

AMPSC 2018 Panama

Welcome & Introductions

Dr. Frohman welcomed everyone and introduced the topics to be discussed.



Michael Frohman
Stony Brook
President (2017-18)



Departmental Survival and the Future of Pharmacology

“Issues and Challenges (& AAMC/CFAS issues)”

Dr. Vrana described the historical perspective of the basis for this discussion that spawned from discussion at the meeting in 2017 based on an announcement of a Council of Faculty and Academic Society (CFAS) meeting agenda item on the Worth of Basic Sciences. Kent identified some Issues and Challenges that he identified as being significant with respect to the survival of departments:

Relevance of Departments (of Pharmacology) to School Mission

- Emerging new schools without basic science departments
- Administrators perceive economic benefit from teaching with reduced Faculty

Loss of Instructional Time & Contact (Rise of OME, the Office of Medical Education)

- Loss of independent Pharmacology courses
- OME becomes Academic Home with control of schedule & content
- Organ (or System)-based courses often directed by clinicians

Merged departments & creation of Institutes and Centers

Funding: The Huron Report examined funding across 46 institutions. Schools received an average of \$111M in external research funding, but expended an additional \$0.53 for each dollar of sponsored research received. This was interpreted to indicate that schools lose \$ on funded research.

Departments in Medical Schools generally have no extraneous revenue, i.e. SoM Departments often have no undergraduate teaching, Master's programs, or administrative roles that could be used to offset loss of external funding of faculty who must be retained.

Retention of Productivity Faculty



Kent Vrana,
Penn State University



A second issue that resonated was the ability to recruit and retain faculty, with issues emanating from this that were connected to the success of the department in the eyes of the administration. These included:



- Successful recruitment with significant fiscal obligations that are consumed to enable the individual to be successful in capturing external funding, and then they leave or are “poached” to another institution;
- Tenure decisions often needing to be made over a time frame that results in the decision needing to be made without funding and based on potential.



Dr. Vrana suggested opportunities to meet some of these challenges:

Opportunities for Success

- Make yourself (i.e. the department) valuable to the school
 - Participate in or lead USMLE Board review and strategy sessions / courses
 - Take control of Clinical Quality Instruction
 - Employ the AMSPC Knowledge Objectives to drive content discussions
 - Enable/support clinical research by offering joint appointment to clinical faculty in our departments (n.b. – should our faculty be connected to appropriate clinical departments?).
- Hype prestige
- Develop Courses or Instructional Contributions that generate revenue
- Involve appropriate faculty in Curricular administration and leadership
- Embrace Inter-professional education
- Recommend appropriate faculty for positions in Education Administration



**Ray Mattingly,
Wayne State
University**

Ray Mattingly, Wayne State

Ray discussed the spring CFAS meeting on Basic Science Departments that alarmed many of us & provided a handout on the topics that were discussed, i.e.

- Should we be called “basic sciences” or “discovery sciences”?
- AAMC Survey – “Understanding What Basic Scientists Need Most”

Dr. Mattingly also described the furor that developed over the original agenda topic, which was “Brexit for PhDs from Academic Medical Centers” that was modified after protest to “Brexit for PhDs from Academic Medical Centers – Is it even a choice?”, which was further modified to the final agenda topic of “The place for PhDs in the Medical Schools of tomorrow”

“AAMC View on Evolving Role of Basic Science Depts in Medical Schools” Challenges for Basic Science – 2018

Dr. McKinney set the framework by categorizing the 149 medical schools as:

Research-Intensive (30 schools): Top-tier funding levels; research funding is a major driver; Infrastructure exists to support the research mission. Still, issues with funding core labs, aging faculty (most grants for investigators in 60s and 70s), few tenure track slots available, and dependence on clinical funds transfer.

Standard schools: Determining whether to grow or not to grow; Funding security somewhat at risk due to institutional image; Infrastructure designed to promote teaching and research; Focus is sometimes blurry depending on political power; Aging faculty also problematic; Some dependence on clinical funds transfer; These institutions are ripe for mergers and acquisitions and shifting relationships.

Non-research schools: Curriculum a key element & driving force; Finding teachers can be challenging; Evaluating faculty can be difficult: What is promotable



**Ross McKinney
Chief Scientific
Officer, AAMC**



activity? How to fund research on medical education? How to teach research if it's not a core activity? Less dependence on clinical transfer; Depend more on tuition.

