Where the heroes are: testing in a war zone

MLO: We are very curious as to what is being done where. Are most lab activities restricted to actual hospitals or mobile hospitals? How many military pathologists are in Iraq, and would they be in the Green Zone or in the field?

MAJ James Branch, (Hometown unknown): We work via a pathology augmentation team staffed by one active-duty pathologist and four soldier medical-laboratory technicians (MLTs), two non-commissioned officers, and two enlisted. Active-duty pathologists typically volunteer for the assignment and deploy for approximately six months. Other members of the team deploy for 12 to 15 months. The augmentation team does not work alone and is collocated with a combat-support hospital (CSH). The augmentation team processes exclusively surgical pathology specimens, roughly 2,600 cases per year.

MAJ Eva K. Calero/Madrid, Spain: Medicine delivery can be broadly described as being delivered in levels of care. In our area of operations or AO (Iraq), there are three levels of care. The first level is basic first aid. The second is a troop medical-clinic level, which has resuscitative capabilities. The third level of care can be compared to a hospital that has surgical capabilities and that is a hospital developed from tents or a fixed facility. The levels are defined not by the structure in which they are housed but by the capabilities and roles they play in the evacuation and care the patient receives.

Military levels of care in a combat zone are usually geared to trauma, resuscitation, stabilization, and evacuation up to a safer facility where the patient can be stabilized, returned to duty, and/or evacuated. Currently, the care in the area of operations is transitioning to incorporate long-term-care needs in addition to acute and/or trauma care. Lab activities do not occur at Level I facilities. Level II labs have basic tests, mostly point of care, which aid a provider in acute-care treatment (complete blood counts [CBC]; chemistries; urinalysis [UA]; limited serology; and limited blood banking, usually emergency release-blood capabilities). Level III labs have a combination of acute and long-term-care capabilities (e.g., hematology, coagulation, chemistry/reference chemistry, UA, serology, transfusion services, microbiology; some facilities have mycology, mycobacteriology, and parasitology).

Con’t on pg 9
Happy 2009! This year’s annual meeting is being held at the Silver Legacy in Reno, always a popular site. As the meeting will soon be upon us, this issue of the Society Scope is designed to help you prepare. The meeting includes opening ceremony guest speaker retired Hall of Fame LSU basketball coach Dale Brown, a renowned motivational speaker. As usual, the board of directors has put together an outstanding agenda that includes diverse topics ranging from basic phlebotomy to advanced molecular diagnostics and from accreditation of garrison laboratories to the challenges of field based laboratory operations. This year’s meeting has more workshops related to deployed laboratory medicine than any in recent memory. As such this issue of the Scope includes a reprint of an MLO article entitled “Where the heroes are: Testing in a war zone” as well as an update on Theater laboratory issues from LTC Wade Aldous the current OIF laboratory consultant. Also included is a piece from the Air Force Medical Genetics (AFMG) laboratory at Keesler AFB. I highly encourage everyone to take the time to read these excellent articles; they truly demonstrate the “scope” of our laboratory operations within DOD. Also in this issue of the Scope you will find all the information you need to plan your meeting activities. Included are a meeting schedule, workshop abstracts, poster listings, vendor lists and floor plans for the meeting site. Also included is an overview of selected activities in the Reno area. Lastly, if anyone is interested in submitting articles for future publication, please refer to the deadlines below and contact me for further information.

LTC Paul Mann, USA

NEW DEADLINES for SAFMLS Society Scope:

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President’s Message
Lt Col Brian G. Casleton, USAF

Happy New Year! Where does the time go? It seems like just yesterday we were enjoying New Orleans, now we have another opportunity to renew friendships and continue to plot the future of military laboratory medicine at the Silver Legacy Hotel and Casino in Reno! The annual meeting is just around the corner; 23-26 March 2009. The planning committee has been very busy getting ready and I am confident that each of you will enjoy the meeting this year and find something to educate and inspire you to future success. I would like to thank LTC Mike Lopatka and his team as it really is no small task to put this meeting together each year and once again the planning committee has put together a fabulous week of events. I would also like to thank another “behind the scenes” person and that is Maj Jeannette Watterson our new Exhibit Program Chair. She is the one that finds future sites for this wonderful event, negotiates contracts, works with vendors in the exhibit hall, and handles all of the other tasks that must be completed to make our meeting a success.

This year we will begin the week with our Opening Ceremony speaker, Coach Dale Brown who will tell us how to find success and happiness. As a professional speaker, he works with organizations that want to achieve success and inspire a winning attitude toward work and life. Dale Brown is recognized as one of the most accomplished and gifted speakers in the world and his gift for motivating both teams and individuals is legendary. His philosophy is based upon winning, leadership, conviction and personal growth which all tie nicely into this year’s theme—“Leadership: winning the war, preparing for future challenges.” From there we move into the business meeting, workshops, EXHIBITS, short topics, and poster sessions. Did I mention the EXHIBITS? Please take the time to visit the exhibit hall, see the latest technologies and visit with the vendors. Without their continued support this meeting would not be possible.

If you need more information please visit the SAFMLS website (http://www.safmls.org) to find out more about the events scheduled this year. The website has more information about the annual meeting and the society so please visit and find out what is happening. The Planning Committee will continue to work all the way to the meeting kick-off on 23 March 2009. The Vice-President and Chair of the Planning Committee, LTC Mike Lopatka, would love to hear from you if you would like to help out. He can be reached through the SAFMLS Board of Director’s webpage. Please feel free to let us know how we can improve future meetings. In closing, I would like to thank the membership for their confidence in me. It has been an honor and pleasure to lead this Society as your president. I look forward to seeing you in Reno!

New for 2009:
- Registration Fee $20 – This will help defray the costs of providing PACE credits.
- Annual Dues $20 – Dues for 2009 are payable by 31 Dec 2008.
- Vendors may subscribe to the Society Scope for $30 per year. Contact the Editor or Secretary.
I write this Consultant’s Corner during a period of great change for both the Department of Defense and the nation we serve. The last six months have seen a panic in the credit markets, the deepening of what is expected to be a lengthy recession, and an historic election season that has apparently reoriented our nation’s political and strategic priorities.

Despite these changes, continuity will dominate DoD operations in the near term; our worldwide footprint will remain relatively static, the demands for forward medical support will remain robust; even our Secretary of Defense will remain for the time being. At the operational level, the long-expected shift of resources from the Iraqi Theater of Operations (ITO) to the Afghan Theater of Operations (ATO) will slowly pick up steam.

However, such continuity may be short-lived. Sharp downturns in our nation’s economy have in the past put downward pressure on defense expenditures, despite perceived defense needs. During the Great Depression, United States military preparedness lagged badly even as the threats of Nazism, Fascism, and Japanese Militarism became manifest. In the 1970s, economic instability, hyperinflation, and a de-emphasis on military preparedness in the wake of Vietnam produced a “hollow military” even at the height of the Cold War. Even the relatively mild recession of the early 1990s contributed to the search for a “peace dividend” that sharply reduced the size of DoD’s budget relative to our Gross National Product and the overall Federal Budget.

While such parallels are far from exact, there are similar dynamics today that will constrain DoD and the triservice laboratory community in coming years, regardless of the necessity of our missions. We are now in the wake of a burst credit bubble that has destabilized a global financial system overly dependent on expansive credit and easy money. Revenues to the US Treasury are down sharply as economic activity contracts. The American public is disenchanted with ongoing wars in Asia and the memory of 9/11 continues to fade, as does patience with defense spending. More importantly, we are placing literally trillions of dollars of additional spending (some in the form of tax “credits”) on the national credit card. Even more alarming, these historic budget deficits are accompanied by approximately $70 trillion in unfunded future liabilities for Medicare and Social Security- and this is before any further expansions of federal health coverage. As the economist Herb Stein once said, “If something can’t go on forever, it will stop.” Something’s got to give- and part of that something is the defense budget. We will see reductions in or elimination of significant weapons programs, and force modernization will focus not on growing the force but rather on leveraging limited resources to maximum effect. Military personnel are among the most expensive of DoD assets, and promises to the contrary, the inexorable tide of red ink will limit end strength in coming years in the absence of major strategic challenges or heightened threats to the homeland. While we still have a war (or two) to win, we are moving away from guns and towards butter.

I am not a pessimist who believes that America’s best days are past (intellectuals even have a word for it: “Declinism”, with a capital D). America retains a relatively free economy, remains culturally open and adaptive, and is receptive to new methods, systems, and technologies. Not coincidentally, we see all of these qualities in the actions of SAFMLS members around the globe. Faced with GWOT challenges and resource constraints, we have refined methods, sought new technologies, enhanced inter-service cooperation, consolidated, and generally tried to do more with less. Laboratory interoperability is a great example of how we have used technology to break down barriers between MTFs, and between the three services. It is imperative that these trends continue, that we challenge our old, service-specific ways. Why, for example, can’t we eventually transition to a unified Medical Command? Why does each service have a separate contract or system for HIV testing? Why doesn’t

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more test volume cross service boundaries? Why can’t we procure a state-of-the-art, fully integrated laboratory information system that transcends the limits of CHCS, CoPath and DBSS? Why can’t operational medicine have better connectivity?

We must be relentless in the pursuit of efficiency, integration and technological advancement. To do otherwise would be to fail to read the signs of the times.
off instruments for repair and return because of the lack of local service contracts. Not every location has backup instruments and has had to do without some testing in the interim period. We tend to share instruments among facilities to keep testing going. There are basically a core set of instruments that each facility will have including a Piccolo, an iSTAT, and an Act10 for basic core lab functions. Larger facilities will have a more extensive test menu.

**Testing**

Physicians who rotate every 6 months are accustomed to ordering their preferred test(s) from their previous duty station which may or may not be available at the location that they are at. They often pressure the lab to bring on new tests which may have sustainability issues with each incoming CSH depending on expertise levels. To eliminate this problem, we developed a laboratory submission manual with a listing of all of the local tests performed. Any new tests would have to be sent out. The CSH treats patients to prepare them for a return to duty or evacuate within 72 hours. However, some of our MTFs also provide care for host nation civilians, contractors, and detainees. These individuals do not evacuate, so they remain hospitalized until they can either be transferred to a local civilian facility or discharged. This increases the microbiology testing workload as well as a number of specialty tests. We’ve determined that at least one microbiologist should be located with the CSH that sees many HN individuals. Since there are many tests that cannot be performed in theater, we’ve tried to limit these tests for only those whose results will impact patient care that can actually be provided at the Level III CSH. All specimens that are sent out go through LRMC. Unfortunately, LRMC reports a very high rejection rate of specimens (approximately 50%) due to specimens being out of temperature range upon receipt or from leakage. We recently identified a shipping container that will keep the temperature consistent during transit and all facilities will be using them in the future. Finally, not all of our personnel involved in shipping of specimens have received training and certification from CHPPM to send hazardous and infectious materials. Incoming units should identify these personnel early on to get them trained and certified before coming to theater.

The AMEDDC&S developed a “FLIP” disk several years back otherwise known as the field laboratory information program. This is a wonderful resource for all units preparing to deploy. The information is intended to contain the latest SOPs, forms, and information to the field. While there is a great amount of useful information including many teaching images, several of the SOPs are outdated and some are associated with instruments that are not currently fielded. The guidance given is that the FLIP is a collaborative effort and is only as good as the content submitted from the field. We must continue to provide comments, questions, and contributions to keep this document applicable to future deploying units.

**Supplies**

Supply issues are quite varied and numerous. Only FDA approved testing should be performed in theater, but we’ve identified some kits that do not meet this standard. These have since been removed from testing. Typically, when supplies are ordered for a specific kit or reagent, we receive the actual product. However, due to back orders and other supply issues, sometimes a substitute reagent is received from another manufacturer. In one case, we identified three different manufacturer’s rapid malaria kits delivered in theater. Anytime a new test is brought online, it requires validation and a new SOP before results can be reported. Luckily, since the test concepts are pretty much the same, appendices can be made to the original SOP. We’ve also noticed that some of the reagents ordered arrive with a very short shelf life and in some cases they even arrive expired. This is an issue that we’re working with USAMMCE-SWA to correct. All such reagents may end up being delivered directly to the ordering location by the manufacturer in an effort to increase shelf life. Sometimes, facilities are still required to use expired reagents until replacement items arrive, but all such reagents must pass QC to
ensure that the desired reactions are achieved. Greater inventory management needs to occur at each location to reduce these issues.

**Communication**

Methods of communication are not always reliable. Sometimes the internet servers are down and we are unable to send and receive e-mail. Additionally, local phone service has also been hit or miss at times. We’ve not always been able to contact our providers by their cell phones due to interruptions. Additionally, we’ve been unable to dial out to contact our colleagues at other locations for teleconferences. These interruptions are minimal compared to the lack of a fully functioning CHCS system for reporting laboratory data. There is no lab interoperability between locations. Most locations are unable to bid and test results and must manually enter patient data. This increases the likelihood of clerical errors. CHCS files and tables were not all built equally for each location. When running a statistical detail report (SDR) to capture all test data, we found that it was woefully inadequate for measuring total workload. We’ve since resorted to manual counting for better accuracy. Many of our providers are not registered in CHCS and so any tests that they order either does not get ordered into CHCS or it is ordered under another provider’s name, usually the DCCS. Lastly, not all locations have the ability to log onto LRMC’s server to get patient testing results.

**Future Plans**

Standardization is the new catchphrase. We’re currently working towards that here in ITO. We already established a theater laboratory submission manual and a theater-wide antibiogram. While reviewing the actual testing capabilities of supported FOBs, FSTs, level 2, and level 3 facilities, we found both differing instrumentation and personnel at each level. We tentatively determined the tests that are to be performed in both level 2 and level 3 facilities and have begun reviewing the reagents and test kits from USAMMCE-SWA. Initially, we hoped to identify the preferred test reagents, but with variable supply issues, it appears to be wise to have more than one choice. As discussed earlier, we plan to get new SOPs written for all common reagents and tests.

We are also interested in maintaining the quality of testing at each location. Although we are not CAP accredited facilities, we determined that we could use the existing CAP checklists and review the questions that apply to us. Once the reviews are complete, these checklists will be used by each facility for an interim inspection and then we will have a team visit each location to review guideline adherence and provide input for improving quality.
CALL FOR NOMINATIONS FOR
2009 SAFMLS BOARD POSITIONS

• Open Positions: President-Elect (Army), Vice President (Air Force), Army/Navy/Air Force/Enlisted Members-at-Large

• Nominee must be a regular member of SAFMLS, not anticipating retirement within the next year, and must be willing and able to attend board meetings.

• Send the following NLT 21 March 2009 to the SAFMLS Secretary, LT Adrian Gaskin at secretary@safmls.org.
  o Letter of Intent (1 page)
  o Picture (electronic preferred)
  o CV (1 page)

• The Officers of the Society shall be, by order of succession, President, Vice-President, Treasurer, and Secretary. A conscious effort should be made to effect multiple agency representation among the Officers of the Society and under no circumstances will the President be from the same service for more than two consecutive terms.

• The Officers and a President-Elect shall be elected annually from among the Full Members of the Society by majority vote during the Business Session at each Annual Meeting, with the exception of the Treasurer and Secretary, who shall be elected for a three-year term.

• The Officers shall take office at the conclusion of each Annual Meeting, shall be responsible for the affairs of the Society during the following year, and will conduct of the succeeding Annual Meeting.

• The President-Elect will serve as a Society President the year following the term of office of the current President and shall serve during this interim period as a non-voting member in all meetings of the Board of Directors, unless the President-Elect qualifies as a voting member under Articles V of the Bylaws.

• The Vice President, in the event the President is unable to serve, shall assume all of the President’s functions.

• There shall be seven Members-at-Large, each elected for a period of two years. Six of the seven Members-at-Large shall be Commissioned Officer Members, with not more than two members from any one service. In addition, one term for each service will expire each year. The seventh Member-at-Large will be an Enlisted Member representing any service. Each Member-at-Large will have one vote.

DEADLINE: 21 March 2009
MLO: Are med-lab techs on the front fighting lines, or are they in a hospital/clinic environment some distance away? What are the major issues in a war zone that differ from those in civilian hospitals, clinics, and doctors’ offices? How do med-lab techs keep their focus/composure during hostile fire?

MAJ Paul Mann, Erie, PA: For the most part, there are no real “front lines” in Iraq due to the nature of fighting. Most military MLTs work either in a CSH or in a troop medical clinic. There are also a few lab techs who work in the theatre food-supply detachment. All of these facilities are in secured areas where the chances of direct contact with the enemy is minimal; however, indirect fire attacks, such as mortar and rocket attacks, are not uncommon. Staying focused during an attack becomes a matter of discipline. Soldiers stay focused on the task at hand, which is providing laboratory services or preparing blood for transfusion. You cannot afford the luxury of allowing the threat of indirect fire to impact your work because, often, people’s lives are on the line. The lab personnel have a very specific and vital role in the life-saving process and their commitment to excellence is essential.

MAJ Calero: Because laboratory work is not part of the immediate first aid a soldier would receive if wounded, military MLTs are not found in Level I aid station/front fighting lines but in a Level II where resuscitation capabilities begin. Only combat medics accompany soldiers in the fighting areas. Level II facilities — which, again, are the first place where you see soldier MLTs — are usually some distance away from the fighting/combat-engagement areas. The major issues in this war zone are:

1) no global or robust laboratory information system, which requires laboratory results to be managed and distributed in hard copy;
2) continuity/staff transition of operations is problematic in that deployments require the whole laboratory staff to conduct a complete transition every nine to 15 months as new units come in to rotate into the operational area;
3) the extreme environment, dust, and temperature creates havoc on laboratory instruments and requires redoubling of preventive-maintenance efforts to ensure the instruments remain operational;
4) limitations on the ability to perform specialized testing on site and to have immediate consultation with experts as needed necessitates referral testing and the shipping of specimens out of the Iraqi theater of operations;
5) availability of required supplies, or reagents arriving with short expiration dates, reagents for the same assay arriving with different lot numbers, or supplies/equipment damaged in transition; and
6) hostile fire. Our particular lab has not experienced too much hostile fire; but, in addition to being lab techs, first and foremost we are soldiers, and understand and are prepared to operate and deliver in those types of situations.

MLO: What would med-lab techs in a war zone consider the greatest obstacle to obtaining accurate results? An article by CPT Chas. Henry, USMC (RET) entitled “Insurgents in the Bloodstream” appeared in the February 2008 issue of the U.S. Naval Institute Proceedings talking about infectious-disease problems that have come out of the conflict — such as acinetobacter infections becoming a deadly problem among wounded. Are military med-lab techs seeing this in their cultures? What infection-control difficulties exist in a war zone with a climate like that of Iraq (e.g., heat, bad water, blowing sand), or does such a climate work in their favor?

MAJ Calero: The lab conducts quality control (QC) and quality assurance (QA) in the same basic fashion as back at home to ensure results are of quality, accuracy, and diagnostic value. Because we are in a war zone, however, the instruments are used in ruggedized conditions, [so they] tend to be light and portable, and more point of care than the sophisticated instruments used at our permanent facilities back home. We continue to provide the best possible laboratory results rendered in a combat zone.

Infectious-disease diagnostic capabilities in theater have been greatly enhanced during Operation Iraqi Freedom through the deployment of the microbiology (M403) augmentation kit to Level III CSHs. Currently, six of seven Level III CSHs have the ability to perform routine isolation, identification, and susceptibility testing for pathogens recovered from blood, urine, wounds, respiratory, and so forth. Acinetobacter baumannii, in particular, has become an established problem for patients throughout the military healthcare system during Operation Iraqi Freedom/Operation Enduring Freedom due to its environmental resilience and resistance to nearly all commonly used antimicrobial agents. This and other common bacterial pathogens such Escherichia coli and Staphylococcus aureus can and are routinely isolated in our CSH labs.

Infection-control issues tend to mirror those seen at any other healthcare facility. In fact, we have not seen any evidence to show significant nosocomial transmission within our medical-treatment facility. The microbiology section works closely with the hospital infection-control team to

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Level II labs are usually staffed by one or two military medical-laboratory technicians. Level III labs are usually staffed with at least one or two medical technologists (MTs), with the bulk of the staff being military MLTs. A Level IV lab is usually in a medical center outside our AO that has full reference capabilities. Tests not performed in the Iraqi theater of operation are sent to a Level IV facility. In our pathology augmentation team, the pathologist provides tissue examination and pathological consultation for the whole Iraqi theater of operation. The augmentation team is attached to a Level III facility not in the field environment and is collocated where there is greater need for the services of a pathologist. All facilities requiring surgical tissue support have access to the pathologist on the pathology augmentation team.
ensure appropriate precautions are taken with high-risk individuals. An annual antibiogram is produced to monitor changes in bacterial antibiotic profiles and to aid clinicians with prescribing empiric therapy.

The unique environmental conditions faced in Iraq pose a series of issues for the microbiology laboratory. Because of the ever-present dust, contamination of culture media is a constant issue, and one about which the technician remains cognizant. These contaminants need to be identified quickly 1) to ensure providers are not given misleading information and 2) to save the tech time and resources, which may otherwise be wasted in an attempt to identify the contaminants.

Temperature extremes can also prove to be troublesome. During the summer months, media and reagents can be exposed for extended periods of time to temperatures well beyond those recommended by the manufacturer. A robust QC plan has been established to ensure the performance of all media and reagents.

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I think our civilian counterparts would love hearing our war stories, from living arrangements to how our lab was set up, what equipment we had, what lab tests we had, and what staffing we had.

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**MLO**: What tests are most commonly ordered in a war zone and why? What menu is offered, and does that change from one venue to another? What can you tell us about the application of point-of-care testing (POCT), and how the medics are using POCT devices? Is all testing in a war zone point of care?

**MAJ Mann**: In the CSHs that support U.S. and Coalition forces, there tend to be two categories of patients: trauma and routine “sick call.” In trauma cases, many times a “trauma panel” is performed, which includes a CBC, ABO/RH [blood-group and Rh antigens], blood gas, electrolytes, and PT/INR [prothrombin time/international normalized ratio]. In support of sick-call patients, the labs performed are typically basic and comprehensive metabolic panels, CBC, and, occasionally, serology or other chemistries.

