

SECTION: 18
DATE:
February 7, 2017

**BOARD OF REGENTS**  
**EASTERN MICHIGAN UNIVERSITY**

**REPORT**

**REPORT: 2017 SUMMER RESEARCH AWARD**

**ACTION REQUESTED**

It is recommended that the Board of Regents accept and place on file the Report on the 2017 Summer Research Awards.

**STAFF SUMMARY**

The Summer Research/Creative Activity Award (SRA) is intended to encourage and support the research, creative, artistic, and scholarly endeavors of full-time tenured or tenure-track EMU faculty during the summer months (May-August) by providing stipends of \$12,000 for outstanding proposals in lieu of summer teaching assignments. Faculty may apply in teams. Each team member is allowed to request a full award, but each benefiting member must submit a full electronic application.

**FISCAL IMPLICATIONS**

None. The cost of the fellowships will be absorbed in the faculty salary budget.

**ADMINISTRATIVE RECOMMENDATION**

The proposed action has been reviewed and is recommended for Board approval.

  
University Executive Officer

1/18/17

\_\_\_\_\_  
Date

**EASTERN MICHIGAN UNIVERSITY**  
DIVISION OF ACADEMIC & STUDENT AFFAIRS

**2017 SUMMER RESEARCH AWARD**

1. Eamonn Arble, (Psychology). "Personality as a Modifier of Age-Related Decline in Decision Making: Cognitive and Neural Correlates in Healthy Aging."
2. Leslie Atzmon, (Art & Design). "Design and Science: Catalyzing Collaborations."
3. Logan Bearden, (English Language and Literature). "Transformative Writing Programs: Toward Models of Multimodal Curricular Transformation."
4. Meriam Caboral-Stevens, (Nursing). "Knowledge, Attitudes and Cultural Competence of Nursing Faculty on Lesbian, Gay, Bisexual and Transgender (LGBT) Population."
5. Vernnaliz Carrasquillo, (Engineering Technology). "The Effect of Cycle-to-Cycle Variations in Mixed Model Assembly Lines on Workers' Posture and Recovery Time."
6. Stephanie Casey, (Mathematics). "Student Reasoning about Statistical Association with Dynamic Representations."
7. Anne Casper, (Biology). "Formation of Copy Number Variations (CNVs) in DNA."
8. Chong Man Chow, (Psychology). "Body Talk in Lesbian Couples: Implications for Body Image and Eating Behaviors."
9. Matthew Cook, (Geography & Geology). "Historical Geographies of the African American Experience: Analyzing Museums' Changing Narratives."
10. Joseph Csicsila, (English Languages and Literature). "Grieving Tom Sawyer: Mark Twain, Loss, and the Transformation of a Writer."
11. Claudia Drossel, (Psychology). "Examining Behavioral Variability in Alzheimer's and Other Progressive Neurocognitive Disorders."
12. Emily Grman, (Biology). "Plant Mutualisms: Integrating Theory and Data."
13. Kelly Grossmann, (Library). "High School Datathons: A Model for Early Engagement in STEM."

14. Kristin Judd, (Biology). "How Does Wetland Restoration Affect the Balance of Ecosystem Services?"
15. Andriiii Kashliev, (Computer Science). "A Software Tool for Automating the Design of Big Data Databases."
16. Matthew Kirkpatrick, (English Language and Literature). "The Vast."
17. Anthony Koschmann, (Marketing). "Promotional Activity, Consumption, and Brand Relevance After the Great Recession."
18. You Li, (Communication, Media, & Theater Arts). "Discovering Native Advertising and Its Effects on Media Credibility."
19. Harriet Lindsay, (Chemistry). "A New, Microwave-Assisted Reaction to Form Privileged Scaffolds for Pharmaceuticals."
20. Dustin London, (Art & Design). "Landscape's Influence on Abstract Painting in a Digital Era."
21. Christina Marsack, (Social Work). "Older Parents of Adult Children with ASD: Experiences with Formal Social Support."
22. Carmen McCallum, (Leadership & Counseling). "Graduate Student Mental Health: Exploring Perceptions and Reasonable Accommodations."
23. Salar Mesdaghinia, (Management). "Unethical Pro-Organizational Behaviors Reduce Employees' Psychological Well-Being."
24. Megan Moore, (Sociology, Anthropology, & Criminology). "A Forensic Anthropology Analysis of the Tomb of Casimir Pulaski, American Revolutionary War Hero: A Question of Gender."
25. Rebecca Moore, (Health Promotion & Human Performance). "Predictability of VO2max from Three Commercially Available GPS Watches."
26. Mary-Elizabeth Murphy, (History & Philosophy). "Journeys through Jim Crow: African Americans, Interstate Bus Segregation, and Black Protest Politics, 1915-1948."
27. Biswajit Panja, (Computer Science). "Security in SCADA System using Hybrid Cryptography Algorithms to avoid Cyber-attacks on Power Grids."
28. Keon Pettiway, (Communication, Media, & Theater Arts). "Filling Up the Jails of the North and South: Rhetorical Trajectory of Non-violent Direct Action in Martin Luther King's Civil Rights Public Addresses, 1956-1968."