Successes: We have reached an amazing point in science, with Precision Medicine Initiative, Genetic treatments for single gene diseases licensed for use, ability to control or cure of cancers that were previously lethal; ability to manipulate the immune system to target specific cancers; HIV treatment and prevention of transmission; New tools to understand the brain and nervous system function; Gene editing; and Biologic drugs appearing so quickly.

Messaging: Stress importance of basic research; Teach students to communicate their research in clear, concise way (elevator speech); Work with public relations office to avoid hyped language – long term, hype is hurting

Role of Basic Science departments – challenges: Schools abandoning lecture-based formats; Lectures are recorded as a resource; (Clinical) team-based, problem-focused curricula; what justifies school support for basic scientists?

Justifications for Research in Research-Intensive Institutions: New knowledge; Institutional reputation (helps the clinical mission & draws philanthropy); Grants (although they lose money); Culture of science; Training for PhDs & Research Fellows

Justifications for Research in Standard Schools: Margin is narrower; Reputation; New knowledge; Training; Grants bring revenue, but marginal gain low

Justification for Research in Non-research schools: Reputation & Training

Funding challenges: 21st Century Cures Act authorized more but it was earmarked and counted in total budget.

F & A (Indirect Costs) Threats: Proposal to reduce F & A to 10% (Administration costs capped at 26%); F & A to be allocated at a flat 12% instead of the current negotiated rate. On average it would reduce F & A payments by 78%. Since bonds and research costs will continue and most revenue sources have already been maximized, institutions would aggressively trim their budgets. However, so far, the F & A system has been protected by Congress.

Grants are not the Sole Source: Most BS faculty partially funded by grants; Non-TT faculty may be held to a higher level of funding; Practice plan funds drive considerable funding to institutional budgets in most schools.

Bottom line: NIH budget is year to year; Monitor F & A system threats. Also, Clinical revenues are tenuous: Status of 340B and Disproportionate Share Hospitals (DSH), and keep an eye on uninsured rates.

Basic Science Funding: NIH appreciates important of true basic science

Faculty and trainees: Slow to low growth; PhDs in academic positions, Post-doctoral appointments, and Faculty achieving tenure all declining, while Graduate school acceptances are increasing [Alternate career issue].

Future

After such uplifting discussing, he maintains that the future is not as dim or dire as it appears to be on the surface, but will require some adjustment on our part.

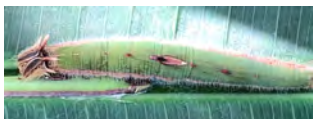
Advice to Faculty and Trainees

Train for flexibility

Help develop better pathways for junior investigators

Develop better approaches to tenure

Ross's presentation is available upon request



"Medical Education, Now and Then: A perspective on changes through the decades on how pharmacology and medicine are taught."



**Robert Flowers,
MUSC**



Dr. Flowers provided an historical perspective about his medical training at the University of Mississippi. The curriculum was lecture-based and attendance was mandatory with students spending most of the day through the first 2 years in the classroom.

The faculty consisted of several very effective teachers including Dr. Arthur Guyton, who was trained as a neurosurgeon but was stricken with polio that prevented him from continuing his neurosurgery career and directed him to the discipline of physiology.

Dr. Flowers commented that technology that has developed over the past several years has markedly improved medicine and the delivery of health care and he pointed out that pharmacology has greatly benefited from these new advances. He completed his presentation with a passionate plea for continuing to train future doctors by returning at least to some degree to the "older" ways of instruction, as the human engagement of instructors and students may be waning to the detriment of the profession.

His final quote was: "It takes a human to train a human to treat a human."

ASPET – Strategic Planning for Pharmacology

Ms. Siuciak began by encouraging the group to vote for ASPET officers. She then described the status of the strategic planning process for ASPET that has gone on since it began in 2016.

Vision: Pharmacology is an essential integrative discipline that creates new knowledge about drug action and translates those discoveries into novel therapeutics. In order to improve health and cure disease, ASPET will be an advocate for everyone practicing this discipline.

Mission: To be the professional home for educators, students, researchers, healthcare practitioners, and other professionals working to advance pharmacology research, exchange knowledge, and increase the impact and influence of this scientific discipline.