**MAJ Calero**: Naturally, the majority of the tests are focused on basic life assessments: CBC and metabolic panels (with coagulation tests for traumas). These assays are followed by “sick-call” tests such as UAs and reference chemistry and serology tests. Every trauma has, at a minimum, a type and screen. The tests offered for the particular population we serve are CBC, comprehensive and basic metabolic panels, UA/coag panels, type and screen/ type and cross, LTF, lipid panels, cardiac panels, blood gases, culture/sensitivity, reference chemistries (hepatitis markers, TDMs, thyroid, PSA, hormonal testing, hemoglobin A1C/microalbumins), rapid testing/manual tests (from rapid strep to *Helicobacter pylori*, about 20 rapid/ manual tests are offered), mycology, mycobacteriology, parasitology, urine chemistries, and Fe/TIBC. The menu offered is delineated by the tests outlined above. POCT is the basis for deployable medical-laboratory systems, but more robust analyzers with greater capabilities are being considered and, where appropriate, introduced. Currently, most Level IIIIs have moderate-complexity reference chemistry instrumentation.

**MLO**: What are the most common errors encountered? How do you follow up on such errors in this situation? How much QC, QA, and so on can be done in this environment? Do the conditions in a war zone demand a selection of which standard operating procedures are followed most closely and which ones are allowed to “slide,” if any, because of conditions there?

**MAJ Mann**: First and foremost, we do not let anything “slide” because of our pursuit of excellence. Even though we are in a deployed environment, we strive to ensure we are providing excellent healthcare that meets or exceeds the standards of any world-class quality healthcare-delivery facility. Ensuring specimen identity is probably the most important step in minimizing laboratory errors. In severe trauma cases where there are several critically wounded individuals, the environment can become chaotic. Stressing that the individuals that collect the specimens verify the patient’s identity at the time of collection by physically checking the identification bracelet is imperative.

**MAJ Calero**: Usually CSH laboratories are staffed by small tight-knit groups, 15 laboratorians at the most. This staffing environment makes training and oversight requirements easily accomplished. There are minimal laboratory errors. Our primary mission is to provide accurate timely results. An implied task with this mission is to train and ensure a competent staff. To this end, QA/QC is done daily to assure accuracy and timeliness of results. We train and regularly assess personnel competencies. Performance-improvement projects and data are recorded on a monthly basis. The only thing we have to “slide” on is the use of expired reagents. Expired reagents are used only when quality control for the reagents is within the established acceptable limits.

**MLO**: Are med-lab techs able to get the reagents and supplies they need in a war zone? Is there anything a med-lab tech needs that he/she might not be able to get?

**MAJ Mann**: Many of the supplies are initially sent to a medical-supply depot in Europe and, from there, are forwarded to another depot. As you can imagine, we have a very robust medical-logistics system that keeps our facilities and personnel well supplied.

**MAJ Calero**: For the most part, standard reagents are the only ones readily available. We usually encounter multiple problems trying to bring in new non-standard reagents and instrumentation due to all the channels and levels of command the request needs to process through for approval. There are many success stories where the needed supplies or replace-
MLO: What is/are the most difficult aspect(s) of a med-lab tech’s job in a war zone? What would make this job better? Are more med techs needed in the Iraqi war zone?

MAJ Mann: Managing blood products during a mass casualty (MASCALS) or in response to a severe trauma can be a very stressful experience. There is a lot of pressure to provide blood product quickly to prevent exsanguination. You must make sure, however, that the products prepared are compatible and that all the documentation is complete. During the busy times, it seems that there is always more work than there are lab techs to perform it. So, from that perspective, more techs in theatre would be helpful.

MAJ Calero: For me, it was never about not having the means to give the best lab services possible. I always knew the lab team would find a way to make any lab mission successful. We all knew this was our time to be there for our unit, for our soldiers/patients, and to make things happen, to find answers, to think accuracy, to go the extra mile. For me, the truly most difficult aspect was being there to keep everyone in good spirits in spite of a personally demanding environment.

SPC Jones: It is much faster paced and has the added effect of the environment (e.g., alarms, incoming rounds) to adjust to. Also, even though you are in a war zone and there is not necessarily updated equipment to work with, the job can still be done.

CPT Erwin: Be flexible. Many of the resources we take for granted at our stateside medical centers/medical department activities are not routinely available while deployed: slow logistics, difficulties in communication, and environmental pressures all combine with the stress of long deployments. Even so, the soldier med tech is still relied upon to produce accurate and timely results for high-complexity testing regardless of these stressors.

MLO: Based on his/her experiences there, what would a med-lab tech likely tell other servicemen and women in the medical-lab field who are without war-zone experience about running a laboratory operation in Iraq?

MAJ Mann: Being able to multitask in this environment is critical. Adhering to standard workflow practices and procedures is vital. It is important to have confidence in your skills, in your peers, and in your equipment. The pace is often very fast, and laboratory results play a large role in treating trauma patients. Small mistakes can result in improper diagnosis, inadequate or unneeded treatment, or even death.

MAJ Calero: That it will be the best time in their lives if they really love the lab field. The cases we had were, many times, challenging, and we depended so much on each other and had to be always on our toes and resourceful. We all learned so much about prioritizing, working fast but still paying attention to basic control measures; we learned about all sections of the lab and became experts in so many areas, so we are generalist/specialists. It was a very fulfilling 15 months, with many “highs” and satisfying lab-work accomplishments, that we would never get exposed to back in the United States.

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MLO: What would you share with civilian medical-laboratory techs back home about your experience in a war zone that might help them in their work here at home? Explain how the immediate action of a soldier medical-laboratory technician had a direct positive impact on the saving of a soldier’s life.

MAJ Mann: This is a unique environment for a laboratory technician. You conduct your laboratory business in the most complex situations at the highest standard while operating under reduced supervision as compared to similar size labs in U.S. facilities. You are also considered a vital part of the healthcare team. Lab techs are often part of trauma teams where they help to collect samples, deliver results, courier blood, and even help hang blood for transfusion. As a result,
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lab techs are provided a bigger view of the entire healthcare picture, and this allows them to see how their work impacts the overall mission of saving lives as they work in some of the busiest trauma centers in the world. Although this can be emotionally taxing, at the same time it makes you realize the importance of accurate and reliable lab services.

MAJ Calero: I think our civilian counterparts would love hearing our war stories, from living arrangements to how our lab was set up, what equipment we had, what lab tests we had, and what staffing we had. I think that right there would allow everyone to see how we all — at the end of the day — would do anything to get the job done right, no matter what the conditions are, because we love our field of work.

SPC Jordan M. Wright/Roseburg, OH: Out here, we spend so much time working on our own and making decisions without a pathologist or supervisory consultation, it is very fulfilling to know that I can run the whole lab unsupervised and make good decisions. I guess I had a good base, and being here tested those basic skills. But also, I was forced to use those skills, build on them, and make split-second decisions when I had to work traumas or MASCALs when no one was around to guide me through it. Overall, [this has been] a very fulfilling experience as a junior lab tech, and I hope I can continue that level of productivity when I return to the States. Also, that people from different backgrounds can come together and work very closely to deliver good results but also as quickly as possible [is fulfilling]. We only had one month to come together from our different home stations and train as a lab before we went to Iraq. It has been the experience of a lifetime for a lab to become so close, so proficient, and so efficient without knowing each other from before and then] delivering such good lab support to our hospital.

SPC Jones: Along with SPC Wright, I agree that working here in Iraq places you in situations where you learn a lot more by being able to make quick decisions on your own, whether it be from traumas that come in or the routine questions that we need to provide answers for from various providers and other soldiers. This experience helped me in becoming more comfortable with the aspect of working in a lab alone and being able to make the proper decisions. It is basically all about learning how to make the best of the situation and resources that you have. These qualities can help in any civilian lab in the States by helping a lab become more efficient.

SGT Sandy Said/Tampa, FL: I would have to say [making a direct positive impact] was when we had about seven or eight patients come in — one toddler, one adult male, and the rest children. It is not nearly as much as other CSHs have to deal with, but that was a first for our unit. I was on shift by myself, but my officer-in-charge and the non-commissioned officer in charge happened to be here. If they were not here, I would not have been able to get all the results out and issue out the amount of blood that I did at the time. We all worked so well together, running around covering each other when someone stepped away to go to the docs for whatever reason. We also coordinated with other units outside of our CSH to prepare in case we ran out of blood and the blood-supply unit could not resupply us in time. Everyone wanted to help. I liked the feel of the pressure of trying to get everything out to the doctors. It made us realize that, in the end, not only does the lab work so well together, but also the whole hospital has such good cohesion that we were all able to work well under all that pressure.

MLO: What is your most unusual medical-laboratory “war story”?  
MAJ Calero: Not necessarily unusual, but unique in that in our particular hospital, we have Romanian soldiers assigned. This particular rotation, we received two Romanian lab techs. One was actually a master’s-equivalent MT. It was very thrilling to welcome lab techs from another country to become part of our lab team and realize we all speak the same “lab language” and share the same love for the lab field.

SPC Jones: The only thing that I can think of is the experience with the MASCALs that we have had, in that we did not really have any warning of them and merely had to think on our feet and adjust to the situation. After the lab experienced MASCALs, it was determined the most efficient ways to handle the increased workload was to have a paper trail of all results and hand carry them to the doctors. This is more efficient and quicker than dealing with logging in all of the specimens and entering all of the results manually.

CPT Erwin: Spending the summer as the only clinical microbiologist in theater! It was an eye-opening experience to be the SME [subject-matter expert] for infectious-disease diagnostics and not have immediate access to others in the field. I very quickly assessed what our current capabilities and needs were, then immediately started implementing new strategies for improvement throughout the AO. This initiative ultimately led to the creation of the first microbiology-consultant position in theater.

MLO: What is/are the most difficult aspect(s) of a med-lab tech’s job in a war zone? What would make this job better?  
SGT Said: The hardest part to me is the amount of tests that we cannot do out here. Do not get me wrong, we can do a lot out here, but it is when we find something wrong with someone and need to run more complicated tests, we are unable to do that. Instead, we ship samples to reference laboratories in another country. For med techs who have no war-zone experiences, be patient. When you get into a new lab in-theatre, things might not be as easily set up as they are back in the garrison. We are always changing things around, trying to make processes easier, not only for us but for the providers as well. This can be painstaking and time consuming.

Con’t on pg 13
A day in the life of Bagdad’s Ibn Sina Hospital

By CPT Victoria McCarthy

Upon entering Ibn Sina Hospital in Baghdad, you might forget that you were still in Iraq. As you walk in the front door, you are instantly greeted by two soldiers sitting behind a receptionist-style desk. They are all too happy to help you with whatever you need. Walking along the freshly waxed floors, you casually glance at the clever witticisms posted [on the walls] by the staff. A little way down the hall, people are patiently waiting for their prescriptions. Pharmacy, laboratory, and radiology techs bustle about their various missions. Everything seems normal until, from out of the blue, a loud explosion rocks the building. The overhead speakers buzz with the announcement of incoming rounds, and people scramble to find a safe location. Once the “all clear” is given, everybody returns to his or her tasks. It is just another day at the Ibn Sina Hospital in Baghdad, Iraq.

Ibn Sina Hospital was founded on March 20, 1964, by four doctors — Dr. Khadim Shubber, Dr. Modafar Shathar, Dr. Qassim Abdul-Majeed, and Dr. Clement Serkis — who were dedicated to the healthcare of the Iraqi people. Quality of care was guaranteed to all patients regardless of socioeconomic status. The hospital contained some of the most advanced technology for its time. Unfortunately, all that changed under the control of Saddam Hussein. The former dictator seized the hospital in 1974 and limited its use to Baath Party members only. When coalition forces took control of the facility in April 2003, they returned the hospital to the high-quality standards on which it was founded. Now, everybody that comes through the front door can receive treatment; Coalition forces, Iraqi civilians, and detainees alike.

Soldiers currently residing at Ibn Sina come from units all over the United States, some from field units, some from hospitals. Each individual brings unique experiences that enhance the quality of healthcare provided. For some staff, this is their first tour; for others, this may be their second or even third tour. All are dedicated to the mission of taking care of patients. Often pulling anywhere from 12- to 14-hour shifts, six to seven days a week, soldiers still manage to find time to take care of themselves and others.

In the Army in order to get promoted, soldiers need to acquire a certain number of points. Promotion points required is dependent upon the rank and occupation of the soldier as each military occupational specialty requires a different number of points. Points are earned in various ways, such as completing military correspondence courses, performing well on the Army physical-fitness test, taking college classes, and volunteering for extra tasks. Many soldiers use available time to complete these requirements and better themselves professionally.

Trying to stay fit here is a challenge. Even though gyms are provided, they do not necessarily have all the equipment one needs to get a good workout. Sometimes the increased hostilities result in the closure of the physical-fitness locations. This is where good, old-fashioned, American ingenuity comes into play. Soldiers will use whatever is at hand to accomplish their fitness goals. When it is not safe to go outside, you will see them running on the stairs in the residence halls or lifting objects of various weights.

Another common pastime is the completion of education goals. Many soldiers will take advantage of benefits offered by the Army to improve themselves personally. These programs include free tuition and language programs. It is not unheard of for a soldier to complete a master’s degree while deployed. Being here in Iraq also provides an opportunity for soldiers to share their knowledge with others. One such example is the LEAN-Six Sigma class currently in session. Once a week, the group gathers to learn the concepts of effective management taught by the officer-in-charge of the lab.

History was made in February of this year when the lab techs of Ibn Sina became the first to become certified as MLTs in a war zone. As far as anyone knows, no one had even attempted this before. An Army Master Sergeant and the staff at American Medical Technologist Organization got together and made it all happen. Study materials were acquired; and every night, the tired techs stayed up late and studied. During slower periods on shift, index cards with questions could be found almost everywhere in the lab. Their hard work paid off, and eight new lab techs joined the MLT ranks.

Although this unit has only been here a short period of time, the amount of work has made many alternative activities a challenge. It is a wonder that the soldiers manage to find the time to accomplish as much as they have. All these distractions are necessary, however. They are vital to keeping one focused. Being cooped up in one place for an extended period of time takes its toll on a body and mind. Add to that the stress of being away from family, threats of enemy rockets, the influx of patients, and the occasional down time, it is not hard for someone to lose his or her sense of individuality. Everybody tries to find a way to deal with it as best he or she can; whether it is through exercise, education, or professional growth.

What is more important, however, is that the soldiers of Ibn Sina Hospital remain vigilant in our ongoing war. They strive to provide the best care available and constantly seek out new ways to improve the system currently in place in addition to self-improvement. Rest assured that if, for some reason, you had to be treated here, you could expect a degree of professionalism and courtesy available nowhere else in the world.
Effective December 8, 2006, the Nevada Clean Indoor Air Act prohibits smoking in most public places and indoor places of employment. While smoking is permitted on the gaming floor of casinos, it is prohibited in all restaurants and other areas where children are allowed by law.

**What does this mean for you?** A significantly cleaner, more breathable experience. Because smoking is not allowed in restaurants, bars that serve food, convention facilities, hallways, bathrooms, elevators, employee break rooms, video arcades, etc., the overall level of smoke in the facility is greatly reduced.

Your SAFMLS Board of Directors met at the Silver Legacy in September, and we noticed a tremendous difference in the air quality throughout the hotel, including the sleeping rooms and meeting rooms. We think you will be pleasantly surprised. So join us! Come see why Reno is America’s Adventure Place.
Just like years past, one of the highlights of the annual meeting is the President’s reception. Let this year be no exception. Since we are in the heart of the West and the “The Biggest Little City in the World”, let’s don our cowboy boots, kick up our heels and have some fun ...

Yeeee Haaaa! We have a wonderful evening planned to include great food, drinks and a band. As always, this is a perfect opportunity to mingle, renew old friendships and make new friends. Hope to see you all there.

**Come Join Us for a GOOD TIME!**
Come join us for this year’s **SAFMLS Fun Run/Walk**

**WHO:** All Runners/Walkers looking to have FUN!!

**WHAT:** An orienteering type event where participants have one hour to find as many points as possible around town.

**WHEN:** Wednesday, 25 March 2009
Registration 0530
Start promptly at 0600… YES, in the morning!

**WHERE:** Meet at Silver Legacy Lower Level Entrance (near Valet Parking)

**WHY:** To exercise, enjoy the city, and have FUN before a long day in meetings

**EXTRAS:** Complementary T-Shirt and 1st, 2nd, 3rd place prizes for each event (Prizes given at Awards breakfast)

**SPONSOR:** CHIRON / Novartis Vaccines and Diagnostics

**REGISTRATION:** Just Show Up!!
## 2009 SAFMLS Schedule

### Society of Armed Forces Medical Laboratory Scientists (SAFMLS)

#### 2009 Annual Meeting
Silver Legacy Resort and Casino, Reno, NV
22 March - 26 March 2009

### Sunday 22 Mar 09
- 0630 - 0700: Continental Breakfast
- 0700 - 0730: Opening Ceremonies (0600 - 1000)
- 0730 - 0800: Grand Exposition Hall
- 0800 - 0900: Continental Breakfast
- 0900 - 0930: Society Meeting (0900 - 1110)
- 1100 - 1130: Lunch (on your own)
- 1130 - 1200: Registration - Lower Level (LL) Pre-Function Salon (0700 - 1600)
- 1200 - 1300: Workshops (1300 - 1700)
- 1330 - 1400: Silver Legacy Meeting Rooms
- 1430 - 1500: Break
- 1500 - 1600: President's Reception (1630 - 2130)
- 1630 - 1730: Grand Exposition Hall
- 1730 - 1830: BOD Meeting (1730 - 1830)
- 1830 - 1900: BOD Dinner - Sterling's (1600 - 2100)

### Monday 23 Mar 09
- 0600 - 0630: Continental Breakfast
- 0630 - 0700: Workshops (0730 - 1200)
- 0730 - 0800: Silver Legacy Meeting Rooms
- 0800 - 0900: Lunch (on your own)
- 0900 - 1000: Exhibits/Posters (1230 - 1700)
- 1000 - 1100: Reno Events Center
- 1100 - 1130: Amy CLOC Advisory Board
- 1130 - 1200: Registration - Lower Level ( LL ) Pre-Function Salon (0700 - 1600)
- 1200 - 1300: Break
- 1330 - 1400: Workshops (1300 - 1730)
- 1430 - 1500: Silver Legacy Meeting Rooms
- 1500 - 1600: Break
- 1600 - 1700: Service Blood Program Breakouts
- 1700 - 1830: BOD Meeting (1730 - 1830)
- 1830 - 1900: Planning Committee / Rioz Appreciation Dinner - Casino Royale (1600 - 2100)

### Tuesday 24 Mar 09
- 0630 - 0800: Continental Breakfast
- 0800 - 0900: Exhibits/Posters (0800 - 1200)
- 0900 - 1000: Reno Events Center
- 1000 - 1100: Lunch (on your own)
- 1100 - 1200: Workshops (1300 - 1730)
- 1200 - 1300: Silver Legacy Meeting Rooms
- 1300 - 1400: Break
- 1430 - 1500: Service Blood Program Breakouts
- 1500 - 1600: BOD Meeting (1730 - 1830)
- 1630 - 1730: Planning Committee / Rioz Appreciation Dinner - Casino Royale (1600 - 2100)

### Wednesday 25 Mar 09
- 0630 - 0800: Continental Breakfast
- 0800 - 1000: Exhibits/Posters (0800 - 1200)
- 1000 - 1030: Reno Events Center
- 1030 - 1100: Lunch (on your own)
- 1100 - 1200: Workshops (1300 - 1730)
- 1200 - 1300: Silver Legacy Meeting Rooms
- 1300 - 1400: Break
- 1430 - 1500: Service Blood Program Breakouts
- 1500 - 1600: BOD Meeting (1730 - 1830)
- 1630 - 1730: Planning Committee / Rioz Appreciation Dinner - Casino Royale (1600 - 2100)

### Thursday 26 Mar 09
- 0630 - 0800: Continental Breakfast - Grand Expo B (0700 - 0900)
- 0800 - 0900: Short Topics (0900 - 1200)
- 0900 - 1000: Legacy Meeting Rooms
- 1000 - 1100: Lunch (on your own)
- 1100 - 1200: Service Breakout Sessions (1300 - 1700)
- 1200 - 1300: Legacy Meeting Rooms
- 1300 - 1400: Break
- 1400 - 1500: Service Breakout Sessions (1300 - 1700)
- 1500 - 1600: Legacy Meeting Rooms
- 1600 - 1700: Break
- 1700 - 1830: BOD Meeting (1730 - 1830)
- 1830 - 1900: Planning Committee / Rioz Appreciation Dinner - Casino Royale (1600 - 2100)

Service Consultant Counselling Sessions (by appointment Monday-Thursday)
CONTINUING EDUCATION UNITS  
(CEU Contact Hours)

Aaron J. Harding, LCDR, MSC, USN  
Laboratory Manager  
Naval Medical Center San Diego  
San Diego, CA  
P.A.C.E.® Coordinator for 2009 SAFMLS Annual Meeting

The SAFMLS organization provides continuing education units (CEUs) to all annual meetings through the American Society for Clinical Laboratory Science (ASCLS). CLIA ’88 recommendations, state licensure requirements, recertification requirements of the National Credentialing Agency for Laboratory Personnel (NCA), ASCP Board of Registry (BOR), and even laboratories’ employment requirements, all have one thing in common: the need for continuing education credits. Clinical laboratory professionals need and use (Professional Acknowledgement for Continuing Education) P.A.C.E.® programs to gain continuing education credit for recertification and licensure renewal. P.A.C.E.® approved programs are accepted by both the NCA and ASCP-BOR for recertification. SAFMLS has received approval from ASCLS P.A.C.E.® for providing continuing education credits for license renewal in all licensure states (including California) except for Florida.

Your annual SAFMLS meeting provides the ability for you to earn CEUs through P.A.C.E.®, and certified by ASCLS. The major laboratory credentialing agencies, ASCP and NCA, both require 36 CEUs every three years. Please note, contact hours and continuing education units (CEU) are not synonymous. Contact Hours is the unit of time used by P.A.C.E.® for continuing education credit. A contact hour is based on an actual clock hour. **One CEU is equal to ten contact hours.** One contact hour is equal to 0.1 CEU. The SAFMLS Board of Director’s continue to evaluate additional opportunities to offer the society contact hours throughout the year and during the annual meetings to meet your federal and state CEU requirements. As a part of this effort I will be presenting a workshop, *Establish a P.A.C.E. Approved Program at Your Facility*, outlining the requirements for implementing a local P.A.C.E.® Program supported by the society.

