Department of BIOCHEMISTRY

Winter 2015
Volume I, Issue XI

The [CATALYST]

[News & Announcements]

Congratulations! to Dr. Ramamurthy & Dr. Stoilov on receiving a R01. The project title of their award is "Photoreceptor neuron specific alternative splicing of messenger RNA."

As most know, we are currently in the middle of a Faculty search for the Department. Two candidates have visited us on the HSC campus thus far, with 1-2 more projected to visit in the beginning of the New Year. Thanks to everyone who has taken time out to participate in meetings and to attend their seminars so far! *If you can please either complete a survey that is sent out by Janelle or take notes about them and be ready to discuss in our next faculty meeting. (Look for the date of the next faculty meeting from Gina in the near future!)

Don't forget the 51st annual Van Liere Convocation and WVU Health Sciences Research Day: March 3 & 4, 2016.

http://www.hsc.wvu.edu/resoff/van-liere-research-day/

Ray Anderson and Ashley Brandebura are hosting a guest speaker, Dr. Rakex Kayed, PhD, for the Cell Biology Training Program. He will be visiting on Thursday 2/11/16 and will present a seminar at 10:30am in the Eye Institute. The title of his presentation will be "Tau Aggregation and the Formation of Oligomeric Strains in Neurodegenerative Disease".

Thanks to everyone who attend the Biochemistry Holiday Potluck-Luncheon. It was a very good turn-out and as expected, the food was delicious! Photos from the luncheon, courtesy of Dr. Riedel, are posted on page 2 of the newsletter.

Season's Greetings!

Inside This Issue

Upcoming Birthdays

Vazhaikkurichi Rajendran	Dec 2
Dan Vanderbilt	Dec 17
Peter Stoilov	Dec 22
Brad Hillgartner	Dec 29
Nachiket Pendse	Jan 8
Pete Mathers	Jan 11
Yuriy Loskutov	Jan 18
Ratnesh Singh	Jan 20
Tanya Dilan	Feb 1
Helen Rogers	Feb 6
Carol Sholtis	Feb 7
Alexey Ivanov	Feb 15
Paolo Fagone	Feb 24
Zach Wright	Feb 25
George Tryfiates	Feb 26
Mike Miller	Feb 28
Drew Shiemke	Mar 6
Kimmi Alonge	Mar 9
Jessica Hall	Mar 14
Sing Sie Yu	Mar 14

"Do not go where the path may lead, go instead where there is no path and leave a trail"
~Ralph Waldo Emerson

[Season's Greetings]

[Chair's Corner]

You know that it is the end of the fall semester in Biochemistry since Drew has been spotted wearing the gaudy Christmas tree tie that he dons for the Medical School Academic Standards Committee meeting to review student performance in their first semester. It is a hand-me-down. Larry Harris wore the same tie to that meeting when he served as coordinator of the Human Function course, and then he passed it on when Drew took over the role.

In reflection, it has been a productive and exciting year in the Department. We have successfully recruited a number of new faculty through the West Virginia Clinical and Translational Science Institute. The Department is continuing to recruit. We are in the middle of first visits of some outstanding candidates for our ongoing faculty search and have plans to launch another faculty search in the next calendar year. These searches require considerable effort from members of the search committees and our administrative staff. Thanks to all who served in this past year. A number of research programs in the Department successfully secured extramural funding, including the programs of our junior faculty members. Congrats again to these folks - your efforts have paid off! Success in our teaching mission was evident in the performance of the MSI students on the NBME Biochemistry shelf exam. There was a 100% pass rate, the average for our students was in the 88th percentile and of the 110 MSI students taking the exam, 43 scored above the 90th percentile and 15 scored above the 99th percentile. Kudos to the faculty involved in teaching the Biochemistry component of Human Function.

Overall, it has been a successful year and I believe we are poised for continued success in the new year. Great job everyone! Have a safe and very happy holiday!!

