CSURF 2025

COLORADO SPRINGS UNDERGRADUATE RESEARCH FORUM

Redefining research with undergraduate presentations from students within the Pikes Peak Region.

Hosted by Colorado College

Student Presenter Registration: 1 February – 4 April 2025

UNITED STATES AIR FORCE ACADEMY

PIKES PEAK STATE COLLEGE

UCCS University of Colorado Colorado Springs

COLORADO COLLEGE

SATURDAY | 26 APRIL 2025

Information & Registration at www.uccs.edu/csurf

Armstrong Hall, Colorado College


ARMSTRONG HALL
COMPLETED 1966 BY THE
CSURF 2025
COLORADO SPRINGS UNDERGRADUATE RESEARCH FORUM
Poster Presenters
COLORADO COLLEGE
PIKES PEAK
CSURF 2025
COLORADO SPRINGS UNDERGRADUATE RESEARCH FORUM
Redefining research with undergraduate presentations from students within the Pikes Peak Region.
2025 CSURF KEYNOTE ADDRESS
Dr. Murphy G. Brasuel
Professor
Colorado College
Department of Chemistry and Biochemistry
21st Annual Colorado Springs Undergraduate Research Forum
Keynote Address - Cornerstone
Dr. Murphy Brasuel
CSURF 2025
COLORADO SPRINGS UNDERGRADUATE RESEARCH FORUM
Book of Abstracts
WELCOME TO CSURF 2025
Check-In HERE
Information Table – We're here to help!
CSURF 2025
COLORADO SPRINGS UNDERGRADUATE RESEARCH FORUM
Redefining research with undergraduate presentations from students within the Pikes Peak Region.


COLORAD
COLLEGE


KATHRYN MOHRMAN
THEATRE
KATHRYN MOHRMAN


KATHRYN MOHRMAN
THEATRE


KATHRYN MOHRMAN
THEATRE

2025 CSURF KEYNOTE ADDRESS

Dr. Murphy G. Brasuel
Professor
Colorado College
Department of Chemistry and Biochemistry

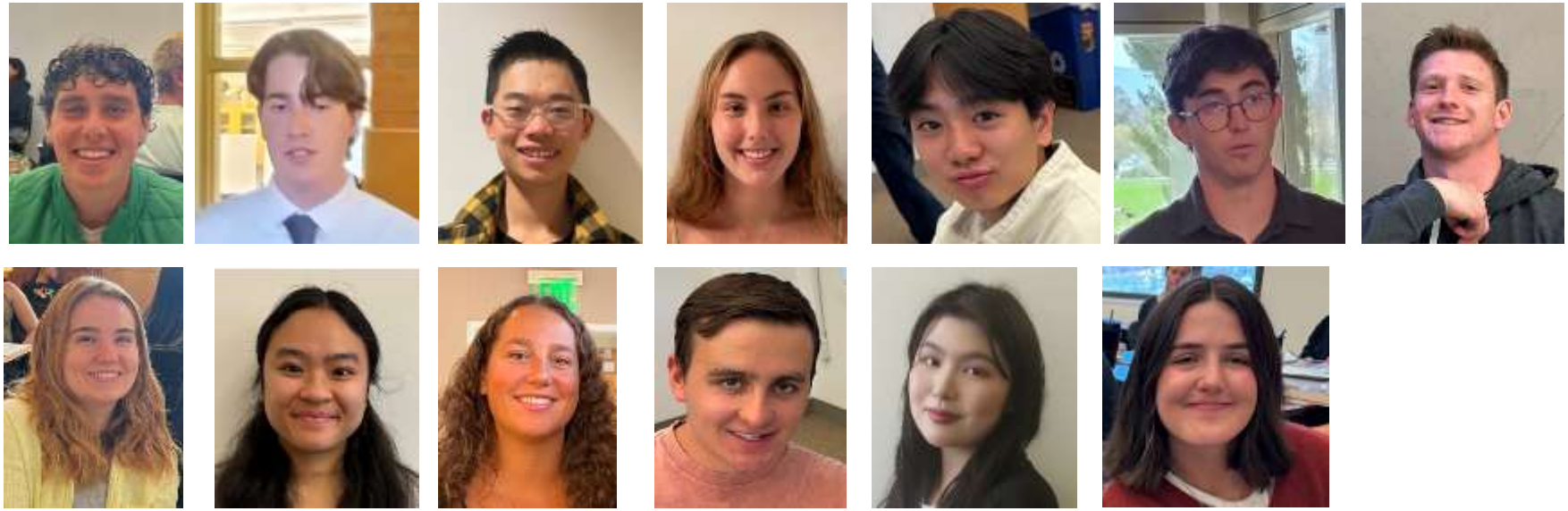
Research:
A VW Microbus Mediated Journey into Inner Space, Art Authentication, Spicy Food, and the Chemical Genius of Plants

Abstract: Research is a technical term for the process of discovery. This talk will be a rapid trip through a variety of research projects that I have had the honor of being involved in. On this trip through discovery, covering everything from nanotechnology to spicy food, we will explore components of discovery that can be hidden by the technical tools, forms, and formality that shape our own research ecosystems.


Star Wars: Episode V – The Empire Strikes Back
Lucas Film™ stock image
I want to be a scientist and do research!
IMPERIAL ATTACK BASE