How do I get my contact hours? It is the responsibility of each attendee to ensure he/she SIGNS IN on the attendance form prior to the start of the briefing for EACH workshop and short topic, as well as the Opening Ceremony Lecture. If you do not legibly sign the attendance roster prior to the start of the lecture you cannot obtain CEU contact hours. CEU contact hours must be verifiable by ASCLS through signatures on attendance logs. Additionally, your registration packet contains certificate of attendance forms that are to be used to document your attendance at the short topics, workshops and opening ceremonies. Please be sure to accurately fill out these certificates of attendance. Finally, you will also rate whether the learning objectives were met via your feedback following the briefing. Please take the time to fill out each respective feedback forms. Your presenters use the information provided to improve their briefings for future audiences.

SAFMLS attendees are laboratory professionals who continue to share and enhance their knowledge, partly through attendance at the meeting. Please take the time to thank all of those who voluntarily prepare and present workshops, short topics and posters at our annual meeting. Without their efforts we would not have a meeting to attend. Thanks and have a wonderful time in Reno!
1300-1500  2-Hour Workshops

#1  AN OVERVIEW OF THE BIODEFENSE PROGRAM AT ARMED FORCES INSTITUTE OF PATHOLOGY

Presenter(s):  Dr. Mina Izadjo, Ph D
               Michael P. Dempsey, Maj, USAF
               Thomas L. Shaak, Maj, USAF
               Joval Gapuz, HM1, USN
               Dr. Kathryn Kalasinsky, Ph D
               Ms. Lalaine Anova
               Ms. Marie E. LaMorena

Abstract:  The Division of Microbiology at the Armed Forces Institute of Pathology (AFIP) is nearly 100% dedicated to Biodefense efforts. The Division receives yearly reimbursable funding in support of a number of projects in diagnostic, therapeutics, vaccine and drug discovery. Our effort constitutes an integral and significant Biodefense capability for the Department of Defense. This workshop is presented by a panel of our scientists with a wealth of experience in the rapidly evolving biodefense field. Our discussion will include an update on our diagnostic capability such as rapid reagent-less Raman Chemical Imaging Biothreat Detection (RCIBD) and comparison of automated and manual genomic material extraction. We will also have discussions on Air Force Proficiency Testing program for M1M and JBAIDS, our water quality testing program and evaluation of next generation diagnostic technologies. An overview of our current therapeutics and drug discovery efforts will include our collaboration with a Nobel Prize Laureate at Yale University for inactivation of virulence and/or toxicity of biowarfare agents. In addition, we will provide the future path on application of our current capabilities in other areas of military medicine.

Objectives:
1. Describe Laboratory and Facility.
2. Provide an Overview of Diagnostic Capability.
3. Provide an Overview of Drug Discovery and Therapeutics Efforts.

#2  ESTABLISH A P.A.C.E. APPROVED PROGRAM AT YOUR FACILITY

Presenter(s):  Aaron J. Harding, LCDR, USN

Abstract:  The Society of Armed Forces Medical Laboratory Scientists (SAFMLS) has established an Annual Providership Program with the American Society for Clinical Laboratory Scientist (ASCLS) that allows the society to offer the opportunity for organizations to establish a local Professional Acknowledgement for Continuing Education (P.A.C.E.) Program for continuing educations credits. The course of instruction will outline the requirements for establishing a local P.A.C.E. Program to assist individuals with meeting certification requirements.

Objectives:
1. Outline ASCLS requirements for establishing a local P.A.C.E. Program within SAFMLS organization.
2. Describe requirements for developing and approving presentations for P.A.C.E contact hours.
3. Describe requirements for managing a local P.A.C.E Program.
#3 ARMED SERVICES BLOOD PROGRAM UPDATE…………………………………….. SILVER BARON A

**Presenter(s):** Francisco J. Rentas, COL, USA
               Melanie Sloan, LTC, USA
               Mr. Donald Dahlheimer

**Abstract:** The Armed Services Blood Program Office (ASBPO) was established by the Assistant Secretary of Defense for Health Affairs to coordinate the blood programs of the Military Services and the Unified Commands. The ASBP is currently undergoing transformation in business practices through development of novel marketing strategies; redesign of the Blood Management requirements and procurement processes; and support to innovations in information management research/development through partnerships with other federal and civilian agencies. This workshop updates participants on the following ASBP activities: (1) Operations in support of the Global War on Terrorism (2) Business practice transformations and Strategic Vision (3) Defense Blood Standard System enhancements (4) Global strategic alliances and (5) Research and Development initiatives.

**Objectives:**
1. Update attendees on the status of the Defense Blood Standard System (DBSS) and efforts to define future information management requirements for theater and garrison support.
2. Review of DoD research efforts, to include recent posters, and published articles.

#4 CLINICAL CASES IN MICROBIOLOGY AND INFECTIOUS DISEASES………………….. SILVER BARON B

**Presenter(s):** Mark Scheckelhoff, CPT, USA
                William Keener, CPT, USA
                Brian Robinson, CPT, USA
                Ed Keen, CPT, USA
                Rachael Hampton, LT, USA
                Anthony Jones, CPT, USA
                Mark Hickman, LTC, USA
                Ms. Sherry Trevino

**Abstract:** The clinical case workshop will cover specific patient cases observed in military medical facilities throughout our theater of operations. Cases will cover a variety of disease-causing microorganisms and will focus on broadening knowledge amongst colleagues on current microbiological and laboratory techniques used for diagnosis. Presentations will include an introduction to the patient history, clinical presentation, specimens received, and any other relevant information related to the case. Presenters will discuss procedures and techniques used for identification and relate any difficulties or unique circumstances that were confronted. Additional discussion will include definitive characteristics of identified organisms, potential sources of infection, typical clinical presentation, and any lessons learned during their experience with the case.

**Objectives:**
1. Identify associations between clinical disease and microorganisms.
2. Discuss current diagnostic procedures for the identification of microorganisms.
3. Identify and discuss current advances in clinical microbiology.

#5 ADVANCES IN HEMOSTASIS MONITORING AND TESTING…………………………….. SILVER BARON D

**Presenter(s):** John R. Hickman, Lt Col, USAF
                Lucia E. More, Lt Col, USAF
                Jody Noe, Lt Col, USAF
                Mr. David L. McGlasson
Abstract: This workshop will cover several current topics in hemostasis monitoring and testing. An alternative algorithm for pre-operative assessment of hemostasis in lieu of doing a bleeding time test will be presented. A single calibration curve using the Anti-Xa chromogenic assay for monitoring heparin therapy will be explained along with how to establish a dosing nomogram using anti-Xa instead of aPTT results. New research comparing a chromogenic factor X assay with international normalized ratio for monitoring oral anticoagulation therapy will be presented. Additionally, efforts to enhance warfarin anticoagulation monitoring with the use of genetic markers and point of care testing will be discussed. The basic theory and new applications of the Thrombelastograph® (TEG) will also be presented.

Objectives:
1. Increase knowledge in the methods and use of Anti-Xa for monitoring heparin therapy.
2. Increase knowledge of warfarin therapy genetic testing and POCT.
3. Introduce and become familiar with TEG® technology and new applications.

#6 REVIEW OF CLINICAL CHEMISTRY I……………………………………………. .................... SILVER BARON E
Presenter(s): David A. Smith, LTC, USA
Christine LH Snozek, 1LT, USA

Abstract: This workshop will focus on related topics in clinical chemistry. The format will involve dynamic lectures that include case studies in conjunction with discussions among the three expert panel presenters. We will encourage audience participation during the jeopardy (Army vs. Air Force vs. Navy) style competition that will be conducted during the last portion of the workshop. This workshop will focus on the logistics of testing for therapeutic and abused drugs, including the purpose of screening and confirmation assays, the choice of sample matrix (serum, blood, urine, other), and the timing of sample collection (peak and trough). The discussion will then focus on thyroid disease to include the latest in screening, diagnosis, guidelines, and complications. The discussions will start with background pathophysiology fundamentals followed by general background information. After these fundamentals are discussed, specific cases will be presented and solved from the point of view of the patient, clinician, and laboratory. The review session will take the part of a jeopardy competition show, where teams will be created, rules will be established, the panel will present questions, team portions will be scored, and a prize(s) will be awarded.

Objectives:
1. List the basic components of pharmacokinetics (ADME) and describe ways each could potentially affect the concentration of drug in a patient specimen.
2. Describe underlying pathophysiology and outline laboratory testing used for screening, monitoring, and diagnosing thyroid disorders.
3. Using clinical case examples the participant will be able to apply the knowledge gained in the workshop to interpret the meaning and importance of thyroid testing and therapeutic/abused drug levels.

#7 CHCS REPORTS AND ADHOCS……………………………..……………………. .......................SILVER BARON 6
Presenter(s): Donna J. Fox Capt, USAF
Karen B. Chisholm, Capt, USAF

Abstract: The Composite HealthCare System (CHCS) is the Laboratory Information System (LIS) for the DoD. This workshop is geared toward individuals who are new to CHCS, those individuals running over their own labs and anyone who has not worked with CHCS in a few years. The focus is on basic adhocing, building and updating test files, and running workload and status reports. CHCS tips and time savers will also be discussed.

Objectives:
1. Participants will have a basic understanding of CHCS adhocing.
2. Participants will gain the knowledge to run workload/status reports.
3. Participants will gain the knowledge to update their platform’s file and table fields.
#8 OFFICER CAREER DEVELOPMENT

**Presenter(s):** Steven A. Wilson, Col, USAF
Dale A. Ferguson, Col, USAF
Debra Niemeyer, Col(ret), USAF
Lucia E. More, Lt Col, USAF
Imelda Catalasan, Maj, USAF
Deiadra J. Moore, CMSgt, USAF

**Abstract:** This workshop is for lab officers who are relatively new to the military. It is intended to provide tools for becoming more effective, confident leaders. It is presented by a panel of senior USAF Lab Leaders who have a wealth of valuable experience and information between them. It will cover writing effective OPRs/PRFs, BSC force structure and career path, rank appropriate education and training to build your career, clinical investigations and research opportunities, and developing leadership skills.

**Objectives:**
1. Understand the BSC officer career path and career development strategies.
2. List the characteristics of an exceptional officer.
3. Learn effective appraisal writing techniques.

**1530-1730 2-Hour Workshops**

#9  WE ARE WITH THE GOVERNMENT AND WE ARE HERE TO HELP (THE PROCESS FOR MEDICAL COUNTERMEASURE DEVELOPMENT)

**Presenter(s):** Dr. Richard Jaffe, Ph D
Mr. John C. David

**Abstract:** In November 2007, the Homeland Security Council (HSC) with the Department of Defense (DoD), Department of Health and Human Services (HHS), and Department of Homeland Security, focused on review and discussion of critical gaps in the Nation’s preparedness for large-scale biological attacks that remain. The Administration has significantly addressed deficiencies in the Nation’s ability to respond and mitigate biological weapons attacks on the homeland by signed policy directives and legislation which collectively create a foundation for national biodefense preparedness.

In April 2008, the DoD participated in an HSC-led interagency discussion on interagency alignment of biodefense research investments. This meeting discussed the current state of interagency coordination and integration of basic and applied research efforts and opportunities for augmenting or enhancing current activities to yield a robust portfolio. The result of this meeting was the creation of an Integrated National Biodefense Medical Countermeasure (MCM) Portfolio. This supported the MCM planning and alignment required by Homeland Security Presidential Directive (HSPD)-18 and the vertical and horizontal coordination echoed in HSPD-21. Currently, the DoD and HHS are analyzing the probability of successes, gaps, and funding needs in their respective MCM portfolios. A transition to the next administration, as well as a review of portfolio gaps and redundancies, and integrating the sharing of costs, knowledge, and people into portfolios are all immediate steps ahead.

One large DoD investment is the Transformational Medical Technologies Initiative (TMTI) which is dedicated to implementing a key component of the Quadrennial Defense Review 2006: develop broad-spectrum medical countermeasures against advanced bio-terror threats, including genetically engineered intracellular bacterial pathogens and hemorrhagic fever viruses. The ultimate goal is to build a biodefense capability enabling rapid response from identification of unknown pathogens through discovery, development and manufacture of medical countermeasures.

TMTI is a novel approach to the acquisition of medical countermeasures. It integrates science and technology with drug development and manufacturing to provide the warfighter with protection from biological threats while developing novel technology platforms that have wide applicability. Two Investigational New Drugs have been submitted to the Food and
Drug Administration, fully two years ahead of schedule, and has made investments in genetic sequencing capabilities and platform technologies.

This presentation will provide an overview of the DoD’s efforts to provide an integrated strategy which guides the MCM portfolio and the path ahead.

**Objectives:**
1. Review the end-to-end integration of the national portfolio for biodefense medical countermeasure (MCM) products that are necessary to leverage investments and maximize preparedness.
2. Identify the portfolio probability of success and articulate the required investment.
3. Recognize the goals for building a biodefense capability enabling rapid response from identification of unknown pathogens through discovery, development and manufacture of medical countermeasures.

**Presenter(s):** Darci Smith, CPT, USA  
Nathan Fisher, CPT, USA  
Stefan Fernandez, MAJ, USA

**Abstract:** The mission of the United States Army Medical Research Institute of Infectious Diseases (USAMRIID) is to conduct basic and applied research on biological threats resulting in medical solutions to protect the warfighter. The goal of this workshop is to highlight some of the research occurring at USAMRIID in the fields of virology, bacteriology, and toxicology. The following three topics will be discussed:

**Therapeutic Development and Characterization of Animal Models for Rift Valley Fever.** Rift Valley fever (RVF) virus infection is a major biological threat to the warfighter and is classified as a Category A agent by the Centers for Disease Control (CDC) due to its ability to cause high mortality rates, ease of dissemination, and its potential to cause major public panic and social disruption. Thus, the development of a therapeutic treatment for RVF is a top priority for the military. However, effective therapeutics cannot be developed without a better understanding of the pathogenesis of RVF. The characterization of RVF animal models will be discussed.

**Use of Galleria mellonella (Greater Wax Moth) Larvae as an Alternative Host for Evaluation of Interactions Between Select Agent Bacteria and the Innate Immune System.** The innate immune systems of insects are strikingly robust and highly similar in both function and structure to those of mammals. *G. mellonella* has been used to study human pathogens primarily due to its ability to thrive at 37ºC and several quality studies have shown a direct correlation between the virulence of human pathogenic bacteria and fungi in *G. mellonella* larvae and in mice. So while providing comparable data to mice, *G. mellonella* larvae are much more cost effective, less labor- and resource-intensive, and more ethically acceptable for use in certain situations, especially for early discovery phase and large-scale screening studies. The usefulness of this system for analysis of select agent bacteria will be discussed.

**Development of Intranasal Vaccine Against Staphylococcal Enterotoxins.** Staphylococcal enterotoxins are rated among the highest biological threats and are listed by the CDC as a category B agent. Attenuation of the enterotoxin has resulted in a vaccine immunogenic in animal models. Development of an intranasal vaccine strategy remains a challenge today.

**Objectives:**
1. Discuss the mission of the United States Army Medical Research Institute for Infectious Diseases.
2. Discuss some of the research occurring at USAMRIID.
3. Discuss specific research projects in virology, bacteriology and toxicology.
0730-0930 2-Hour Workshops

#11 DOD CLINICAL LABORATORY IMPROVEMENT PROGRAM ................................................... SILVER BARON E
Presenter(s): Dan E. Harms, COL, USA
CAPT Larry Ciolorito, CAPT, USN
Imelda Catalasan, Maj, USAF
Robert D. Wojtazsczyk, SGM, USA
Ruben Layug, HMC, USN

Abstract: This course will provide important details of the DoD Clinical Laboratory Improvement Program (CLIP). Presenters will discuss tips on how to maintain regulatory compliance with facility and lab accrediting agencies and will offer lessons learned on real-world lab accreditation and proficiency testing management issues. Army, Navy and Air Force representatives will present information regarding the requirements for new registration and renewal of CLIP certificates and will discuss the unique aspects of each Service’s lab accreditation and proficiency testing contract.

Objectives:
1. Provide an overview of the DoD Clinical Laboratory Improvement Program.
2. List the requirements and understand the procedures for new registration and renewal of CLIP certificates.
3. Provide information on each Service’s lab accreditation and proficiency testing contract.

#12 DRiL DEPLOYMENT READINESS LABORATORY ...................................................................... EXPO A
Presenter(s): Donna J. Fox, Capt, USAF
Melissa Holbrook TSgt, USAF

Abstract: The purpose of this workshop is twofold. First to inform military laboratorians methods, technologies and techniques that are being effectively utilized at Wilford Hall Medical Center to prepare deploying personnel for the rigors of trauma medicine in the AOR. Secondly, to demonstrate the successful implementation of GWOT funding to effectively train and equip deployers to Joint Base Balad, Iraq.

Objectives:
1. Participants will gain the knowledge of technologies employed in the field.
2. Participants will gain the knowledge of laboratory set-up at Joint Base Balad, Iraq.
3. Participants will gain the knowledge GWOT funding effectively spent for training.

#13 EMERGING AND REEMERGING INFECTIONS ................................................................. EXPO C
Presenter(s): Helen B. Viscount, COL, USA
Mark R. Hickman, LTC, USA
Chunlin Zhang, LTC, USA
William F. Nauschuetz, LTC(ret)
William Keener, CPT, USA

Abstract: Lack of or erosion of public health infrastructure is one of the contributing factors for continued occurrence of outbreaks of infectious diseases, emergence of new infections and reemergence of old ones. Because of the increasing size and mobility of the human population, these diseases pose a persistent threat to the health of the armed forces and of the global community. These past few years we have battled methicillin-resistant Staphylococcus aureus and other multiply resistant bacteria in the health care setting. Recent outbreaks of avian influenza, cholera, dengue and chikungunya fevers underscore the potential for the reappearance of infectious diseases in currently unaffected populations. In contrast, leprosy was once widespread but is now considered a tropical chronic disease. Leprosy remains nationally notifiable in the
United States. This workshop will discuss these reemerging infections to include strategies to combat microbial threats to health.

Objectives:
1. List 5 emerging and reemerging infections.
2. Briefly describe one reemerging infection.
3. What antimicrobics are effective for any 2 of these infections.

0730-1200 4-Hour Workshops

#14 A HANDS-ON IN THEATER LAB INSTRUMENTS-- Ac•T 8/10 HEMATOLOGY ANALYZER, PICCOLO XPRESS, HAEMONETICS MCS+ LN 9000………………………………………………………………………………………………… SILVER BARON A, 4, 5, 6

Ac•T 8/10 HEMATOLOGY ANALYZER TRAINING
Presenter(s): Ms. Ann Bloxam
Ms. Cynthia Fasano

Abstract: Qualified Beckman Coulter representatives will lead a course on basic principles of the Ac•T 8/10 hematology analyzer, an \textit{in vitro} diagnostic instrument that analyzes human blood for total counts of RBCs, WBCs and PLT, as well as HGB and other red blood cell indices. The course will cover initial set-up and installation of the analyzer, including proper reagent hook-up/replacement. The basic mechanics, as well as software features and functionality, will be explained. The instructors will show the students the entire cycle of how to run controls, set-up patients, introduce samples, and analyze results. Additionally, the students will be taught how to conduct preventative maintenance, including calibration, as well as general maintenance that could include replacement of items such as tubing, valves and fuses. The instrument’s flags and warning messages will be discussed, along with error alerts and what to do about them.

Objectives:
1. Create understanding of the principles of Ac•T 8/10 hematology analyzer operation: what it does, how it does it.
2. Instruct students on how to maintain and trouble-shoot the analyzer.
3. Supervise hands-on practice of above principles.

OPERATION OF PICCOLO XPRESS
Presenter(s): Dr. Vladimir Ostoich, Ph D
Mr. Randy Knick CIV

Abstract: Qualified Abaxis representatives will lead a course on basic principles of the Abaxis Piccolo chemistry analyzer, an \textit{in vitro} diagnostic instrument that analyzes human blood. The course will cover initial set-up and installation of the analyzer, including proper loading of reagent discs. The basic mechanics, as well as software features and functionality, will be explained. The instructors will show the students the entire cycle of how to run controls, set-up patients, introduce samples, and analyze results. Additionally, the students will be taught how to conduct preventative maintenance, as well as general maintenance.

Objectives:
1. Create understanding of the principles of Piccolo xpress analyzer operation: what it does, how it does it.
2. Instruct students on how to maintain and trouble-shoot the analyzer.
3. Supervise hands-on practice of above principles.

COLLECTING SINGLE DONOR PLATELETS USING THE HAEMONETICS MCS+ LN 9000 IN A COMBAT ENVIRONMENT
Presenter(s): Emmett Gourdine, LTC, USA

Abstract: This workshop is intended for laboratory personnel who want to know more about apheresis technology and
how it’s being used in a combat environment. This workshop will provide a basic overview of apheresis technology currently used in blood bank organizations. Using actual equipment, this workshop will demonstrate how to operate the Haemonetics MCS + LN 9000, currently being used in CENTCOM Blood Support Detachments (BSD) and Medical Treatment Facilities (MTF). Lastly, the workshop will share the latest information on the collection and transfusion of single donor platelets to those injured in Iraq and Afghanistan using the Haemonetics MCS+ LN 9000.

Objectives:
1. To understand the basic principles of apheresis technology
2. To get an overview of the basic operation of the Haemonetics MCS LN 9000.
3. To get an update on the collection and transfusion of single donor platelets in CENTCOM medical treatment facilities.

#15 THE NEW 711TH HUMAN PERFORMANCE WING – MORE THAN JUST SLURPEES AND BIG GULPS!

Presenter(s): Patricia A. Reilly, Col, USAF
Ronald T. Rippetoe, Lt Col, USAF
David G. Watson, Maj, USAF
Gerardo I. Ramos, Maj, USAF
Richard C. Casabar, Maj, USAF
Eric C. Haywood, MSgt, USAF
Roy N. Adams, TSgt, USAF
Ms. Elizabeth M. Escamilla

Abstract: The Air Force Research Laboratory’s new 711th Human Performance Wing (711 HPW) is the centerpiece of the Joint Department of Defense Center of Excellence for Human Performance Sustainment and Readiness, Optimization and Effectiveness Research. The 711 HPW, which stood up in 2008, combined the Air Force Research Laboratory’s Human Effectiveness Directorate, the USAF School of Aerospace Medicine, and the Human Performance Integration Directorate. Under BRAC law, the 711 HPW will be housed at Wright-Patterson AFB by September 2011. This workshop provides an overview of the 711 HPW organization, its unique vision and missions, and examines the “University Model” on which it is based. During the course of the workshop several military laboratory professionals from the 711 HPW will provide insights into some of the research, education and training activities of the wing, with special emphasis on recent successes and challenges. Topics to be covered include: (1) an update on biotechnology and counterproliferation research to include ongoing initiatives in nanotechnology, use of genetic techniques to further cognitive research, effectively utilizing bioinformatics data and a discussion of the challenges associated with operating and managing the AF’s only active Biological Safety Level 3 facility and (2) an overview of USAFSAM’s aeromedical education, training and research activities, which now include the former AFIOH’s Epidemiology Laboratory and Applied Technology Center.