"Christmas waves a magic wand over this world, and behold, everything is softer and more beautiful"
~ Norman Vincent Peale

[Dr. Khramtsov's Lab: A Glance Inside Their Work]

by Dr. Valery Khramtsov

My name is Valery Khramtsov and I have been asked to write an introduction over our scope and goals for research. I intentionally avoid writing "my research" and "my goal" here because, along with myself, there are several members of my laboratory and collaborators I work with who are of primary importance to the success of our mission: Dr. Mark Tseytlin, physicists; Dr. Andrey Bobko, chemist and spectroscopist; Dr. Timothy Eubank, cancer biologist and physiologist; and Dr. Benoit Driesschaert, chemist. All have all recently joined West Virginia University this past Fall 2015.

I joined WVU as a Professor in the Department of Biochemistry this Fall (2015) Semester from The Ohio State University, where I had worked for the past 15 years. I got my Ph.D. in Physics and Dr. Sci. degree in Chemistry from the Russian Academy of Science. I taught graduate courses in Biochemistry at Novosibirsk State University as well as Free Radical Biomedicine at The Ohio State University. I have worked in many laboratories around the world including with the help of long-term fellowships from the Alexander von Humboldt foundation (1989-1991, Max Planck Institute for Biophysical Chemistry, Gottingen, Germany), Fogarty Foundation (1997-1998, NIH, USA), and Japan Society for Promotion of Science (2014, Sapporo University). Retrospectively, I conclude that my interdisciplinary background was a necessary pre-requisite for establishing interdisciplinary programs in my first laboratories in the Russian Academy of Science, and then in the USA, as well as establishing numerous fruitful collaborations. Looking forward, I believe that with the help of my collaborators and our complementary backgrounds, we will be able to establish an "In Vivo Multifunctional Magnetic Resonance center" (IMMR center) at West Virginia University. Dr. Andrey Bobko (Research Assistant Professor) and Dr. Benoit Driesschaert (Research Scientist) have moved from OSU to WVU to join our group. Andrey's lab will be focused on the development of approaches for detection of important physiological parameters (pH, redox, pO2, glucose, etc.) in living tissues using electron and nuclear magnetic resonance techniques. Benoit will continue his work on the synthesis of innovative paramagnetic probes. Dr. Mark Tseytlin, recruited from Dartmouth College, New Hampshire as an Assistant Professor, will be focused on the development of a new generation of electron paramagnetic resonance (EPR) imaging techniques. Dr. Timothy Eubank, my long-term collaborator at OSU, was recruited as an Associate Professor in the Department of Microbiology, Immunology & Cell Biology. His lab will contribute to the IMMR center by developing various animal models of cancer as well as studying tumor macrophage phenotypes. All of our laboratories are conveniently located in the same wing of the fifth floor of the HSC-S. In addition, we will house our in vivo imaging facilities in the basement of HSS, room #229F.

The long-term focus of our research is the development and application of new magnetic resonance approaches to biomedicine. In recent years, we actively developed EPR-based approaches for multifunctional monitoring of tissue microenvironment (TME) in animal model of disease, such as cancer and ischemic heart. Note that magnetic resonance approaches, NMR (nuclear magnetic resonance)- and EPR-based techniques, are methods of choice for in vivo applications due to the sufficient depth of microwave penetration into the optically nontransparent tissue. Widely used in clinics, MRI (magnetic resonance imaging) is based on acquiring the NMR signal from protons of water, the latter being in very high concentration in living tissue, up to 110 M (!). EPR-based approaches lack this fortune due to the extraordinary low concentrations of endogenous paramagnetic specimens, often below ?M or even nM levels. Therefore, EPR requires the application of exogenous paramagnetic probes. On the other hand, this provides the advantage of EPR techniques over NMR in functional specificity: with help of specially-designed paramagnetic contrast agents that allow for noninvasive simultaneous monitoring of physiologically-relevant parameters in the tissue of living subjects. We pioneered paramagnetic probes and corresponding approaches for measurement of pH, biological thiols such as glutathione, and probes of dual and multiple functionalities. These approaches include imaging techniques such as low-field EPR imaging and proton-electron-double-resonance imaging (PEDRI; also termed Overhauser-enhanced MRI, OMRI).

Figure 1. Left: Tim and Andrey preparing tumor-bearing mouse for the EPR monitoring of TME parameters. Right: Expanded view of anesthetized mouse in the gap of L-band EPR spectrometer.

