15th ANNUAL STUDENT RESEARCH POSTER PRESENTATIONS
Tuesday, 19 April 2011
SABBATINI LOUNGE OF THOMAS CENTER – CHRISTIAN BROTHERS UNIVERSITY

Courses and Participating Faculty

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Mentor</th>
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<tbody>
<tr>
<td>CE</td>
<td>Civil Engineering CE432</td>
<td>Dr. K. Madhavan</td>
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<tr>
<td>CHEM</td>
<td>Chemistry Research Senior Seminar 431</td>
<td>Dr. Dennis Merat</td>
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<tr>
<td>ECE</td>
<td>Electrical and Computer Engineering 410</td>
<td>Dr. John Ventura</td>
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<tr>
<td>MATH</td>
<td>Mathematics Senior Seminar 482</td>
<td>Ms. Cathy Carter</td>
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<tr>
<td>ME</td>
<td>Mechanical Engineering 408</td>
<td>Dr. Ray Brown</td>
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<tr>
<td>MHIRT</td>
<td>Minority Health International Research Training</td>
<td>Dr. Malinda Fitzgerald</td>
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<tr>
<td>NSCI</td>
<td>Natural Science Seminar 410/411</td>
<td>Ms. Lynda Miller</td>
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</tbody>
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STUDENTS WILL BE PRESENT AT THEIR POSTERS
- Even numbered boards 12:30 – 1:00 pm
- Odd numbered boards 1:00 – 1:30 pm
General Reception for faculty, students and mentors 12:30 -1:50

** Dominic Dunn Award Announcement by Dr. Johnny Holmes @ 12:45 pm **

1. NSCI Tolerance and Withdrawal Effects of Zolpidem and Diazepam on Mice Regina A. Smith
2. ME SFI Renovation Marcus Sims
3. MATH Active Paths from Graph Theory to Origami Rance Alan Killen*
4. NSCI Effects of Acne & Rosacea on Skin pH Teri Lewis
6. BIOL/ MHIRT The Importance of Maned-Wolf Fruit (Solanum lycocarpum) for Mammals of the Brazilian Cerrad. Jennifer Cobb*, Marina Zanin, Natalia M. Torres and Leandro Silveira
7. NSCI The Effects of Chinese privet on Shelby Farms Forest Justin Hopper
8. BIOL The Human Impact On Sea Turtles In The Gulf Meagan E. Lamicia*, and Danielle O’Neil
9. CE Design of a 2011 ASCE Deep South Steel Bridge Competition Mallory Bailey
10. BIOL/ MHIRT Extinction Of Olfactory Fear Conditioning In Rats. Vanessa K. Walker*, A.P. Carobrez, Rimenez de Souza, and Julianna Kroon
11. NSCI Effects of Tick Saliva on Secretion of TNF alpha from Mouse Macrophages Kaylea Brewer
12. CHEM II-6 Production by Airway Smooth Muscle Cathlyn Chan* and Rennolds Ostrom
13. BIOL The Blocking Effect In The Dorsal Prefrontal Cortex Of Rats Cheryl Clause*, Wen-lin Sun, and YueQiang Xue
14. NSCI The Effect of Light on the Life Cycle of Artemis nyos SadeDora Rogers
15. BIOL Prevalence Study Of Avian Viruses in Benin and Togo, West Africa Bridgett R. Sharp*, Mariette Ducatez, and Richard Webby
16. ME Instruments for a Midline Approach to Minimally Invasive Spinal Surgery Jacob Zimmerman
17. CHEM Expression Analysis of Genes Using Real-Time PCR. Casey Carr*, and Burt Sharp
18. NSCI Effects of Temperature on Efficiency of Mosquito Insecticides Caleb Burrow
19. BIOL Effect Of A Functional Ph1-F2 Protein On Viral RNA Expressions Of The 2009 Pandemic H1n1 Virus. Mary J. Dickey*, Henju Marjuki and Robert Webster
20. ECE Tech2Exec Dictionary iPhone Application Max Karimnia
22. PHYS Field Suitability of a Compact Spectrometer Daniel E. Benson
23. BIOL Using Glaucoma-Related Phenotypes Of Mice To Identify Genes That Control The Severity Of Glaucoma. Natalie E. Hurt* and Monica Jablonski
24. NSCI Effects of Probiotics on the Digestive Tract of Ayshwater Darters Samantha De Melo
26. ECE RFID Security System for Vehicles at CBU Ian Withrow
27. BIOL Mutation Analysis of THAP1 Gene in Dystonia Patients. Carrie A. Le*, Jiangfeng Xiao, and Mark S. Ledoux
28. CHEM Calcium Binding Properties and Changes in Expression of a High Molecular Weight Protein from flex opaca DeMario Smith* and Dennis Merat

Special Thanks to all the Mentors and Funding Agencies.

