






# June 2022 Board of Trustees Meeting

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| <b>Schedule</b>  | Wednesday, June 1, 2022 1:00 PM — 2:00 PM CDT      |
| <b>Venue</b>     | Maxine A. Smith University Center - Ballroom (320) |
| <b>Organizer</b> | Sparkle Burns                                      |

## Agenda

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Presented by Doug Edwards

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# 1. Call to Order and Opening Remarks

Presented by Doug Edwards



## 2. Roll Call and Declaration of Quorum

Presented by Melanie Murry



### 3. Approval of Meeting Minutes for March 1, 2022

For Approval

Presented by Doug Edwards

**THE UNIVERSITY OF MEMPHIS**  
**BOARD OF TRUSTEES MEETING MINUTES**  
**MARCH 1, 2022**

The University of Memphis Board of Trustees convened on Tuesday, March 1, 2022, in-person on the University of Memphis main campus in Memphis, TN.

**I. CALL TO ORDER AND OPENING REMARKS**

Chairman Edwards called the meeting to order.

Chairman Edwards stated this would be Dr. Rudd's last meeting as President and recognized the guests the University had from the Tennessee Higher Education Commission, the Association of Governing Boards, and a member of the public in attendance to address the Board.

**II. ROLL CALL AND DECLARATION OF QUORUM**

Chairman Edwards recognized Board Secretary Melanie Murry.

Secretary Murry called the roll. The following trustees were in attendance:

Trustee Graf  
Trustee Martin  
Trustee Roberts  
Trustee Johnson  
Trustee Riley  
Trustee Kemme  
Trustee North  
Chairman Edwards  
Trustee Ellison (participated electronically via Zoom and verified he was alone and could hear her.)

Secretary Murry instructed the Board that all votes must be roll calls due to Trustee Ellison participating electronically.

**III. APPROVAL OF REVISED MEETING MINUTES FOR AUGUST 25, 2021, AND APPROVAL OF MEETING MINUTES FOR DECEMBER 8, 2021**

Chairman Edwards called for a motion to approve the revised August 25, 2021 meeting minutes and approval of the December 8, 2021 meeting minutes. The motion was made by Trustee



Johnson and properly seconded. Chairman Edwards asked was there any discussion, none was provided. A roll call vote was taken and unanimously approved.

#### **IV. REQUEST TO ADDRESS THE BOARD**

Chairman Edwards recognized Mr. Joseph B. Kent to address the Board.

Mr. Kent addressed the board regarding the University's decisions and partnerships related to public economic development.

Mr. Kent concluded his address.

#### **V. PRESIDENT'S UPDATE**

Chairman Edwards recognized University President, Dr. M. David Rudd.

Dr. Rudd began his president's update by expressing his appreciation to those that assisted in the Carnegie R1 effort for the University.

Dr. Rudd gave comments about the current legislative session related to the budget Governor Bill Lee has recommended for higher education and capital expenditures. Dr. Rudd expressed his appreciation for Governor Bill Lee, the Tennessee Legislature, and Tennessee Higher Education Commission for their support.

Dr. Rudd concluded his presentation.

#### **VI. NAMINGS FOR FOGELMAN DRIVE AND THE AVRON AND ROBERT FOGELMAN BUSINESS COMPLEX**

Chairman Edwards recognized Dr. Rudd to present the namings for Fogelman Drive and the Avron and Robert Fogelman Business Complex.

Dr. Rudd gave an overview of the impact the Fogelman family has had at the University of Memphis. Dr. Rudd made a recommendation for the Board to approve the renaming of Innovation Drive to Fogelman Drive and the Business Complex to Robert and Avron Fogelman Business Complex.

Chairman Edwards made remarks about Robert (Bobby) Fogelman and the Fogelman family's impact at the University of Memphis.

Secretary Murry informed Chairman Edwards that a motion was needed, the motion was made by Trustee Johnson and properly seconded. A roll call vote was taken and unanimously approved.

## **VII. REPORTS AND RECOMMENDATIONS OF THE ACADEMIC, RESEARCH AND STUDENT SUCCESS COMMITTEE**

Chairman Edwards informed the Board reports and recommendations for the Governance and Finance Committee will not be presented because the committee did not meet.

Chairman Edwards recognized Trustee Kemme to give the reports and recommendations for the Academic, Research and Student Success Committee.

Trustee Kemme stated the committee had two (2) informational items and two (2) action items.

The following informational items were presented:

- Executive Vice President of Academic Affairs and Provost, Dr. Tom Nenon presented the revision to the faculty handbook.
- Executive Dean, UofM Global, Academic Innovation & College of Professional and Liberal Studies presented information on GROWWTH (Growing Relational and Occupational Wealth in West Tennessee Households) which is a community project to help those reach economic success.

The following action items require Board approval:

- The revised mission statement for the University which now recognizes the University as an R1 Research Institution.
- The naming of the Communications and Fine Arts Theatre Building to the Edward and Bernice Humphreys Theatre Building.

Trustee Kemme made one motion to approve both action items. The motion was properly seconded. A roll call vote was taken and unanimously approved.

## **VIII. REPORTS AND RECOMMENDATIONS OF THE AUDIT COMMITTEE**

Chairman Edwards recognized Trustee Roberts to present the reports and recommendations of the Audit Committee.