Objectives:
1. Participants will receive an overview of the Air Force Research Laboratory’s new 711th Human Performance Wing, and will gain an understanding of how it contributes to the DoD’s Center of Excellence for Human Performance Sustainment and Readiness, Optimization and Effectiveness Research.
2. Participants will receive an overview and update on research activities within the Applied Biotechnology and Counterproliferation Branches of the Human Effectiveness Directorate of the 711th HPW with special emphasis on recent successes and challenges.
3. Participants will receive an overview of the research, aeromedical education, production laboratory, new technology evaluation, and 24 hour consultation capabilities within the USAF School of Aerospace Medicine, USAFSAM’s 2008 merger with AFIOH, its role in the new 711th HPW, and an update on the state-of-the-art facilities being built at WPAFB.

#16 TC2 (CHCS CACHE) FILE AND TABLE

Presenter(s): Mr. Martin E. Tenney

Abstract: This workshop is targeted for laboratory officers and laboratory technicians who have been designated to deploy as a part of the laboratory team for a Combat Support Hospital (CSH) in support of Operation Iraqi Freedom.
Objectives:
1. Obtain a basic understanding of TC2 lab file and able building.
2. Understand which lab files/fields can be changed and which can not be changed.
3. Obtain information about additional lab user training that’s available.

Abstract: This workshop will be split into three sections. The first half of the presentation will discuss basic principles of electrophoresis as it is used in the clinical laboratory. Serum protein electrophoresis (SPEP), urine protein electrophoresis (UPEP), and CSF electrophoresis will be described to illustrate diagnostic and prognostic value for patients with plasma cell disorders. The serum free light chain assay will be described to illustrate its role as an additive tool in the diagnosis of multiple myeloma and other plasma cell disorders. This will be followed by a discussion of the use of the PT/INR ratio in the diagnosis and treatment of Heparin Induced Thrombocytopenia (HIT). The HIT discussion will focus on the background behind the use of PT/INR as well as the manner in which it is used by clinicians. Specifically we will address the requirement for critical result notification of PT/INR in the treatment and management of HIT. The final part of this workshop will include a discussion of the use of hemoglobin electrophoresis as it is used to manage patients with diabetes mellitus that have a non-A variant hemoglobin. This workshop will finish with a review session based on we will tie everything together using a case study approach and finish up with a fun and informative review session.

Objectives:
1. Understand basic principles of serum protein electrophoresis for the diagnosis of plasma cell disorders (PCDs) and relate PCD cases to the free light chain assay.
2. Understand the use of hemoglobin electrophoresis in the diagnosis on non-A variant hemoglobins as they relate to the use of hemoglobin A1c in the care and treatment of diabetes mellitus.
3. Understand the use of PT/INR in the diagnosis of coagulopathies, especially Heparin Induced Thrombocytopenia (HIT).

Abstract: Introduction to terrorist organizations, goals and plans for future attacks. Sharia law will be explained as well as the potential use of WMDs against the United States. The concept of stealth jihad will be discussed. A short documentary will be shown to emphasize key elements of the presentation.

Objectives:
1. Define the goals of terrorist organizations.
2. List methodologies of WMD utilization.
3. Explain stealth jihad.

Abstract: This session is targeted for Donor Recruiters and other users of the eDonor® Donor Relationship Management
tool. Since its adoption in 2006, users of this system have experienced difficulty in using it to improve recruitment efficiency. This session will provide attendees with a better understanding of techniques currently used in the field to effectively use this system to conduct and track the results of an email campaign. The information and insight that can be gained from some of the reports built into the system will also be discussed. Several times each year, eDonor incorporates system enhancements that improve its efficiency. The use and benefit of some of these enhancements will be outlined and discussed.

Objectives:
1. Review techniques for preparing an email campaign and adding user profiles.
2. Gain a better understanding of DRM reports.
3. Introduce new system enhancements.

#20 THE BLOODY TRUTH…………………………………………………………………………. SILVER BARON 2, 3

Presenter(s): George A. Hestilow Maj, USAF
             Kathryn B. Shaw, Maj, USAF
             Karen J. Buikema, Capt, USAF
             Frederick A. Matheu, LT, USN
             Patrick Chernay, SSgt, USAF

Abstract: This workshop is designed to be an overview of current topics and challenges in the field of military blood banking. The workshop will cover topics such as apheresis collection in theater, the development of a new in-theater blood collection UTC, screening blood donors in a recruit environment, and the frozen blood program. Participants will also be introduced to new cutting edge blood bank technology including the blood pharming initiative and pathogen inactivation. The target audience for this workshop is all technologists and technicians with an interest in the current happenings of the military blood banking community.

Objectives:
1. Understand the theater blood product collection process.
2. Use technology to improve donor screening process, and understand the process of basic trainee screening.
3. Understand the process of pathogen inactivation and the potential benefits it brings to the blood bank.

1000-1200 2-Hour Workshops

#21 JBAIDS PROGRAM OVERVIEW AND UPDATE……………………………………………………… SILVER BARON E

Presenter(s): Mr. James O. Murray
             Dr. John van Hamont, Ph D
             Ms. Lisa Perez

Abstract: The Joint Biological Agent Identification and Diagnostic System (JBAIDS) is a newly developed DoD laboratory system using PCR to identify biological threat agents found in clinical, food, and environmental samples. JBAIDS has been fielded to deployable and fixed-facility hospitals, food safety, and reference laboratories in all Services; and is included in the National Guard’s Analytical Laboratory System. The JBAIDS analyzer, components, and processes have gone through an extensive test and evaluation process by the multiservice operational test agencies.

This workshop will provide an overview of the JBAIDS components, capabilities, employment, and other aspects of the concept of operation.

Updates on current and proposed future product improvements will include FDA clearance for diagnostic assays, software and computer updates, logistics updates, and status of development of next generation identifier.

Demonstration of the new magnetic bead processing kit will be included. An interactive discussion of lessons learned, troubleshooting, interpretations of challenging test results, and other topics of interest will be conducted.
This overview may be especially useful for persons with operational responsibilities in medical units or those needing an overview of JBAIDS capabilities, employment, and other aspects of the concept of operation.

Objectives:
1. Describe the JBAIDS system components, capabilities, and concept of employment.
2. Describe the JBAIDS program status, updates, and future improvements.
3. Describe the general procedures and employment of new kits and the handling of various troubleshooting challenges.

#22 1ST AREA MEDICAL LABORATORY CAPABILITIES WORKSHOP……………………………………….. EXPO A
Presenter(s): Robert K. Pell, Jr., LTC, USA
Sarah L. Pierson, CPT, USA

Abstract: This workshop will provide a history, necessity and comprehensive review of the missions of the Area Medical Laboratory, of which, only two currently exist in the Department of Defense inventory. The workshop will outline the four squads that make up the Area Medical Laboratory, the considerable capabilities within each squad, to include the personnel assigned, the instrumentation and equipment used, the throughput and types of missions supported and the way ahead/relevance for the unit into the future. The workshop will also outline and highlight, through individual presentations by the squad leaders, the real world exercises that the 1st AML recently participated in with the Idaho National Labs and during Exercise KEY RESOLVE/FOAL EAGLE ’09 in Korea. The workshop will conclude with a panel discussion between the 1st AML presenters and the audience to clarify any questions concerning AML capabilities, missions or opportunities for laboratory personnel within the Army to be assigned.

Objectives:
1. Familiarize the audience with the capabilities of the 1st Area Medical Laboratory (AML).
2. Provide the audience with real world exercise examples/lessons learned of the 1st AML in action.
3. Clarify the challenging roles and opportunities for laboratory personnel who may be interested in joining us.

#23 IT’S ALL ABOUT THE NUMBERS …………………………………………………………………… EXPO C
Presenter(s): Cindy Wilkerson, CDR, USN

Abstract: Have you struggled to understand your workload reports from CHCS? Do you know how to determine the correct CPT codes to use when building test files or how to know if they are accurate? Have you ever used a staffing standard to determine how many personnel you need working in your laboratory? In this workshop, the participants will be asked to bring their own workload report (SDR) from CHCS. The CPT codes on the report will be reviewed, examined for accuracy, suffixes explained and general observations made. The participants will be able to review their own workload report and see examples of common discrepancies found on workload reports from other facilities. A discussion will be held on how to correct the discrepancies in CHCS. Once workload has been verified, the participant will be able to use their own workload figures and determine staffing requirements based upon an accepted staffing model. Each aspect of the staffing model and data required will be examined in detail and explained. Each section of the model will be calculated. The results of the staffing requirements will be reviewed and evaluated. At the end of the session, participants should have a better understanding of workload recording in CHCS, CPT coding and the use of staffing model to determine appropriate personnel numbers.

Objectives:
1. Participant will be able to review laboratory CPT codes for accuracy in coding.
2. Participant will be able to review workload report from CHCS and interpret data.
3. Participant will be able to use workload data to determine clinical laboratory staffing based upon staffing model.
1300-1500  2 Hour Workshops

#24 CASE STUDIES IN BLOOD BANKING ................................................................. SILVER BARON 2, 3
Presenter(s):  Kathryn B. Shaw, Maj, USAF
              Nagenia McBean, 2LT, USAF

Abstract: Has it been years since you’ve done any Blood Banking? Are you in a position where you are responsible for the Blood Bank, and need to refresh yourself on the technical specifics? Are you deploying? This is the workshop for you! This interactive seminar will teach you the basics in ABO/Rh typing and antibody screening/antibody identification techniques. We will cover A subgroups, and show you how to resolve ABO discrepancies, which occur when the front type does not match the back type. Additional topics include Rh typing, Weak D testing, and DAT. There will be several handouts, which you will be able to use as we walk you through case studies in ABO typing and antibody workups. Please join us to re-learn Blood Banking in about 2 hours!

Objectives:
1. Identify the common causes of ABO and Rh discrepancies and learn resolution techniques.
2. Identify simple techniques that can be useful in resolving antibody problems.
3. Evaluate and resolve serologic problems and relate to patient’s clinical condition.

#25 DOUBLE UP: THE ROAD TO IMPLEMENTING THE COLLECTION OF DOUBLE RED CELLS .................................................................................................................................................................... SILVER BARON 1
Presenter(s):  Aaron J. Harding, LCDR, USN

Abstract: The sole methodology within the Armed Services Blood Program (ASBP) for manufacturing liquid red blood cells is through the collection of whole blood (WB). Since the Food and Drug Administration (FDA) approved the use of apheresis technology for the collection of two red blood cell products (2-RBC) in 1998, civilian blood organizations have been converting donors with specific blood types, primarily Rh negative, to the double red cell collection procedure to increase inventory levels. In 2002, Naval Medical Center, San Diego, CA (NMCSD) was the first military donor center to implement 2-RBC collections. After concerns expressed within the ASBP of the unknown effects of 2-RBC collections on a military population, collections were limited to non-military personnel. In 2003, 2-RBC collection research was conducted evaluating the cardiovascular, neuro-cognitive, and hemodynamic effects compared to a WB donation with no significant differences between the two groups except 2-RBC donors had a lower ferritin level. After the development of standardized validation plans and operating procedures, in 2008 NMCSD began validating 2-RBC collections for FDA licensure.

Objectives:
1. Describe apheresis technology available for collecting double red blood cells.
2. Understand physiological effects of double red blood cells compared to whole blood donation.
3. Describe administrative requirements for submitting a licensure package to the FDA.

#26 PUBLIC AFFAIRS AND COMMUNICATIONS TECHNIQUES AND STRATEGIES ................................................................................................................................. SILVER BARON 4, 5
Presenter(s):  Ms. Julie Oliveri

Abstract: The Armed Services Blood Program Office (ASBPO) was established by the Assistant Secretary of Defense for Health Affairs to coordinate the blood programs of the Military Services and the Unified Commands. The ASBP is currently undergoing transformation in business practices through development of novel marketing strategies; redesign of the DBSS requirements and procurement processes; and support to innovations in information management research/development through partnerships with other federal and civilian agencies.
This public affairs workshop will demonstrate how basic communications strategies and public affairs methods should be used to keep your chain-of-command informed of your successes; build effective relationships with the military media; and, turn potential negative publicity into positive publicity.

Designed as an interactive exercise for blood donor recruiters and lab officers to teach and subsequently demonstrate basic communications techniques, workshop participants will learn how to formulate and communicate a strong positive message to the appropriate audience. For the blood donor recruiter, audiences are the potential blood donor pool, command structure, military media and interested military organizations. For the laboratory officer, audiences can include the hospital command structure, installation command structure, military media and civilian press. This workshop will teach simple ways to tailor your message to a particular audience as well as effective ways to work with your public affairs office. Participants will leave with an understanding of basic communications techniques, and how to adapt and best use these techniques as needed.

Objectives:
1. To inform and update attendees on the status of the Centralized Comprehensive Communications Plan for the Armed Services Blood Program Office.
2. Demonstrate positive media messaging techniques.
3. Instruct audience in public affairs protocols and methods.

1300-1730 4-Hour Workshops

#27 CAP LABORATORY ACCREDITATION PROGRAM........................................................ SILVER BARON A
Presenter(s):  Dr. R. Bruce Williams, MD, FCAP
Ms. Denise Driscoll, MS, MT(ASCP)SBB

Abstract: The CAP Laboratory Accreditation Program shares your commitment to excellence. This workshop will provide you with tips, tools, and techniques that will facilitate achieving and maintaining your laboratory accreditation through continuous compliance. In addition to the presentation regarding recent revisions to checklist requirements, there will be a review of the specific areas of the checklists that continue to cause difficulties in interpretation to laboratories and inspectors. You will learn techniques you can use to investigate and implement corrective actions for poor proficiency testing performance. You will also take home information about the resources that are available at the CAP Web site which will enable you to more efficiently and effectively maintain your laboratory accreditation.

Objectives:
1. Describe recent and significant checklist changes and ways to maintain continuous compliance with the new accreditation requirements.
2. List investigative techniques used to determine causes of poor proficiency testing performance and describe effective corrective actions.
3. Find and use resources and tools available on the CAP Web site to assist in achieving and maintaining accreditation.

#28 CORE LABORATORY AUTOMATION: LESSONS LEARNED……………………………… SILVER BARON B
Presenter(s):  David Smith, LTC, USA
Linda Guthrie, LTC, USA
Aziz Qabar, LTC, USA
Arlene Lopez, LCDR, USN;
Michael VanZile, CPT , USA
Kelly Wilhelms, CPT, USA
Amanda Trowbridge, 1LT, USA

Abstract: For over a decade Department of Defense (DOD) facilities have pursued a wide variety of laboratory automation systems to improve Core Laboratory performance. This workshop is intended to provide a brief review of automation in the Core Laboratory with particular focus on lessons learned. Multiple speakers will provide interactive
presentations on general topics of automation: State of laboratory prior, 2) Reasons for opting for automation, 3) Selection process, 4) State of laboratory after automation and 5) Lessons learned (if I could do it again…). A summary and panel discussion will follow.

**Objectives:**
1. Understand advantages and uses of laboratory automation in the Core Laboratory setting.
2. Develop an understanding of laboratory automation implementation pitfalls, workarounds and solutions.
3. Synthesize integrated goals for future implementation of Core Laboratory automation through reported successes and failures at implementation sites.

#29 LAB CLIFF NOTES 201, THE DEPLOYMENT…………………………………………………………………………………………………….. SILVER BARON C
**Presenter(s):** David Craft, COL, USA
Eva Calero, LTC, USA
Lanette Hamilton, LTC, USA
Steve Mahlen, LTC, USA
Paul Mann, LTC, USA
Phil Rooks, MAJ, USA
Jeff Smith, MAJ, USA
Dan Erwin, CPT, USA
Elaine Morrison, CPT, USA
Wendy Adamian, 1LT, USA

**Abstract:** This workshop is targeted to Military Laboratory Officers, NCOs and enlisted members, all of whom have the potential to deploy in support of wartime and contingency lab operations worldwide. This 4-hour workshop is presented by a panel of Army officers who have deployed since 2004 in support of Operations ENDURING FREEDOM and IRAQI FREEDOM in Blood Detachments, Combat Support Hospitals, General and Microbiology/Infectious Disease laboratories, and Medical Brigade/Corps Lab Consultancy. The diverse disciplines, timelines, and experiences brought in by panel members will provide invaluable lessons learned that can be applied to current and future operations, and serve as pre-deployment training guidelines for all potential areas of deployed assignment.

**Objectives:**
1. Recall a minimum of 3 roles filled by deployed laboratory personnel.
2. Identify three major issues or challenges facing deployed medical laboratories/laboratory personnel.
3. Familiarize attendee with solutions to major issues or challenges facing deployed medical laboratories/laboratory personnel.

#30 NAVY JUNIOR LABORATORY OFFICER DEVELOPMENT…………………. SILVER BARON D
**Presenter(s):** Larry Ciolorito, CAPT, USN
Cindy Wilkerson, CDR, USN
Mark Crowell CDR, USN
Carolyn Marquez, CDR, USN

**Abstract:** This workshop is targeted for Medical Technologists serving as junior Navy laboratory officers. It is intended to provide tools for becoming an independent, effective Laboratory Manager and leader as well as a Laboratory Department Head. It is presented by a panel of senior USN Medical Technologists who have worked in a wide range of laboratory management, training, and regulatory oversight positions. This workshop will cover topics such as regulatory issues & compliance, lab QA/QC program, method & instrument validation overview, and proficiency testing program management. It is broadly applicable to Medical Technologists in both technical and leadership roles.

**Objectives:**
1. State the purpose of Quality Assurance in terms of regulatory and accreditation requirements for CLIP, CAP, FDA, JCAHO, and AABB.
2. Define responsibilities of a Laboratory Manager, Laboratory Department Head and/or Laboratory Section Head (Division Officer) in a CONUS and OCONUS environment.

3. List the steps of Method/Instrument Validation IAW CLSI standards.

#31 CAREER ASSIGNMENTS FOR ARMY BIOCHEMISTS: 71B OFFICER PROFESSIONAL DEVELOPMENT.................................................................................................................. SILVER BARON E

Presenter(s):  
Brian Lukey, COL, USA
Richard Duncan, LTC, USA
Kevin Pitzer, LTC, USA
David Smith, LTC, USA
Aziz Qabar, LTC, USA
Robert Carter, III, MAJ, USA
Claudia L. Henemyre-Harris, MAJ, USA
Peter Platteborze, MAJ, USA
Marisol Castaneto, CPT, USA

Abstract: Remember the old slogan, “An Army of One.” In many instances, an Army biochemist may find that he or she is the only 71B assigned to a research facility or medical center. To complicate matters, many specialties exist within the 71B functional area such as chemistry, biochemistry, physiology, and molecular biology. With so much diversity in the 71B arena, where can an Army biochemist work? This workshop will describe the various career assignments for Laboratory Sciences Officers within the 71B functional area. The intended audience is all 71B officers and individuals interested in a career in biochemistry and/or the military. The format for the workshop will be several short presentations by various 71B speakers followed by a break-out session to ask more in-depth questions of the speakers. Speakers will present information regarding assignments at Medical Research and Material Command (MRMC), Center for Health Promotion and Preventive Medicine (CHPPM), Area Medical Laboratory (AML), a Medical Center (MEDCEN) clinical laboratory, a Department of Clinical Investigation (DCI) laboratory, a Forensic Toxicology Drug Testing Laboratory (FTDTL), and an acquisition position. In addition, the 71B consultant will share his experiences as a commander.

Objectives:
1. List eight career assignments available for Army biochemists (71B’s).
2. Describe position duties and responsibilities for three Army biochemist (71B) assignments.
3. Discuss the advantages and disadvantages of three Army biochemist (71B) assignments.

1530-1730 2 Hour Workshops

#32 AFMS LABORATORY BIOLOGICAL DEFENSE POLICY/GUIDANCE UPDATE.................................................................................................................. SILVER BARON 2, 3

Presenter(s):  
Patricia A. Reilly, Col, USAF
Michael Dempsey, Maj, USAF
David Hagerty, Maj, USAF,
Dr. Elizabeth Macias, PhD

Abstract: The Air Force Laboratory Biological Defense Steering Committee (AFlab-BDSC) serves as the advisory body to AF/SG3 on all laboratory biological defense issues. The AFlab-BDSC develops and facilitates Expeditionary, Fixed Site Homeland Defense and Homeland Security policies, plans, projects, and procedures at the request of the SG3. This workshop will provide an update on AF lab biodefense laboratory policy as well as information pertaining to the Homestation Laboratory Response Team, CDC Laboratory Response Network, Joint Biological Agent Identification and Diagnostic System and the M1M instrument. It will include the latest information on training, instrument sustainment. Workshop participants should ensure the information provided is incorporated in their installation specific medical contingency response plans under annex N (C-CBRN Response) as appropriate.
Objectives:
1. Explain current AFMS Biodefense laboratory policy to installation leadership including first responders (i.e., security forces, civil engineering readiness, mission support group).
2. Incorporate latest AFMS Biodefense laboratory policy and guidance into installation specific medical contingency response plans.
3. Differentiate between AFMS Homestation Medical Laboratory Response capability and Laboratory Response Network role.

#33 INFLUENZA SEQUENCING FOR DUMMIES……………………………………………………SILVER BARON 1

Presenter(s): Thomas F. Gibbons, Maj, USAF
Stephen Christian, MSgt, USAF

Abstract: USAFSAM receives original upper respiratory specimens from around the world which are examined for the presence of viruses using traditional viral culture techniques. Concurrently, these specimens are screened for influenza A and B using reverse-transcriptase polymerase chain reaction techniques (RT-PCR). Nearly 100% of the identified influenza specimens undergo molecular characterization. This characterization includes the genetic sequencing of the hemagglutinin surface proteins, the results of this analysis are compared with previous and currently utilized vaccine component strains. All laboratory data are shared with the CDC and are included in the WHO phylogenic representation of circulating strains. The focus of this workshop is to enable the average Medical Laboratory Technician to understand the basic principles of sequencing and phlyogenetic characterization performed at the USAFSAM Public Health Laboratory.