Thanks to Alpha Chi Honor Societies for sponsorship.

*AX Members identified with gold seal on poster and *
29. NSCI
Comparison of Four Treatment Modalities for Vitamin D Deficiency in Dermatologic Skin Types 5 and 6.
Brea T. Bowers*, Robert Skinner, Patricia Adams-Graves, William Rosenberg, Robert Sayre, and Beverly Williams-Cleaves

30. BIOL
The Role of Arterial Myocyte Membrane Cholesterol in Ethanol-Induced Cerebrovascular Constriction.
Matt Jackson*, Anna Bukiya, and Alex Dopico

31. ECE
Mobile Sun Tracking Solar Panel
Robert Aleks and Adam Blair

32. CHEM
Validation of a Fluorescent Dye Based Assay
Yandira Salinas*

33. BIOL
Impact of Halo Vest Stabilization in Patients with Blunt Cervical Spine Fractures.
Kyle Hayes*, Martin Croce, and Louis Magnotti

34. NSCI
Headaches as a Symptom with TMJ Disorder and the Likelihood of Reduction and/or Resolution of the Headaches with Active Treatment
Jessica Benson

35. BIOL
Effects of High Cholesterol Diet on Cholesterol Levels in Rat Smooth Muscle Arteries of Variant Diameter
Amanda Fitzgerald*, Maria Asuncion-Chin, Anna N. Bukiya, and Alex M. Dopico

36. CE
Design and Construction of a Concrete Canoe
Rance Alan Killen*

37. NSCI
The Effect of Acid Rain on Earthworms (Lumbricus terrestris)
Rachel Norris

38. BIOL
Analysis of the Frequency of Cystic Fibrosis Transmembrane Conductance Regulator (CFTR) Gene Mutations in the African-American Population in Memphis
Matthew G. Charles* and Anjaparavanda P. Naren

39. CHEM
Determining Agonists and Antagonists for Sphingosine-1-Phosphate on the S1P1 Receptor.
Erik Scott*, and John Young

40. NSCI
Metal Ion Binding to High-Energy N12C4
Zamrya Lambert

41. CHEM
Nanocomposites With High Aspect Ratios: Multilayered Versus Conventional
Sergio Nazarenko, Yingju Wu, Jeremy Decker, Justin Burt*

42. ME
Pommel Horse/Mushroom Circle Trainer
Adam Zysk

43. CHEM
Enlivening Chemistry in Memphis City Schools
Catherine Gluzsek*

44. NSCI
Temperature and Time Effect on Germination of the Ginkgo biloba
Jeffrey Kaldahl

45. CE
Design of Bridge over a Stream Leading to a School
Catherine Wood

46. CHEM
Method Development and Validation for BKM120 in Mouse Plasma and Cerebrospinal Fluid by Liquid Chromatograph Tandem Mass Spectrometry
Jack Land*, Feng Bai, and Clinton Stewart

47. MATH
Folding Math Together: An Exploration of Modular Origami
Brittany Course

48. CHEM
Synthesis of Pharmaceutical Derivatives from Tetrahydrofuran
Chris Colanero*, George Kvakovszky

49. NSCI
The Effects of Chinese privet on Shelby Farms Forest
Justin Hopper

50. ECE
Autonomous Emergency Response Robot
Lindsey Hodges, Wani Hakim, and Nate Phillips

51. ME
The Universal First Strike Round Adapter
Matthew McKnight

52. NSCI
The Transmission of Bacteria Within a Sealed Air Compartment as a Model for Respiratory Disease Transmission in an Aircraft
Kimberly Patton

53. ME
Mini-Baja
Jeffrey Dove, Robinson, Sambhav Gada, Sam Noland, and Jeremy Hopkins

54. NSCI
The Effects of Adderall and Ethanol on Locomotory Behavior in Drosophila Melanogaster
Tammy Jeans

55. CE
Design of a Distribution Warehouse
Joseph Boyer

56. BIOL
The Effects of Anthropogenic Chemicals on the Chytrid Fungus (Batrachochytrium dendrobatidis) in Culture
Madison Cao* and Dr. Matthew Parris

57. NSCI
Mutated Genes of Congenital Stationary Night Blindness
Victoria Bujalski

58. ME
CBU Moonbuggy 2011
John Wesley Hall, Kyle Edmundson, Sean Buonanno, Yu Cai, Gerald Paige

59. ME
Cervical Retractor
Chris Tran

60. NSCI
Isolation of Lectin from Agkistrodon piscivorus leucostoma (Western Cottonmouth Moccasin) Venom
Puja Karawadra

61. BIOL
The Determination of Vitamin D Analogs for the Possible Treatment of Diseases Without Calcemic Side Effects
Kathleen Nelson

62. BIOL
Optimization of the Synthesis of Nanocapsules Containing pH-sensitive Indicator Dyes
Brandon Mahanney