

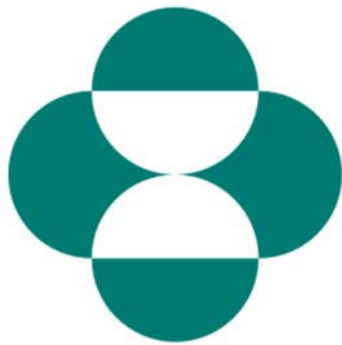


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4th ANNUAL
**TRANSLATIONAL
RESEARCH SYMPOSIUM**
January 31, 2020

Program & Abstracts

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The 4th Annual CNU Translational Research Symposium

January 31, 2020 8:00 AM-5:00 PM

Start Time	Duration	Agenda
8:00 am	45	Registration
8:45 am	15	Opening Remarks Dr. Alvin Cheung, PharmD, MHSA, CNU President
Oral Presentation Session 1 (Moderators: Drs. Xiaodong Feng (COP), Ruth Vinall (COP), Linh Ho (COP))		
9:00 am	45	<i>Keynote Speaker</i> Dr. Yuanpei Li, Ph.D., Associate Professor, UC Davis <i>Transformable Nano-Theranostics for Precision Cancer Imaging and Therapy</i>
9:45 am	20	Hang Nguyen, P2 Student, CNUCOP Summer Research Fellowship <i>Natural Plant Extracts Modulate OA-induced Steatosis in Human C3A (Hep2/C3A)</i>
10:05 am	20	Ayeh Barekat, P3 Student, CNUCOP Summer Research Fellowship <i>Pharmacodynamics of Ampicillin Against Enterococcus Faecalis Cultured with Escherichia Coli</i>
10:25 am	20	Steven Sprenger, M3 Student, CNUCOM <i>Induction of Adipogenic Genes by Novel Serum-free Conditions in Pre-adipocyte 3T3-L1 and ST2 Cells</i>
10:45 am	15	POSTER PRESENTATIONS - Coffee break
Oral presentation Session 2 (Moderators: Drs. Catherine Yang (MPS), Damon Meyer (CHS))		
11:00 am	20	Dr. Abdelbasset Farahat, CNUMPS Faculty <i>Indole and Benzimidazole Diamidines: Synthesis, DNA Binding and Antiparasitic Activity</i>
11:20 am	20	Emily Nguyen, M2 Student, CNUCOM <i>Generating a Stable Hepatitis B Virus Cell-based Infectious System for Drug Screening</i>
11:40 am	20	Nancy Le, 3+ BSMD Student, CNUCHS <i>Testing of the BRCA2 Protein in Repairing Double Stranded Breaks in rad52 Mutated Cells</i>
12:00 pm	60	POSTER PRESENTATIONS - Lunch Break
Oral Presentation Session 3 (Moderators: Drs. Yihui Shi (COM), Welly Mente (COP))		
1:00 pm	45	<i>Keynote Speaker</i> Dr. Paul Glassman, DDS, MA, MBA, Assistant Dean for Research, CNUCDM <i>On the Road to Value-Based Care Systems: Oral Health Care and Telehealth-Connected Teams</i>
1:45 pm	20	Dr. Gordon Sproul, PGY1 Resident, CNUCOP <i>Evaluating 30-day Surgical Site Infection (SSI) Rates Using Protocol-guided Timing and Dosage of Perioperative Antibiotics</i>
2:05 pm	20	Kyle Cartier, P1 Student, CNUCOP/CNUMPS <i>The Dual Role of the PARK2 gene: a Cross-talk between Neurological Disorders and Cancer</i>
2:25 pm	20	Elizabeth Browning, P3 Student, CNUCOP Summer Research Fellowship <i>Dysregulation of Nrdp1 Expression Levels and Cellular Localization Occurs in Prostate Cancer Patients and is Associated with Worse Patient Outcomes</i>
2:45 pm	60	POSTER PRESENTATIONS - Coffee break
Oral Presentation Session 4 (Moderators: Drs. Ahmed ElShamy (MPS), Shankar Chaturvedi (COP), Tuan Tran (COP))		
3:45 pm	20	Dr. Ghalib Aikhatib, CNUCOM Faculty <i>Low levels of HIV-1 envelope-mediated fusion are associated with long-term survival of an infected CCR5-/- patient</i>
4:05 pm	55	Awards for Poster and Oral Presentations
5:00 pm		Adjournment