Continued on page 5

"If everyone is thinking alike, then somebody isn't thinking"
~ George S. Patton

[A Day in the Life of the Ramamurthy Lab]

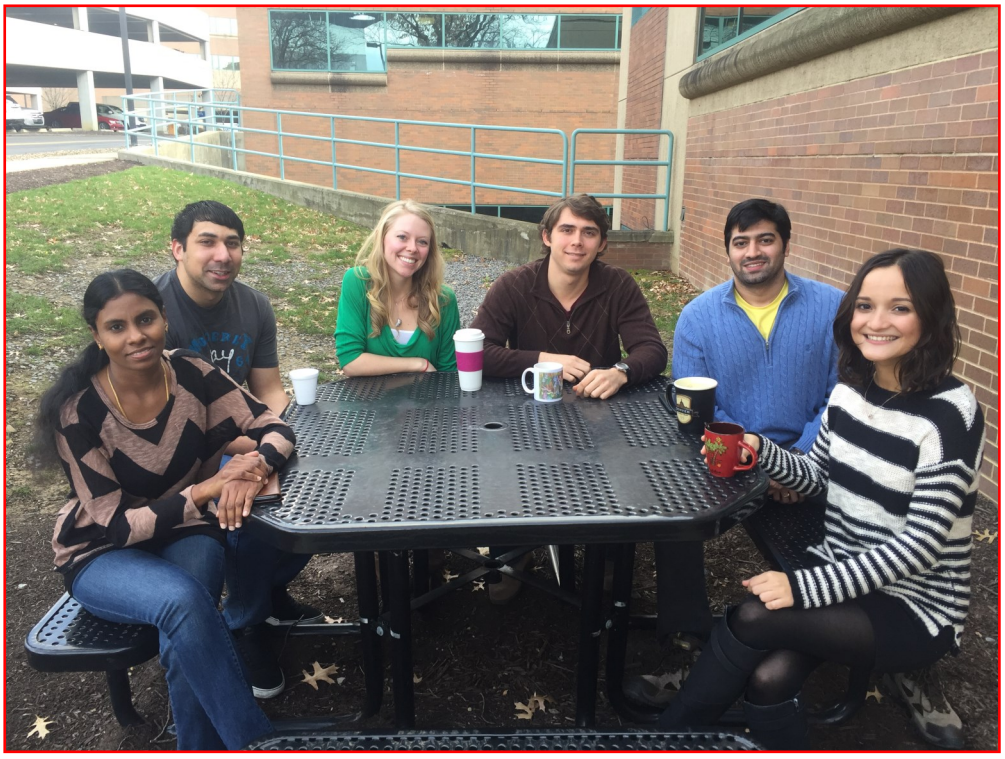
by Abigail Hayes

It is hard to encapsulate what a typical day in the Ramamurthy lab is like, because it is different for every one of us. However there are a few day-to-day activities that remain the same for us all. There are five grad students in our lab, and we each meet with Vishy one-on-one once a week. We also have a weekly lab meeting, joined by the Stoilov, Kolaindevelu, and Sokolov labs, where we present current work as well as practice presentations for conferences and meetings. Our lab meetings can get pretty intense with this group of people and can last up to 2.5 hours; everyone bounces off ideas, interesting arguments ensue, and they can be very thorough. We are a very tight-knit group in the eye institute, there is almost always a conversation going on between lab mates or with the other labs in our little hallway about experiments and interesting results. There is also almost always someone in the lab working, whether it is early morning, late at night, or on weekends. However, we make time for coffee breaks to give us a small respite from our vigorous amount of daily work. We also like to do fun things as a lab to keep up lab morale, such as our summer boat day, going out for wings, or even different festivals.

Vishy is a great mentor who works tirelessly on all of our projects (and on minimizing our always-growing animal list) and is always willing to offer advice or help with troubleshooting. When a student first joins the lab, he will train them on basic techniques himself, but as time in lab increases he pulls back so that we may become more independent. His advice on presentations, grants, and papers is invaluable and luckily he is always pushing us to work harder and go as far as we can.