Goals:

- Promotion of Pharmacology and ASPET: What is pharmacology?
Explore pharmacology brochure; Website enhancements
Social media campaign; Video series
- Advocate for the discipline: Member outreach
Relationship with AMSPC; Improve membership engagement
Science policy committee
Increased collaboration with FASEB
Elevated ASPET profile (Washington Fellows Program)
Enhancing undergraduate education
- Attracting and Developing the Next Generation of Pharmacology
- Reimagining the Annual Meeting
- Enhancing ASPET journals
- Advocating for Critical Science Policies
- Strengthening ASPET:
Several new programs
Financial evaluation to develop sustainable business model
New Space
Develop global partnerships with defined metric
Initiate a governance review



**Judy Siuciak,
Executive Director**





**Mary-Ann Bjornsti,
UAB**



Summary & Roundtable Discussions: Survival of Pharmacology Depts

Dr. Bjornsti led a discussion that began last year about the factors that contribute to threat to department independence and what is needed to insure the survival of pharmacology and pharmacology departments.

She identified one major threat to survival as the Dean(s). Other areas that emerged from the discussion as potential contributors to the threat included:

Organizational structure – Centers and Institutes vs the Department

Cost of research and education: Metrics for success

Funds Flow – Operations impacting resources: Chair turnover, Budget cuts

Pharmacology – an undervalued discipline today? Support for team science

- Ways to elevate the discipline in value

Medical Education: Pharmacology “boot camp”

Centralized administration: Strategic recruitment/space allocation

Drug discovery in Academia: Develop biotech - industry sponsored research

Additional discussion among the group focused on conversations with administrators about both research and education.

Welcome & Introductions AMSPC Day 2

AMSPC Response to The Opioid Crisis

“Opioid Crisis: From Overdose to Addiction”



**Kathryn Cunningham,
UTMB Health**



Dr. Cunningham presented a spirited introduction to the opioid crisis, “Canary in a mine field”, “How We Got Here”, including Pharma: Aggressive marketing, “educating physicians, claimed no addictive potential; Pain: a fifth vital sign – 10X increase in non-cancer pain management, combined with inadequate FDA oversight. There was inadequate medical education, and no prevention and treatment services

A variety of Opioids are available. New Psychoactive Substances (NPS) manufactured in Asia and shipped by the internet circumvent drug control laws; >600 new compounds are available. Novel Synthetic Opioids (NSOs): Structurally diverse, wide distribution, Lack of pharmacological knowledge about them.

Fentanyl derivatives: More potent than morphine and fentanyl:

U47700 (aka “U4”; “Pink”): Non-fentanyl synthetic; schedule 1

W-18 “Potent fentanyl-related designer drug”; No apparent opioid receptor activity

Gray Death Cocktail

Opioid Overdose, Leading Cause of Death in individuals <50 y/o; “Facing Addiction in America’ – Surgeon General: “It’s time to change how we view addiction”

Key Terms: Use: Any use of any substance; Driven by market forces

Misuse:

Addiction: Substance Use Disorder; Compulsive, persistent drug-seeking

Neural Circuits in Substance Use Disorders: Some discrimination:

Reward Circuit – Basal Ganglia; Extended Amygdala

Habit Circuit – Prefrontal cortex

Overdose Prevention and Reversal: New opioid antagonists, agonists

Nerve stimulation devices

Treatment of Opioid Use Disorder: Buprenorphine, Others

Treatment of Chronic Pain: Biased agonists

UTMB Pharmacology and UTMB Center for Addiction Research
Advance science
Develop precision therapeutics
Identify disease biomarkers
Disease-modifying therapeutics
Build infrastructure

Molecular NeuroTherapeutics

“The Basic Pharmacology of Opioids Informs the Opioid Discourse about Misuse and Abuse”: The Fix: All Hands on Deck



Laura Bohn, Scripps

“Using Biased Agonism at Opioid Receptors to Improve Opioid Analgesics”

Dr. Bohn described her career path that led her to move from a tenured position at Ohio State to the Scripps Screening Center in Florida to facilitate a research program directed towards the development of “biased” opioids that could provide analgesia without triggering respiratory suppression, the major cause of death from overdose, as a substitute for traditional opioids.

Mu opioid receptors

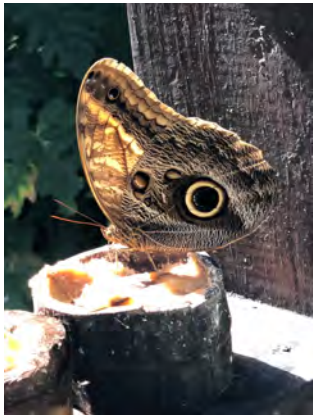
The concept of the receptor being “All on” vs a rheostat perspective is becoming more acceptable, which opens the door to pursuing functional selectivity of GPCR activation. The two basic ideas are: Change in receptor shape or conformation selectively influences interactions with intracellular proteins, and the intracellular protein complement differs between cell types.