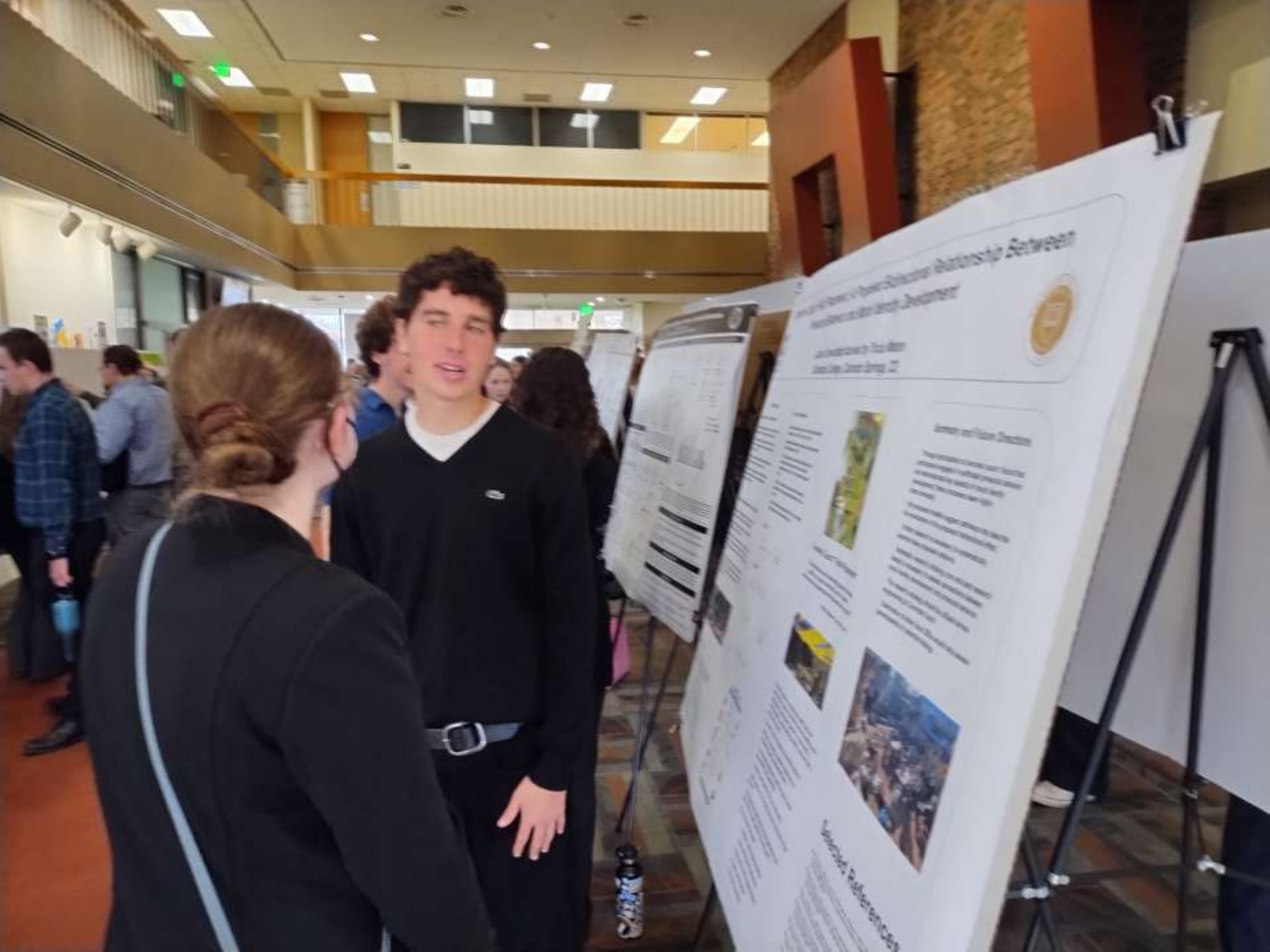

Water
Glucose
DNA diameter
Virus
Bacteria
Cell
Suger grain
Ping pong
Tennis ball
10^{-1}
1
10
10^{2}
10^{3}
10^{4}
10^{5}
10^{6}
10^{7}
10^{8}
Nanometers
Liposome
Micelle
Dendrimer
Polymer
Gold
Quantum dot
Carbon nanotube
Trends in Biotechnology
Wong, Joanna K.L. et al. Will Nanotechnology Bring New Hope for Gene Delivery?, Trends in Biotechnology, 2017, Volume 35, Issue 5, 434 - 451

COLORADO COLLEGE

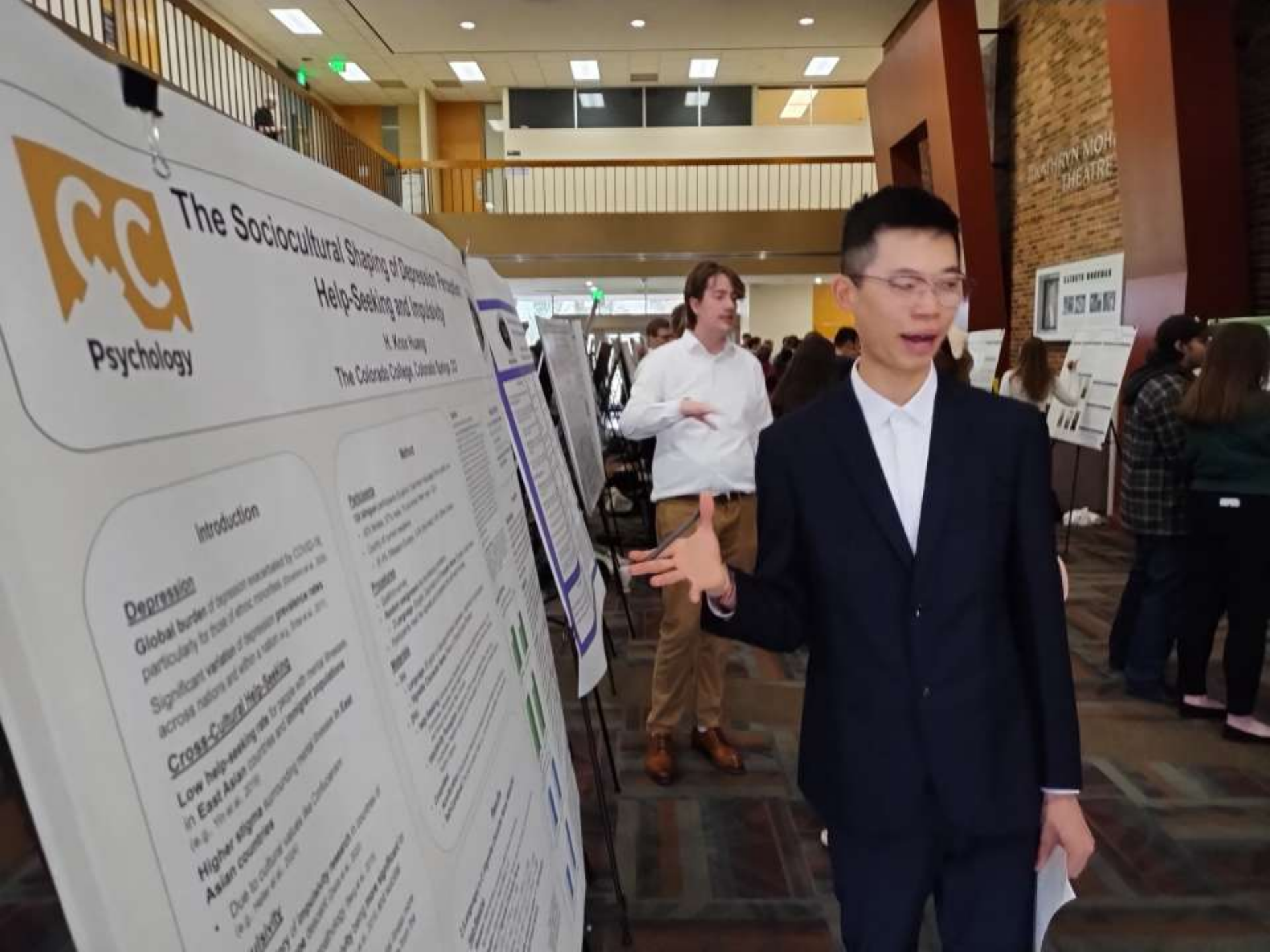


Top: Jake Greenblatt, Tayo Hopfer, H. Knox Huang, Áine Kaminski, Hyungyu Kim, Ben Leibowitz, Remi Maher

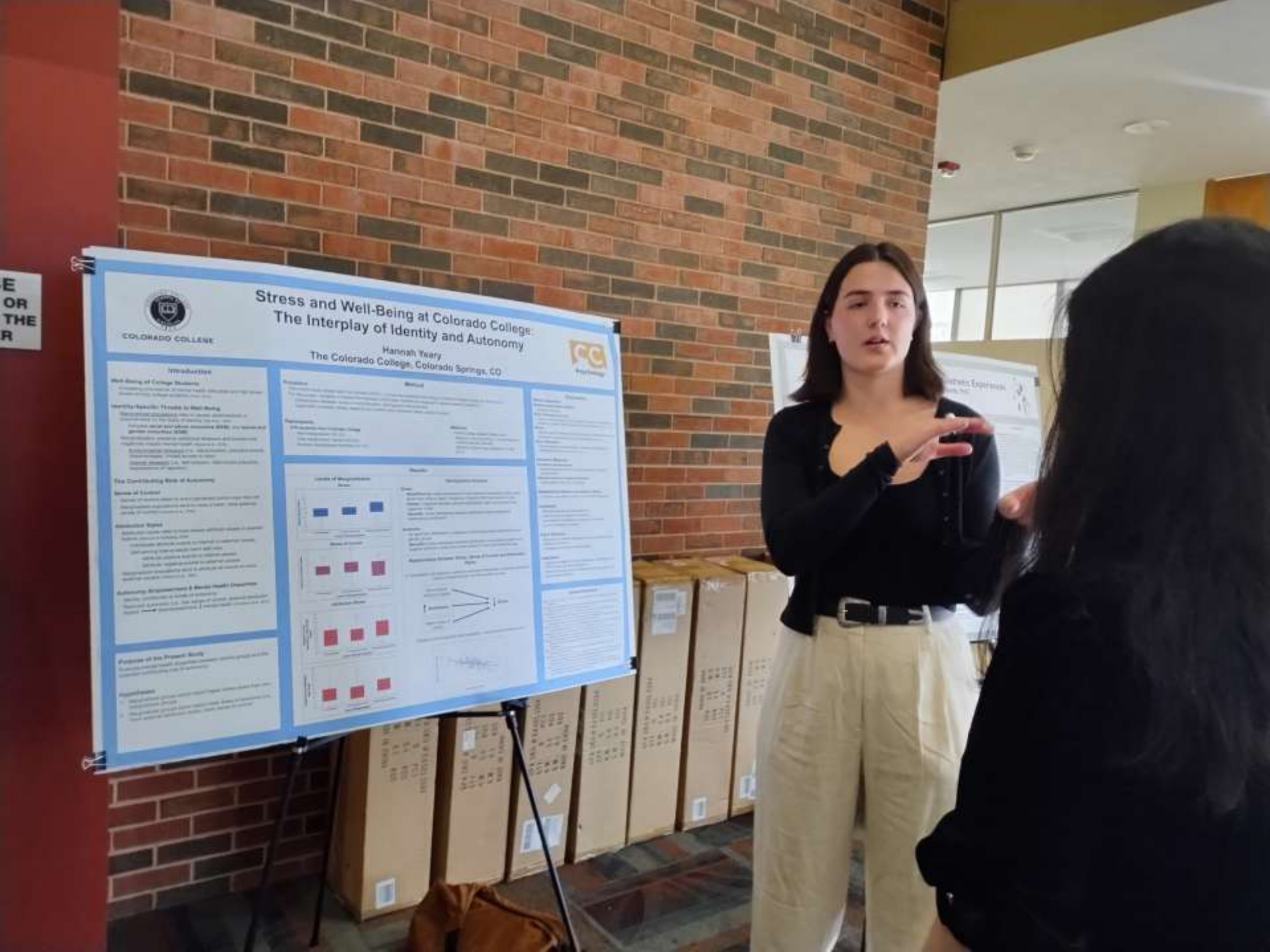
Bottom: Ana Martin, Grace Nguyen, Nicole Peirson, Kole Petersen, Xinran Wang, Hannah Yeary