Objectives:
1. Participants will have a basic understanding of the role USAFSAM has in the annual influenza vaccine selection.
2. Participants will have a basic understanding of the role and importance hemagglutinin plays in the pathogenicity of influenza.
3. Participants will gain the ability to understand an example of an influenza sequence analysis report, to include a phylogenic analysis of the HA1 region of hemagglutinin from recently analyzed specimens.

25 Mar 09 (Thursday)

1300-1500 2 Hour Workshop

#34 USING DBSS AND BUSINESS OBJECTS FOR RECRUITING AND DATA REPORTING…………………………………………………………………SILVER BARON 6

Presenter(s): Mr. Martin D. Ricker

Abstract: Attendees of this session will gain a basic understanding of the functionality of DBSS and how it works with Business Objects to extract data and produce reports. The group will discuss different reports that are currently available in the system and which ones work well for producing monthly recruitment data reports. Additionally, the group will discuss techniques for using data in DBSS to identify special donors to satisfy particular collection requirements.

Objectives:
1. Understand some of the basic functionality of DBSS and BO.
2. Identify useful existing reports in DBSS and BO.
3. Explain how to use specific reports to extract data for reports and identify special donors.
1530-1700  2 Hour Workshop

#35  PLANNING MULTI-CENTER BLOOD DRIVES.........................................................SILVER BARON 6
Presenter(s):  Mr. Martin D. Ricker

Abstract:  This session Attendees will be given some basic guidelines to consider when planning larger, multi-center blood drives. An open discussion will follow to identify specific considerations for the three military academies. Additionally, communication and marketing techniques will be outlined that have proven successful at some of these drives in the past. The group will also discuss how to apply these techniques to other blood drives. This session will also include an open discussion on how to capitalize on the competitive spirit of the cadre and student chain of command at the academies.

Objectives:
1. Outline and discuss primary planning considerations for multi-center drives.
2. Explain some techniques to publicize these drives.
3. Discuss the use of the cadre and student chain of command to ensure a successful drive.

2009 SAFMLS SHORT TOPICS AND ROOM ASSIGNMENTS

GROUP ONE:    LAB ADMINISTRATION, SILVER BARON B

0900  SO, YOU WANT TO BE A SQUADRON COMMANDER… START YOUR PREPARATION TODAY

Presenter(s):  Reba Harris, Lt Col, USAF

Abstract:  Squadron Command is one of the most rewarding positions in the Air Force, and getting there takes advanced preparation and planning. There are numerous steps one must take early in their Air Force career to ensure they are ready for command, during their window of opportunity. Selecting the right mentor and staying engaged with mentor(s) throughout your career is pertinent in this process. One of the first steps in this process is to know your job, and to function well in it. The second step is to seek leadership positions appropriate for your rank. These and other steps are instrumental to your advancement up the promotion ladder. Additionally, completion of PME is an absolute must, you cannot get promoted without it, and the sooner you complete your PME the better off you’ll be. Records review for correctness for some has been the difference in getting promoted versus not. Sustaining a record of excellence along with the above topics ensures laboratorians are competitive with the rest of the BSC Corp AFSCs. Also important is taking advantage of the numerous opportunities available for you to excel within your squadron, group, and wing. Finally, knowing now what you’d like to be doing in 6-10 years will assist the BSC Development Team, along with AFPC assignments team in steering your career down the pathway you’d like to go. Don’t wait until the last minute, take action today to put yourself in the best position for command, the competition is tough and this workshop will provide key steps to show you the way.

Objectives:
1. Steps You Must Take Today in Preparation for Squadron Command Tomorrow
2. Reviewing Your Records
3. How to Sustain a Record of Excellence

0930  APPLICATION OF AKO WEBSITE RESOURCES TO ADVANCE THE LABORATORY COMMUNITY

Presenter(s):  Brian Robinson, CPT, USA

Abstract:  Army Knowledge Management is the U.S. Army’s strategy to transform itself into a network-centric organization with access to information, systems and services. The strategy includes objectives designed to web enable all Army
applications and manage the information technology infrastructure and services from any location around the globe while leveraging the internet at anytime. One objective in particular is to institutionalize AKO as the portal to provide universal and secure access to the network. Available to all Army Soldiers and civilians, AKO allows individuals and groups to stay connected worldwide. It does so by offering a number of different features including fully encrypted Instant Messaging capability and the ability to create specific communities that enable its users to post and share information pertaining to their unique mission areas. Army Microbiologists have created a virtual community within the existing AKO microbiology website to store and disseminate information. This allows for real-time delivery of information, mentorship and professional development, and recognition of achievement. Additionally, a non-AKO external website was created for informational and recruitment purposes. Some successes have been monthly updates and forums/blogs to disseminate pertinent information. Limitations have included computer resources, network availability, level of user technical expertise, and frequency of updates. The goal of this short topic is to communicate the tools available through AKO to foster collaboration and encourage greater participation from members of an AOC. A number of metrics that are used to measure success will be discussed as well as some of the challenges that may be encountered when trying to establish a virtual community.

Objectives:
1. Describe the resources available within the AKO website community
2. Summarize how the AKO community can improve the clinical and research laboratories
3. Detail the challenges associated with community establishment and website operations

1000 APPLICATION OF LEAN SIX SIGMA IN A HIGH VOLUME CLINICAL DIAGNOSTIC LABORATORY

Presenter(s): Mr. Tom Mohanty, MBA
             Mr. Mark Scheman, MT(ASCP)

Abstract: This presentation is designed to outline a process on how to use Six Sigma and Lean methods to charter, design, and implement a full scale Lean project in a large clinical diagnostic laboratory. The presentation will outline the Six Sigma DMAIC (Define, Measure, Analyze, Improve, and Control) methodology and Lean principles used to design and implement the project. The focus of the presentation will be on how the Lean Six Sigma project was chartered, data collection and analysis performed, various tools used (5S, value stream map, spaghetti map, value added and non-value added time, just-in-time delivery etc.) to complete the design and implementation. We will also share the results from this effort and the learnings.

Objectives:
1. Understand how Six Sigma method can be used to execute a full scale Lean design effort in a clinical diagnostic laboratory
2. Understand key Lean tools/principles that can be used to design a clinical diagnostic laboratory
3. Understand how interactions of physical, process, technological, and organizational changes contribute to a large scale Lean design effort

1100 CONTINUOUS PROCESS IMPROVEMENT OPTIMIZES BLOOD DELIVERY

Presenter(s): David Kuch, Maj, USAF
              Adaymee Cofresi, Capt, USAF

Abstract: This workshop provides an introduction to process improvement principles/tools which can improve laboratory processes, and describes a recent application of these principles to improve blood delivery within a medical center. For two-decades, Lean process management principles have been used to streamline processes to eliminate nonvalue-added practices to improve customer values. These principles coupled with Six Sigma practices were applied to the blood product delivery process within David Grant USAF Medical Center at Travis AFB, CA. A multidisciplinary team of medical center staff members streamlined the emergency release and routine issuance of blood products. In the year since the implementation of the streamlined processes, a significant and sustainable improvement to blood delivery turnaround time (TAT) has resulted (59% and 45% TAT improvement, respectively). The timely and accurate blood
component delivery has enhanced laboratory-clinical teamwork, improved overall medical center mission effectiveness, and optimized patient care.

Objectives:
1. Introduce process improvement principles that can be used by laboratory managers to optimize efficiency
2. Provide a “tool box” of Lean and Six Sigma techniques to improve laboratory efficiency
3. Discuss successful application of process improvement principles to improve blood delivery

GROUP TWO: MOLECULAR BIOLOGY, SILVER BARON C

0900 EVOLUTION OF MOLECULAR METHODS FOR DIFFERENTIATING FRANCISELLA TULARENSIS

Presenter(s): Michael Dempsey, Maj, USAF

Abstract: Molecular biology has revolutionized the field of biotechnology. In the past 5-10 years vast amounts of new knowledge have emerged about microbes and higher life forms due in large part to advances in genomics, to include polymerase chain reaction (PCR), comparative genome hybridization, and whole genome sequencing. These methods have greatly aided microbial identification strategies and understanding of genomic determinants of phenotype. The highly infectious zoonotic bacterial pathogen, Francisella tularensis, is a model that has benefited from such advances in genomics. A main focus of the presentation will be to demonstrate the role that molecular biology, in particular, genomics, has contributed toward the growing scientific knowledge base surrounding F. tularensis. Previous studies have resulted in discovery of new taxa of F. tularensis as well as identification of molecular mechanisms, including some involved in subspecies-level virulence and biochemical variations. Our current work is focused on analysis of a complete genome sequence of F. tularensis subspecies holarctica with unique polymorphisms potentially involved with hypervirulence in humans. Previous findings as well as selected results from our current study will be presented, and application of such methodologies toward understanding other organisms will be considered.

Objectives:
1. Describe key phenotypic differences between the main Francisella tularensis subspecies
2. Describe contributions of molecular biology and genomics toward differentiating F. tularensis subspecies
3. Discuss on-going efforts in characterizing F. tularensis taxa based on whole genome sequencing

1000 EPIDEMIOLOGICAL RESPIRATORY SURVEILLANCE IN EUROC

Presenter(s): George Kallstrom, MAJ, USA

Abstract: This short topic is intended for laboratory professionals interested in microbiology. This presentation will focus on the EUCOM/DoD GEIS partnership to increase disease surveillance capabilities across Europe and the Middle East. Discussion will focus on how the surveillance program was funded and implemented. Data will be presented regarding increased surveillance with a particular emphasis on respiratory viruses such as Influenza and RSV. Laboratory testing methodologies will be presented including; viral culture, PCR, multiplex PCR and Luminex technology for detection of respiratory pathogens. A discussion about benefits, increased workload and costs associated with increased surveillance will be included in the presentation.

Objectives:
1. Understand the purpose and benefits of Pathogen Surveillance
2. Comprehend EUCOM efforts in standing up increased surveillance
3. Understand how surveillance plays a role in preparedness for novel pathogen outbreaks
1030 OVERVIEW OF NUCLEIC ACIDS AND PHARMACOGENOMICS

Presenter(s): Peter Platteborze, MAJ, USA

Abstract: This seminar is targeted for all laboratory personnel (lab technicians, MTs, clinical chemists) who have an interest in learning more about the nucleic acid molecules DNA and RNA. It will cover the basic structure and function of deoxyribonucleic acid and ribonucleic acid to include a description of the transcriptional and translational processes. After this overview there will be a short discussion on some basic common nucleic acid methodologies, such as Polymerase Chain Reaction (PCR). The discussion will culminate in a description of pharmacogenomics, a very hot topic in the field of clinical chemistry.

Objectives:
1. Understand the structure/function of DNA in a clinical chemistry laboratory
2. Understand the structure/function of RNA in a clinical chemistry laboratory
3. Understand the basics behind pharmacogenomics

1100 USAFSAM REFERENCE LAB UPDATES

Presenter(s): Julie Kena, Capt, USAF
Elsie Martinez, MT(ASCP)

Abstract: USAFSAM/PHE receives more than 4,000 clinical diagnostic patient specimens daily from around the world. This workshop will review the automated immunoassay technology and robotics installed to augment growth in testing in support of our DoD beneficiaries. It will also review challenges encountered and things to consider when bringing online advanced automation. We will discuss the Base Re-Alignment and Closure (BRAC) and the plans to continue testing until the move to Wright Patterson AFB, Ohio in 2011. The final portion of the workshop will be devoted to customer updates and feedback to shipping specimens. The entire workshop will be an interactive Q&A discussion on timely results to customers, “what is the right thing to do”, and a forum to discuss “the good, the bad, and the ugly.”

Objectives:
1. Participants will gain insight on the AF Clinical Reference Laboratory, technology, and impact to the DoD
2. Participants will have the opportunity to interact with support teams to resolve standing issues on-the-spot
3. Participants will gain knowledge on EPI services impacted by the Base Re-Alignment and Closure (BRAC)

GROUP THREE: DEPLOYMENT, SILVER BARON D

0900 BSD OPERATIONS IN AFGHANISTAN

Presenter(s): Barbara Bachman, MAJ, USA

Abstract: Operations of the Blood Support Detachment in the Afghanistan theater of operations was limited to storage and distribution activities from the onset of operations up until early 2007. With the 932nd BSD taking on back-to-back rotations in the theater from 2006 thru 2008, the unit was in a unique position to expand the BSD’s role as well as significantly improve the safety of the blood supply, most specifically the donor pre-screening and collection of emergency whole blood. This presentation will take you through the experiences of the 932nd BSD as they expanded operations to include theater-wide donor pre-screening, rapid testing, platelet collection and improvements to blood monitoring/tracking and reporting.

Objectives:
1. To review the expansion of operations of a Blood Support Detachment in the Afghanistan Theater of Operations and the impact on the safety of the blood supply
2. To illustrate the challenges and shortfalls of blood reporting and tracking utilizing TDBSS in a theater of operations
3. To orient first-time deploying Soldiers/Leaders on the challenges that may be experienced with a maturing theater

1000 PLATELET COLLECTIONS IN OIF AOR

Presenter(s): Rob Curtis, Capt, USAF

Abstract: This presentation will cover the history of platelet collections in Iraqi Freedom. Though the program is not inspected by the FDA or AABB, the same protocols for collection are followed to include ABO/Rh, Infectious diseases and culturing. Even in the less-than-ideal conditions of Iraq, the percentage of units with positive testing that renders a unit unusable is very comparable to that found in stateside collection facilities.

Objectives:
1. Usage of Platelets in the AOR
2. Process of Platelet Collection in the AOR
3. Percentage of Positive Culture/EIA Results

1030 AN OLD APPROACH TO A NEW PROBLEM: ENDEMIC DISEASE SURVEILLANCE IN THE AREA MEDICAL LABORATORIES

Presenter(s): Vanessa Melanson, CPT, USA

Abstract: The mission of the two Area Medical Laboratories, the 1st and 9th AMLs, is to conduct threat detection and field confirmation for nuclear, biological, and chemical agents and surveillance for endemic diseases. The biothreat detection capabilities include nucleic acid detection using PCR and the R.A.P.I.D. instrument, protein detection using ECL and the M1M device, and bacterial growth on agar plates. However, these identification methods have been focused on a limited number of pathogens (i.e. bioweapon agents). Recently, the AMLs have tested an expanded ability to perform endemic disease surveillance, specifically to detect RNA viruses and parasites. The development of field-tested nucleic acid extraction and reverse transcription-PCR (RT-PCR) protocols has provided a means for bringing these detection methods to the AMLs. Through the use of positive and negative controls and spiked samples, personnel assigned to the 9th AML were able to evaluate their proficiency using these detection protocols. To maintain training, the personnel continued to process and test field samples obtained from various parts of the world. Because of this training, the 9th AML was able to successfully complete analysis of samples submitted to them during a NATO training exercise. Therefore, the field-adapted nucleic acid extraction and RT-PCR protocols have enabled the AMLs to expand their endemic disease surveillance mission by allowing them to identify any number of selected RNA viruses and parasites in the field using their assigned equipment. In conclusion, the incorporation of this expanded capability has significantly increased the AMLs’ ability to rapidly identify endemic disease pathogens in the field, thereby enhancing a Commander’s disease risk assessment in the operational area.

Objectives:
1. Explain the capabilities of the Area Medical Laboratory
2. Illustrate the role of reverse transcriptase (RT)-PCR as an endemic disease surveillance protocol
3. Evaluate the integration of the RT-PCR protocol into the Area Medical Laboratory

1100 A NOVEL ROLE FOR AN AIR FORCE CLINICAL LABORATORY OFFICER DEPLOYED AS A MEDICAL LINGUIST IN SUPPORT OF A HUMANITARIAN MISSION ABOARD THE USS KEARSARGE

Presenter(s): Fe Lobo-Menendez, Maj, USAF
Tuan Ly, MSgt, USAF

Abstract: The mission CONTINUING PROMISE is one of U.S. Southern Command’s humanitarian assistance programs aimed at boosting security and stability in Central, South America and the Caribbean. The four month deployment on board the amphibious assault ship USS Kearsarge (LHD 3) supported the second phase of Continuing Promise 2008. This partnership involved US military members, US Public Health Service, US Coast Guard, Canadian Military, Netherlands
Military, French Military, Brazilian Military, host nation military forces and medical personnel, and non-governmental organization personnel from Project Hope and Operation Smile. During the four month mission, the Kearsarge crew provided civil engineering and medical support to five host partner nations (Nicaragua, Colombia, Dominican Republic, Trinidad and Tobago and Guyana), as well as, hurricane disaster relief support to Haiti. The focus of this presentation is to enhance awareness of these types of humanitarian missions, highlight the role and opportunities available as a medical linguist to other laboratory professionals holding the required qualifications, and to share this life changing experience with the armed forces medical laboratory scientist community.

Objectives:
1. Understand the minimum requirements necessary to participate in future Continuing Promise missions as a medical linguist
2. Know the process to achieve and maintain foreign language proficiency identifier in your personnel record and how to increase your chances to be chosen to participate in similar future missions
3. Understand the nature of the services provided to the host nations

GROUP FOUR: POINT OF CARE TESTING, SILVER BARON E

0900 POINT OF CARE POSITIVE ID BARCODING OPTIONS

Presenter(s): James Camp, COL, USA
Emmett Gourdine, LTC, USA
Phillip Rooks, MAJ, USA

Abstract: This workshop is targeted to all laboratory professionals interested in improving the identification of patients and the accuracy, legibility of patient data on labels for laboratory specimens. The presentation will cover the implementation of several systems (i.e., Cerner, Bridge Solutions; Neoteric, Blood Track; and Phg Technologies, EasyID/Mobile) in Army Medical Treatment Facilities. Information will provide tools for improving patient identification at any Medical Treatment Facility.

Objectives:
1. Participants will be able to discuss different Point of Care identification barcoding systems installed in Military Treatment Facilities
2. Participants will be provided tools to improve patient identification
3. Participants will be able to determine which patient identification system is right for their facilities’ network environment and budget

1000 POCT Purgatory

Presenter(s): W. Gunnar Conrow, Capt, USAF
Mark Noon, Capt, USAF

Abstract: Point of care testing is a valuable tool for providing prompt diagnostic data to clinicians. The employment of POCT devices in emergent and clinical settings as enhanced the ability of providers to treat patients quickly and efficiently. However, speed often comes with a price. POCT programs are plagued with problems such as poor instrumentation, lack of training and improper storage and use of reagents. In this session, we will discuss the benefits of operating a POCT program and the common quality issues regarding POCT programs. Finally, we will also offer some strategies to help the laboratory manage a successful decentralized testing program.

Objectives:
1. Demonstrate ways Point of Care Testing enhances patient care
2. Identify common problems with Point of Care Testing programs
3. Discuss strategies for operating a successful Point of Care testing program
1030  POINT OF CARE TESTING – A PRIMER

Presenter(s): Keye Latimer, Maj, USAF
Paul Eden, Capt, USAF

Abstract: This workshop is targeted for lab officers and NCOICs who are looking to establish a point of care testing program in their facility. The presentation will be geared towards relevant College of American Pathology and Joint Commission guidelines as well as identifying and training medical personnel to perform and document testing in the clinics. Common problems with point of care testing will be discussed as well as CAP surveys

Objectives:
1. Discuss common point of care testing issues
2. Review CAP surveys and their application to the clinical staff
3. Discuss training of clinical staff when establishing a POCT program

1100  PHLEBOTOMIST TOP TEN LIST

Presenter(s): Mr. Farrah Ehrbar

Abstract: The specimen collection area is the busiest and most stressful area of the laboratory. In this presentation we will discuss the top ten things that every phlebotomist needs to know and practice with every venipuncture. Subjects to be covered include, drawing technique, patient and technician safety, and last but not least sample integrity. Knowing the ins and outs of effective drawing technique, will reduce stress and errors and produce a more enjoyable experience for both patient and phlebotomist.

Objectives:
1. List personal protective equipment needed for phlebotomy
2. Discuss patient identification requirements and appropriate sample labeling
3. Explain when to stop phlebotomy after unsuccessful attempts

1130  AUDIT VS. INSPECTION PROCESS

Presenter(s): Truc Duong, MT(ASCP), CPA, CISA
Tam Duong, Maj, USAF

Abstract: This workshop is targeted for mid-level leadership within the Clinical Laboratory community. The objective is to provide these individuals a basic understanding of the Air Force Audit Agency’s mission, audit process and types of audits performed. Furthermore, this workshop will assist these leaders in understanding the differences between inspections performed by the medical community (specifically, the College of American Pathologists) versus audits performed by the Air Force Audit Agency for example “Weapons of Mass Destruction Emergency Response”. This workshop provides the tools and information necessary to assist these leaders in preparing for these inspections or audits, in turn, improving the efficiency of laboratory operations and ensuring compliance with federal laws and regulations. Finally, this workshop will educate commanders on how to utilize audit services to enhance their internal control processes.

Objectives:
1. Understand inspection versus audit process
2. Learn what auditors and inspectors look for depending on a macro or micro review
3. Improve efficiency of lab operations
0900 MARKETING THE ARMED SERVICES BLOOD PROGRAM

Presenter(s): Melissa Yu, MBA

Abstract: The Armed Services Blood Program (ASBP) is a tri-service operation that requires coordination among the blood programs of the military services and unified commands. In working to raise brand awareness for the ASBP as well as increase regular blood donors, the marketing arm of the Armed Services Blood Program Office (ASBPO) works to develop strategic and installation-level programs and campaigns as well as brand management activities to meet the ASBP mission. This workshop consists of interactive discussions regarding marketing campaigns, messaging, and reach, as well as updates on current initiatives.

Objectives:
1. Update attendees on strategic and installation-level marketing initiatives
2. Elicit discussion regarding desired branding and seasonal campaigns which would increase regular donations and program exposure
3. Elicit discussion regarding best methods to reaching target audiences

1000 RECRUITING AND RETAINING APHERESIS DONORS

Presenter(s): Martin Ricker

Abstract: Apheresis platelet donors are a difficult commodity to acquire and sometimes even more difficult to retain. This session will allow an open discussion of techniques to recruit and retain these valued donors. The discussion will also include techniques for assigning responsibilities for recruiting, retaining and scheduling apheresis donors that capitalize on teamwork. Pitfalls to all three areas will be addressed and potential solutions to overcoming them will be identified.