Our lab studies the retina and focuses on protein trafficking and photoreceptor development and maintenance in the context of different retinal diseases, with different mouse models as our main platform of study. Each student in the lab has two main projects that they focus on, yet there is always a possibility that Vishy will walk in and mention some side project that might be interesting "to think about". Zach Wright and Nachiket Pendse are the senior most members, and will be leaving us soon, so their days consist more of writing than the rest of us. Zach is working on two different animal models that each expresses a different constitutively active small GTPase, both of which cause photoreceptor dysfunction and degeneration. Nachi focuses more on prenyl lipid modifications within the photoreceptors and how disruption of the prenylation pathway affects photoreceptor function. Tanya Dilan works on one mouse model that possesses a mutation in the Bardet-Biedl Syndrome-8 protein, which causes degeneration of photoreceptors, and another mouse model with the same mutation but only present in cone photoreceptors. Jesse Sundar is our newest member, and is starting a project studying how dark-raising the mice will affect the progression of different retinal diseases as compared to typical light/dark-cycle raised mice. Lastly, I work on two very different projects, each using a model relevant to different retinal diseases. One is a continuation of Vishy and Saro's work (Dr. Kolaindevelu), focusing on the protein AIPL1 and its interaction with the effector enzyme of phototransduction, PDE6. The other is a brand-new project focusing on the protein ARL2BP and its role in photoreceptor development.

All in all, I think every day in this lab is a very fun, motivating, and interesting place to work!



[Appalachian Regional Cell Conference]

by Ashley Brandebura

The 4th annual Appalachian Regional Cell Conference (ARCC) took place at Marshall University on November 21st. The purpose of this conference is to provide an opportunity for graduate students in the Appalachian region to present their research and to establish collaborations between graduate students among the four major participating universities: West Virginia University, University of Kentucky, Marshall University and Ohio University.

This year the Keynote Speaker was Dr. Alejandro Sanchez Alvarado from the Stower's Institute for Medical Research. He spoke about his research on regenerative pathways in the planarian S. mediterranea. His RNAi experiments have elucidated the Wnt and Hedgehog pathways as players in the molecular basis for regeneration. Although he uses planaria as his model system, he mentioned several interesting examples of mammals that can regenerate. One such example was the deer, which can shed and regenerate its antlers every year.

West Virginia University students represented and took home 5 out of the 10 poster prizes. The winners included Aaron Snoberger, Kimberly Alonge, Aric Logsdon, Danielle Shepherd and Skye Hickling. Additionally, Brandon Lucke-Wold gave a great oral presentation. Next year the conference will be hosted by WVU.

[Dr. Khramtsov's Lab: A Glance Inside Their Work]

Continued from page 3

Our goal at WVU is to establish a new "In Vivo Multifunctional Magnetic Resonance center" (IMMR center) with the support of the Robert C. Byrd Health Science Center. This center will combine state-of-the art, commercially-available, as well as newly developed and highly innovative instrumentation with novel paramagnetic contrast probes allowing for real-time in vivo imaging of functional parameters important in the health of living tissues. Figure 1 shows Tim and Andrey placing an anesthetized mouse between the magnet of the L-band EPR spectrometer (purchased for the IMMR center from Magnettech, Germany) to measure the parameters of the TME in the breast tumor.

Figure 2. From left to the right: Mark, Andrey, Benoit, Tim and Valery. OMRI console and magnet are shown on the right.

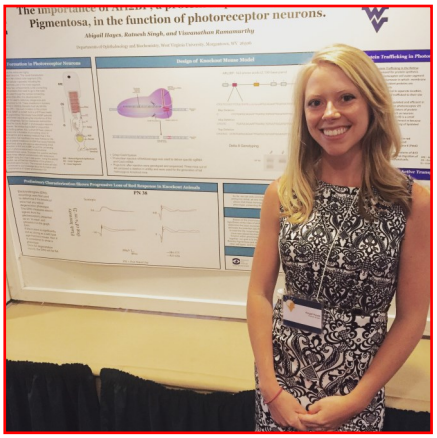
Figure 2 shows our team in the basement room 229F near the recently delivered OMRI instrument (from Redox Ltd., Japan). This OMRI instrument combines functional specificity of paramagnetic probes and spatial resolution of MRI. However, it requires the probes with long relaxation times such as trityl radicals designed in our lab by Benoit. These probes also have an advantage when used for EPR imaging (EPRI), which potentially possesses a higher functional resolution compared to OMRI. Commercially-available EPRI instruments have significant limitations, in particular long acquisition times of an hour or more for 3D images, which is impractical for in vivo use. In our IMMR center, Dr. Tseytlin will develop a new generation of so-called "rapid-scan EPR imaging technology" utilizing advances in fast techniques and new algorithms for EPR imaging acquisition and image reconstruction.