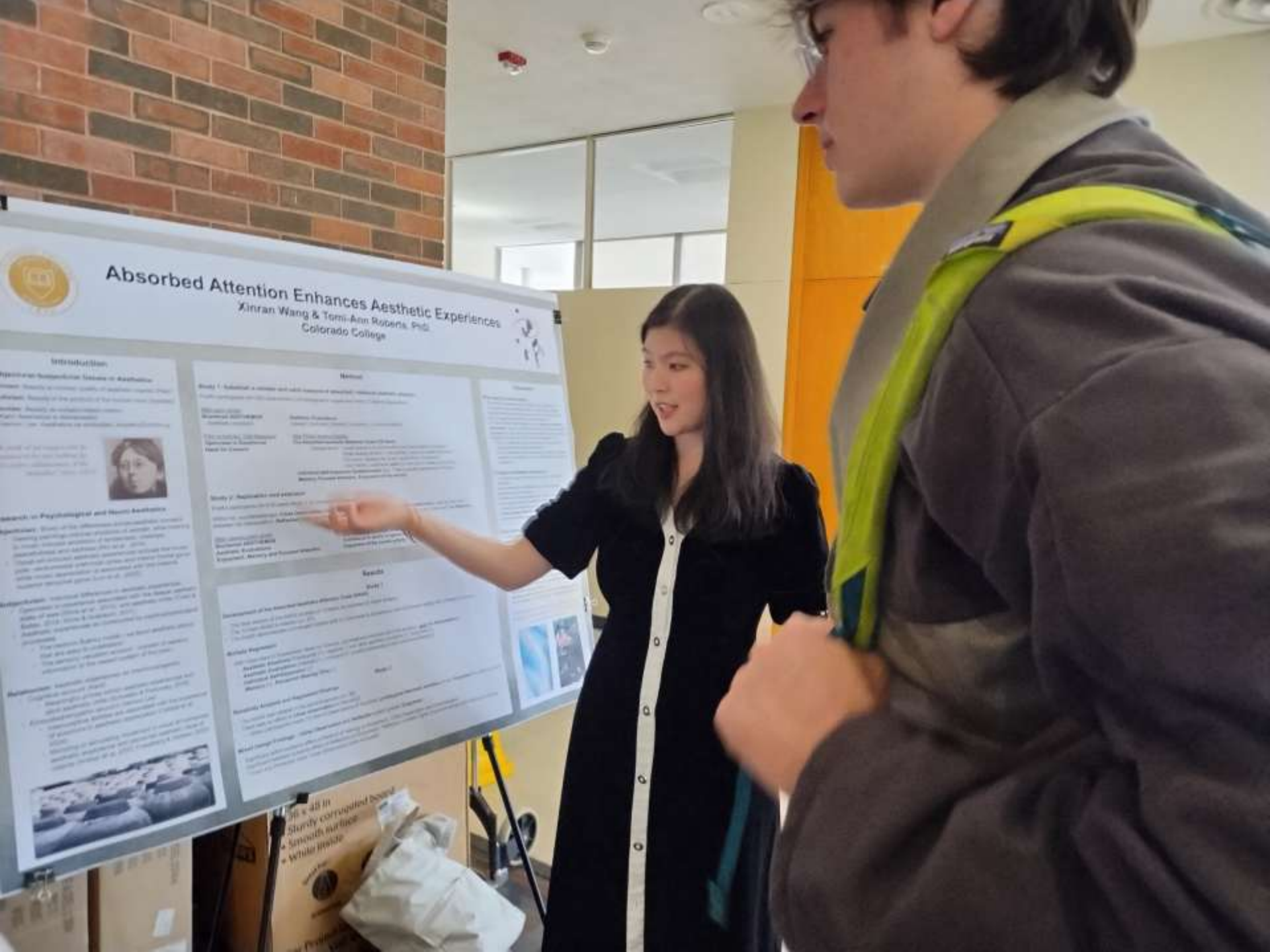


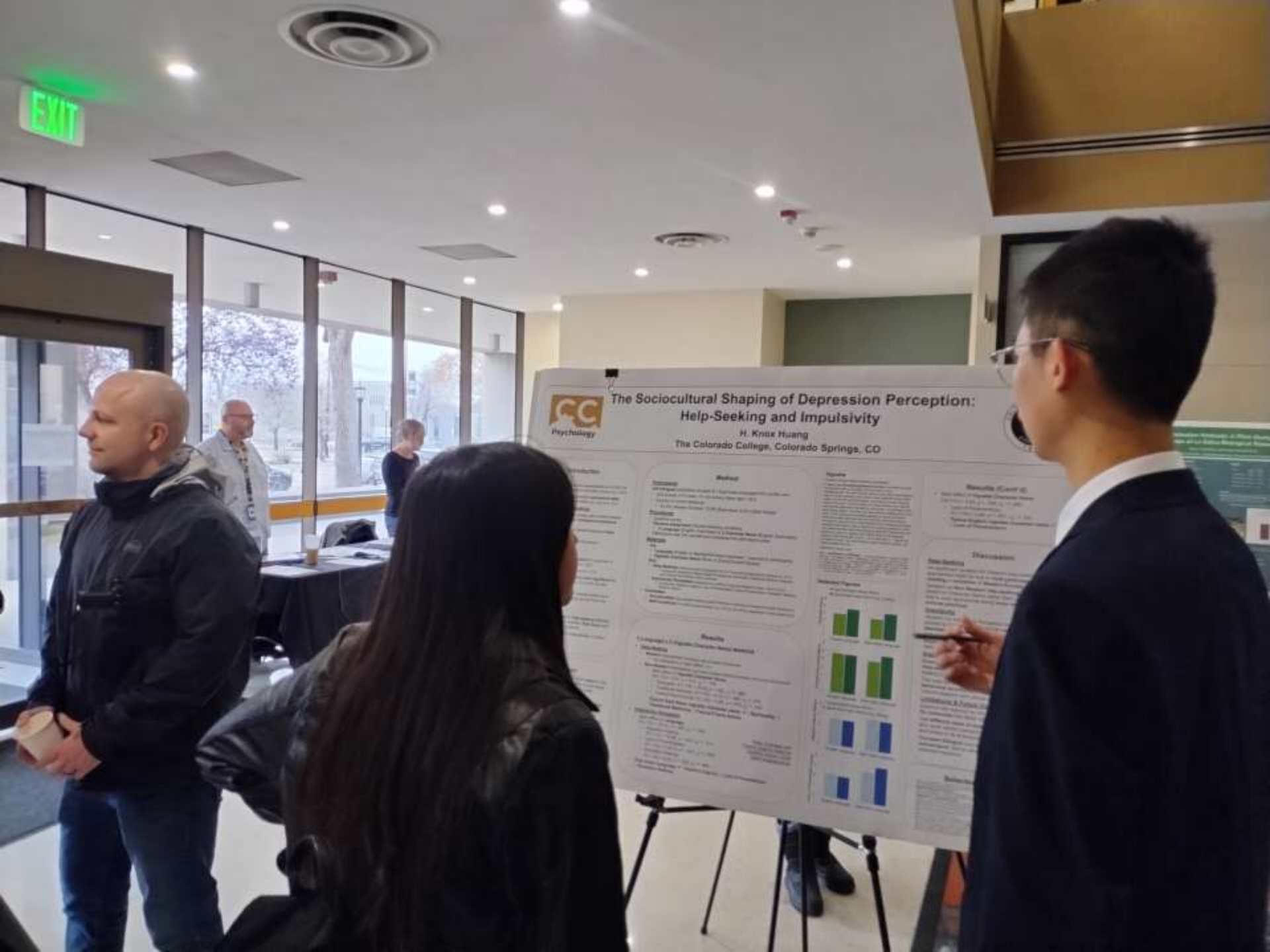

Support Influences Burden, Partially Mediated by Stigma:
A Study of Family Caregivers for Schizophrenia
Theodor Hopfer and Kristi Erdal
The Colorado College, Colorado Springs
Psychology
Introduction
The Family Caregiver's Experience in Schizophrenia
Self-Stigmatization
Method
Results
Discussion


Psychology
The Sociocultural Shaping of Depression Preva
Help-Seeking and Impulsivity
H. Kress Huang
The Colorado College, Colorado Springs