Objectives:
1. Identify and discuss techniques to recruit new donors
2. Identify and discuss techniques to retain current donors
3. Discuss scheduling pitfalls and ways to overcome them

1100 CREATING EFFECTIVE SITE COORDINATORS

Presenter(s): Martin Ricker

Abstract: Two major keys to success at any blood drive is to have a well trained, motivated coordinator and a supportive chain of command. This session will identify techniques recruiters can use to assist in the selection of the right coordinator for a blood drive site. Additionally, the group will discuss how coordinators should be trained and ways they can help gain and retain the support of the organization’s leadership.

Objectives:
1. Identify and discuss techniques for selecting good site coordinators
2. Discuss techniques to train site coordinators
3. Discuss methods to use the site coordinator to garner support from the command
GROUP SIX: TRAINING, SILVER BARON 2

0900 USE OF AN AUDIENCE RESPONSE SYSTEM TO ENHANCE TRAINING

Presenter(s): Kevin McNabb, COL, USA

Abstract: This short topic is targeted to any lab officers who provide training to their personnel. It is intended to demonstrate an audience response system (ARS) and how it has been used at the United States Military Academy to enhance teaching of General Chemistry to cadets. This same system can easily be tailored to other environments and training to provide a more interactive learning environment. This workshop will cover the basics of the system and how it operates, show how it was used in the USMA learning environment, and then suggest several ways in which it can be used by the participants. This system is similar to other systems currently in use by many major universities to assess and modify teaching to better meet the needs of the learner. This has shown to foster a better, deeper, and long-lasting learning which should be the goal of all great training. And finally, this system can maximize training time by allowing for more meaningful training in a shorter time period.

Objectives:
1. Introduce the attendees to an audience response system (clickers) and how they function
2. Discuss how this system has enhanced training at our facility (USMA)
3. Learn how this system could be employed in a myriad of situations to enhance or augment training

1000 USAF SCHOOLHOUSE UPDATE WITH TRI-SERVICE TRAINING REPRESENTATIVE Q&A

Presenter(s): Paul Nelson, Capt, USAF
Barry White, Capt, USAF

Abstract: The past year was an exciting and challenging time for the USAF schoolhouse and there are several updates about both current and future training initiatives. This short topic presentation will be split between a standard briefing and a Q&A session. The briefing portion is targeted for enlisted members and is intended to provide MLT course information. The discussion is paneled by current schoolhouse staff and will also cover the most up-to-date info concerning the proposed Tri-Service MLT program, scheduled to start at Ft Sam Houston in 2010. Army and Navy schoolhouse reps will be part of the Q&A panel scheduled for the last 30 minutes of the workshop. This forum allows for an exchange of information which informs interested AF members and allows schoolhouse staff to gather feedback from front line supervisors/lab managers, thus assisting us in keeping a finger on the pulse of current career field concerns.

Objectives:
1. Enlisted Medical Laboratory Apprentice Program Phase I/II
2. Current Perspectives of MLT Education and Training
3. Gain knowledge of Tri-Service Training

1100 BIRTH OF A LAB TECH – MANAGING THE TRANSITION FROM PHASE II TRAINING TO FIRST PERMANENT DUTY STATION

Presenter(s): Gregory Stapleton, TSgt, USAF
Dean Brotherton, A1C, USAF
Sara Waterman, A1C, USAF

Abstract: Every military member, sooner or later, will find themselves PCSing. This short topic presentation is designed to give tips for the smooth transition to a first duty station. The information is presented from the perspective of a recent Phase II Medical Laboratory Technician (MLT) training graduate as well as from the gaining facility supervisor. Although the focus of this presentation will be on the transition from Phase II MLT school to first permanent duty station, this topic should be relevant to all military members.
Objectives:
1. After this presentation, students will become aware of issues facing a new technician’s arrival to his or her first base.
2. Presentation will also instruct students in how to handle the arrival of a new technician, from a supervisor’s perspective.
3. After the presentation, students will have the knowledge necessary to implement a common sense plan for a technician’s smooth transition to a new base.

1130 THE FUTURE OF THE LABORATORY WORKFORCE

Presenter(s): Kathy Cilia, MT

Abstract: This short topic presentation is appropriate for all levels of the military as the subject is very broad and has general appeal. The short topic will not only discuss the three basic trends that are affecting the future of healthcare, but will provide special emphasis on how these trends will affect the future of the clinical laboratory workforce. Data will be presented to put the current and future workforce shortages into perspective. Finally, there will be a discussion on what the laboratory community is collectively doing to help alleviate and/or prevent some of these workforce issues from occurring.

Objectives:
1. Cite three basic trends that are affecting healthcare.
2. Explain how the healthcare trends will affect the laboratory workforce.
3. Describe what the lab community is doing to help alleviate future lab workforce issues.

GROUP SEVEN: MISCELLANEOUS, SILVER BARON 3

0900 UPDATE ON JOINT COMMISSION TISSUE STANDARDS

Presenter(s): Duke Kasprisin, M.D.

Abstract: Because of errors, deaths and scandals in tissue banking both the FDA and the Joint Commission (JC) have created more strict standards for the management of tissue. More than 59,000 recalls of tissue have been conducted since the FDA began keeping these statistics in 1994 and there have been many cases where hospitals could not identify what happen to the tissue and if it was implanted could not find the recipients. FDA regulates tissue manufacture and JC monitors use of tissue in hospitals. JC set standards that apply to hospitals in 2005 and has modified them in 2007 and 2009. These standards cover how tissue is managed, traced and tracked and the identification and reporting of adverse reactions. This presentation will explore the evolution of the standards for tissue and identify areas of success as well as problems that have arisen in meeting these standards. The JC’s nomenclature and its methodology for inspections will be discussed. An examination of the shortcomings of SOPs that have been discovered in hospitals and a detailed description of deficits found during audits will be presented.

Objectives:
1. List the recent changes in the Joint Commission standards on tissue.
2. Identify the potential areas of difficulty in meeting the Joint Commission standards.
3. Explain the reasons a hospital might have to register with the FDA as a tissue bank.

1000 HOW TO CREATE AN EFFECTIVE SCIENTIFIC POSTER

Presenter(s): Richard Casabar, Maj, USAF

Abstract: This workshop is targeted for laboratorians and scientists who have either never created a scientific poster or would like to improve their current or past posters. It is intended to provide instructions on how to create an effective scientific (research or clinical) poster. Examples of effective and ineffective scientific posters will be displayed during the workshop. Helpful instructions and references will also be provided to attendees for
their future use. The knowledge of creating scientific posters will be helpful for any laboratorian or scientist who would like to present a clinical or research poster in future SAFMLS or other scientific meetings.

**Objectives:**
1. To teach audience how to create an effective scientific (research or clinical) poster
2. To show attendees examples of effective and ineffective scientific posters
3. To provide instructions and references on creating scientific posters to attendees for their future use

**1100 BIOREGULATORS AS POTENTIAL AGENTS OF BIOTERRORISM**

**Presenter(s):** Thomas Shaak, Maj, USAF

**Abstract:** Bioregulators are biochemical modulating compounds that occur naturally in humans and other organisms. Recent years have seen advances in the discovery of novel incapacitating bioregulators and in the understanding of bioregulator modes of action, and their synthetic routes of manufacture. These compounds may be hundreds of time more potent than traditional warfare agents. The modulating compounds are substances normally found in nature and are known to regulate normal biological processes. Bioregulators can affect the range of activity of the entire living system and be lethal. The threat of bioregulators is similar to toxins. Bioregulators provide new sites of toxic action, fast and specific effects, penetrate protective filters and equipment and can be physically incapacitating. These features make them ideal candidates for future agents of biowarfare.

**Objectives:**
1. Describe what bioregulators are and where they occur
2. Describe the biological actions of bioregulators
3. Discuss the potential use of bioregulators as agents of biowarfare

**1130 FUNCTIONAL COMPOSITION AND BIOPHYSICAL ASPECTS IN THE DESIGN OF AN EFFECTIVE REPLACEMENT LUNG SURFACTANT**

**Presenter(s):** Jean Muderhwa, MAJ, USA
T.F. Haley, LTC, USA

**Abstract:** Active pulmonary surfactant is required to normalize alveolar stability, compliance, and gas exchange. Because of the essential physiological roles of the complex, multi-component lung surfactant system, its dysfunction contributes to the pathophysiology of several pulmonary diseases, most notably the respiratory distress syndrome (RDS). The clinical syndrome of RDS is associated with acute lung injury from multiple etiologies, leading to severe respiratory failure and significant mortality in both adult and pediatric patients. Treatment of patients with RDS is largely supportive, including mechanical ventilation with tidal volumes, positive and expiratory pressure to open collapsed alveoli, supplemental oxygen, and supportive care of other organ system failures. Given the high mortality rate (34% to 60%) of patients with ARDS, other therapies are clearly needed. Administration of exogenous pulmonary surfactant is an adjunctive therapy that can help adult and pediatric patients with RDS. Since the development and approval for use by the Federal Drug Administration (FDA) of 4 exogenous pulmonary surfactants (Exosurf, Survanta, Curosurf, and Infasurf), surfactant therapy has substantially improved the survival of premature infants with respiratory distress syndrome, but is not uniformly effective. Several studies are now underway to design replacement lung surfactants that are as effective as native surfactants based on precise functional composition and component biophysics of endogenous surfactants. Understanding the response of the main phospholipid (DPPC and DPPG) and the two amphipilic surfactant-specific proteins (SP-B + SP-C) to changes in surface area and other interfacial parameters (e.g., surface compressibility and respreadability, surface viscosity, surface potential) is fundamental to determining the functionality of lung surfactant and how to better design lung surfactant replacements for respiratory distress syndrome, both neonatal and adult. The expectation is that such formulations should improve gas exchange while providing simultaneous rapid healing in conditions involving pulmonary surfactant deficiency and dysfunction. These aspects of functional composition and component biophysics in the design of an effective replacement lung surfactant will be discussed fully.
Objectives:
1. Explain the physiological role of lung surfactant as its dysfunction as related lung disease, i.e., respiratory distress syndrome
2. Provide an overview of current replacement lung surfactant therapy
3. Underline the functional composition and component biophysics in the design of an effective replacement lung surfactant

GROUP EIGHT: MICROBIOLOGY, SILVER BARON 4

0900 REVIEW OF MRSA DETECTION METHODS

Presenter(s): Donna Wolk, PhD

Abstract: This presentation provides a brief background about MRSA, its impact in U.S. hospitals, as well as recent guidelines and legislation related to the prevention of MRSA. Many hospitals have implemented active surveillance programs to identify MRSA carriers in order to reduce MRSA infection rates. Laboratories are using various detection methods for MRSA including selective differential agar and PCR. This presentation explores the keys to understanding MRSA testing, the various methods for MRSA detection and how they differ.

Objectives:
1. Discuss the recommended guidelines, legislation, and impact of MRSA screening in the US
2. Describe keys phenotypic and genotypic elements of MRSA testing
3. Compare and contrast various methods for MRSA detection

1000 20/30 DAY SUSCEPTIBILITY TESTING QC

Presenter(s): Lindsay Lalla, SrA, USAF

Abstract: Many times switching analyzers can be confusing and stressful, especially when you are still expected to provide excellent patient care. Researching which analyzer would best suit your microbiology lab and its workload can also be taxing. Figuring out the next step to take after receiving your new analyzer may be the cause of not purchasing a new analyzer at all. That is where this presentation can help. This presentation will focus on the advantages and disadvantages of the Vitek 2, Microscan, and Phoenix microbiology analyzers. It will provide beneficial information on 20/30 day QC, which QC bugs to use, and how to switch to weekly QC. In addition, it will identify QC protocols required so that you may transition successfully from your old analyzer to your new one.

Objectives:
1. Identify the advantages/disadvantages of three microbiology analyzers
2. Describe 20/30 day QC as it applies to your analyzer
3. Identify QC protocols for performing your instrument validation

1030 MAKING SENSE OF BIOPLEX ANA RESULTS

Presenter(s): Mr. David Escamilla, MT(AMT)

Abstract: Most clinicians are accustomed to seeing ANA test results in the form of a titer and a pattern, such as “1:320 homogeneous” or “1:640 speckled”. This is because the labor intensive IFA procedure has been the predominant method of ANA testing for several decades. However, the advent of multiplex technology
in recent years has made it possible to automate ANA testing in a way that is both faster and often more diagnostically relevant than IFA. The Air Force Epidemiology Lab, as well as Quest Diagnostics, Mayo Clinic, LabCorps, and Scott&White Healthcare, have already implemented this new technology. This presentation will outline the evolution of autoimmune testing methodology in recent years, and will describe how the new methods can aid in the diagnosis of lupus, mixed connective tissue disease, Sjogren’s syndrome, scleroderma, and polymyositis. Finally, a comparative evaluation of the Bioplex and IFA methods will be undertaken on the basis of cost effectiveness and FTE optimization in high throughput environments.

Objectives:
1. Explain the theory behind multiplex flow immunoassays
2. Interpret several representative ANA results generated by the Bioplex
3. Compare the benefits of Bioplex and IFA methods in certain settings

1100 HIV FORCE TESTING PLATFORMS FOR USEUCOM AND USCENTCOM

Presenter(s): Michael Sandford, SPC, USA

Abstract: Currently the entire Army Force Health HIV Program is monitored through the Department of Diagnostics and Laboratory Monitoring, HIV Diagnostics and Reference Laboratory in the Walter Reed Army Institute of Research. The Force Screens for USEUCOM and USCENTCOM continue to be performed within the small laboratory in Rockville, Maryland. The HDRL uses state of the art instrumentation only in use in three other laboratories in the contiguous US and the only system in the Army. The service members are tested for antibodies to HIV through an Enzyme Immunoassay identifying potential exposure with the virus. The instrument utilized sophisticated robotics in additions to software monitoring systems to ensure positive specimen identification and processing of thousands of specimens within one run. The assay is repeated in duplicate for reactive specimens prior to forwarding for confirmatory testing. The Army Force Health Protection continues to be the WRAIR, HDRL primary mission.

Objectives:
1. Educate Tri-service on current Army Force Testing Disposition and Performance
2. Provide insight on newest EIA automation utilized to provide Army services
3. Educate on instrumentation advances in EIA testing

1130 DNA PROBE TECHNOLOGIES FOR DIAGNOSING SEXUALLY TRANSMITTED DISEASES

Presenter(s): Carina Hager, 1LT, USA

Abstract: This presentation is targeted for NCO’s and junior enlisted personnel as well as Officers to raise awareness about the increasing numbers of Chlamydia cases. It is intended to provide current laboratory testing methodology, the importance of screening, and treatment options. Reported cases and rates by state will be provided as well as case reports from various military installations. This information will be helpful for everybody who is counseling individuals as well as anybody who will be deploying in the near future.

Objectives:
1. To teach audience about Chlamydia infections in men and women
2. To show audience how Chlamydia is diagnosed in the laboratory
3. To provide numbers of cases reported within the United States and overseas.
GROUP NINE: MISCELLANEOUS, SILVER BARON 5

0900 QUALITY ASSURANCE IN THEATER – APPROACHES AND BARRIERS

Presenter(s): James Lange, LTC, USA

Abstract: Command and control responsibilities include assuring medical treatment facilities exercise good medical and laboratory practices. TF 3 MEDCOM’s approach and barriers to achieving theater-wide QA will be presented. This presentation is intended for laboratory managers, command-level personnel and any laboratory officer who aspires to join a command and control element.

Objectives:
1. Establish the rationale for an in-theater QA program
2. Describe command and control levels that can exercise QA
3. Discuss barriers to command-level QA

1000 CONTRACTING FOR DUMMIES

Presenter(s): Anne M. Sterling, CPT, USA

Abstract: The purpose of this course is to provide an overview or refresher for contracting representatives (CORs) and others involved in contracting for products and services. Contracts are legally binding relationships between two or more parties obligating the seller to furnish supplies or services and the buyer to pay. In the laboratory we utilize contracts extensively for analyzer purchase, reagents, maintenance, rentals, reference testing, and other necessary supplies. This workshop will provide general information for researching, preparing, and maintaining contract agreements, whether you are the COR, or just an interested party. Areas discussed will be market research, budget and planning, purchase request packages, solicitation, evaluation and award, PRWeb, wide area workflow, payment, changes/modifications, ratifications, and closeouts. There will be an opportunity for attendees to share key lessons learned from past experiences.

Objectives:
1. Understand basic contracting process to obtain products or services
2. Understand roles and responsibilities of key players, and how to be an effective COR
3. Basic contracting regulations and elements of a contract

1100 RETIREMENT PLANNING BASICS: TSP AND BEYOND

Presenter(s): Edward Griffin, 1Lt, USAF

Abstract: Only about 10% of the population retires successfully. Will you be one of them? Most people spend more time planning their vacations than their retirements. In this “retirement basics” class we will go over what you need to know about the Thrift Savings Plan, how to build a basic retirement mutual fund portfolio, asset allocation, and why knowing your risk tolerance in investing is so important. Find out how serving twenty years in the military can easily make you a millionaire.
Objectives:
1. Understand the basics of the Thrift Savings Plan
2. Understand the basics of portfolio asset allocation
3. Understand the basics of risk tolerance in investing

GROUP TEN: MISCELLANEOUS, SILVER BARON 6

0900 NANO-ALUMINUM TOXICITY LEVELS ASSOCIATED WITH MITOCHONDRIAL ATP ENERGY DYSFUNCTION IN NERVOUS CELL LINE N2A

Presenter(s): Ileana Hauge, Maj, USAF

Abstract: We hypothesize that aluminum nanoparticles (Al NPs) induce cellular apoptosis when maximum tolerance levels are exceeded and mitochondrial ATP energy homeostasis cannot be maintained. We further hypothesize that the level of Al NP-induced neurotoxicity on mitochondrial energy dysfunction can be directly expressed as a function of Adenosine-5’-triphosphate (ATP) levels in individual cell types, and that alterations in neuronal ATP levels may affect cognitive function. Brain cells are highly energy dependent for maintaining ion homeostasis during high metabolic activity. To perform its complex functions, the brain requires a continuous high-energy supply level. ATP is a multifunctional nucleotide that is most important as a molecular currency of intracellular energy transfer, transporting chemical energy within cells for metabolism. Published data indicated that aging brain cells become inefficient at mitochondrial energy production, causing age-related cognitive decline in energy output. Data from our laboratory indicated that a similar, but highly accelerated, energy decline occurs following Al NPs neurotoxic exposures, and that mitochondrial energetic failure correlates with NPs size, exposure concentration, and cell type. This study was performed using two Al NP sizes of 50nm and 120 nm, with an incremental concentration scale exposure range of 0.01-200 µg/mL and two methods, MTS cell viability and ATP mitochondrial energy assays. The range was designed to cover the environmental exposure limits identified for Al present in drinking water, recommended to be below 200 micrograms per liter by the World Health Organization. N2a, Al 120nm 24 h exposure cell viability using MTS method was only affected at 200 µg/mL in contrast with ATP mitochondrial energy affected at 0.01 µg/mL Al (120nm, 24 h exposure) making the ATP assay 1000 X more sensitive than MTS (df=1; p<.001**). Al 120nm proved to be more toxic to N2a neuroblastoma cells in comparison to Al 50nm (df=1; p<.001**). General data suggest that Al NPs size > 100nm was more toxic than Al NPs < 100 nm in N2a cell line, suggesting that in evaluating Al NPs neurotoxicity, should be taking into consideration the Al NPs size, concentration, exposure time, and cell type. More studies are necessary to evaluate the size, concentration, and time exposure of Al NPs toxicity in relation to cell type and mitochondria in other neuronal cell types, and the Al NPs effect on brain cognitive processes.