β -arrestins interact with the opioid receptors, and β -AR2 KO mice have intact analgesia responses but are resistant to respiratory depression. Dr. Bohn described using mathematical modeling to evaluate biased agonists. *In vivo* efficacy looks good, with high analgesia and low respiratory depression.

This sort of biased agonism should be applicable to other GPCRs. Current work includes attempting to improve side effect profile.

The foundation of the work is described in Dr. Bohn’s recent report,

Schmid CL et al. (2017) Bias Factor and Therapeutic Window Correlate to Predict Safer **Opioid Analgesics**. *Cell*. 2017 Nov 16;171(5):1165-1175.



Palmer Taylor, UCSD

“Pharmacology and Pharmacy Interdigitation; Opioid Use and Misuse as a Departmental Educational Mission”

Dr. Taylor described his role in developing a new curriculum for PharmDs that incorporates combined education in the 2nd year with medical students.

Some of the topics he likes to emphasize include major therapeutic oversights: Antimicrobial overprescribing, Oral corticosteroids, Amphetamine and related biogenic amine prescriptions, & Opioid Therapy:

- Opioids, the only one where we had the information and misjudged the consequences; California legislated a minimum of 24 hrs of teaching

Conformation of M₂ AChR: Allosteric activity, Needs to be included in teaching

UC San Diego has a course in Therapeutics of Pain Management

Unbalanced Pain Management; Course description at UCSD included in slides

How did we end up with 3 epidemics? Unimodal treatment

PDMP (Prescription Drug Monitoring Program)

CURES (Controlled Substance Utilization Review and Evaluation System)

Important in reducing overprescribing



**Pam Potter,
Midwestern Univ.**



“Interdisciplinary Elective on the Opioid Crisis.”

Dr. Potter described the teaching approach at Midwestern University, which uses interprofessional training, i.e., students often combined for basic science courses.

- Students participate in community service

Course on Safe Opioid Practices: Open to all students

Course Delivery

Session 1: How do you monitor “chronic pain”; Face to face

Session 2: On-line module; Adolescent

Module structure: Start with a case; Assessment with a quiz at the end

Session 3: Patterns of abuse; Recognizing patients at risk

Session 4: Non pharmacological means of pain management

Session 5: Safe prescribing and dispensing guidelines

How to interview patients

How to assess pain and what constitutes appropriate treatment

Prescribing varies by profession

Session 6: Identify best practices for treating and preventing abuse

AZPA Naloxone Training; Dentists also targeted

In-class sessions 2 and 3: Group sessions; Self-assessment

Cons: Online modules for practicing physicians can be difficult to access

Not user friendly; Online assessments don’t provide feedback

Focuses more on prescribing and prevention rather than treatment

Pros: Students can easily participate; Can be tailored for different students

In-class sessions provide interprofessional engagement; Topics specific

***“Addressing the Opioid Crisis: Medical Student Instruction
in Opiate Drug Pharmacology and Pain Management”***

Dr. Cox made a nice presentation on how opioid education at the USU is integrated across the duration of the 4-year training, employing longitudinal following of specific, fictional individuals. For example, someone injured in the Gulf War who requires pain management for back pain, and then becomes addicted with all of the ensuing complications.

Basic principles: Instruction integrated across disciplines

Use of small groups

Creating threads connecting Substance Use Disorder across 4 years

Providing students opportunity for discussion; Use DSM-V

Location in Curriculum: Preclinical: First 18 months

Clinical Curriculum: Pain management (years 2-4)

Post-clerkship: Bench-to-bedside

Preclinical:

Musculoskeletal-skeletal: NSAIDs and peripheral pain

Neuroscience and Behavior: Pain systems/opiate drugs; stimulants

Multi-system: Substance Use Disorders-all drugs

Small group classes: Case studies, computer-based

Latest Recommendations: Extend use of NSAIDs and physical therapy for most pain and reserve opiates for severe pain and/or palliative care

Opiates: Range from weak (Tramadol to strong). What lab tests might you want before prescribing an opioid?

Multi-systems Module comes late, which permitted an increase in contact hrs.

Topics: Addiction and withdrawal:



**Brian Cox, Uniformed
Services University**



Requirement for students to visit Alcoholics Anonymous Meetings
Students write a “blog” and discuss meeting in small group

Drugs and Society: Legal aspects; The “Opioid Crisis”

Outbreaks of IV infections: HIV and HCV infections in rural Indiana

Cost of treatment; Responsible prescribing

Objective in treating SUD; Use and availability of naloxone

Value of syringe and needed exchange;

Community provision of “safe havens”; Who pays for costs of treatment?