Introduction
Depression
Global burden
particularly for
Significant variation
across nations and
Cross-Cultural Help-Seeking
Low help-seeking rate
in East Asian
Higher stigma
Asian countries
Method
Results
Discussion
THEATRE

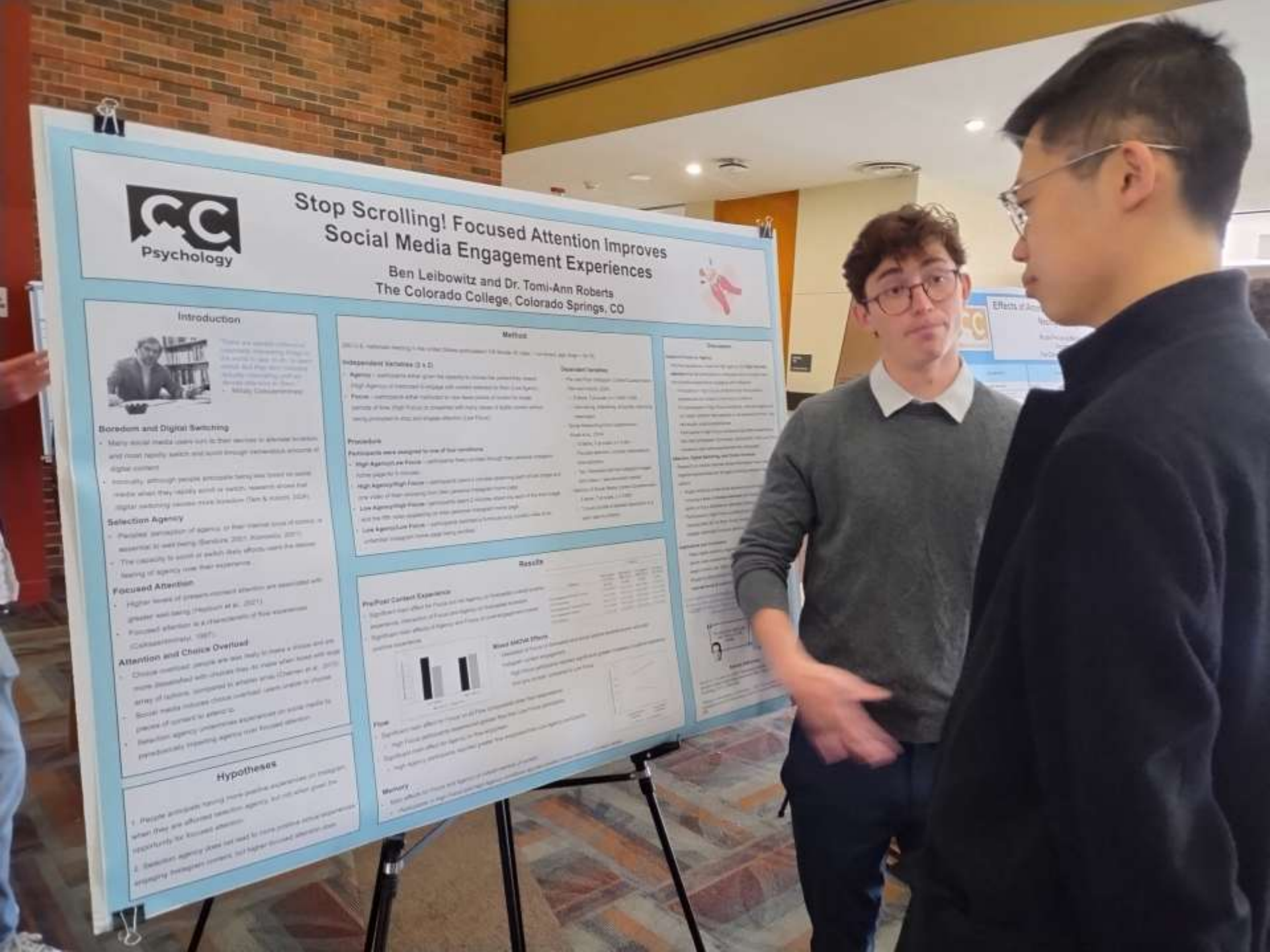

ATHRYN MOHRMAN
THEATRE
n of the Mediodorsal Thalamus to Medial Prefrontal Cortex Pathway
ays 20 and 35 in Mice on Attentional Set Shifting at Columbia University
Aine Kaminski
The Colorado College, Colorado Springs, CO