Keynote Speaker Biography



Dr. Yuanpei Li is a tenured Associate Professor in the Department of Biochemistry and Molecular Medicine at the University of California Davis. He is also an active member at UC Davis Comprehensive Cancer Center. Dr. Li's group aims to 1) develop next generation nano-medicine platforms and novel therapeutics by learning from Mother Nature and clinical practices, 2) obtain fundamental knowledge on how these subjects interact with biological systems, and 3) apply them to solve complex medical problems that are associated with cancer and other diseases. These research projects integrate recent advances in interdisciplinary fields, such as nanotechnology, medicinal chemistry, material sciences, engineering and biology, to create innovative technologies and therapeutics. Significant efforts have also been devoted to the rapid "bench to bed side" translation of these innovative technologies and therapeutics that can tremendously benefit the health of human and companion animals. Dr. Li has successfully led four nano-formulations from the initial design to the stage of filing the Investigational New Drug (IND) application to the FDA for clinical trials in human. Dr. Li has published over 50 research papers and 3 book chapters and filed over 10 patents applications in the field of nanomedicine and molecular imaging. Many of his papers were published in high-impact journals, such as Nature Nanotechnology, Nature Communications, Advanced Materials, Angewandte Chemie and Biomaterials. Dr. Li has been the Principal investigator on 12 nano-medicine grants (total ~\$7 million) and the Co-investigator on 14 federal grants (> \$15 million total cost). He has received the Fellowship Award from the Department of Defense Prostate Cancer Research Program, multiple 5-year R01 awards from the National Institute of Health and a number of awards from UC Davis. Dr. Li is a member of the American Chemical Society (ACS), American Association for Cancer Research (AACR), Controlled Release Society (CRS) and World Molecular Imaging Society (WMIC). Dr. Li also serves as the reviewer for numerous high-rank journals and many NIH and DoD study sections for grant review.

Transformable Nano-theranostics for Precision Cancer Imaging and Therapy

Yuanpei Li¹, Xiangdong Xue¹ and Tzu-yin Lin²

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Nanoparticle-based theranostic agents are emerging as a promising paradigm towards personalized nanomedicine for disease- and patient-specific diagnosis and treatment. The integration of imaging and therapeutic functions into a single nano- formulation allows precise diagnosis of disease, individualized selection of treatment modality, real-time monitoring of drug distribution/delivery and assessment of therapeutic outcomes. Although conceptually impressive, these theranostic agents are still at an early stage of development. Concerns also remain with many multifunctional nanoparticles regarding complexity of fabrication, variations in formulations, limited *in vivo* stability, unfavorable biodistribution, limited ability to regulate release of payload and limited data on the fate and toxicity of nanocarriers once they enter the blood circulation. Furthermore, high background noise and lack of an amplification strategy to increase target signal output are major factors hampering advances in nanoparticle imaging functions. We have developed a series of highly innovative transformable nano-theranostics that were highly capable to circumvent the sequential biological barriers which had hindered the drug delivery to tumors. These nano-theranostics have intrinsic fluorescence and are able to chelate various metal ions for non-invasive “visualization” of tumor, drug delivery and therapeutic effect by magnetic resonance imaging (MRI) and near infrared fluorescence imaging (NIRFI). Moreover, the synergistic multi-modality therapy (photothermal-, photodynamic-, chemo- and immuno-therapies) with these nano- theranostics were demonstrated to be highly effective with high complete cure rate in a variety of subcutaneous and orthotopic cancer xenograft models. These nano- platforms with powerful delivery efficiency and versatile theranostic functions shows enormous potentials to improve cancer diagnosis and therapy.

Keynote Speaker Biography



Paul Glassman DDS, MA, MBA is the Associate Dean for Research and Community Engagement at the College of Dental Medicine at California Northstate University in Elk Grove, CA and Professor Emeritus at the University of the Pacific, Arthur A. Dugoni, School of Dentistry in San Francisco, CA. He has served on many national panels including the Institute of Medicine's (IOM) Committee on Oral Health Access to Services which produced the IOM report on *Improving Access to Oral Health Care for Vulnerable and Underserved Populations*.

