

The Sixth Annual



FRIDAY, 30 MARCH 2007

PETTENGILL HALL

CHASE HALL GALLERY ~ OLIN ARTS CENTER ~ SCHAEFFER THEATRE
BATES COLLEGE

The Mount David Summit

The Mount David Summit is an annual celebration of student research, service-learning, and creative work at Bates College. Each year students from all classes present their work to each other and to faculty, staff, family, and community members in a symposium format at the end of the winter semester.

The Summit spotlights the rich and varied academic activities of Bates students across the disciplines, and honors the vibrant intellectual life of the College.

Named for the landmark "mountain" on the campus, the Summit is guided by the motto of the College

—Amore ac Studio—

*loosely translated, With Love and Zeal, With Ardor and Devotion—
devotion to scholarship, creativity,
and the life of the mind.*

The Summit is sponsored by the Office of the Dean of the Faculty with generous funding from a grant from the Howard Hughes Medical Institute, support from the Mellon Learning Associates Program, and a gift from Ralph T. Perry '51 and Mary Louise Seldenfleur.

Poster Presenters

2:45 - 4:00 PM

Poster Session I

Kenneth Adams '07	The ANCA Enigma: A Study of the Etiology of Wegener's Granulomatosis
Oleg Alekseev '07	Nuclear Autoantigenic Sperm Protein Affects the Expression of Estrogen-Responsive Genes
Katheryn Black '07	Effects of Educational Barriers on Young Adults in Maine
Elizabeth Brady '07	Tools for Studying the Mechanism of Selective Alkane Oxidation
Monique Brown '07	HIV/AIDS in South Africa and the Public Health Efforts
Mary Bucci '07	Public Opinion of Women in the 2000 and 2004 Presidential Elections
Caroline Bullock '07	An Examination of Effective Assessments to Adequately Measure Student Understanding in High School Biology
Rashel Burton '07	Utilization of n-Pentenyl Glycosides in the Synthesis of Disaccharides
Amanda Chisholm '08, Gregory Henkes '08, Dashiell Hibbard '07, Taimur Khan '07, William Locke '08, Pritesh Patel '07, Alexander Smith '07, Kristina Stafstrom '09, and Benjamin Umiker '07	Plant Physiology Class Projects
Lillian Conover '07	Investigation of Martin's Sulfurane as an Oxidizing Agent
Sulochana Dissanayake '09	Friends of Prisoners' Children of Sri Lanka
Akiko Doi '07	Mechanism of Encephalomyocarditis Virus Protein Concentration Regulation
Jessa Doleac '07	Long-Term Changes in <i>Glycera dibranchiata</i> Abundance at a Protected Mudflat in Wiscasset, Maine, USA, and the Effects of Commercial Baitworm Digging on Benthic Communities
Keith Egan '07	An Investigation of the Microbial Populations Found in Fog in Southern Maine
Jeanethe Falvey '07	The Politics of Hunger: Food Riots in Industrializing States
Lucas Feinberg '07	Effect of Baitworm Digging and Epibenthic Predation on Soft Shelled Clam <i>Mya arenaria</i> Growth and Survival
Christine Fletcher '07	Marine Science Education
Kay Gonsalves '07	Identification of a Putative Dioxin Response Element in the Promoter Region of the Human Beta-Adrenergic Receptor Gene
Samantha Haaland '07	Intraventricular Hemorrhage in Premature Neonates
Elizabeth Hamm '07	The Reflection of Global Trends toward Local and Sustainable Agriculture in Maine

Gregory Henkes '08	Investigating Feasibility of Acoustic Telemetry and Habitat Use of Adult Hickory Shad, <i>Alosa mediocris</i> , in the Mullica River/Great Bay Estuary, New Jersey
Gregory Henkes '08	Shifts in the $\delta^{13}\text{C}$ Signal of Greenland Cockle <i>Serripes groenlandicus</i> Shell Organic Matter: An Indicator of Intra- and Inter-annual Changes in Primary Production in the Arctic Ocean?
Gary Kan '07, Zachary Lapin '08, and Binit Malla '08	The Study of Polarization Dynamics of a Multi-Mode Vertical-Cavity Surface-Emitting Laser
Benjamin Lepesqueur '07	Limnology of a Small New Hampshire Lake
Ann Lovely '07	Chiral NMR Discrimination of Secondary Amines with (18-crown-6)-2,3,11,12-Tetracarboxylic Acid
Katherine Luddy '07	Probing Monooxygenase Mechanisms Using Diagnostic Substrates
Jordan Manly '07	BRCA-Associated Breast Cancer
Atdhe Matoshi '07	The Use of Chemosensitivity and Resistance Assays for Predicting More Effective Treatment Protocols for Cancer Patients
Taegan McMahon '07	The Effects of Acid Rain on the Growth and Morph-Out Rates of <i>Epipedobates tricolor</i> Tadpoles
Peter Meisel '07	Investigation into Beat Rate and β 2-Adrenergic Receptors mRNA Levels Following β -Naphthoflavone Exposure
Hannah Meyer '07	Improving the Water Quality of the Androscoggin River: Efforts and Effectiveness of the Natural Resources Council of Maine and the Androscoggin River Alliance
Brooke Miller '07	Respiratory Plasticity after Perinatal Hyperoxia is Not Prevented by Antioxidant Supplementation
Gabriela Muñoz '07	Boat Activity Affects Bottlenose Dolphin <i>Tursiops truncatus</i> Behavior in Mississippi Sound
Courtney O'Farrell '07	Tetra-sulfonated Calix[4]resorcarenes as Chiral Solvating Agents in NMR Spectroscopy
Tobechukwu Okoye '07	Journey to the Promised Land: Finding the Best Home
Zaw Oo '07	Expression of Hemoglobin in <i>Daphnia magna</i> is Influenced by Interactions
Pritesh Patel '07	Chemo-Preventive Effects of Curcumin on Chemically Induced Cell Proliferation
Mariah Pfeiffer '07 and Michael Wilson '07	Oral Histories
Samantha Piro '07	Effects of Perinatal Hyperoxia on Ventilation and Carotid Body Growth in Rats