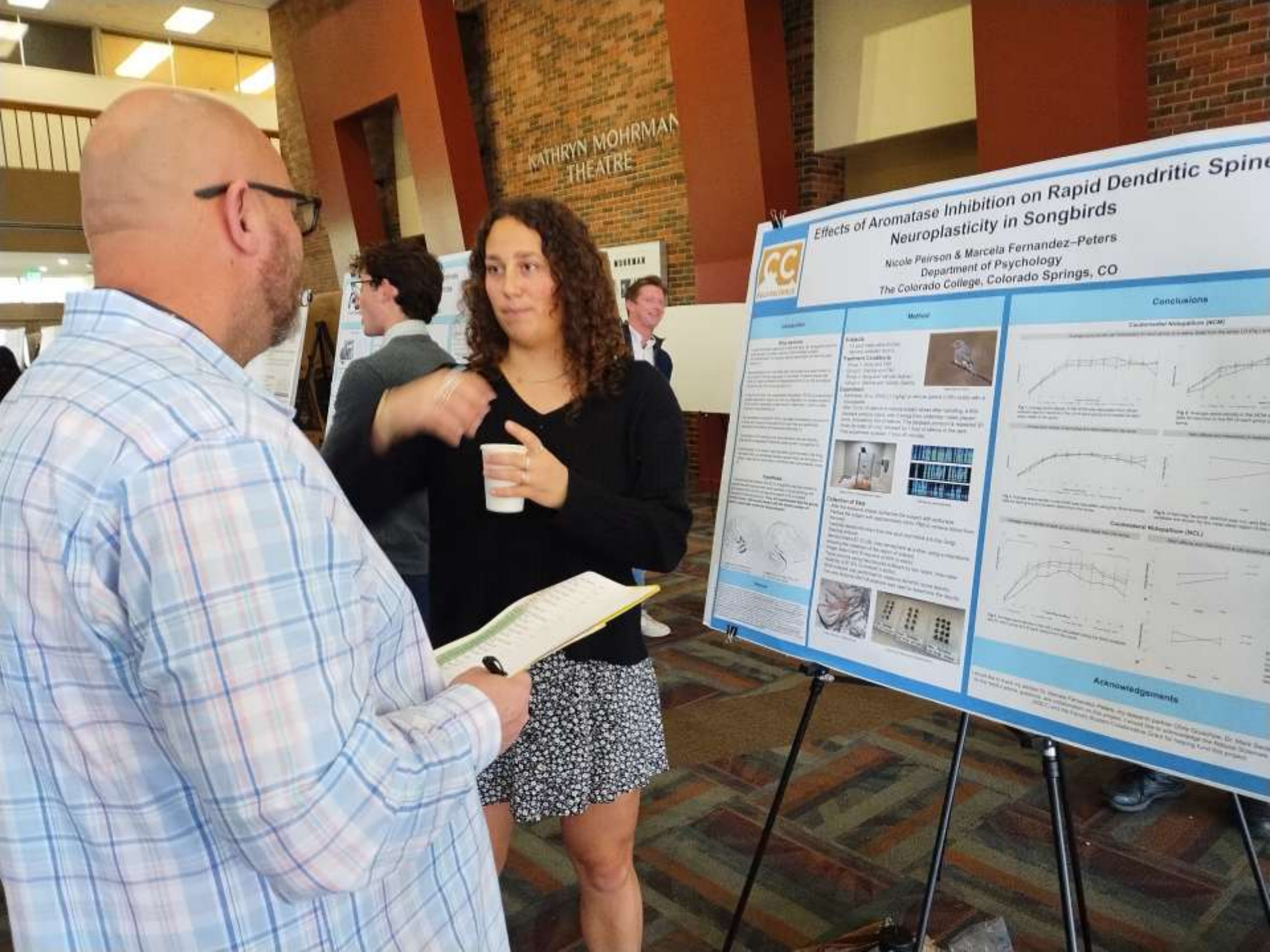

COLORADO COLLEGE
Stress and Well-Being at Colorado College:
The Interplay of Identity and Autonomy
Hannah Yeary
The Colorado College, Colorado Springs, CO

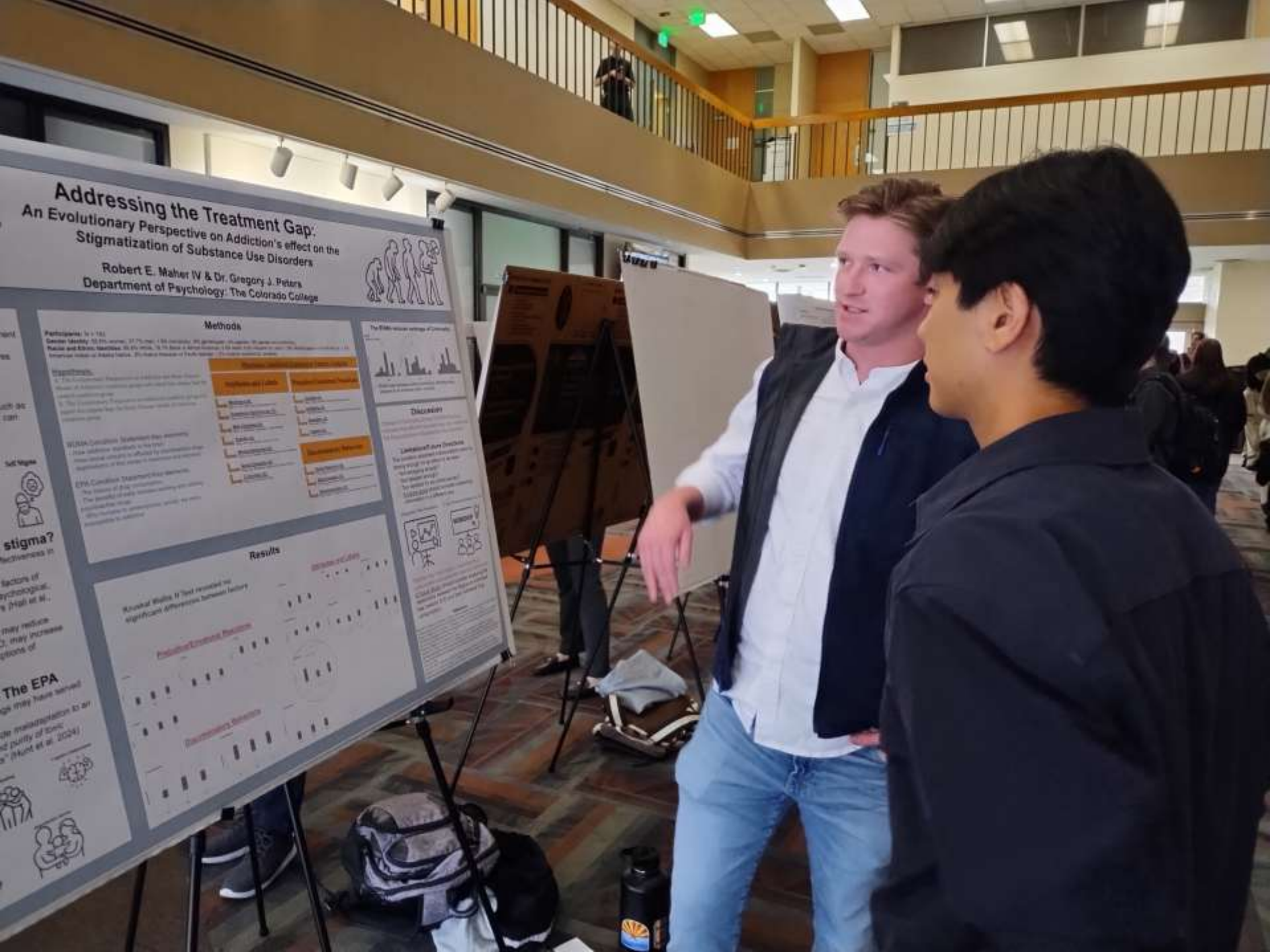

Absorbed Attention Enhances Aesthetic Experiences
Xinran Wang & Tomi-Ann Roberts, PhD
Colorado College