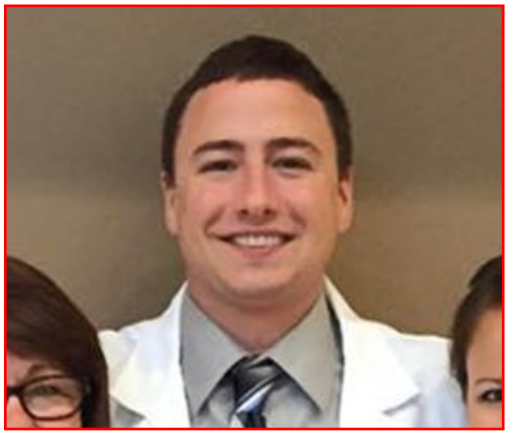
A particular focus of the research carried out at the IMMR center will be pre-clinical evaluations in animal models of cancer, aimed to obtain new insights into mechanisms of tumorigenesis which will lead to the optimization of anticancer therapeutic interventions and to improve outcome prediction. We are pleased that the aforementioned cancer-related projects are currently supported by two new R01 grants we received this year from the National Cancer Institute. The focus of the current NIH-supported research is an application of multifunctional in vivo TME analysis using in vivo magnetic resonance spectroscopy and imaging to investigate TME role in tumor progression and therapy. (See more details and related refs. at http://medicine.hsc.wvu.edu/biochemistry/people/faculty/valery-khramtsov/).

At the moment, our IMMR center is in the initial stages of purchasing the instruments and laboratory organization. We plan to gain full capacity and become fully efficient in the summer/autumn of 2016. We are open for collaboration and foresee a bright future for the IMMR center at WVU to significantly contribute to the advancement of biomedical research. Please do not hesitate to contact me for any questions! Merry Christmas & Happy Holidays to all.

[Meet Our Students!]

Each issue we are introducing different students that are involved in our program/labs. In this issue and a couple going forward, we are focusing on a few of our students who are enrolled in our BMB program but actually work in other labs, or vice versa, those who are in our labs but are enrolled in other programs.





Skye Hickling
Lab: Dr. Eric Tucker

I grew up in Midlothian, Virginia but then attended Radford University where I received my Degree in Chemistry in 2014. In January of this year, I joined the wonderful Dr. Eric Tucker's lab. My favorite thing about this lab is that we have windows! Just kidding, I really do love my colleagues and they are all supportive and collaborative (even when I'm grumpy). However, my life doesn't only consist of science, much to my boss's dismay. I love cooking and perhaps my favorite hobby is eating, but I also really enjoy working out. Along with that, I believe that it is our differences that makes us who we are, so let me tell you a little more. My favorite color is cerulean blue, I love tigers and whale sharks, and I am left handed. Eventually I would like to graduate from WVU with my PhD and first author publications so that I may work in the pharmaceutical field with drug development.

Abby Hayes
Lab: Dr. Vishy Ramamurthy

I work in Dr. Ramamurthy's lab in the Eye Institute. My dad was in the Navy, so I moved around a lot as a kid, but my family settled in Wheeling, WV, which is where I went to high school. I completed my undergraduate at Marshall University, after which I came here. Outside of lab I love spending my time doing DIY/crafts, I love theater (almost everything artsy), and reading. After I finish up here I plan on doing a postdoc.

Ray Anderson
Program: Neuroscience
Lab: Dr. David Smith

My name is Raymond Anderson, and I'm from the Small town of Salem, South Dakota. I received my undergraduate degree in psychology and biology from the University of South Dakota. I am actually in the Neuroscience program here at WVU, but I work in a Biochemistry lab. I work with proteins involved in neurodegenerative diseases. I chose to work in a Biochemistry lab because I feel that understanding the basic enzymatic activities happening in neurons is essential in order to truly understand the nature of the nervous system. I like anything to do with being outdoors and/or hanging out with friends, and I have no idea what my future plans are at this point in time. I've got time to figure it out before I graduate!