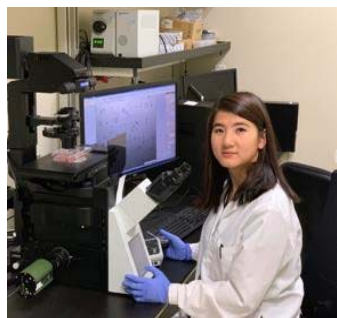
Dr. Glassman has had many years of dental practice experience treating patients with complex conditions and has published and lectured extensively in the areas of Hospital Dentistry, Dentistry for Patients with Special Needs, Dentistry for Individuals with Medical Disabilities, Dentistry for Patients with Dental Fear, Geriatric Dentistry, and Oral Health Systems reform. He has a long career working with special populations in a variety of practice and community settings. Dr. Glassman has been PI or Co-PI on over \$30 million in grants and contracts over the last 30 years devoted to community-service demonstration and research programs designed to improve oral health for people with disabilities and other underserved populations. Dr. Glassman has led the national movement to improve oral health using telehealth-connected teams and Virtual Dental Homes.

On the Road to Value-Based Care Systems: Oral Health Care and Telehealth-Connected Teams

The U.S. oral health care system primarily serves the wealthiest and healthiest segments of society. Those groups and individuals with the greatest burden of disease face many barriers in accessing oral health services in the traditional oral health delivery structures. At the same time, there are several promising developments in oral health care. These include increased focus on value-based outcomes, new materials and understanding in prevention, treatment, and behavior support science, and innovations in delivery systems including expanded roles for allied personnel and the use of telehealth-connected teams to “bring care to where people are.” All these trends and developments provide opportunities for CNU to receive funding and excel at community-delivery and translational science research.

ORAL PRESENTATIONS

Title: Natural Plant Extracts Modulate OA-induced Steatosis in Human C3A (Hep2/C3A)



Author: Hang Nguyen, College of Pharmacy, CNSU,
Hang.Nguyen2562@cnsu.edu

Advisors: Lakshmi Shankar Chaturvedi, Ph.D., Dept. of
Pharmaceutical & Biomedical Sciences-College of Pharmacy; Dept.
of Basic Sciences and Surgery-College of Medicine, CNSU
Lakshmi.Chaturved@cnsu.edu

Tibebe Woldemariam, PhD, Department of Pharmaceutical &
Biomedical Sciences, CNSU College of Pharmacy, Elk Grove CA,
TWoldemariam@cnsu.edu

Title: Pharmacodynamics of Ampicillin against Enterococcus faecalis Cultured with Escherichia Coli



Authors: Aye Barekat, College of Pharmacy, CNSU,
ayeh.barekat6108@cnsu.edu

Tiffany McMurtry, College of Pharmacy/MPS, CNSU,
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Parwinder Purewal, College of Pharmacy, CNSU,
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Fantasia Rodriguez, College of Pharmacy, CNSU,
fantasia.rodriguez2760@cnsu.edu

Advisor: Justin Lenhard, PharmD, College of Pharmacy, CNSU,
Justin.lenhard@cnsu.edu

Title: Induction of Adipogenic Genes by Novel Serum-free Conditions in Pre-adipocyte 3T3-L1 and ST2 Cells



Author: Steven Sprenger, BS, College of Medicine, CNSU

Advisors: Lakshmi S. Chaturvedi, PhD, Dept. of Basic Sciences and
Surgery-College of Medicine, NSU,
Lakshmi.Chaturved@cnsu.edu

Tibebe Woldemariam, PhD; College of Pharmacy, CNSU
Dinesh Vyas, MD, Chair, Department of Surgery, College of
Medicine, CNSU

Title: Indole and Benzimidazole Diamidines: Synthesis, DNA Binding and Antiparasitic Activity



Author:

Dr. Abdelbasset A. Farahat (presenter), Master of Pharmaceutical Sciences program, CNSU, Abdelbasset.Farahat@cnsu.edu

Title: Generating a Stable Hepatitis B Virus Cell-based Infectious System for Drug Screening