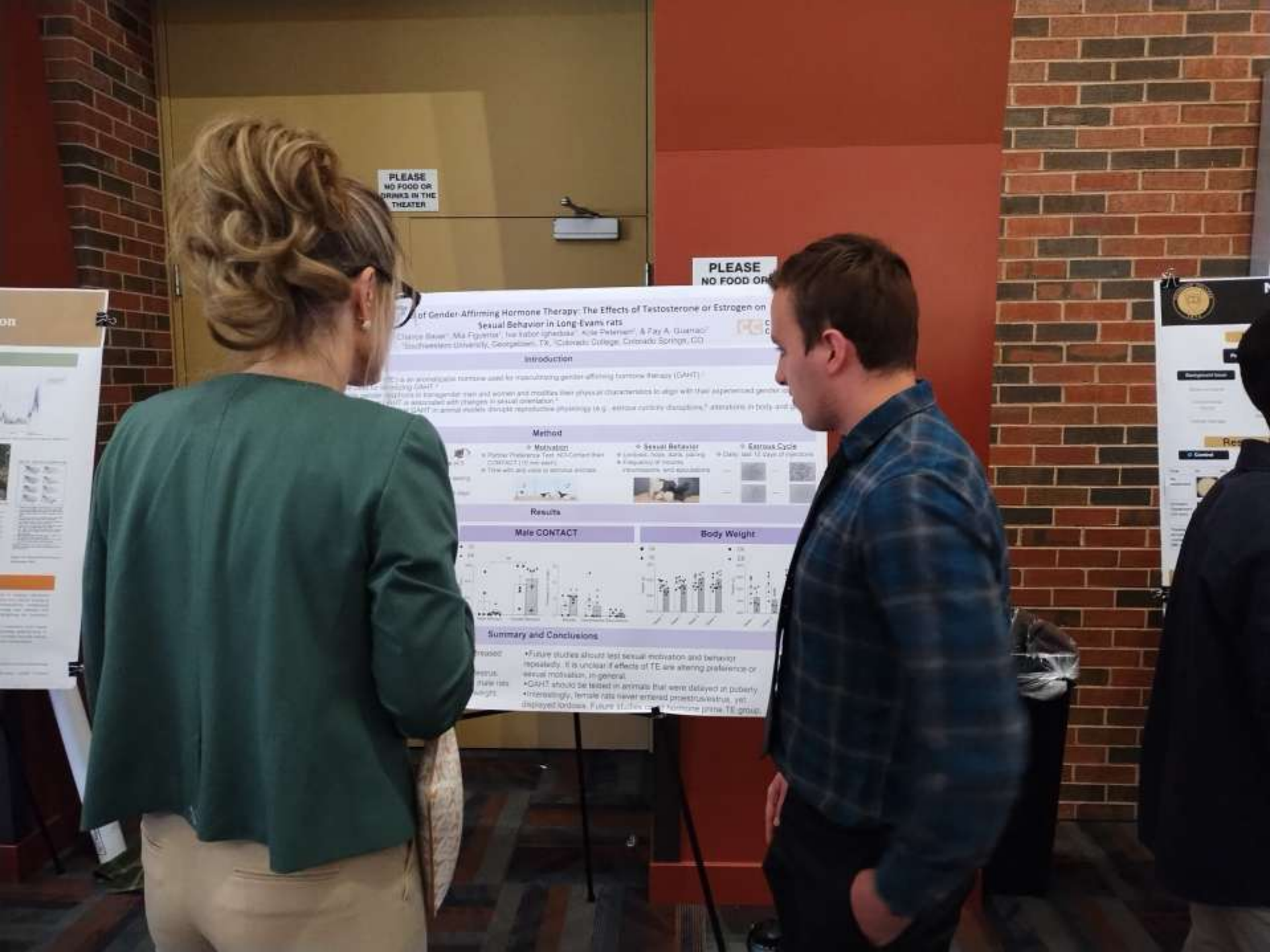

EXIT
CC
Psychology
The Sociocultural Shaping of Depression Perception:
Help-Seeking and Impulsivity
H. Knox Huang
The Colorado College, Colorado Springs, CO
Method
Results
Discussion

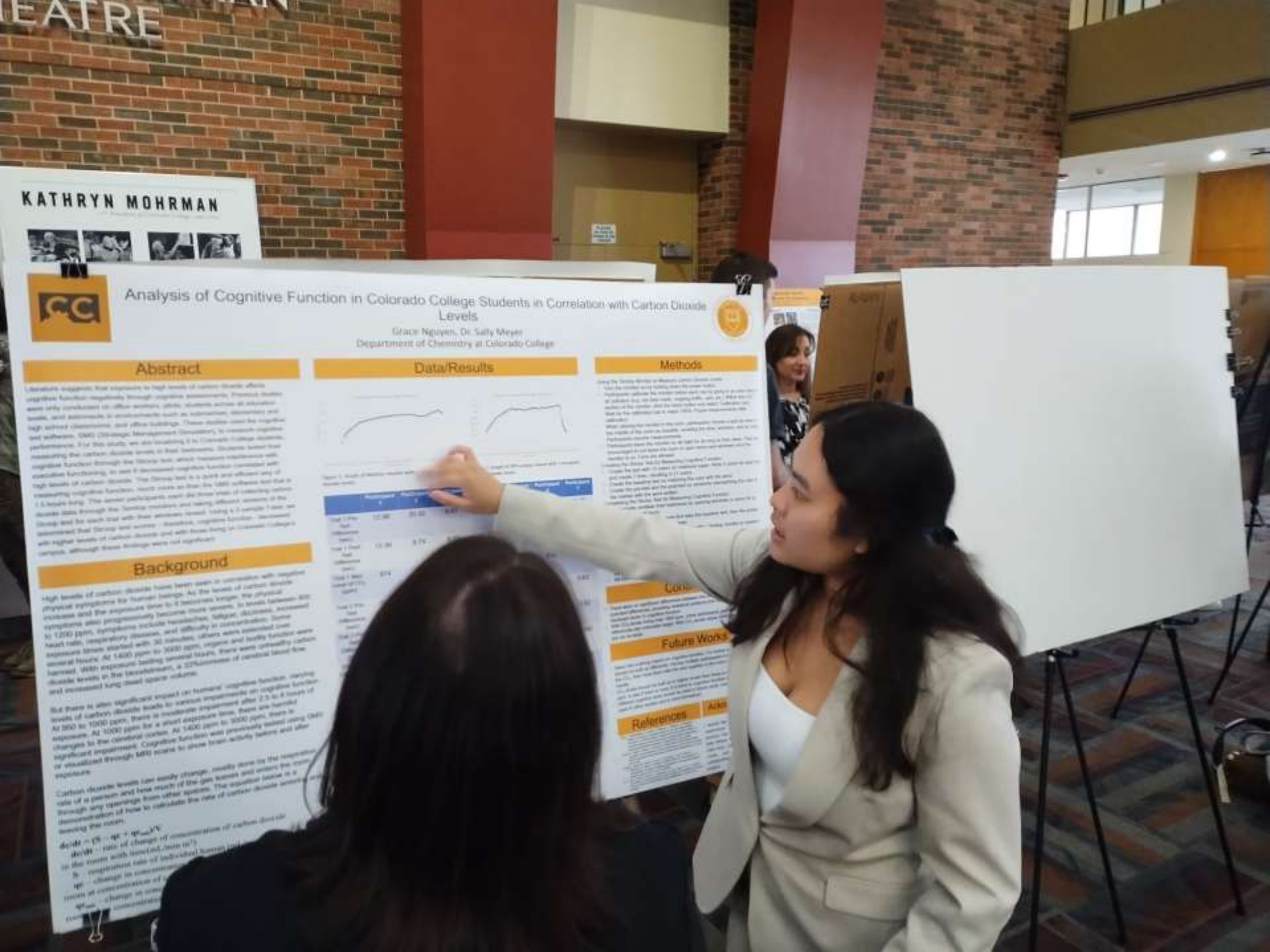

KATHRYN MOHRM THEATRE
MORNING WHITE LIGHT EXPOSURE SHORTENS SLEEP LATENCY AND
MORNING BLUE LIGHT EXPOSURE IMPROVES MOOD IN COLLEGE STUDENTS
INTRODUCTION
METHODS
DISCUSSION
Hypothesis
Limitations
Future Directions
SELECTED REFERENCES
ACKNOWLEDGEMENTS