[Recent Publications]

- **Rajendran VM**, Nanda Kumar NS, Tse CM, Binder HJ. "*Na-H Exchanger Isoform-2(NHE2) Mediates Butyrate-dependent Na+ Absorption in Dextran Sulfate Sodium (DSS)-induced Colitis*." J Biol Chem. 6459

10 Things you didn't know about:

Gina Mazzetti

The Basics
Title: Administrative Associate
Office: 3123HSC-N

1. What was your very first job?
My first paying job was so long ago and I was 13 years old! I worked at a small zoo just five miles down the road from where I grew up in Central Pennsylvania. It was called the "Forest Zoo". I sold the animal food for 25 cents in the petting area where they had a lot of goats and llamas, and even some type of deer that were not the common white tails we see here in West Virginia. They opened another business across the street later that year called "Fantasy Forest". It was filled with small houses and story book characters. I played Little Red Riding Hood and handed out lollypops to all the kids! I remember being very embarrassed when I would see a classmate!

2. Five things you couldn't live without?
I would need more than 5 things! But the short list would be: Laughing, everyone should laugh more! Music! Walking or horseback riding the beautiful trials in West Virginia, Maryland and Pennsylvania. My car keys! Popcorn, cold beer and a good Pittsburgh Penguin Hockey game! Thunder storms! Did I go over my 5 things?!

3. If you could have dinner with any historical figure/world leader/ scientist/celebrity, who would it be and why?
Penny Chenery. (Helen Bates Chenery Tweedy) She owned Secretariat, the best race horse who ever ran, in my opinion. She was quite the entrepreneur and savvy business woman back in the early 70s where it was very uncommon for a woman to be successful in the competitive horse racing industry. I would love to sit with her and hear her passion and just tell stories about Secretariat. She is 93 years old and currently lives in New Rochelle, New York. She made a cameo appearance in the Disney movie about her famous Triple Crown winner, "Secretariat".

4. Favorite guilty-pleasure TV show?
Partridge Family. Growing up in the 70s, every Friday night we would watch the Brady Bunch and then the Partridge Family. I had a crush on David Cassidy! I am guilty of still listening and watching episodes on You Tube.

5. Favorite vacation spot and why?
Anywhere there is a great view, good company and no clocks!

6. Were you voted 'Most Likely To…." Something in your high school yearbook?
If so, what? I once had a classmate write in my Eighth grade autograph book: "I hope you win the Kentucky Derby when you are 101"! I always wanted to be a horse jockey growing up.

7. Were you named after anyone in particular?
I was named after my paternal Grandmother, Giovannini Santoni Mazzetti. My parents shortened the name to Gina. I wish I would have had the chance to know her. She passed in 1936 when she was just 36 years old.

8. What do you think people would be most surprised to know about you?
Probably not too much, I do not have many secrets! But some people might be surprised to know that I am a Grandmother! I have a beautiful 13 year old Granddaughter who is a ray of sunshine.

9. Any hobbies people might be surprised to know about?
I have a few part-time hobbies/jobs that I enjoy. I sometimes entertain at Senior Facilities, Festivals and sometimes birthday and block parties. I have several different shows. One of my shows is called "All About Horses" where I dress equestrian or cowgirl style. I bring a lot of props such as a giant inflatable horse, saddles, bridles and posters of famous horses and horse people. I have a puppet of Mr. Ed from 1962 that still talks! It is so much fun to share my passion with my audience. We always have a good time. The other shows are balloon twisting and face-painting.

10. Where to you see yourself in 5 years?
That is a difficult question. So many things can happen in the blink of an eye. I hope I am still here, working in the Biochemistry Department with this wonderful group of people! I love my job!