Authors: Emily Nguyen, College of Medicine, CNSU, Emily.Nguyen7991@cnsu.edu

Fatima Shabaan Yasin, College of Pharmacy, CNSU, Fatima.Yasin2916@cnsu.edu

Advisor: Ahmed El-Shamy, Ph.D., Master of Pharmaceutical Sciences, CNSU, ahmed.elshamy@cnsu.edu

Title: Testing of the BRCA2 Protein in Repairing Double Stranded Breaks in rad52Mutated Cells



Authors: Nancy Le (presenter), College of Health Sciences, CNSU, nancy.le3193@cnsu.edu

Husni Abdul-Rahman, College of Medicine, CNSU, husni.abdul-Rahman4444@cnsu.edu

Advisor: Damon Meyer, PhD, College of Health Sciences, CNSU, damon.meyer@cnsu.edu

Title: Evaluating 30-day Surgical Site Infection (SSI) Rates Using Protocol-guided Timing and Dosage of Perioperative Antibiotics



Author: Gordon C. Sproul, Pharm.D. Sutter Medical Center
Sacramento, sproulg@sutterhealth.org

Advisor: Andrea Brizee, Pharm.D., BCPS. Sutter Medical Center
Sacramento, brizeea@sutterhealth.org

Title: The Dual Role of the PARK2 Gene: a Cross-talk between Neurological Disorders and Cancer



Author: Kyle M. Cartier, Master of Pharmaceutical Sciences, CNSU,
Kyle.Cartier6198@cnsu.edu

Advisor: Simeon O. Kotchoni, PhD, Master of Pharmaceutical
Sciences, CNSU, simeon.kotchoni@cnsu.edu

Title: Dysregulation of Nrdp1 Expression Levels and Cellular Localization Occurs in Prostate Cancer Patients and is Associated with Worse Patient Outcomes



Author: Elizabeth Ann Browning, College of Pharmacy, CNSU
elizabeth.browning3699@cnsu.edu

Advisor: Ruth Vinal, PhD, Department of Pharmaceutical &
Biomedical Sciences, College of Pharmacy, CNSU, rvinal@cnsu.edu

Title: *Low Levels of HIV-1 Envelope-mediated Fusion Are Associated with Long-term Survival of an Infected CCR5-/- Patient*



Author: Ghalib Alkhatib, College of Medicine, CNSU
Ghalib.Alkhatib@cnsu.edu

POSTERS

Poster #	Presenters	Abstract Title	Contact
1	Aarin Thuan Pham Hoang, Barkha Tiwana	Decreased Use of Opioid with Vibration Anesthesia Device in Upper Lid CO2 Laser Blepharoplasty	aarin.phamhoang6308@cnsu.edu
2	Aaron Downs, M.D	Cadaver with an Azygous Lobe: Anatomy and Significance	aaron.downs4122@cnsu.edu
3	Arya Asghari, Dorsa Heydarlou	A Comparison Of Skin Thickness And Hair Quality In Patients With Scarring Versus Non-Scarring Alopecia	arya.asghari6812@cnsu.edu
4	Eugene Kreys, PharmD, PhD, BCPS	Comparing Fall Risk Among Antiepileptic Drugs in the Elderly: A Nested, Case-Control Study of a Medicare Database	ekreys@cnsu.edu
5	James A. Lugtu, BS	Identifying Risk Factors for Hydrocodone and Illicit Drug Abuse in the U.S. to Facilitate Prevention Planning	jamesalexander.lugtu8822@cnsu.edu
6	Janie Yu	PBPK and its Virtual Populations: Prediction of Pediatric Furosemide Dose Using SimCyp®	janie.yu1236@cnsu.edu
7	Jinjing Cheng	Efficacy and Safety of Transitioning From Clonidine to Dexmedetomidine in Mechanical Ventilation	jinjing.cheng@cnsu.edu
8	Muhamod Saied, PharmD	A Retrospective, Observational Study Evaluating Cost Efficacy, Safety and Use of Single Dose Vials Versus Prefilled Syringes	Muhamod.saied@tu.edu
9	Peter Alexieff	Bilateral Incomplete Duplicated Ureters in a Male Cadaver- a Case Study	matthew.golden5606@cnsu.edu
10	Tiffany On	Implementing Discharge Pharmacy Services for Reducing Readmission Rates and Patient Harm	tiffany.on@cnsu.edu
11	Dr. Tuan Tran	Revealing Trends of Overdose Deaths and Opioid Prescriptions via Google Keyword Search	tuan.tran@cnsu.edu
12	Dr. Tuan Tran	Machine Learning Based Method for Accurate Prediction of Breast Cancer	tuan.tran@cnsu.edu
13	Alexander Nguyen	Antiproliferative Effects of Carfilzomib on Human HT-29 Adenocarcinoma Colon Cancer Cells	Alexander.Nguyen3924@cnsu.edu
14	Anhao Sam	Dysregulation of the AR-Nrdp1-ErbB3 axis occurs in African American prostate cancer patients and is associated with worse outcomes	Anhao.Sam6546@cnsu.edu
15	Hang Nguyen	Carfilzomib is a more potent anticancerous drug than Doxorubicin in human non-small cell lung cells	Hang.Nguyen2562@cnsu.edu
16	Hannah Neiger	A Review of Synthetic Lethality and Cancer Therapy	Hannah.Neiger6774@cnsu.edu
17	Mollee Chu, Mariam Soni	A Surveillance, Epidemiology, and End Results Analysis of Long Term Patient Outcomes with External Beam Radiation Therapy ± High-Dose Brachytherapy for Squamous Cell Carcinoma of the Vulva	mariam.soni1481@cnsu.edu
18	Neelu Batra	Bioengineering MicroRNA-298 and Anti-miR-126 Agents for Cancer Therapy Research	nbatra@ucdavis.edu
19	Neha Khatter	Using the CRISPR Cas 9 System to benefit CAR-T Cell Immunotherapy in Acute Lymphoblastic Leukemia (ALL)	Neha.Khatter6214@cnsu.edu