Cost of treatment of associated viral and bacterial infections

Value of emphasizing the economic cost of treatment

Follow-up in clinical years: Pain management; Acute detox; Emergency Rx

Assessment of success was not developed, but USMLE performance on this topic appears to have improved.

Brian’s presentation and description of the course is available upon request

All participants: Group Discussion

Suggestions from the group discussion were:

- Developing an AMSPC Mission Statement
- Providing Working Points from AMSPC for Departmental Action

Welcome & Introductions AMSPC Day 3

Introduction of new chairs:

Haian Fu – Emory

Henrik Dohlman – UNC-CH

Irwin Lucke – USU

Louis Gendron – University of Sherbrooke

Josh Baker – Interim – UN-Reno

New Chair Presentation

“Cancer Genomics-based Protein-protein Interaction Network for Therapeutic Target Discovery”

Dr. Fu described the Department of Pharmacology and Chemical Biology at Emory and how the name was changed to interface more appropriately with translational research. He provided an excellent scientific discussion of some of the major advances that have occurred.

Vision Statement: To extend our outstanding molecular pharmacology research programs to advance **therapeutics innovation** and **translational biology**

Vision Development: Therapeutic Innovation and Translational Biology

Advances in genomics, disease illogical, big data and informatics

Growing focus on team science clinical-basic research collaborations

Emory Chemical Biology Discovery Center (ECBDC)-enabled discoveries:

Network of cancer-associated protein-protein interactions to identify potential intervention strategies

Challenge: how to translate such large amount of genomics data into mechanistic understanding of cancer biology and therapeutics

Cancer Target Discovery and Development (CTD2) Network

OncoPPI network v1: Links cancer genes into a signaling network

Inform therapeutic strategies; Prioritize



Haian Fu, Emory

Challenges in cancer therapeutic discovery

Cancer Genome Landscapes: Most target protein kinases

Most cancer driver genes encode proteins without enzymatic activity

Large fraction of mutant drive genes encode tumor suppressors

Summary

Approval of 1st small molecule PPI inhibitor (nevetoclax)

HTS serves as a resource; Case studies demonstrate the utility

NSD3BRD4 and BSD3/MYC PPI may represent new targets for uHTS

The cell Lisa the-based TR-FRET assays for each positive PPI in OncoPPI are readily available for optimization and uHTS campaigns

OncoPPI v1 aims to identify cancer mutating-mediated PPIs for personalized therapeutic discovery

Education Topics



**John L. Szarek,
Geisinger
Commonwealth**

“IUPHAR PEP”

Dr. Szarek discussed the ongoing IUPHAR initiative to promote education in the discipline. He also provided a handout detailing the program and encouraged people to become engaged in the program.

IUPHAR Pharmacology Education Project (PEP)

Guide to Pharmacology (database of receptors and ligands)

John provided a PEP Website demonstration that was very instructive and illustrated the utility of the program. The goal is to provide opportunities for individuals to obtain additional presentations. There is a commentary associated with each link. Searchable database by specific topic.

PEP: Relevance and Accuracy of Content; Website dedicated to pharmacology
Curated and created by pharmacologists

Dr. Szarek suggested that PEP – AMSPC may have opportunity to collaborate in meaningful ways; Knowledge Objectives include links to PEP topic associated with the information; Links from PEP website to KOs

Finally he suggested that the group might want to **Get involved!!!!**

“Approaches to Master’s Programs”

Dr. Neubig described the Master’s Programs currently being offered at MSU

History

2006 Professional Science Masters (PSM)

2009 MS in Pharmacology and Toxicology

2012 Certificate in Safety Pharmacology

2016 Discontinued PSM and created MS Integrative Pharmacology

Target Audience

Average 67 students (previous 3 yrs)

Pharma/CRO/other groups – 51% technical staff and others

Pre-professional, Physicians. & Military

Curriculum

10 credit hours required

Several electives within and outside the department

Professional development courses; Final/Capstone paper requirement

Student Success: Graduation rate: 63% 3 yr average

Tuition/Income: Cost \$25,500 over 3 years

Tuition Income - \$1,675,000



**Rick Neubig,
Michigan State
University**

Department share (70%) - \$1,172,500
Expenses approximately 40%
Life-long students (not yet in M.S. Program)
Approximately 20% as many as M.S. Students

