From the Provost
Welcome to ACU’s second annual Undergraduate Research Festival! Whether you are competing in the Festival or judging entries in the competition or simply viewing and admiring students’ work, we welcome you to this event. The Undergraduate Research Festival celebrates some of the very best work of our students – work that showcases their skills and abilities and demonstrates the results of their intellectual curiosity. We celebrate the students’ creativity and critical thinking, and we applaud the partnerships with many faculty who have mentored the students in their research. Congratulations to all our undergraduate researchers!

Dr. Jeanine Varner, ACU Provost

From the Director
It is a pleasure for the new ACU Office of Undergraduate Research to join with others in hosting the Festival this year. Many hours of preparation have gone into making this event a special time to showcase the work of our students who have used their God-given talents to investigate, analyze, probe, test, explore, discover, apply, create and produce. Increasing numbers of students and faculty members are getting involved in such scholarly and creative activities as we build upon a campus-wide culture of innovation. Thank you for participating in the Festival. Enjoy the celebration!

Dr. Greg Powell, Director, Office of Undergraduate Research
Monday, April 12
Hunter Welcome Center, Rooms B and C

8:00
How Microwave Heating Can Improve the Synthesis of an Anti-Cancer Agent, Jade Jung C
Faculty Mentor: Dr. Greg Powell, Chemistry & Biochemistry

Online Gaming and Life Satisfaction: A Social Study of World of Warcraft, Barrett Lawson, Jordan Traub C
Faculty Mentor: Dr. Jennifer Shewmaker, Psychology

8:15
Microwave Assisted Reaction of Alcohols with Osmium Carbonyl, Kayla Jean Pyper B
Faculty Mentor: Dr. Greg Powell, Chemistry and Biochemistry

Bridging Communities with Local Food: Perceptions from Abilene-Area ‘Locavores’, Samuel Palomoares, Elizabeth Kaszynski, Chris Stephenson C
Faculty Mentor: Dr. Jonathan W. Camp, Communication

8:30
Discrete Logarithm Problem over Composite Moduli, Marc Macie B
Faculty Mentor: Dr. David Hendricks, Mathematics

Book selection: Implications for readers and reading instruction, Katie Morgan, Ashleigh Devoe C
Faculty Mentor: Dr. Sheila Delony, Education

9:00
Vertex and track reconstruction for the NIFFTE TPC, Sarvagya Sharma B
Faculty Mentor: Dr. Rusty Towell, Physics

Across the Universe—or the Atlantic, at least: A Comparative Study of American and Western European Mass Communications, Laura Acuff C
Faculty Mentor: Dr. Susan Lewis, Journalism and Mass Communication

9:15
An Analysis of The Correlations Between The Popularity of Facebook and Its Reasons For Use, Sandra Amstutz, Ben Word B
Faculty Mentor: Dr. Susan Lewis, Journalism and Mass Communication

Considering Age and Gender: A Comparative Content Analysis of the Sexualization of Teen Celebrity Websites, Kyree Matthews, Ashley Small C
Faculty Mentor: Jennifer Shewmaker, Psychology

9:30
Instances of Anger: The Tool of Anger in Little Women, Allison Fowler B
Faculty Mentor: Dana McMichael, English

iPhone and iPad Research, Brittany Rae Ellen Kight
Faculty Mentor: Brian Burton, iSchool

10:00
The effects of light on the symbiotic relationship between Aiptasia pallida and Symbiodinium with respect to the phototactic behavior of the host organism, Amber Deschamps B
Faculty Mentor: Dr. Tom Pirtle, Biology

The Authoritarian Voice in the Speech of College-Aged Women, Erin Haltread C
Faculty Mentor: Nancy Shankle, English

10:15
Return of the Thought Police: 1984 or 2010?, Joel Dallas B
Faculty Mentor: Dr. Laura Carroll, English

Simulations of the NIFFTE Time Projection Chamber, Tyler Thornton C
Faculty Mentor: Rusty Towell, Physics