Objectives:
1. Understand the effects of Al nanoparticles (NPs) on biological systems with emphasis on neurons
2. Learn about two molecular methods to compare cell viability, MTS, to the neuron mitochondria, ATP
3. Understand the Al toxic effect on neuron’ mitochondrial ATP in relation to cell type, Al NPs size, concentration, and exposure time, and future basic research applications
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<td>Nano-Aluminum Toxicity Levels Associated with Mitochondrial ATP</td>
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RESEARCH POSTERS:

R-1: ELECTRICAL AND MECHANICAL FORCES OF BACTERIAL CELLS TETHERED AT THE QCM SOLID-LIQUID INTERFACE
Major Eric Olsen*1, Dr. Arnold Vainrub2 and Dr. Vitaly Vodyanoy2
1Clinical Research Laboratory, 81st Medical Group, Keesler AFB, MS 39534 2Dept of Anatomy, Physiology, and Pharmacology, Auburn University, AL 36849

R-2: MICROSTRUCTURE CHARACTERIZATION OF LANGMUIR-BLODGETT FILMS PREPARED FROM LYTIC BACTERIOPHAGE
Major (Dr.) Eric Olsen*1, Dr. Rajesh Guntupalli2, Dr. Iryna Sorokulova2, Ludmila Globa2, Oleg Pustovyy2, and Dr. Vitaly Vodyanoy2
1Clinical Research Laboratory, 81st Medical Group, Keesler AFB, MS 39534 2Dept. of Anatomy, Physiology, and Pharmacology, Auburn University, AL 36849

R-3: CORRELATION BETWEEN IRON AND ALPHA AND PI GST LEVELS IN HUMANS
1Lt Jeremiah Betz, Ms Jeanette Frey, SSgt Jason Jacobsen, Maj David Kaziska, Dr. Camilla Mauzy
Wright Patterson AFB

R-4: PHENOTYPIC ANALYSIS OF DENGUE VIRUS ISOLATES ASSOCIATED WITH DENGUE FEVER AND DENGUE HEMORRHAGIC FEVER FOR CELLULAR ATTACHMENT, REPLICATION AND INTERFERON SIGNALING ABILITY
CHUNLIN ZHANG, RATREE TAKHAMPUNYA, DUPEH R. PALMER, JULIA LYNCH, AND ROBERT PUTNAK
Division of Viral Diseases, Walter Reed Army Institute of Research, Silver Spring, MD

R-5: PRESERVATION OF BACTERIA IN NATURAL POLYMERS
Major (Dr.) Eric Olsen*1, Dr. April A. Krumnow2, Dr. Iryna Sorokulova3, Ludmila Globa2, Dr. James Barbaree3, and Dr. Vitaly Vodyanoy2
1Clinical Research Laboratory, 81st Medical Group, Keesler AFB, MS 39534 2Dept. of Anatomy, Physiology, and Pharmacology, Auburn University, AL 36849 3Dept. of Biological Sciences, Auburn University, AL 36849

R-6: IMMUNOCAPTURE AND CONCENTRATION OF RICIN TOXIN PRESENTED IN SERUM, URINE AND BUFFER USING PARAMAGNETIC BEAD TECHNOLOGY
Xiaolian Tan, Victor R. Rivera, Kerri Ann Smith and, Natesan Mohan, Julie Tran Mark A. Poli
Department of Molecular Biology, Toxicology Division U.S. Army Medical Research Institute of Infectious Diseases, Fort Detrick, Frederick Maryland

R-7 CRITICAL CLINICAL LABORATORY RANGES FOR NORMAL SWINES, GOATS, RATS AND RABBITS
Sgt Orlando Hernandez, Mai Nguyen, Maj Roger Price
United States Institute of Surgical Research, Fort Sam Houston, TX 78234
R-8: THE EFFECT OF PROPRANOLOL ON POST-TRAUMATIC STRESS DISORDER IN BURNED SERVICE MEMBERS
Laura L. McGhee¹, Christopher V. Maani¹, Thomas H. Garza¹, Peter DeSocio¹, Kathryn M. Gaylord², and Ian H. Black³
¹ US Army Institute of Surgical Research, Battlefield Pain Control Project Area, ² United States Army Institute of Surgical Research, Center for Outcomes Research, ³ Brooke Army Medical Center, Department of Anesthesiology

R-9: THE CORRELATION BETWEEN KETAMINE AND PTSD IN BURNED SERVICE MEMBERS
Laura L. McGhee, Ph.D.¹, Christopher V. Maani, MD¹, Thomas H. Garza, BS¹, Kathryn M. Gaylord Ph.D.¹, and Ian H. Black, MD²
¹ US Army Institute of Surgical Research, ² Brooke Army Medical Center

R-10: SILDENAFIL PREFERENTIALLY MODULATES ANGIOGENIC FACTORS IN DIABETIC RAT SKIN FLAPS
SSG Jauwana Adams, USA, MAJ Nelson A. Franco, MD, CPT Josh Hansen, MD, CPT Chong Yi, MD, CPT Miao Zhou, DDS, CPT James Arnold, DDS, Jay K. Moon, BS, Esra Toussaint, PhD, Joseph Woods, PhD, MD, and MAJ Jose M. Pizarro, PhD.
Department of Clinical Investigation, Dwight D. Eisenhower Army Medical Center Building 38705, Ft. Gordon, GA 30905

R-11: EFFECTS OF NICOTINE AND METAL FRAGMENTS ON PAIN AND GAIT FUNCTION FOLLOWING PERONEAL NERVE MICROSURGICAL REPAIR
SPC Adam M Mcconathy BS, CPT Bradley A Rittenhouse, Crystal Hill-Pryor PhD, Brian Shapiro PhD, MAJ Nelson M Franco MD, Esra Toussaint PhD, CPT Darrell F Barker MD, and MAJ Jose M Pizarro MS, PhD.
Department of Clinical Investigation, Dwight D. Eisenhower Army Medical Center Building 38705, Ft. Gordon, GA 30905

R-12: THE EFFECT OF MULTI ANGIOGENIC AGENTS ON SKIN FLAP SURVIVAL
MAJ Jose M. Pizarro, PhD, CPT Thach Pham, MD, Crystal Hill- Pryor, PhD, CPT Farhan Ayubi, DO, SPC Jay K. Moon, BS, Mariama Bah-Sow, MD, Esra Toussaint, PhD, and MAJ Nelson A. Franco, MD.
Department of Clinical Investigation, Dwight D. Eisenhower Army Medical Center Building 38705, Ft. Gordon, GA 30905

R-13: PHOSPHODIESTERASE-5 INHIBITOR (SILDENAFIL), MODULATION OF APOPTOSIS AND ITS ASSOCIATED GENES IN THE RAT SKIN FLAP
SPC Jay K. Moon, BS, Mariama Bah-Sow, MD, MAJ Nelson A. Franco, MD, CPT Thach Pham, MD, Esra Toussaint, PhD, and MAJ Jose M. Pizarro, PhD,
Department of Clinical Investigation, Dwight D. Eisenhower Army Medical Center Building 38705, Ft. Gordon, GA 30905

R-14: DECAY ACCELERATING FACTOR (DAF) REDUCES FLUID REPLACEMENT, MITIGATES ORGAN DAMAGE AND INCREASES SURVIVAL IN PORCINE HEMORRHAGIC MODEL
SPC Apte P, SPC Stracener C, Dr. Simovic M, Dr. Wang Y, Dr. Li Y, MAJ DalleLucca J
Walter Reed Army Institute of Research, Silver Spring, MD 20910
R-15: MULTIPLEX J.B.A.I.D.S. REAL-TIME PCR ASSAYS TO DETECT HUMAN ADENOVIRUSES RESPIRATORY INFECTION
Morris S. Jones II¹, Carl Gibbins¹, N. Ryan Hudson¹, David Metzgar²
¹Clinical Investigation Facility, David Grant USAF Medical Center, 101 Bodin Circle, Travis AFB, CA 94535, USA ²Department of Defense Center for Deployment Health Research, Naval Health Research Center, San Diego, California

R-16: A COMPARISON OF CHEMISTRY MEASUREMENTS ON HUMAN, GOAT AND SWINE PLASMA AND SERUM SAMPLES
SGT Orlando Hernandez, Mai Nguyen, SPC Perla Reyes, MAJ Roger Price
United States Institute of Surgical Research, Fort Sam Houston, TX 78234

R-17: NANO-ALUMINUM TOXICITY LEVELS ASSOCIATED WITH MITOCHONDRIAL ATP ENERGY DYSFUNCTION IN NEURON CELL LINE N2A
Maj Ileana Hauge, Ph.D. Learner; David, R. Mattie, Ph.D.; Robinson, J. Peter, Ph.D.; Hussain, M. Saber, Ph.D.
Applied Biotechnology Branch, Human Effectiveness Directorate, Air Force Research Laboratory, Wright-Patterson AFB, Ohio 45433 *CAMRIS International, Bethesda, MD 20814

R-18: ANALYSIS OF MICROARRAY PROBES FOR VENEZUELAN EQUINE ENCEPHALITIS VIRUS USING AGILENT COMPARATIVE GENOMIC HYBRIDIZATION (CGH) MICROARRAYS
SGT Susana Padilla, SPC Chris Gibson, Elizabeth Bode, Adrienne Trombley, Catherine Baldwin, MAJ Jeanne Geyer and Dr. Leonard Wasieloski
Diagnostic Systems Division, United States Army Research Institute of Infectious Diseases, Fort Detrick, MD

R-19: THE EFFECTS OF TEMPERATURE CHANGE ON BLOOD COAGULATION ASSAYS
SGT Jason Timberlake, SGT Orlando Hernandez, SGT Glen Rossman, Mai Nguyen
United States Institute of Surgical Research, Fort Sam Houston, TX 78234

R-20: CONSTRUCTION AND TESTING OF SECOND GENERATION LIVE ATTENUATED SHIGELLA VACCINES
James E. Lee, Ryan T. Ranallo, Tara Boren, Suramya Fonseka, Malabi M. Venkatesan
Walter Reed Army Institute of Research, Division of Bacterial and Rickettsial Diseases

R-21: IDENTIFICATION OF RICIN IN A CRUDE EXTRACT OF CASTOR BEANS BY ITS ENZYMATIC ACTIVITY.
Cpt William Keener, PhD, MS; Victor Rivera; Martha Hale; Mark Poli
William Beaumont Army Medical Center, Ft. Bliss, El Paso, TX 79920

R-22: DIAGNOSIS OF ALLERGIC RHINITIS WITH IMMUNOCAP AT WILLIAM BEAUMONT ARMY MEDICAL CENTER
Cpt William Keener, PhD, MS; Maj Edward Ager, PhD, MS; Yolanda Thome, BS, MT
William Beaumont Army Medical Center, Ft. Bliss, El Paso, TX 79920
R-23: GAP JUNCTION INTERCELLULAR COMMUNICATION IS TURNED OFF IN COLON CANCER PREDOMINANTLY DUE TO CONNEXIN43 (CX43) GENE MUTATIONS.
Gregory J. Fredericks¹ and Alan F. Lau²
¹Department of Clinical Investigation, Tripler Army Medical Center, HI 96859 ²Natural Products and Cancer Biology Program, Cancer Research Center of Hawaii, Honolulu, HI 96813.

R-24: A COMPARATIVE STUDY OF DIFFERENT DNA EXTRACTION METHODS FOR THE PRODUCTION OF HIGH QUALITY GENOMIC MATERIAL.
Thomas L. Shaak, Maj, USAF, BSC, Vanessa Marcel, Meagan Parrott, Victoria Kalasinsky, Jennifer Engle Dr. Ketan Patel, Dr. Mina Izadjoo
Division of Microbiology, Department of Environmental and Infectious Diseases, American Registry of Pathology, AFIP, Bldg. 54, 16th Street NW, Washington, DC 20306

R-25: JET FUEL INDUCED IMMUNE SUPPRESSION: ROLE FOR AROMATIC HYDROCARBONS AND THE MOLECULAR MECHANISM
Gerardo Ramos, Maj, USAF, BSC and Stephen E. Ullrich, Ph.D.
University of Texas Health Science Center Houston and University of Texas M.D. Anderson Cancer Center

R-26: J.B.A.I.D.S. REAL-TIME PCR ASSAY TO DETECT HUMAN ADENOVIRUS 14 FROM NASAL WASHES
Morris S. Jones II¹, N. Ryan Hudson¹, Carl Gibbins¹, David Metzgar² and Lisa Lott³
¹Clinical Investigation Facility, David Grant USAF Medical Center, 101 Bodin Circle, Travis AFB, CA 94535, USA ²Department of Defense Center for Deployment Health Research, Naval Health Research Center, San Diego, California ³Eagle Applied Sciences, LLC, Advanced Diagnostic Laboratory, Epidemic Outbreak Surveillance, 2460 Pepperell St., Bldg. 4429, Lackland AFB, TX

CLINICAL POSTERS:

C-1: WILL A GLOBAL CONSENSUS BE REACHED FOR ELIMINATING UPEP WHEN EVALUATING PLASMA CELL DISORDERS?
Jude M. Abadie, Karen van Hoeven, and Justin M. Wells
Walter Reed Army Medical Center

C-2: PERFORMANCE AND THERMOSTABILITY OF RAPID HIV 1/2 TESTS FOR SCREENING BLOOD DONATIONS USING EARLY HIV POSITIVE SAMPLES
Capt Anthony B. Polito III, BSC, USAF and Maj Robert J. O’Connell, MC, USA
Walter Reed Army Institute of Research

C-3: FLIP DISK VER. 4.1
SFC Craig Anderson
AMEDDC&S, Fort Sam Houston, TX
C-4: THE BEST PATH FOR BLOOD MANAGEMENT SOFTWARE: FROM IDEA TO PROTOTYPE TO A DEPLOYABLE SOLUTION
Ileana Hauge, Maj, US Air Force, BSC; Maria F. Trujillo*, Ph.D.
Applied Biotechnology Branch, Human Effectiveness Directorate, Air Force Research Laboratory, Wright-Patterson AFB, Ohio 45433 *CAMRIS International, Bethesda, MD 20814

C-5: VALIDATION OF MICROPLATES ASSAY FOR DETECTION OF BACTERIAL AND PARASITIC ENTERIC PATHOGENS.
CPT Carlos A. Barrera, USAR, MS, CPT Brian J. Robinson, USA, MS, CPT Edward F. Keen, USA, MS, Mr. Liberato Pagaoa, Mrs. Linda Monson, LTC Wade Aldous, USA, MS.

C-6: AEROMEDICAL ISOLATION TEAM (AIT)
SGT Jesse A. Stephens, MED, USA
United States Army Medical Research Institute of Infectious Diseases

C-7: CAPTURE OF ANATOMIC PATHOLOGY WORKLOAD FOR THIRD PARTY REIMBURSEMENT
Maj Jeannette M. Watterson and Mr. Greg McDonald
88th Diagnostics and Therapeutics Squadron, Wright-Patterson AFB, Ohio

C-8: DEVELOPMENT AND IMPLEMENTATION OF A PATIENT SPECIMEN LABELING SYSTEM, USING THERMAL LABEL TECHNOLOGY, FOR STANDARDIZED PRIMARY LABELS THROUGHOUT THE MEDCEN
MAJ Claudia L. Henemyre-Harris, MS, USA; Linda D. Fujimoto; Jaclyn K. Whelen; Ernest G. Pang; Linda S. Sakuda; MSG Ann M. Wyant, USA; MSG Cassandra Y. Colondres, USA; Vickie D. Kummerfeldt; CPT Holly K. Swartz, MS, USA; LTC Lanette R. Hamilton, MS, USA; COL James M. Camp, MS, USA. 1
1Department of Pathology and Area Laboratory Services; 2Quality Services Division; 3Information Management Division; Tripler Army Medical Center, HI 96859

C-9: METHICILLIN-RESISTANT STAPH AUREUS DETECTION AND SURVEILLANCE
Maj John R. Shirley, Ray Buford, Capt Jerome Vinluan, Kathy Nagy, Ruth Jones, MSgt Rhonda Martin Michael O’Callaghan Federal Hospital Nellis Air Force Base, Nevada

C-10: ESSENTRIS: ERROR RATES AND PATIENT SAFETY
CPT Natalie Collins, MS, USA; LTC Jose Chavez, MS, USA; CPT Kelly Wilhelms, MS, USA.

C-11: INCIDENCE OF MULTIDRUG RESISTANT ACINETOBACTER AND PSEUDOMONAS ISOLATED FROM DEPLOYED PERSONNEL INJURED IN IRAQ AND AFGHANISTAN
CPT Edward F. Keen III
Brooke Army Medical Center (BAMC), Fort Sam Houston, Texas

C-12: PLATELET AGGREGATION IS IMPAIRED BY SUPERNATES FROM STORED PACKED BLOOD CELLS
Frederick A. Matheu and Steve J. McFaul
1Great Lakes Regional Blood Donor Center, Great Lakes, IL and 2Walter Reed Army Institute of Research, Division of Military Casualty Research, Department of Blood Research, Silver Spring, MD
C-13: OVERVIEW OF JBAIDS CONCEPT OF OPERATIONS
James Murray, Dr. John van Hamont, LTC Carl Brinkley, PhD
Army Medical Dept. Center & School, Room 1333 Willis Hall, 2250 Stanley Road
Fort Sam Houston, TX 78234-6137

C-14: Test & Evaluation of JBAIDS
Dr. John van Hamont, James Murray, Anna Eldred, Jacqueline Roman-Samuel, Darrell Woody, Lisa Perez, Elisabeth Yawn
Dept of Clin Spt Svc, Rm 1333, AMEDD Center & School, 2250 Scott Road, Fort Sam Houston, TX 78234

C-15: TRAINING OF JBAIDS OPERATORS
Dr. John van Hamont, James Murray, Jacqueline Roman-Samuel, LTC Carl Brinkley, PhD
Dept of Clin Spt Svc, Rm 1333, AMEDD Center & School, 2250 Scott Road, Fort Sam Houston, TX 78234

C-16: AFSO21 Initiative Regarding No Test Orders and Improper Sample Labeling at the 1st Medical Group Laboratory
1Maj Clarence Gagni, SMSgt Jonathan Figgers,Lt April Barr, MSgt Kelly Butterfuss, TSgt Beverly Lutz, TSgt Lemuel Ollet, TSgt Terri Elftmann, SSgt (Sel) Jessica Butler, SSgt Tiffaney Hill, SSgt Karen Claxton, SrA Adam Legrand, Mr. Michael West, Capt (Dr.) Megan Durham; 2MSgt Camille Blackmon, MSgt Michael Skipper; 3Mr. Ricky Wamble
11st Medical Group, 77 Nealy Avenue; 21 FW/CCO AFSO21; 3HQ ACC/A9 CASCO Langley AFB, VA 23665
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<td>Remel (ThermoFisher Scientific)</td>
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Air Force Medical Genetics is Back and Better Than Ever
by Capt Mona Nelson, Flight Commander

When I arrived at Air Force Medical Genetics (AFMG) Keesler AFB in Oct 2007, I assumed that the DoD tri-service laboratory community had been benefiting from the incredible capabilities and cost-saving opportunities the center has to offer. I realized that less than half of the DoD labs were utilizing our incredible facility and took it as a disconnect that needed to be fixed—ASAP. My goal is that by the time you finish reading this article, you will agree.

The Air Force Medical Genetics Center was established as a Flight under the 81st Medical Operations Squadron, 81st Medical Group, 81st Training Wing under direct orders from the Air Force Surgeon General in 1979. It was pioneered by geneticist Col (Dr.) Barry Thompson for four years, who eventually became the Group Commander for the hospital. Col (Dr.) David Rigdon, another geneticist, took over the reins and led the Flight for the next 21 years until his retirement in 2005. He is now the Medical Director for the genetics center.

In addition to clinical care, AFMG started out with only cytogenetic testing back in the days of manual ordering, recording, and reporting, and the lab was manned by only four technologists. The laboratory workflow improved with the advent of CHCS, and business started booming when molecular genetics was added as a capability in 1987. Not too long thereafter, the workload reached its peak and stabilized—yet its customer base comprised less than a quarter of the total number of military laboratories out there. Why not all?

Fast forward to now.

Almost 30 years later, AFMG stands bigger and better than ever, offering state-of-the art services to the same customers—all health-care facilities within the Department of Defense. We continue to provide focused genetic services relating to patient care and counseling, provider education and laboratory testing. The staff has tripled in size and is comprised mostly of civilians (this in order to preserve operational stability). There is something to be said about the complexity of training involved in becoming a fully-functional genetic technologist!

Technical Expertise. Fortunately, the turnover of personnel has been historically small—3 of the original 4 personnel who started this journey are still gainfully employed here (the other one recently retired). They are now considered the best of the best in the nation, given the expertise they have developed through the years. Col (r) Dr. Rigdon can attest to that personally. After all, he signs off on personnel competency, and certifies the quality and accuracy of lab results generated, literally one report at a time.

Premier Technology. AFMG’s laboratory instrumentation is also the best of the best. There are multiple DNA sequencers and analyzers onsite to take on sizable workload. There is no more “regular” chromosome analysis, only high-resolution. Fluorescent in-situ hybridization, a powerful technique in detecting DNA sequences in tissues and tumors, has become “the norm” despite its popularity. Instead, all eyes are now on the latest acquired innovation, the Comparative Genomic Hybridization aka Chromosomal Microarray, which is a technology that combines molecular and cytogenetic methods capable of detecting loss, gain or amplification of DNA segments. AFMG is no doubt, right on track to preserving its premier status.

Stability. Following the devastation of Hurricane Katrina in 2005, AFMG (along with the rest of the base) had to temporarily shut down. However, less than a year after the storm and in the midst of Keesler’s rebuilding efforts, AFMG slowly but surely reopened its doors to its customers, one military base at a time. No sooner had the facility swiftly taken action to reconstitute, when CAP inspectors were at their door. Given the exceptional skills of its crew, AFMG gained reaccreditation easily. Furthermore, the Air Force Surgeon General appointed AFMG the primary screening site for Air Force cystic fibrosis testing in 2007.

Con’t on pg 61
Interoperability. AFMG systems connectivity to all AF sites is made possible by LABINTEROP. Not only does this minimize manual labor for the receiving lab, it also saves precious time in the delivery of results. Thus, interoperability is a must before a service agreement is initiated. Just how hard is it to get “interoped?” Surprisingly, it only takes a matter of days for most, especially if there are no firewall issues and there is sufficient manpower in the Systems department to stay on top of the data exchange process. Although a couple of bases took several months, given the number of bases that have successfully “interoped” within just the last year including overseas, the months-long delay proved to be an exception rather than the rule. Recently, some of Army and Navy MTFs have followed the AF’s cystic fibrosis initiative and began establishing Memoranda of Agreement. AFMG’s workload started building back up again - exponentially this time. We are up to the challenge!

Quality. Even in the face of rising workload but steady manpower, the number of amended reports has not changed. We still average 0-1 per year. With an annual volume of 15,000 tests, this small number is testimony to the quality of our analyses. That’s because every single report goes through multiple sets of hands—from the administrative technician to the lab technologist to the data entry clerk and lastly to the geneticist who does the final review—in the name of accuracy. Although turnaround times vary depending on the test in question, these are monitored extremely closely, and exceed the established standards. Without additional fee but adequate notice from the sending lab, we can easily track a “special case” to get the results out faster than the routine target time. Furthermore, although many civilian genetic tests results are difficult to access or interpret, our results are available in plain language in CHCS and AHLTA, and thus viewable by any military provider worldwide. Additionally, we have geneticists on staff that can answer questions regarding results’ interpretation.

Cost Savings. The funding process has not been an issue. We have established individual MIPRs, and mechanisms for central funding—either way has worked well for reimbursements. After all, military facilities don’t make money off of each other! In short, AFMG does not exist for profit. As much as we wish to offer testing for free, we are limited by the local budget allocated to us to operate at baseline only. It is readily apparent that the cost to send genetic tests to civilian labs far exceeds what it costs to send those tests to AFMG instead. One MTF saved $75K by ordering one particular test at Keesler. But that’s only one test (out of many that we offer). And that’s only one military lab. How many labs are in the DoD worldwide and how many are outsourcing for the wrong reason?

Awareness. We went to the SAFMLS annual meeting in 2008, manned a booth, handed out brochures, business cards, beads (it was Mardi Gras!) and held an interactive short-topic presentation concentrating on our services and requirements. We have also created both a public website and an official website only accessible through the AF portal, and posted lab guides and contact information there. Although we have worked to increase awareness and received multiple inquiries, there is still quite a big chunk of genetic testing out there that we can recapture.