Benefits: 1 FTE; Summer salaries for 4 tenure track faculty
2 full-time and 6 part-time teaching faculty; 6 Office staff
All office operations; Subsidies/Updates for Department Core facilities
Faculty Startups; Improvements and Renovations

Advertising: Word of mouth; Occasional undergraduate/research presentations

Competition: Drexel University; U Cincinnati; Toxicology Programs; Industry

Roundtable Discussion

Several issues discussed: Foreign students; Is there a market?
Assessment; Do they get a transcript
How does the graduate school get involved in admission
Do they use GRE scores? What about the certificate program?
Control from administration to provide accountability can be onerous

Canadian Report: Louis Gendron

Foundation Scheme (45%): Sustainable (R35-like)
Project Scheme (55%): Similar to R01
Applications can only be made to 1 program
Foundation grant success prevents application to Project grant
Grant size is equal the mean amount of CIHR support the applicant has received over the past 5 years, increase by a maximum of 10%
The reform came with a totally revised peer review process (virtual peer review)

Total number funded was 150 of 1366
\$400 million for 150 (23 Early Career Investigators) in 2014
\$290 mil for 120 (33 ECIs) in 2015
Budget cut for 2016

Has both positive and negative effects, with the majority being negative
Bad impact on collaborations

“FASEB Science News”

Jennifer brought news from Washington in a Howard Garrison tone that was very refreshing.

Mood in Washington not good; Congress is from Mars
Ongoing tension between the House and Senate
Competing factions in both parties and both chambers
Freedom Caucus/Republican Study Committee vs. “Tuesday Group”
Senate Democrats “running for President” vs those running for re-election in states Trump won in 2016

The deficit doesn’t matter...for now; Focus Shifting to 2018 Mid-term Elections

Reasons to be Optimistic

Funding Increases approved for Agencies
21st Century Cures authorized + \$4.8B for NIH/10 yrs
FY 2016 +2B; FY 2017 – more funding increases; +2B for NIH

Strong support in Congress; Previous increases in caps

Champions for NIH: Roy Blunt, Tom Cole

We Have a (Budget Caps) Deal!

Increases defense and non-defense discretionary caps by \$300B over 2 yrs.



Jennifer Zeitzer,
Director of Legislative
Relations, FASEB

Stipulates \$2B Increase for NIH over 2 years
Other Provisions of Interest: \$50M for NIH to repair research
\$6B for opioid response and mental health programs
\$150M for Special Diabetes Program in 2018 and 2019

Outlook for FY 2019: “Transaction authority” for NIH to address opioids
- Reauthorization of Higher Education Act

Trump FY 2019 Budget Request; Big Increase in defense spending
Big cut in NIH (rumor it will be 30%)
Elimination of Fogarty International Center
Cap on F & A costs (10% cap included in FY 2018 budget)
Cuts to other research agencies (rumor of 30% cut for NSF)
Will not be taken seriously on Capitol Hill

Other Surprises: Agency Reorganization plans
OMB instructed all agencies to “take immediate actions to achieve near-term workforce reductions”

Executive Order on Fetal Tissue Research Expected from VP Pence’s office
New restrictions on federal funding for fetal tissue research
May also cover hESC research

FASEB Efforts: Capitol Hill Day

Science Policy Issues: Revision of “Common Rule”

New Clinical Trials Definition: Meaning of “intervention” and “health-related biomedical or behavioral outcomes” was changed
New policy on reporting NIH-funded clinical trials

Are We Drowning in RFI’s from NIH?

Recommended Reading List: Regulatory burden, Provider Challenges

Jennifer’s presentation is available upon request



Treasurer’s Report

Dr. Busija provided a Handout of the Financial status of AMSPC
Finances are doing well

Expenses: Annual Meeting, EB Mixer

Minor Expenses: AAMC dues, Tax Preparation, Website Maintenance, MN Registration, Office Supplies, NDOGS, ASPET Travel Award (DPE)



David Busija, Tulane

Election of Nominating Committee

Richard Neubig - Chair

Kathryn Cunningham

Dave Taylor

Group will be soliciting nominations for President-elect and Secretary

Preview 2019-2020 AMSPC Meeting

Michael Frohman President (2017-19)

Kauai, Hawaii – Jan 11-15, 2019 (Note dates are earlier than usual)

St. Thomas, US Virgin Islands – Jan 26-31, 2020



**Michael Frohman,
Stony Brook**