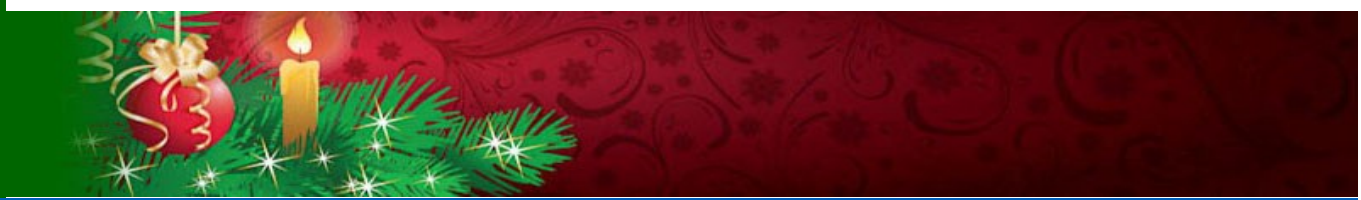
[Coffee Break]

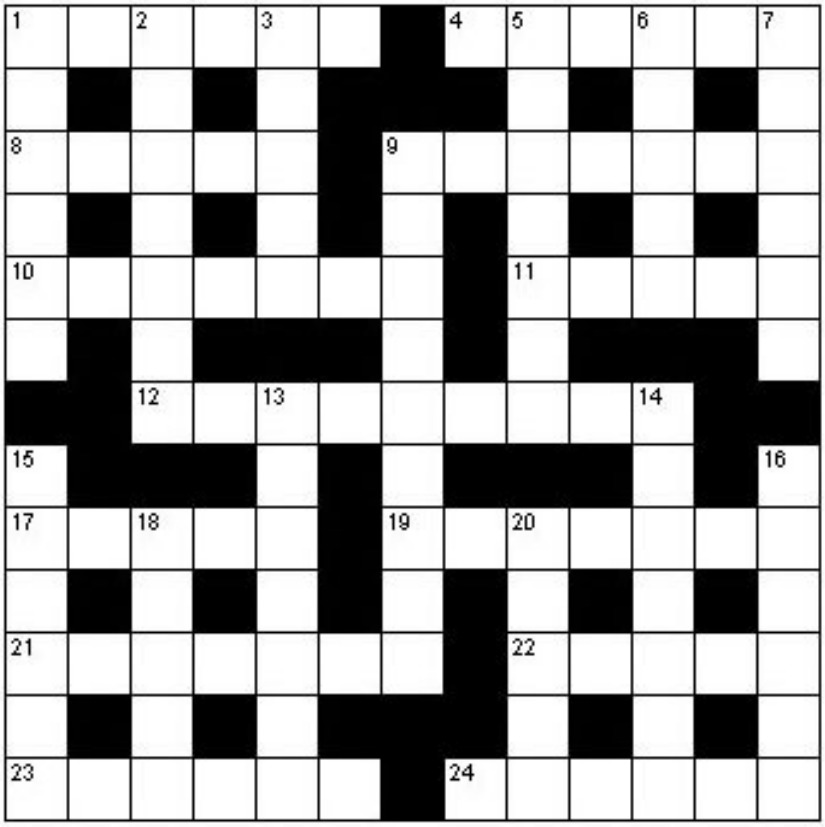
Moon

Find Words to Describe the Moon

Z	Z	E	I	C	R	H	I	M	P	A	C	T	C	R	A	T	E	R	I	N	G
D	E	D	M	G	Y	Q	U	A	S	R	A	D	N	E	L	A	C	I	N	L	W
I	J	W	Q	E	W	T	R	M	C	L	L	S	T	R	A	G	M	B	J	U	P
F	N	K	E	L	T	N	A	M	A	X	U	M	A	E	J	P	J	S	Z	N	N
F	H	A	I	D	V	A	Z	E	H	N	C	N	G	M	A	C	Y	T	E	A	E
E	G	S	S	G	A	P	L	T	R	A	S	A	A	C	E	N	R	L	L	R	V
R	B	N	I	A	X	R	R	L	I	T	U	H	T	R	C	F	Y	U	S	W	E
E	E	T	I	W	A	A	K	R	I	G	E	C	A	H	R	D	A	E	S	A	L
N	M	S	Q	N	E	P	A	V	N	C	R	C	R	V	A	O	S	C	D	T	E
T	M	E	M	D	E	M	O	A	O	A	I	O	A	R	E	P	C	X	E	E	O
I	A	G	O	E	W	H	L	L	T	L	N	R	K	P	I	L	D	K	Q	R	L
A	R	R	R	S	T	I	T	E	L	O	C	S	O	L	S	Y	A	J	S	I	L
T	G	A	U	E	T	S	R	G	U	O	U	A	C	N	G	R	M	N	Y	C	O
E	O	L	H	D	U	S	Y	S	N	R	P	E	N	O	A	K	E	G	D	E	P
D	R	H	P	I	L	N	R	S	F	E	R	R	L	I	R	L	O	T	Y	E	A
B	P	T	L	T	G	O	I	A	R	A	L	O	O	V	C	V	L	E	U	S	D
O	A	F	U	N	T	Q	C	C	L	A	H	E	O	G	K	M	W	O	J	O	M
D	N	I	S	A	D	E	S	O	K	T	L	R	T	E	R	Q	A	H	Y	N	J
Y	U	F	T	E	A	V	S	O	Y	E	U	O	P	U	L	A	U	R	P	E	I
J	L	I	T	C	O	R	E	M	R	C	L	F	S	N	N	Z	M	S	I	N	D
G	O	Y	D	O	B	L	A	I	T	S	E	L	E	C	M	I	K	J	S	A	N
N	A	T	U	R	A	L	S	A	T	E	L	L	I	T	E	A	M	T	C	Y	X