Rachael Pool '07	Capabilities Approach to Family Planning in Tamil Nadu, India
Alissa Praggastis '07	Purification of Encephalomyocarditis Viral Proteins 3CD and 3D RNA Polymerase
Kyle Rogers '07	Optimization of an Ideal Permanent Magnet Synchronous Elevator Motor
Julia Shelkey '07	The Effect of Cranberry Juice on the 160kDA Hemagglutinin of <i>Staphylococcus saprophyticus</i>
Aubrey Smith '09	Cloning of Glutamate Receptors in the Pond Snail <i>Biomphalaria glabrata</i>
Ann Speers '07	The Long- and Short-Term Effects of Baitworm <i>Glycera dibranchiata</i> Digging on Nutrient Cycling in the Intertidal Flats of Maine, USA
Samuel Taylor '07	Modeled Patterns of Atmospheric Deposition as Seen through Metal Concentrations in the Organic Soil Horizons of Acadia National Park, ME
Christopher Theile '07	Synthesis of a Spiroketal Enol Ether Natural Product
Kaitlyn Tucker '10	Nature in Russian Culture
Benjamin Umiker '07	Membrane Proteins of <i>Trypanosoma brucei</i> in Tsetse Fly Host
Aubrey Van Kirk '07	Metabolism of 1,4-butanediol, a GHB Analog, Using a Rat Model
Joseph Warren '07	Harvest Size, Growth, and Harvest Efficiency of the Bloodworm <i>Glycera dibranchiata</i> from Intertidal Mudflats in Midcoast Maine
Rebecca White '07	The Potential of ROS as Therapeutic Agents in the Treatment of Cancer
Christine Woll '07	Effects of Baitworm <i>Glycera dibranchiata</i> Harvesting on Infaunal Density and Diversity on Two Intertidal Mudflats in Midcoast Maine
Weili Zhang '07	Pathogenic Differences between Ebola-Zaire and Ebola-Reston Due to Genomic Variation in Viral Glycoprotein

Poster Presenters

4:00 - 5:45 PM

Poster Session II

Kimberley Alexander '07	Parental Influence on Children in Sports
Meredith Anderson '07	The Involvement of the Anterior Cingulate Cortex in the Cognitive Dysfunction of MS Patients: An sMRI Study
Stephanie Beauvais '07	An Analysis of Students' Motivation and Decision-Making Processes in Choosing to Apply to and Attend Bates College
Ainur Begim '07	The Roles of Gender and Temperament in Novelty and Familiarity Preferences for Infant-Directed Singing
John Bement '09	The Finnsburh Episode in <i>Beowulf</i> and in History
Dana Bennett '10, Cora Chisholm '10, Nicolas DeFrancis '10, Hannah Inman '10, and Benjamin Smeltzer '10	A Nanotechnology Project: Programming an STM
John Bladon '10, Steven Fukuda '10, Joshua Linscott '10, Guang Liu '10, and Nelish Pradhan '10	A Nanotechnology Project: Building an Scanning Tunneling Microscope-Mechanical Aspects
Aaron Bobik '09, Meagan Doyle '09, Jennifer Foster '09, Rachel Goodermote '09, Jennifer Rasmussen '07, Winthrop Rodgers '09, Rebecca Wason '09, Charlotte Weidlein '09, and Simon Willbanks '09	Shetland Islands Archaeology
Aleksandra Brakalova '07	Reconsolidation of Drug Memories: A Means of Reducing Relapse?
Allison Caine '07	The International Vicuna Festival
Matthew Capone '07	Fan Behavior at Collegiate Sporting Events
Annie Carlton '10, Alexander Gentili '10, Andrew Laflam '10, Russell Milholland '10 and Caspar Yi '10	A Nanotechnology Project: Building an Scanning Tunneling Microscope (STM)-Electrical Aspects of the STM
Annie Carlton '10, Hannah Inman '10, and Guang Liu '10	A Nanotechnology Project: What is an STM?