Conclusion. DoD laboratories are here for the benefit of military men and women and their families. By using our own services, we save the DoD and our MTF money – something that has become increasingly important in the time of shrinking budgets and heightened awareness of military spending. As a laboratory community, we should look for ways to share our resources and expertise, to provide better quality service at lower overall cost for each other. Additionally, keeping laboratory testing within the military community is important for maintaining the currency and competency of our lab folks. I encourage you to explore what testing other MTFs may be able to offer to you and foster relationships, since every test performed within a DoD facility is a win-win.
AIR FORCE MEDICAL GENETICS
Keesler AFB MS

Hours of Operation:
Mon-Fri 0700-1700

For inquiries, email:
81mdg.genetics@keesler.af.mil

Phone: 228-377-6727 DSN 597-6727

Keesler Lab Interop, email:
81mdg.labsystems@keesler.af.mil

Phone: 228-376-4419 DSN 591-4419

GENETIC TESTS AVAILABLE

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<td>Cystic Fibrosis (CF)</td>
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<td>Fluorescent In Situ Hybridization</td>
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<td>Williams</td>
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<td>Wolf-Hirschhorn</td>
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Shown are karyotypes and patient descriptions. What is wrong with each karyotype and what is the associated condition?

1.

Patient information: 2 day old female with low tone, loud systolic murmur, single palmar crease, and appears dysmorphic.

Con’t on pg 64
Patient information: 23 year old male with lanky build, gynecomastia, small testicles, and fertility concerns.
Welcome to the “Biggest Little City in the World”. We know there are good times ahead of us as we once again join our brothers and sisters of the Society of Armed Forces Military Laboratory Scientists in learning and celebrating our profession. Certainly the siren call of the slots will snare its share of victims, but to the victors, the spoils of Reno await. Here is a sampling of the culture, art and life that Reno has to offer you on this grand odyssey.

**National Automobile Museum:** over 220 vehicles on display with street scenes from the 30’s, 40’s and 50’s. Having visited the museum myself, I can honestly say that it is not for the car buffs alone. Take your camera along to capture the moment as you sit in some of America’s classic cars. ($10) 10 S Lake St. Reno, NV 89501 (775)333-9300 [www.automuseum.org](http://www.automuseum.org)

**Lake Ridge Golf Course:** Voted “Best of Reno” for good reason with breathtaking views of Reno and surrounding mountains, and only 4.5 miles from downtown. Don’t miss the signature hole, #15, a world-famous par 3 atop a rocky ridge 140 feet above Lake Stanley to an enticing island green. Get in on the $49/$59 winter rates. 1218 Golf Club Dr. Reno, NV 89509 (775)825-2200 [www.lakeridgegolf.com](http://www.lakeridgegolf.com)

**Nevada Museum of Art:** Do all those flashing lights and clanging bells have you begging for some peace and culture? Head for the Nevada Museum of Art, and check the website for the free tour schedule, weekly events to include music, performances and brunch. ($10)160 W Liberty St Reno, NV 89501 (775)329-3333 [www.nevadaart.org](http://www.nevadaart.org)

**Mt. Rose Ski Resort:** If you haven’t had your fill of winter wonderland yet this year, take the 25 minute trip out to frolic with the rest of the snow bunnies. Beginners packages with rental from $59, military discounts, day lift tickets $64. Shuttle service daily from Reno (775)325-8813. 22222 Mt Rose Hwy, Reno, NV 89511 (775)849-0704 [www.mtrose.com](http://www.mtrose.com)

**Fleischman Planetarium & Science Center:** Feeling like you haven’t been out-of-doors in days? For a good time, call the show time hotline, and you’ll get to experience some of the greatest natural wonders on the fantastic dome-ceiling screen. The locals will tell you that the best seats are in the very back, but you already knew that, didn’t you? 1600 N Virginia St. Reno, NV (775)784-4811 [www.planetarium.unr.nevada.edu](http://www.planetarium.unr.nevada.edu)

**Chapel of the Bells:** If you find yourself asking the question, “where is the ‘Absolutely best place to get married in Reno’?” look no further. This is the #1 spontaneous wedding venue with your choice of music, decorations and keepsakes. Check out the “Tonight’s the Night” package for $300, and don’t forget the $50 off-season discount coupons. 700 W Fourth St. Reno, NV 89503 (800)872-2933 [www.renochapel.com](http://www.renochapel.com)

**Truckee River Arts District:** Those winnings are burning a hole in your pocket? I will gladly take care of them for you. Or, make sure you visit both the CalAve and Riverwalk sections of the district for unique specialty shops, antique stores, boutiques and galleries. This area is quickly becoming Reno’s pre-eminent neighborhood retail, restaurant, entertainment and business district. You’ll love this newest, hippest section of Reno, while you find items you can’t get anywhere else.
Your shopper’s high won’t keep you going forever and hard as it might be to tear yourself away from your favorite activity, at some point you’re bound to require some local sustenance. The downtown has many tastes and flavors that will please your palate and satisfy your appetite. Even if you’re just thirsty, the Reno Downtown area is the best place to grab a drink and watch the world pass you by. Here’s a sample, but by no means all.

- **Beaujolais Bistro** - a cozy bistro specializing in country French cuisine, 130 West St.
- **WildRiver Grille** - classic American favorites and fresh specials daily, 17 S. Virginia St.
- **SilverPeak Grill & Taproom** - original and delicious dishes, 135 N. Sierra St.
- **Jungle Vino** - emphasizing fine wine and food pairings, 246 W. First St.
- **Dreamer’s Coffee House** - comfortable sofas & a full coffee bar menu, 17 S. Virginia St.
- **Imperial Bar & Lounge** - a centrist joint, with something for everyone, 150 N. Arlington Ave.
- **The Chocolate Bar** – a trendy place to sip both alcoholic and nonalcoholic chocolate drinks while sampling addictive confections like their Chili-Infused Truffles, 475 S Arlington Ave.
- **Blue Moon** - famous gourmet pizza, 190 California Ave.
- **Cheese Board** – a concoction of wine, cheeses and other lunch specialties, 247 California Ave.

If the nightlife is what you’re after, and not just any little dive will do, check out one of these hotspots:

- **210 North** – The upscale atmosphere showcases a distinctive European style. A 17,500 foot facility incorporating eye-catching décor, three bars, state of the art light and sound systems, massive projection screen, dance floor and VIP services.
- **ALLCITY Live** inside the Grand Sierra Resort is where the area’s hottest DJs spin until the early hours of the morning.
- **Aura Ultra Lounge** located in the Silver Legacy Resort Casino. Enjoy hand-crafted cocktails around the elliptical-shaped bar while flair bartenders provide plenty of excitement as they entertain guests with dazzling routines and exhibitions, and the Aura Angels serve up fantastic drink specials including a special menu of martinis designed around the colors of the aura.
- **BuBinga Lounge Nightclub** inside the Eldorado Hotel Casino is decorated in rich, warm colors of ruby red, moss green and gold. Dance the night away in Reno’s most award-winning nightclub, winning year-after-year in “Best of” polls.
- **Divine Ultra-Lounge**, located in the popular arts district of downtown Reno, offers an upscale, chic meeting place where travelers can relax and gather with old and new friends alike.
MEMBERSHIP APPLICATION

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*Biochemistry, Laboratory Management/Administration, Medical Technology, Anatomical Pathology, Clinical Pathology, Toxicology, Microbiology, Cytology, Biomedical Research, etc.

**CERTIFICATIONS, REGISTRATIONS, LICENSURES (DATES)**

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**MEDICAL LABORATORY WORK EXPERIENCE (Military/Civilian)**

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MEMBERSHIP APPLICATION

AGREEMENT: I hereby apply for membership in the Society of Armed Forces Medical Laboratory Scientists and agree to abide by its Constitution and By-Laws and to support its objectives. I understand that acceptance of my dues is contingent upon approval of my application by the Board of Directors.

ANNUAL DUES: $20.00/year. Society dues are payable by 31 December of each year to maintain active membership and to continue receiving the Society Scope. Individuals requesting membership after 1 October will have their enclosed dues credited for the following calendar year.

NOTE: Application for membership MUST include a recommendation from a SAFMLS member, so indicated by entry of the member's printed name and signature in the space provided below.

______________________________________________      _______________________________________
SAFMLS Member's Name (please print) and Signature                          Applicant's Signature

Send this application (with dues) to the Secretary:

LT Adrian Gaskin
SAFMLS Secretary
32132 Copper Crest Lane
Temecula, CA 92592

Check should be made payable to "Society of Armed Forces Medical Laboratory Scientists" (SAFMLS)

For Use of Board of Directors:

Board Actions                  Date:
                              _______________________ Approved
                              _______________________ Disapproved

Membership Category:     _____ Regular Member       _____ Associate Member   _____ Honorary _____ Emeritus

Comments:

______________________________________________
Secretary, SAFMLS
1. **Call to Order:** The meeting was called to order by the Society President, Lt Col Brian Casleton at 0805 PST.

2. **Members Present:**
   **Officers:**
   - LtCol Brian Casleton, BSC, USAF, President
   - LTC Michael Lopatka, MS, USA, Vice President
   - LT Adrian Gaskin, MSC, USN, Secretary
   - Maj Marybeth Luna, BSC, USAF, Treasurer

   **Members-At-Large:**
   - LCDR Debra Baker, MSC, USN, Navy Member-At-Large
   - Capt Denise Lennon, BSC, USAF, Air Force Member-At-Large
   - CPT Gerald Kellar, MS, USA, Army Member-At-Large
   - Capt Kathryn Shaw, BSC, USAF, Air Force Member-At-Large

   **Voting Members:**
   - CDR Larry Ciolorito, MSC, USN, Ex-Officio

   **Non-Voting Board Members:**
   - LTC Danny Deuter, MS, USA, Historian
   - CAPT Mike Finch, MSC, USN, Webmaster
   - LCDR Aaron Harding, MSC, USN, Pace Coordinator
   - CAPT Christine Howe, MSC, USN, President Elect
   - LTC Donald Taillon, MC, USA, Army Ex-Officio
   - Maj Jeannette Watterson, BSC, USAF, Conference Director/Site Selection

   **Members Absent:**
   - MSgt David Beacham, USAF, Enlisted Member-At-Large
   - COL William Boisvert, MS, USA, Consultant
   - COL Mark Brissette, MC, USA, Army Ex-Officio
   - LT Leslie Councilor, MSC, USN, Navy Member-At-Large
   - LTC Brian Kendall, MC, USAF, Air Force Ex-Officio
   - CDR Dave Larson, MC, USN, Navy Pathology Ex-Officio
   - MAJ James Lee, MS, USA, Army Member-At-Large
   - LTC Kevin McNabb, MS, USA, Past-President
   - LtCol Dale Selby, BSC, USAF, Air Force Pathology Ex-Officio
   - Maj Richard Schoske, BSC, USAF, Pace Coordinator
   - Col Paul Barnicott, BSC, USAF, Consultant

3. **Introduction:** The meeting was held at the Silver Legacy in Reno, NV. LtCol Brian Casleton welcomed everyone to the meeting and introductions were made.

4. **Review of Previous Minutes:** The minutes from the Post SAFMLS Board of Directors meeting were sent to all members electronically for review following the annual meeting. Minutes were approved.

5. **Treasurer’s Report:** The account has $28,583.62 plus $116,500.42 in the money market account. Report was approved.
6. **Secretary’s Report**: A past dues list will be sent to the Members-At-Large to encourage members to pay up or face being dropped from the roles. Report was approved.

7. **New Applicant Review**: 8 membership applications were reviewed. The breakdown is as follows:
   
   - PHS – 1, Air Force – 2, Navy – 1, Army – 3, Civilian – 1
   - (Officers – 4, Enlisted – 3, Civilians – 1)

   Seven applications met the criteria and were accepted for membership. The eighth applicant did not appear to have a DoD affiliation; more information from the applicant is needed for evaluation and information will be discussed at the next BOD meeting. Certificates and coins will be sent to all of the new members.

8. **SAFMLS 2009 Planning Committee**:
   
   a. Most committee assignments have been nailed down. The audio conferences will begin at the end of October. An e-mail will be sent to the planning committee members with the first audio conference information.

   b. Applications for the vacant Board of Director positions are due to the Secretary by 31 Dec 2008. Vacant positions includes: Vice President (Air Force); President Elect (Army); Member-at-Large (1 for each service); and Enlisted Member-at-Large (any service).

   c. Award application deadline is 31 Dec 2008.

   d. Workshops/Short Topics: Submission deadlines is 31 Dec 08. New forms will be posted on the website and print the next Scope publication.

   e. Registration Desk Issues: Annual membership dues will be collected in separate line by the secretary.

9. **Society Scope Update**: The awards information and workshops/short topics will be updated and published in the Scope. Applications for the vacant Board of Director positions are due 31 Dec 08.

   (CLOSED, Maj Watterson)

10. **Old Business**:

    a. Membership for Vendors – Discussion in regards to allowing vendors or employees of vendors to become SAFMLS members. Motion was denied. The Board approved to allow non-DoD affiliated personnel to subscribe to the SCOPE publication for a fee of $30. The subscription fee currently listed on the SCOPE magazine states $30.

    (CLOSED, Maj Watterson)

    b. Coins – The Society has approximately 180 coins left. Motion was presented to sell the remaining coins, solicit new designs for the back of the coin in the SCOPE, and offer a $50 Visa gift card to the winner. New coins will be made available and sold at the 2010 annual meeting. The Board discussed redesigning the coin every three years. The Board approved the motion.

    (CLOSED, LtCol Casleton)
c. Registration Fees ($25) – A suggestion was made to charge a $25 registration fee to each member and non-member at the annual meeting beginning in 2009. The By-Laws do not specify that a registration fee can not be charged. The Board approved a $25 registration fee effective 2009. The annual dues will remain at $20.  
(CLOSED, LtCol Casleton)

d. Future Venues – 2010 – San Diego; 2011 – New Orleans. The following cities were mentioned as possible sites: Spokane, Boston, Nashville, St. Louis, Las Vegas, Portland, and Memphis. Maj Watterson will investigate these potential sites. A suggestion was made to push the meeting to late March or April if it is held in Boston. A suggestion was also made to return to Reno for future meetings due to the improved air quality; Reno will be discussed at the next annual meeting to ensure that the air quality continues to improve. In addition, a suggestion was made to post a copy of the new Nevada Clean Air Act on the website and in the SCOPE publication.

(OPEN, Maj Watterson)

11. NEW BUSINESS:

a. Treasurer’s Audit – Maj Luna forwarded a copy of the most recent audit to the Board via e-mail. The audit report was approved. The next audit will be conducted at the meeting in Reno.
(CLOSED, Maj Luna)

b. Banking Institution – Maj Luna discussed changing the banking institution from the Armed Forces. She will investigate USAA and Pentagon as potential facilities and report at the next meeting.
(OPEN, Maj Luna)

c. Authorized Account Signers – At this time Maj Luna is the only board member listed as an authorized signer. A suggestion was made to have the President, Vice President, and Secretary become authorized signers; the motion was approved. New signature forms will be available at the next meeting for all the above listed positions. Each year at the Post Board of Directors meeting, the signature form will need to be signed by the newly appointed officers.
(OPEN, Maj Luna)

d. Short Topics Workshops – During the planning stage for last year’s meeting, obtaining the short topics was slow coming. A suggestion was made to advertise for topics in the summer edition of the SCOPE.
(CLOSED, LCDR Harding)

e. New Donor Recruiter – A suggestion was made to add workshops geared towards the Donor Recruiters since all positions will be converted to GS positions.
(OPEN, LCDR Harding)

f. Vendor Short Topic Workshop – A motion was made and approved to allow vendors to present short topic workshops. The Board stipulated that the workshop slots would be open to all vendors and that the vendor’s presentation may not be an advertisement and must be technical or theory based.
(CLOSED)

g. CLMA Partnership – CLMA submitted a request to the Society to partner our annual meeting with their conference. It was mentioned that this topic has been discussed in the past. Board felt that CLMA wanted to join our annual meeting because their membership is down and wants to promote their organization.
(OPEN)
11. NEW BUSINESS: (cont.)

   h. Vendor Bags – Vendors would like to distribute gifts to members at registration. Discussion was made concerning how vendors would get the bags to participants. The Board voted and approved that a table would be set-up for the vendor near the registration booth. The vendor, however, would have to provide a person to hand out the gift bags.

   (CLOSED)

   i. Poster Submission – Discussion occurred concerning the primary author of a poster submission. The primary author must be a current member in order for the poster to be judged. However, the primary author does not need to be present for the judging, but must have a representative at the meeting. The number of posters that a primary author can submit will depend on the size of the meeting location and space accommodations. This topic was approved by the Board.

   (CLOSED)

   j. PACE – LCDR Harding made a suggestion to include CEU articles and questions in the SCOPE publication. Dr. Taillon suggested having CME credits for the providers. He will contact PACE to determine specific requirements.

   (OPEN, LCDR Harding)

   k. Presentation Standardization – LCDR Harding proposed standardizing the requirements for workshop and short topic presentations. He will work with the coordinators of each to help improve the system.

   (OPEN, LCDR Harding)

12. With no further business, the meeting was adjourned at 1030.

   Respectfully submitted,

   // Original Signed //

   ADRIAN D. GASKIN, LT, MSC, USN
   Secretary
12th ANNUAL FORCE HEALTH PROTECTION CONFERENCE
14-21 AUGUST 2009

14-17 August – Preconference Sessions
18-21 August – Core Conference

ALBUQUERQUE, NM

CALL FOR PRESENTATIONS

PRESENTATION REQUIREMENTS
Please note procedural changes from 08 highlighted in yellow

• All Department of Defense personnel will be required to provide documentation of Operations Security and Public Affairs review before their presentations are presented. (DoD Directive No. 5230.29, Subject: Security and Policy Review of DoD Information for Public Release; DD Form 1910, Jan 2006)

• Public Health Service and other government employees will be required to provide documentation of approval for public release from their organizations.

• Authors/co-authors who have not completed the continuing education documents will not be granted continuing education credits for their presentations.

The 12th Annual Force Health Protection Conference, hosted by the U.S. Army Center for Health Promotion and Preventive Medicine, will be held at the Albuquerque Convention Center, 14-21 August 2009. The theme is “Preparation and Protection.”

This year’s conference provides tools to anticipate, recognize, evaluate, and counter occupational and environmental health and disease threats to health, fitness, and readiness for personnel who provide preventive medicine, public health, and health promotion and wellness support to America’s worldwide deployed military forces and the Army community in garrison.

Conference attendees include representatives from DOD, other U.S. Government agencies, academia, industry partners, and allied nations. The conference offers presentations and posters judged as best among those submitted by scientists, engineers, technicians, physicians, and other health professionals.

Potential presentation topics include but are not limited to:

Behavioral Health in Primary Care
Behavioral Sciences and Human Performance
Bio-Defense
Biomarkers
Biotechnology
Chemical, Biological, Radiological Agents
Chemical Testing (Environmental or Health Related)
Clinical Preventive Services and Primary Prevention
Community Health Promotion
Deployment Support
Diseases of Military Importance

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PRESENTATION GUIDELINES

DEADLINES:

Abstract submission on-line by: 27 March 2009
Author Notification of Acceptance: 24 April 2009
Abstract Release Documentation: 8 May 2009
Presentation Release Documentation: 24 July 2009
(DD 1910; CHPPM 259 RE; or other appropriate documentation)
Final Presentations Due: 24 July 2009
(Upload electronically to FHPC website)

DETAILS:

The Track Chiefs, along with the Functional Program Committee (composed of the Conference Director, Deputy Director, and technical experts) will select presentations on the basis of these submitted abstracts. There are no limits regarding the number of abstracts any individual or organization may submit.

Authors may submit abstracts and presentations singly or in collaboration with colleagues in the Army, other government organizations, academia or industry. Material must represent original work and should relate to one of the potential presentation topics listed above.
For both abstracts and final presentations, authors must submit a copy of their local organization’s permission document allowing public release of information contained in the abstract/presentation. For government, corporate and academic speakers, this includes, at a minimum, approval by the appropriate communications official and security official. A signed form or letter on letterhead stationery is required. (Send your abstract documentation to your track chief by 8 May 2009. Send the documentation for your completed presentation to your track chief by 24 July 2009.)

Note that media representatives are not invited to attend conference sessions. This is to ensure open discussion and security of pre-decisional or proprietary information in discussions. Filming of technical sessions is prohibited.

**FORMAT:**

Only **UNCLASSIFIED, Non For Official Use Only (Non-FOUO)** abstracts that are 150 words or less for hour presentations.

Each abstract is technically concise and indicates relevance to the military, in particular public health/preventive medicine, or occupational and environmental health. Results, conclusions and/or other significant items discussed in the paper are included and the abstract is complete in and of itself.

**INSTRUCTIONS:** Go to the FHP website http://chppm-www.apgea.army.mil/fhp

1. Register for the conference (free) and note your password.
2. Select “Submit an Abstract Online.”
3. Type the title (with initial capital letters).
4. Type in names and correct e-mail addresses of any co-presenters or co-authors. (Please remember that these individuals will be required to fill out all the appropriate continuing education paperwork.)
5. Use single spacing when typing the abstract.
6. Enter biographical information (150 words or less) and complete all required CME/CEU information forms listed. (Abstract is not accepted without completion of this step.)
7. Type in two REQUIRED references. (References must be from a primary source/peer reviewed publication/scientific journal.)

Direct questions to: fhp@apg.amedd.army.mil

All authors are notified of the status of their abstract submission (accepted, stand-by, etc) by 24 April 2009. Specific instructions for preparing the final presentations are provided at that time. The selected authors must submit a completed presentation and release documentation by 24 July 2009.

**Special Note – 30 minute presentations:**

The accrediting bodies for continuing education credits will only approve presentations in one-hour increments. Knowing that some of the Science and Technology presentations are traditionally 30 minutes in length and will not fit into this format, arrangements have been made to allow the combination of two 30 minute presentation into a one hour time slot (two 30 min presentations, 2 speakers, presentations somewhat related, e.g. Nanotechnology & Health Effects). If you are interested in delivering a 30 minute presentation, please contact the Science & Technology Track Chief, Irene Sacilotto, (410) 679-2873) for assistance.

*When abstracts are submitted, on-line disclosure forms necessary for attendees to receive CME credits must be completed & signed before the abstract is accepted.*

See you at the 12th FHP Conference in Albuquerque!
SOCIETY SCOPE
P.O. Box 2549
Fairfax, VA 22031-0549
ADDRESS SERVICE REQUESTED

www.safmls.org

See you at the SAFMLS Annual Meeting 2009 in Reno Nevada!

Calendar of Events

Meetings
Society of Toxicology
Baltimore, MD • 15-19 Mar 2009

Future SAFMLS Meetings
2009 Reno, NV
2010 San Diego, CA
2011 New Orleans, LA

www.safmls.org