10:30
“Literally” Speaking: Reason, Metaphor, and Exaggeration in Conflict, Joshua Alkire B
Faculty Mentor: Dr. Bill Carroll III, English

Altering Beamline Components to Reduce the Cost of Prostate Cancer Treatment, Timothy Jones C
Faculty Mentor: Wayne D. Newhauser, Radiation Physics at UT M.D. Anderson Cancer Center

11:00
Undergraduate Research Festival Chapel with Dr. Richard Beck, Psychology B

11:30-12:30
Luncheon A

1:00
An Examination of the Relationships Between Parental Closeness, Media Exposure and Adolescent Female Sexualization, Brit’ny Spain, Brittany Banks, Hilary Standish B
Faculty Mentor: Dr. Jennifer Shewmaker, Psychology

Enterroccoccus Faealis 3-Hydroxy-Methylglutaryl HMG-CoA Synthase: Mutagenesis, Purification and Characterization of Mutant Enzymes A110G/ D184A and D181N, Funmilayo Adebisin C
Faculty Mentor: Dr. Autumn Sutherlin, Chemistry and Biochemistry

1:15
Energy Transfer, Fragmentation and Chemical Reactivity of Peptides with Modified F-SAM Surfaces, Kelsey Young B
Faculty Mentor: Dr. Eric Hardegree, Chemistry and Biochemistry

I Am Girl, Hear Me Squeak, Megan Faver Hartline C
Faculty Mentor: Dr.Bill Carroll, English

1:30
Improving the Accuracy of Neutron Multiplicity Counting, Scott Stewart B
Faculty Mentor: Dr. Rusty Towell, Physics

Effects of Religiosity and Media Use in Adolescents, Sarah Kratzer C
Faculty Mentor: Dr. Jennifer Shewmaker, Psychology

2:00
Japanese Relocation in World War II: The Jerome and Rohwer Experience, Margaret Moore B
Faculty Mentor: Dr. Vernon Williams, History

2:15
Difference of Opinion: A History of Editorial Writing in the Optimist, Chelsea Hackney B
Faculty Mentor: Dr. Kenneth Pybus, Journalism and Environmental Sciences

Use of a Naturally Occurring Source of Sulfur to Control Gastrointestinal Nematodes in Small Ruminants, Jason C. Davis C
Faculty Mentor: Dr. Florah N. Mhlanga, Agricultural and Environmental Sciences

2:30
The Importance of Effective Professional Development, Michelle Woods, Ashley Henderson B
Faculty Mentor: Dr. Sheila Delony, Education

Quality Control of the PHENIX Resistive Plate Chambers being Produced for Particle Detector Upgrade, Ryan Wright C
Faculty Mentor: Dr. Rusty Towell, Physics

3:00
The Monster Within: The Role of Roman Catholic Concepts of Sin in The Picture of Dorian Gray, Katherine Sinclair B
Faculty Mentor: Dr. Bill Carroll, English

Teenage Dating Online, Jamalin Harp, Sam Wright, Ashley Wheeler C
Faculty Mentor: Dr. Susan Lewis, Journalism and Mass Communication

3:15
Baptism, Repentance, and the Forgiveness of Sins: Resolving the Issues of Acts 2:38, Morgan E. Philpott B
Faculty Mentor: Dr. Curt Niccum, Bible, Missions and Ministry

Dig-ga Dut Dig-ga Dut Dut: Drumming with Steve Reich, David Degge C
Faculty Mentor: Staci Spring, Music

3:30
Archiving QC Tests in the PHENIX RPC Assembly Facility, Keller Andrews C
Faculty Mentor: Dr. Rusty Towell, Physics

6:00-8:00
Undergraduate Research Festival Banquet B,C
Speaker: Dr. Kevin Gardner, Professor of Biochemistry and Pharmacology in the Graduate School of Biomedical Sciences at UT Southwestern Medical Center
Topic: “Why Knowing How Plants See Tells Us Something Important about Cancer: Biophysics as a Tool for Understanding how Biology Works”