20	Dr. Seyed Saeid Zamanieh Shahri, MD	Evaluation of Gene Oct4 Expression in Pancreatic Cells and Human Pancreas Tumor	saeid.zamanieh@cnsu.edu
21	Victor Cuyugan Changcoco	Anticancer Potential of Carfilzomib, a Proteasome inhibitor on Human Caco-2 Colon Cancer Cells	Victor.Changcoco8745@cnsu.edu
22	Abdelbasset Farahat, Ph.D.	Modifications of σ -Hole Type DNA Minor Groove Binders Structure Effects in Binding Specificity and Affinity	Abdelbasset.Farahat@cnsu.edu
23	Bahaar Muhar	Ependymal Cell Response after Acute Neutralization of C1q in Spinal Cord Injured Foxj1CreERT2-tdTomato Reporter Mice.	bahaar.muhar6811@cnsu.edu
24	Dr. Hongbin Wang	Complement activation fragment C4a inhibits LPS-induced signaling in human monocytes and endothelial cells	hongbin.wang@cnsu.edu
25	Jennifer Huang, Jennifer Magness	Sirt3 Regulates Insulin Signaling Pathway in Adipocytes	Jennifer.vela4492@cnsu.edu
26	Michelle Moyseyev Senderovich	Therapeutic effects of glatiramer acetate and grafted CD115+ monocytes in a mouse model of Alzheimer's disease	michelle.senderovich6810@cnsu.edu
27	Tram Hoang	Sirt3 Regulates Adipogenesis and Adipokine Secretion via Its Enzymatic Activity	tram.nguyen6775@cnsu.edu
28	Ayeh Barekat M.S, Elizabeth Ann Browning B.A	A Review On The Integration of Cannabidiol Into Pharmaceutical Care	ayeh.barekat6108@cnsu.edu
29	Ajay M. Patel, B.S	Aqueous Extract of Ocimum Sanctum L Inhibit Cell Proliferation and Modulate Cell Cycle Regulatory Cyclin Genes in Human Triple-Negative Breast Cancer Cells	Ajay.Patel9812@cnsu.edu
30	Nhi Duong	Aqueous Astragalus Extract Inhibits Proliferation and Differentiation of 3T3-L1 Adipocytes.	nhi.duong9826@cnsu.edu
31	Steven Sprenger, B.S	Lemongrass Essential Oil and its Major Constituent Citral and Citral Derivatives Modulate Adipogenic Gene Expression in 3T3-L1 Preadipocytes	steven.sprenger3881@cnsu.edu
32	Tin Le	Barberry Inhibits Prostate and Breast Cancers via Inhibiting Sirt3 and AKT Pathway	Tin.Le3006@cnsu.edu
33	Aiza Anwar, Janet Lee-Coomes	Autoinflammation of Human Retinal Endothelial Cells: HMGB1 Expression in Hyperglycemic Conditions	aiza.anwar7088@cnsu.edu
34	Dr. Fitsum Feleke Sahle	Synthesis and Evaluation of Stimuli-Responsive Nanogels for the Treatment of Diabetic Retinopathy	fitsum.sahle@cnsu.edu
35	Hannah Tran, Ruthy Tran	Selective S1P3 Receptor Antagonism inhibits S1P3 Agonist-induced Cell Proliferation of Fibroblast Cells, as a Drug Target Approach for Intestinal Fibrotic Crohn's Disease	Hannah.Tran4836@cnsu.edu