APOLLO ELEVEN
ART
CALENDARS
CELESTIAL BODY
CORE
CRUST
DARK SURFACE
DARK VOLCANIC MARIA
DIFFERENTIATED BODY
EARTH
FIFTH LARGEST
HUMANS HAVE LANDED
IMPACT CRATERING
IMPACT CRATERS
LANGUAGE
LUNA PROGRAMME
LUNAR ROCKS
LUNAR WATER ICE
MANTLE
MARIA
METALLIC IRON ALLOYED
MINUTE LENGTHENING
MYTHOLOGY
NASA APOLLO PROGRAM
NATURAL SATELLITE
NICKEL
OCEAN TIDES
OUTER SPACE TREATY
SAME FACE
SOLAR ECLIPSES
SOLAR SYSTEM
SULPHUR
SYNCHRONOUS ROTATION





Across

1 Rigorous (6)
4 Sloping script (6)
8 Imitate (5)
9 Substitute (5-2)
10 Welsh city (7)
11 Indian language (5)
12 Flabbergasted (9)
17 Parrot's name (5)
19 Recital (anag.) (7)
21 Without weapons (7)
22 Leaves out (5)
23 Make possible (6)
24 Decapitate (6)

Down

1 To such an extent (2,4)
2 Comments (7)
3 Spiny desert plants (5)
5 Instructor (7)
6 Weighed down (5)
7 Outspoken (6)
9 Protect (9)
13 Appalling (7)
14 Mislead (7)
15 Husband or wife (6)
16 Came to an end (6)
18 Capital of Tibet (5)
20 Type of steak (1-4)

Crossword Puzzle answers located on the back page [No L  KING...!!]

[Upcoming Events]

WVU and Morgantown Upcoming Events (January 2016 - March 2016)

Date(s)	Event	Time	Location
	January		
1/1/2016	Holiday: New Year's Day		
1/12/2016	Special Seminar Speaker* Dr. Fernando Estrada	12:00pm	Eye Institute
1/14/2016	Research Forum		
1/17/2016	Holiday: Martin Luther King's Birthday		
	Chinese New Year		
1/19/2016	Seminar Speaker, Dr. Maureen Neitz	12:00pm	2094
1/28/2016	Research Forum		
	February		
2/9/2016	Faculty Meeting	12:00pm	Wirtz
2/11/2016	Research Forum		
2/11/2016	Seminar Speaker, Dr. Rakex Kayed	10:30am	Eye Institue
2/25/2016	Research Forum		
2/26/2016	Mid-Semester		
	March		
3/3 - 3/4	Van Liere Convocation & WVU HSC Research Day		
3/8/16	Faculty Meeting	12:00pm	Wirtz
3/10/16	Research Forum		
3/15/16	Seminar Speaker, Dr. Yong Wan	12:00pm	2094
3/18/16	Last day to drop a class		
3/19 - 3/27	Spring Recess		
3/25/2016	Holiday: Friday Before Easter		

Check out the Biochemistry Website