College of Liberal Arts and Sciences

Faculty Research Colloquium

September 18, 2020

Via Zoom

Presentations begin at 3:00pm.

**Alice Chapman (History): The “Double Leprosy of the Heart” and Images of Spiritual Illness.**

This paper will explore images of spiritual illness and the role of Christ the Physician (Christus medicus) in the writings of two contemporary and pivotal twelfth-century figures, Bernard of Clairvaux and Hildegard of Bingen. Medieval images of spiritual illness were often expressed and described in parallel to physical sickness. Just as physical illness required a physician so too did spiritual infirmity, and for this kind of sickness there was only one Physician. This is part a new project that examines the Christus medicus in the twelfth and thirteenth centuries, asking the question, did the role of Christ as Physician change?

**Matt Christians (Cell and Molecular Biology): Breaking Down Light Responses in Plants**

Light plays a critical role in plant survival. Not only is it used for photosynthesis, but it also controls many aspects of plant growth and development, including regulating germination, flowering time and even pathogen responses. The phytochromes are important photoreceptors that allow plants to sense their light environment, specifically in the Red/Far-red wavelengths. After activation by red light, phytochromes move into the nucleus, where they influence gene expression, but shortly afterwards, are degraded through the activity of the Light Regulating BTB (LRB) proteins. My lab studies how the structure of the LRB proteins influence phytochrome degradation. We found several uncharacterized regions in the LRB proteins, one of which is confirmed to play a role in phytochrome degradation. Evidence suggests that this region may influence the interaction with other proteins that help degrade the phytochromes. This work sheds light on how plants respond to their light environment, which may lead to agricultural advances in the future.

**Brian Lakey (Psychology): The Power of Personal Relationships for Mental Health, Personality and Performance**

This talk describes a research program on the ability of specific personal relationships to evoke desired levels mental health, personality, and performance in others. Theoretically, we talk about these effects in terms of providers help recipients regulate their own affect, thought and actions. Personal relationships are defined mathematically as the ability of a provider to evoke high levels of a construct in a recipient beyond 1) the recipient’s typical level of the construct and 2) the provider’s typical ability to evoke the construct in others. Research is reviewed showing strong relationship effects in three domains 1) mental health related constructs (e.g., positive and negative emotion, negative thinking, self-esteem, 2) normal personality (e.g., extroversion, conscientiousness), maladaptive personality (e.g., psychoticism, impulsivity), as well as 3) task performance (memory for lectures and team video game performance). For constructs related to emotion, supportive providers evoke more favorable outcomes.

Future colloquia are scheduled for:

Friday, Oct 16

Friday, Nov 20

Thursday, Jan 21

Thursday, Feb 18

Thursday, March 18

If you would like to give a presentation at one of the five remaining colloquia, please send an email to stavesm@gvsu.edu with preferred dates and a tentative title for your presentation.