36	Mary Jabari	Role of the SIX6 Transcription Factor in the Pathogenesis of Glaucoma	Mary.Jabari6725@cnsu.edu
37	Mary Jabari	Removal of Early Senescent Cells to Protect Retinal Ganglion Cells in Glaucoma	Mary.Jabari6725@cnsu.edu
38	Mary Jabari	Understanding the Mechanism of Age-related Macular Degeneration	Mary.Jabari6725@cnsu.edu
39	Michael Kent	Klebsiella pneumoniae carbapenemase (KPC)-producing Escherichia Coli Shield Staphylococcus Aureus and Enterococcus faecalis from beta-lactam Exposure	Michael.kent3017@cnsu.edu
40	Summer Faria	Using Non-Invasive Cardiac Output Monitoring System To Evaluate Net Fluid Balance Compared To Usual Care In Sepsis Patients	summer.faria@cnsu.edu
41	Arianne Dagdag	Genetic Variations & Clinical Effectiveness of Anti-PCSK9 Medication; a Clinical Case report Study.	arianne.dagdag9568@cnsu.edu
42	Hassan Alshiyab, PharmD	Targeted miR-146a; An Innovative Treatment Modality for Shear Stress-induced Vascular Inflammation.	hassan.al-shiyab6803@cnsu.edu.
43	Tony Joseph Eid, Pharm.D	Topical Lidocaine Patches May Induce QTc Prolongation in a Patient with Cardiac Ischemia	ashim.malhotra@cnsu.edu
44	Vanessa Ho, M.S	Time To Benefit For Stroke Reduction After More Intensive Blood Pressure Control In Older Adults	Vanessa.Ho5618@cnsu.edu
45	Vy Tran Luu	Phorbol 12-myristate 13-acetate Dedifferentiates Human Cardiac Myofibroblasts to Fibroblasts	Vy.TranLuu4045@cnsu.edu
46	Anand Singh, Ishaq Aslam	Asian Clam Adaptations in Response to Environmental Pollutants	Anand.Singh9825@cnsu.edu
47	Lauren Hisatomi	Disease Ecology and Diversity of Native Bees in Sacramento	kristopher.keane@cnsu.edu
48	Natalí Chávez	Using Novel Mitogenome Capture To Analyze Genetic Diversity Of The Endangered Southern River Otter	natali.chavez6766@cnsu.edu
49	Ashim Malhotra, Pharm.BS, M.S., Ph.D	Implementing and Assessing a Faculty Development Workshop in Online and Hybrid Course Design	ashim.malhotra@cnsu.edu
50	Ashim Malhotra, Pharm.BS, M.S., Ph.D	High-Fidelity Simulation as a Novel Integration Tool for the CNUCOP Pharm.D. Curriculum	ashim.malhotra@cnsu.edu
51	Islam Mohamed	Impact of Decoding Medication Tradenames on Students' Performance; a Feasibility Study.	islam.mohamed@cnsu.edu
52	Jeffrey Nehira, BS, PharmD, FCSHP	Implementation and evolution of a student-driven mentorship program in the CSHP-Sacramento Valley chapter.	Jeffrey.nehira@cnsu.edu.
53	Tiffany-Jade Kreys, Pharm.D	Mapping the Co-Curriculum to C.A.P.E. Outcomes and ACPE Standards 3 and 4	ashim.malhotra@cnsu.edu