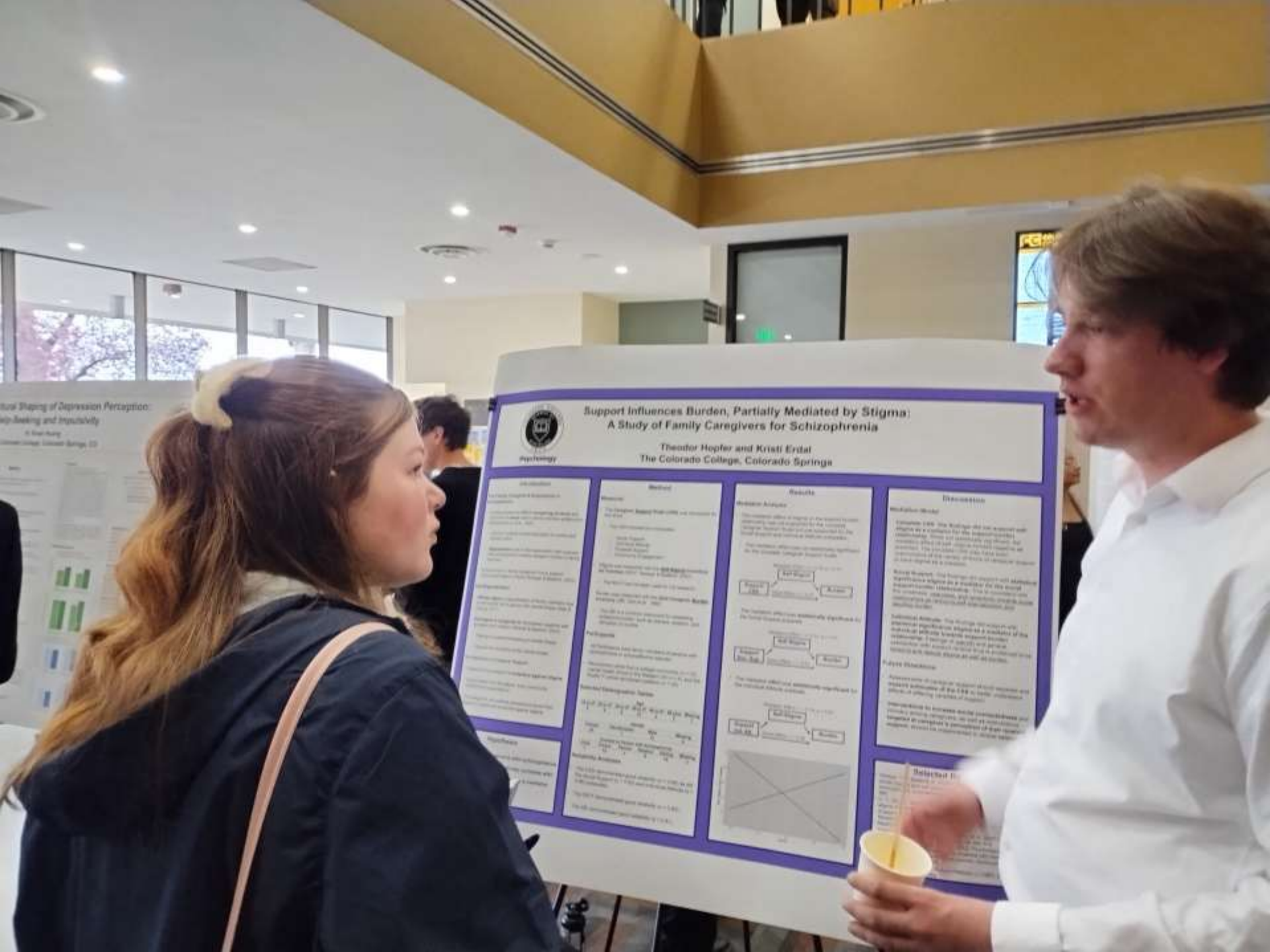

Psychology
Stop Scrolling! Focused Attention Improves Social Media Engagement Experiences
Ben Leibowitz and Dr. Tomi-Ann Roberts
The Colorado College, Colorado Springs, CO
Introduction
Boredom and Digital Switching
Selection Agency
Focused Attention
Attention and Choice Overload
Hypotheses
Method
Results

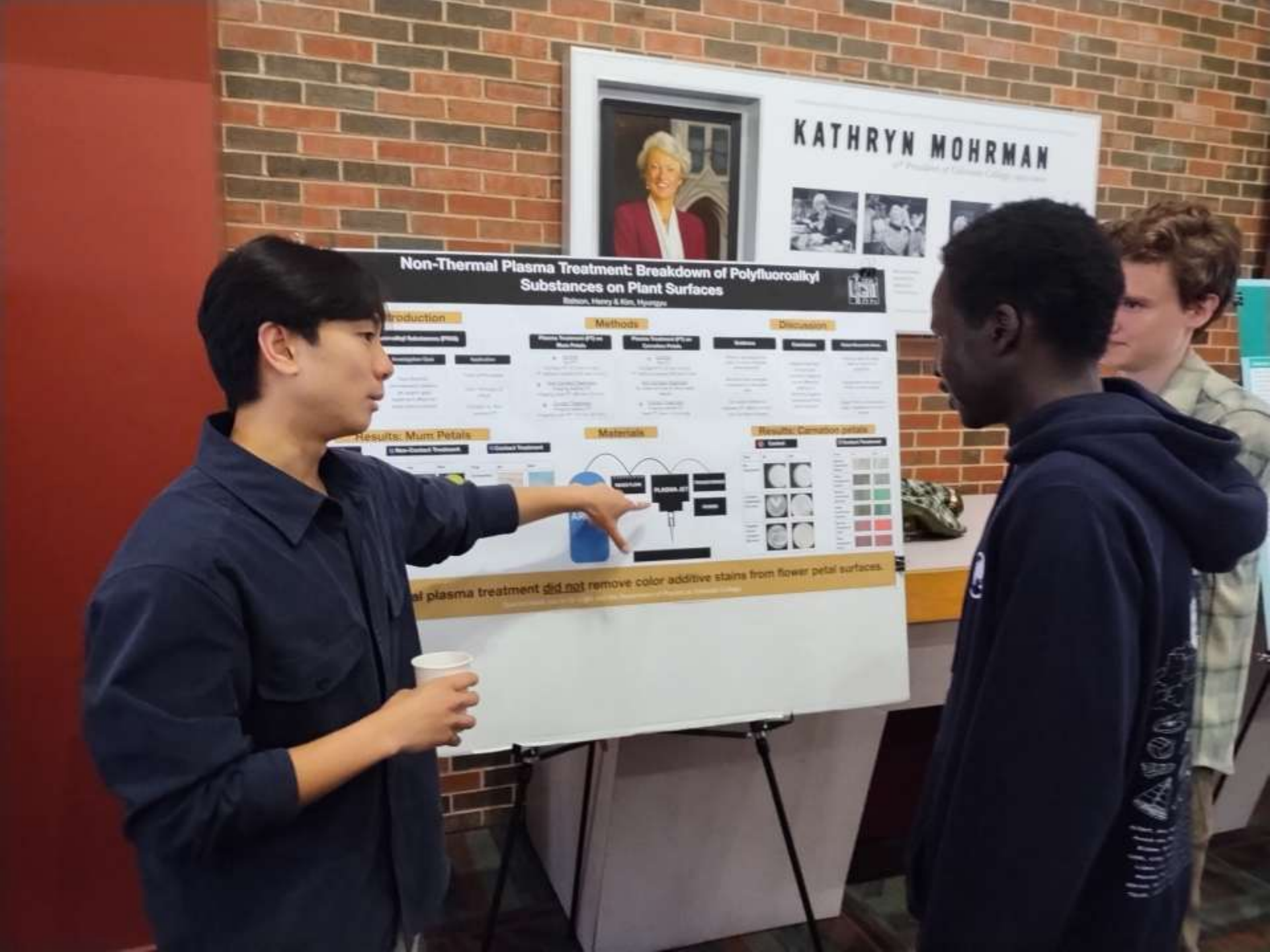

KATHRYN MOHRMAN THEATRE
Effects of Aromatase Inhibition on Rapid Dendritic Spine
Neuroplasticity in Songbirds
Nicole Peirson & Marcela Fernandez-Peters
Department of Psychology
The Colorado College, Colorado Springs, CO
Conclusions
Acknowledgements