29. Paul Price, (Biology). "Bacterial Transduction as a Means of Studying Legume-Microbe Interactions."
30. Chris Reilly, (Art & Design). "Parametric Design Studies in Fine Art."
31. Jodonnis Rodriguez, (Accounting & Finance). "Do Institutional Investors Avoid Women?"
32. Katherine Ryker, (Geography & Geology). "Fear of the Unknown: Developing Positive Science Teaching Attitudes while Reducing Math Anxiety."
33. Joel Schoenhals, (Music & Dance). "Bach on the Arno: Johann Sebastian Bach's Complete Keyboard Partitas Recorded on the Arno 284 Piano."
34. Hannah Seidel, (Biology). "Understanding Cell Division in a Model Organism."
35. Jonathan Skuza, (Physics & Astronomy). "Inception of Magneto-Optical and Plasmonic Research and Instrumentation at Eastern Michigan University."
36. John Sonnega, (Health Promotion & Human Performance). "Disentangling the Role of Stress in Sleep Disparities and Deficits."
37. Macarthur Lamar Stewart, (Engineering Technology). "A Virtual Prototyping Method to Simulate a Lower Limb Prosthesis During Normal Walking."
38. Pamela Stewart, (Art & Design). "Imagining Christ, Performing the Passion: Visual Culture and Confraternal Devotion in Renaissance Milan."
39. Stephanie Wladkowski, (Social Work). "Current Practice of Live Discharge from Hospice Care: Perspectives of Hospice Agencies."
40. Xining Yang, (Geography & Geology). "Measuring Food Access for U.S. Cities and their Health Correlates using Geospatial Big Data."
41. Mehmet Yaya, (Economics). "The Impact of Trust Acts on Crime and Victimization Reporting."

**RESEARCH SPOTLIGHT: PROFESSOR CORY EMAL AND US PATENT NO 9,527,878**

As we bring the 2017 Summer Research Awards before the Board of Regents, it seems opportune to illustrate the transformative impact on faculty research provided by university-funded internal research support.

Attached is a patent awarded to EMU through the research efforts of Dr. Cory Emal, Professor of Chemistry at EMU, and his collaborators at the University of Michigan. EMU's internal research awards programs supported Professor Emal's efforts in this research area, culminating in this patent, by previously awarding him a 2013 Faculty Research Fellowship, a 2014 Research Support Award, and a 2015 Faculty Research Fellowship.

Issued on December 27, 2016, this is EMU's 23<sup>rd</sup> United States patent, and is Professor Emal's fourth patent in this area. US Patent No. 9,527,878 was awarded to the team for their work in developing a class of chemical compounds that can be used as drug candidates for treating several diseases, including thrombosis, myocardial infarction, atherosclerosis, and obesity. The EMU Office of Research Development and Administration (ORDA) and the Technology Transfer Office assisted Professor Emal and his colleagues in the patent application process. Professor Emal also has an impressive record of competing for and winning federal research grants. He was instrumental in developing the new Fermentation Science Program at EMU.



US009527878B2

(12) **United States Patent**  
Lawrence et al.

(10) **Patent No.:** US 9,527,878 B2  
(45) **Date of Patent:** Dec. 27, 2016

(54) **PLASMINOGEN ACTIVATOR INHIBITOR-1  
INHIBITORS AND METHODS OF USE  
THEREOF TO MODULATE LIPID  
METABOLISM**

C07C 229/12 (2006.01)  
C07C 229/34 (2006.01)  
(Continued)

(52) **U.S. Cl.**

CPC ..... C07H 15/203 (2013.01); A61K 31/166  
(2013.01); A61K 31/18 (2013.01); A61K  
31/235 (2013.01); A61K 31/27 (2013.01);  
A61K 31/444 (2013.01); A61K 31/495  
(2013.01); A61K 31/50 (2013.01); A61K  
31/5375 (2013.01); A61K 31/7034 (2013.01);  
A61K 38/1741 (2013.01); A61K 38/482  
(2013.01); C07C 69/88 (2013.01); C07C 69/90  
(2013.01); C07C 69/94 (2013.01); C07C  
229/12 (2013.01); C07C 229/34 (2013.01);  
C07C 235/68 (2013.01); C07C 271/22  
(2013.01); C07C 271/54 (2013.01); C07C  
311/29 (2013.01); C07C 311/49 (2013.01);  
C07D 213/82 (2013.01); C07D 295/195  
(2013.01); C07D 295/26 (2013.01); C07H  
13/08 (2013.01); C07C 2101/14 (2013.01);  
C12Y 304/21073 (2013.01)

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(\*) **Notice:** Subject to any disclaimer, the term of this  
patent is extended or adjusted under 35  
U.S.C. 154(b) by 0 days.

(58) **Field of Classification Search**

None  
See application file for complete search history.

(21) **Appl. No.:** 14/817,690

(22) **Filed:** Aug. 4, 2015

(65) **Prior Publication Data**  
US 2016/0009748 A1 Jan. 14, 2016

(56) **References Cited**

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(57) **ABSTRACT**

The invention relates to plasminogen activator-1 (PAI-1)  
inhibitor compounds and uses thereof in the treatment of any  
disease or condition associated with elevated PAI-1. The  
invention includes, but is not limited to, the use of such  
compounds to modulate lipid metabolism and treat condi-  
tions associated with elevated PAI-1, cholesterol, or lipid  
levels.

20 Claims, 26 Drawing Sheets

**Related U.S. Application Data**

(60) Division of application No. 12/624,126, filed on Nov.  
23, 2009, now Pat. No. 9,120,744, which is a  
(Continued)

(51) **Int. Cl.**

C07H 15/203 (2006.01)  
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A61K 31/27 (2006.01)  
C07C 311/29 (2006.01)  
A61K 31/18 (2006.01)  
C07C 235/68 (2006.01)  
A61K 31/166 (2006.01)  
C07D 213/82 (2006.01)  
A61K 31/444 (2006.01)  
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A61K 31/50 (2006.01)  
A61K 31/5375 (2006.01)  
C07C 69/88 (2006.01)  
C07C 69/90 (2006.01)