Melissa Chen '07	Effects of a Dopamine D1 Antagonist and Caffeine on L-DOPA-Induced Dyskinesia in a 6-OHDA Rat Model of Parkinson's Disease
Niraj Chokshi '07	Proactive Interference Effects on Sentence Production
Laura Clarkson '07	Wallpaper Groups: Art and Abstract Algebra
Emily Cohen-Shikora '07	Blocking, Slowing, and Inhibition: An Exploration of the Mechanisms Underlying Object Recognition in a Scene
Melissa Coito '07	Schizophrenia and the Biological Vulnerability to Abuse Substances: Investigating Four Subregions of the Anterior Cingulate Gyrus
Theresa Conk '07	The HPV Vaccine for Women: What Do Bates College Men Think?
Katy Corrado '07	Social Story Intervention and Asperger Syndrome: Improving Social Skills within the School Environment
Anita Deshpande '07	How Children with Emotional and Behavioral Disorders Cope with Having Alcoholic Parents
Kathryn Doherty '07	The Effects of a Web-Based Intervention on College Students' Knowledge of Human Papillomavirus and Attitudes towards Vaccination
Jonathan Dunn '07	Examining How Maximizers and Satisficers Make Decisions for Other People
Katherine Forester '07	The Prevention of Substance Use/Abuse in Androscoggin County: Data Collection and Planning Stages of a Public Health Campaign with Healthy Androscoggin
Monica Hayden '07	ELL Literacy and Language Development: Evaluating the Potential for a Family Reading Program at the Adult Learning Center
Lauren Jacobs '07	The History of Old English: An Exploration through the Poem <i>Beowulf</i>
Andrew Jagger '07	Flow in Online Role-Playing Games
Rachel Judson '07	Medical and Illicit Use of Prescription Stimulants among College Students: An Investigation of Knowledge and the Theory of Planned Behavior
Patrick Kenna '07	Music in After-School Programs
Stephanie LeBourdais '07	The Role of Corticotropin Releasing Factor in Nicotine Withdrawal
Bennet Leon '07	Recent Sedimentation Chronology of Linnévatnet, a High Arctic Proglacial Lake, Svalbard, Norway
Christopher Leonards '07	Volumetric Implications of the Orbitofrontal Cortex in Response Inhibition, Schizophrenia, Addiction, and Dual Diagnosis: A Structural MRI Study
Jacob Mark '07	Multiplexed Oligonucleotide Ligation-PCR (MOL-PCR): A Novel Technique Applied to the Detection of Plant Pathogens
Neil Marya '07	Characterization of Glutamate-Receptor Containing Neuronal Cells in <i>Helisoma trivolvis</i>
Alison Nestel-Patt '07	Mood and Magazine Advertising: Does Placement of Advertisements Affect Success?
Stephanie Nihon-Kufta '07	Measuring Self-Efficacy and Alpha in Novice Golfers

G. Carl Noblitt '07	Stable Carbon Isotopes in Mollusk Tissue and Shell Organic Matter: Potential Tracers of Primary Production in Near-Shore Gulf of Maine
Madeline O'Donnell '07	The Ability of a 5HT2a Receptor Antagonist to Attenuate PCP-Induced Cognitive Deficits and the Delayed Non-Match to Sample Task as an Animal Model of Cognitive Deficits Characteristic of Schizophrenia
Michael Palmer '08	G-Protein Activated Inward Rectifying Channels within <i>Helisoma trivolvis</i>
Amanda Peters '07	Ignacio Martín-Baró's Liberation Psychology: The Transformation of Psychology in Latin America and the United States
Megan Petry '07	The Impact of the Lewiston, Maine, Family Treatment Drug Court on Dependency Cases
Adam Poplaski '07	Underprivileged Youth in School Setting
Jessica Ricker '07	Caffeine, an Adenosine A1 and A2A Antagonist, Delays the Expression of Nicotine-Induced Locomotor Sensitization in Rats
Madelyn Rubin '07	Volumetric Relationships between Orbitofrontal Cortical Subregions and Verbal Learning and Memory in Obsessive-Compulsive Disorder
Jenny Sadler '07	Communication and Intellectual Disabilities
Lois St. Brice '07	Chemical Assumptions in Input Designation and Parameter Determination in the DayCent-Chem Model
Allison Sawyer '07	The Role of Dynorphin in Morphine Withdrawal
Elizabeth Scannell '07	Pharmacological Characterization of Excitatory and Inhibitory Glutamate Receptors in Buccal Neurons B5, B19, and B27 in <i>Helisoma trivolvis</i>
Adam Shulman '07	The Effect of Scientific Training on Reactions to Defenses in Which Schizophrenia or Antisocial Personality Disorder Absolves the Defendant of Responsibility
Nicholas Swerdlow '09	The Effect of Environmental Stress on Gene Expression in <i>S. cerevisiae</i> and <i>E. coli</i>
Marybeth Tong '07	Knowledge of Emergency Contraception in College Students
Leyi Wang '07	Characterizing Nanostructures with Tip-Enhanced Raman Spectroscopy (TERS)
Emily Williams '07	Vaginal Birth or Cesarean Section? Preference and Reasoning