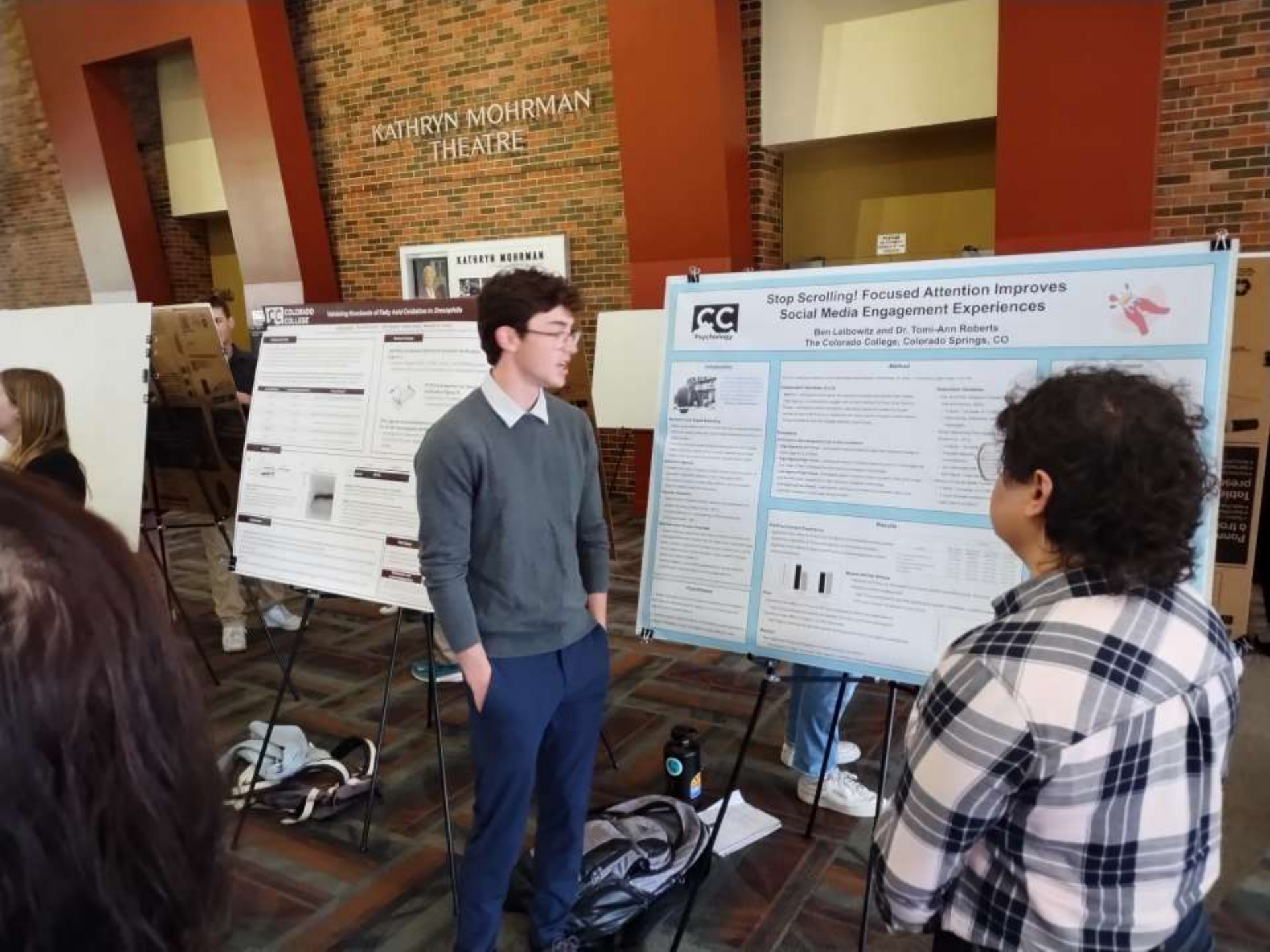

Addressing the Treatment Gap:
An Evolutionary Perspective on Addiction's effect on the Stigmatization of Substance Use Disorders
Robert E. Maher IV & Dr. Gregory J. Peters
Department of Psychology: The Colorado College
Methods
Results
Discussion
stigma?
The EPA


PLEASE
NO FOOD OR DRINKS IN THE THEATER
PLEASE
NO FOOD OR
of Gender-Affirming Hormone Therapy: The Effects of Testosterone or Estrogen on
Sexual Behavior in Long-Evans rats
Introduction
Method
Motivation
Sexual Behavior
Estrous Cycle
Results
Male CONTACT
Body Weight
Summary and Conclusions

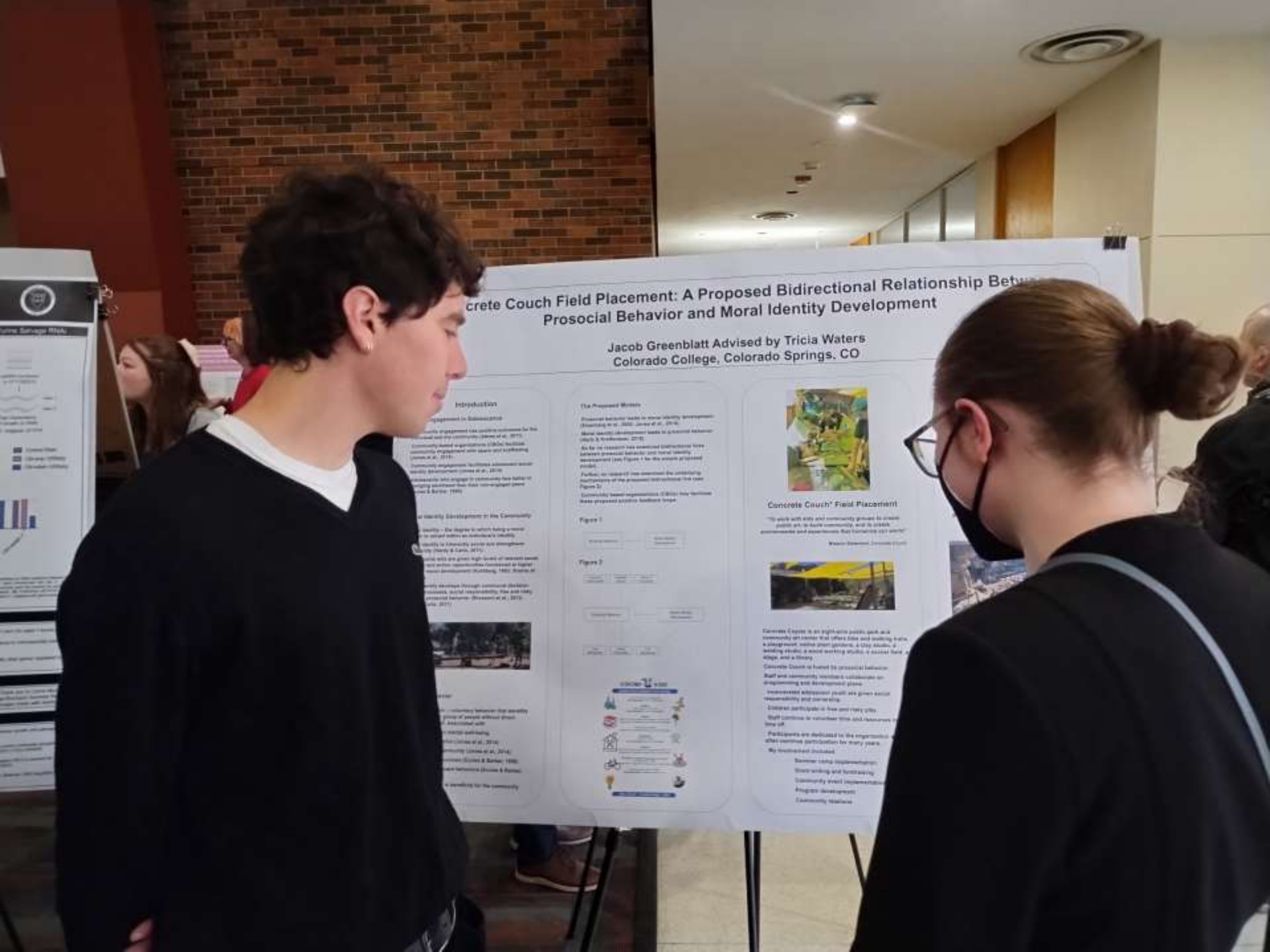

KATHRYN MOHRMAN
Analysis of Cognitive Function in Colorado College Students in Correlation with Carbon Dioxide Levels
Grace Nguyen, Dr. Sally Meyer
Department of Chemistry at Colorado College
Abstract
Data/Results
Methods
Background
Future Works
References


Support Influences Burden, Partially Mediated by Stigma:
A Study of Family Caregivers for Schizophrenia
Theodor Hopfer and Kristi Erdal
The Colorado College, Colorado Springs
Psychology
Method
Results
Discussion


KATHRYN MOHRMAN
Non-Thermal Plasma Treatment: Breakdown of Polyfluoroalkyl Substances on Plant Surfaces
Methods
Discussion
Results: Mum Petals
Materials
Results: Carnation petals
plasma treatment did not remove color additive stains from flower petal surfaces.


KATHRYN MOHRMAN
THEATRE
KATHRYN MOHRMAN
Stop Scrolling! Focused Attention Improves
Social Media Engagement Experiences
Ben Laibowitz and Dr. Tomi-Ann Roberts
The Colorado College, Colorado Springs, CO


NEW MOON CIRCLE
Addressing the Treatment Gap:
An Evolutionary Perspective on Addiction's effect on the Stigmatization of Substance Use Disorders
Robert E. Maher IV & Dr. Gregory J. Peters
Department of Psychology: The Colorado College
COLORADO COLLEGE
Methods
Results
Stigmatization of SUD's
reduce stigma?


crete Couch Field Placement: A Proposed Bidirectional Relationship Betw
Prosocial Behavior and Moral Identity Development
Jacob Greenblatt Advised by Tricia Waters
Colorado College, Colorado Springs, CO
Introduction
The Proposed Models
Figure 1
Figure 2
Concrete Couch' Field Placement

CSURF 2025