKADEE

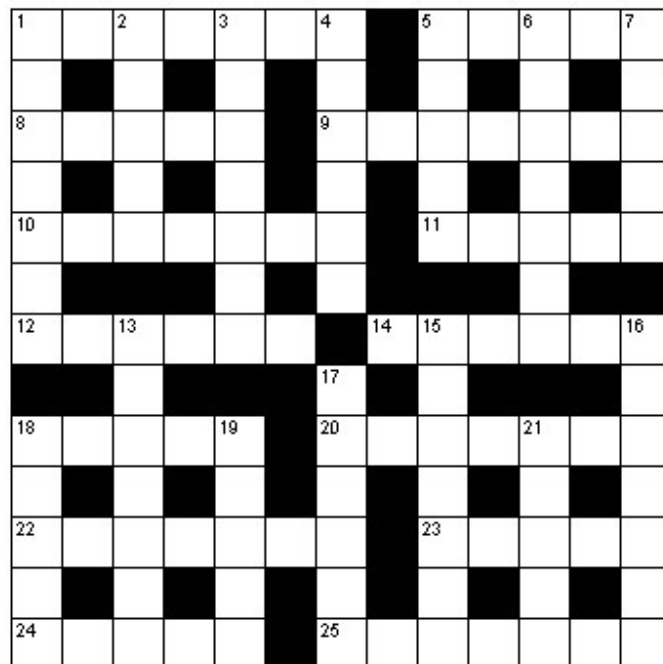
COMMON LOON  
EASTERN GOLDFINCH  
FLYCATCHER  
GREAT CAROLINA WREN  
HERMIT THRUSH  
LARK BUNTING  
MOCKINGBIRD  
MOUNTAIN BLUEBIRD  
NENE  
PURPLE FINCH

RHODE ISLAND RED  
RINGNECKED PHEASANT  
ROADRUNNER  
ROBIN  
RUFFED GROUSE  
WESTERN MEADOWLARK  
WILLOW GOLDFINCH  
WILLOW PTARMIGAN  
YELLOWHAMMER

## AVERAGE TIME SPENT COMPOSING ONE E-MAIL







## Across

- 1 Alterations (7)
- 5 Pulsate (5)
- 8 Lively dance (5)
- 9 Rumour (7)
- 10 Breed of dog (7)
- 11 Young ox (5)
- 12 Yearned (6)
- 14 Straw hat (6)
- 18 Injure (5)
- 20 Female thespian (7)
- 22 Wither (7)
- 23 Terminated (5)
- 24 Regulations (5)
- 25 Made certain (7)

## Down

- 1 Upper-case letter (7)
- 2 More competent (5)
- 3 Hard stone (7)
- 4 Vast desert of North Africa (6)
- 5 Snares (5)
- 6 Look up to (7)
- 7 Purchaser (5)
- 13 Impartial (7)
- 15 Vents (7)
- 16 Dwelt (7)
- 17 Spanish rice dish (6)
- 18 More sagacious (5)
- 19 Plunges (5)
- 21 Duck species from which down is obtained (5)



Crossword Puzzle answers located on the back page [No L<sup>👁️👁️</sup>KING....!!]

## [Upcoming Events]

### WVU and Morgantown Upcoming Events (as of mid June 2015—Mid September 2015)

Date(s)	Event	Time	Location	Additional Info/Website
<b>June 2015</b>				
6/19/2015	WV Blackbears MLB Home Opener	7:05pm	Mon. Co. Ball Park	
6/20/2015	WV Birthday!			
	Cecil Jarvis Greater Clarksburg 10k	8:00am	Clarksburg, WV	
6/21/2015	Father's Day	All Day		
	First day of Summer!			
	RDVIC Father's Day Weekend 5k	2:00pm	Morgantown, WV	
6/27/2015	Morgantown Touch a Truck 2015	10 – 2	WVU Colliseum	\$5 admission
6/28/2015	2015 Coopers Rock Climb-a-thon	11 - 2	Coopers Rock	<a href="http://coopersrockclimbingguides.com/">http://coopersrockclimbingguides.com/</a>
<b>July 2015</b>				
7/3/2015	Independence Day - Observed, University Closed			
	Triple S (pre)4th of July Celebration w/Craig Wayne Boyd	All Day	Triple 2 Harley-Davidson	(Boyd: Winner of <i>The Voice</i> )
7/4/2015	Independence Day			
	Morgantown Running 4 on the 4th		Morgantown WV	
	4th of July Fireworks Downtown	9:00pm	Wharf District	
	4th of July Fireworks with the Black Bears	9:00pm	Mon. Co. Ball Park	following their game
7/8/2015	WVU Day @ PNC Park		Morgantown to Pittsburg	<a href="http://wvutoday.wvu.edu/">http://wvutoday.wvu.edu/</a>
7/10/2015	Jum Dunn Memorial Scholarship Twilight 5 Miler	7:00pm	Morgantown, WV	
7/18/2015	MedExpress Kids' Day	10 - 2	Downtown Morgantown	
	WV Botanic Garden Wild Edible & Medicinal Plant Walk	10 -12	WV Botanic Garden	
7/22 - 7/26/2015	MountainFest Motorcycle Rally	All Day	Mylan Park	
7/27/2015	Monongalia County Fair Parade	7:30pm	High Street	
7/28 - 8/1/2015	Monongalia County Fair	All day	Mylan Park	
<b>August 2015</b>				
8/2/2015	Gene's Run for Special Olympics WV	6:00pm	Morgantown, WV	
	2015 Rush Run 5k Run/Walk	7:00pm	Morgantown, WV	
8/8/2015	Motown Mac N' Cheese Cook-Off		Spruce Street Marketplace Pavillion	
	Run for FUNds	9:00am	Morgantown WV	
8/14/2015	Degree Conferring Date		WVU	No ceremonies
8/17/2015	On-Campus First Day of Classes	2 - 5		
8/22/2015	Heat in the Hills Chili Cook-Off	11 - 5	Camp Muffy, Morgantown WV	
	Sprint, Splash'n Spin Triathlon		Marilla Park & Pool, Morgantown	
8/22 - 8/23/2015	WV Pop Con Convention	11 -5	Mylan Park	
8/29/2015	Slide the City	All Day	Mylan Park	<a href="http://www.slidethecity.com">www.slidethecity.com</a>
<b>September 2015</b>				
9/5/2015	WV Football vs. Liberty		TBA	
9/7/2015	Labor Day - University Holiday			



Check out the  
Biochemistry Website