Trustee Roberts stated Chief Audit Executive, Vicki Deaton presented the following items:

- Summary of audit reports issued completed on fixed assets and IT governance
- Audit issue follow-up
- External Audit Report – University of Memphis Foundation Financial Statements, 6/30/2021
- External Audit Report – University of Memphis Auxiliary Services Foundation Financial Statements, 6/30/2021
- External Report – Application of agreed upon procedures to the University of Memphis' Intercollegiate Athletics Program statement of revenues and expenses, 6/30/2021

- Internal Audit Client Satisfaction Survey for 2021

Trustee Roberts informed the Board that Executive Vice President and Chief Financial Officer (CFO) Raaj Kurapati presented the following:

- 2021 Risk Assessment for approval
- The draft of the FY2021 annual financial report and internal control status

Interim Director for the Office of Institutional Equity, Ceecy Reed presented a compliance update.

CFO Raaj Kurapati came back to the committee to present the plans for the Foundations' website redesign.

Trustee Roberts informed the Board that the committee had one (1) item for approval. Trustee Roberts made the motion to approve the 2021 risk assessment. The motion was properly seconded. A roll call vote was taken and unanimously approved.

#### **IX. 2022 JOHN W. NASON AWARD FOR BOARD LEADERSHIP RECIPIENT**

Chairman Edwards recognized Dr. Barbara Gitenstein, Executive Vice President for the Association of Governing Boards Consulting (AGB) to present the 2022 John W. Nason Award for Board Leadership.

Dr. Gitenstein provided the purpose of the John W. Nason Award and why the decision was made to honor the University of Memphis Board of Trustees.

Dr. Gitenstein concluded her remarks and presented the Board with the 2022 John W. Nason Award.

Chairman Edwards gave remarks about the creation of the Board and the progress the Board has made in 5 years under Dr. Rudd's leadership. Chairman Edwards expressed his appreciation to Dr. Gitenstein and AGB for the award.

#### **X. TENNESSEE HIGHER EDUCATION COMMISSION**

Chairman Edwards recognized Dr. Emily House, Executive Director of Tennessee Higher Education Commission and the Tennessee Student Assistance Corporation.

Dr. House gave remarks and presented the University of Memphis Board of Trustees with House Joint Resolution No. 809 due to the Board receiving the 2022 John W. Nason Award.

Chairman Edwards expressed his appreciation to Dr. House.

#### **XI. CHAIRMAN'S PRESENTATION**

Chairman Edwards made remarks about the accomplishments the University had under Dr. Rudd's tenure as president and the leadership and culture he brought to campus.

Chairman Edwards informed the Board that the University will establish an Institute for Veterans and Military Suicide Prevention which will be under Dr. Rudd's leadership. Chairman Edwards gave an overview of the institute's purpose and focus. The institute will be named in honor of Dr. Rudd. The Rudd Institute for Veterans and Military Suicide Prevention will be funded by using the matching funds provided by the State of Tennessee for the University's research efforts.

Chairman Edwards called for a motion to approve the creation of the Rudd Institute for Veterans and Military Suicide Prevention. The motion was made by Trustee Johnson and properly seconded. A roll call vote was taken and unanimously approved.

**XII. ADDITIONAL BUSINESS**

No additional business

**XIII. ADJOURNMENT**

Chairman Edwards adjourned the meeting and announced the next Board meeting will be June 1, 2022, and the new University President, Dr. Bill Hardgrave will be in attendance.

## 4. President's Update

Presentation

Presented by Bill Hardgrave



## **5. Appointment of Interim Provost**

For Approval

Presented by Bill Hardgrave

## **The University of Memphis Board of Trustees**

Recommendation

For Approval

**Date:** June 1, 2022

**Presented by:** Bill Hardgrave, President

### **Background:**

Dr. Abby Parrill-Baker currently serves the University of Memphis as Dean of the College of Arts and Sciences. Since coming to the University in 1988 as an instructor, Dr. Parrill-Baker has served in many capacities at the University, including department chair in Chemistry, associate dean of the College of Arts & Sciences, and interim dean of the College of Arts & Sciences.

Dr. Parrill-Baker earned her PhD and MS degrees from the University of Arizona and her BS degree from Central Michigan University. She has been the recipient of numerous awards including the Willard R. Sparks Eminent Faculty Award in 2017.

### **Recommendation:**

The Board recommends the appointment of Dr. Abby Parrill-Baker as Interim Provost for the University of Memphis.



**Abby L. Parrill-Baker**  
**Dean, College of Arts and Sciences**  
**Professor, Department of Chemistry**

**CURRICULUM VITAE**

**DEGREES**

| DEGREE           | DISCIPLINE | INSTITUTION                 | YEAR |
|------------------|------------|-----------------------------|------|
| Ph. D.           | Chemistry  | University of Arizona       | 1996 |
| M.S.             | Chemistry  | University of Arizona       | 1996 |
| B.S. with Honors | Chemistry  | Central Michigan University | 1992 |

**ADMINISTRATIVE EXPERIENCE**

**Dean,** College of Arts and Sciences, University of Memphis, May 1, 2019-present

- Manage CAS budget
- Evaluate chairs and directors
- Collaborate with Division of Research and Innovation to contribute to University achievement of Carnegie R1 status
- Collaborate with Deans of other units on interdisciplinary programs and projects
- Collaborate with Development on fundraising initiatives
- Support diversity, equity and inclusion as part of NSF ASPIRED project team
- Member of Core team for STEM Research and Classroom Building project

**Interim Dean,** College of Arts and Sciences, University of Memphis, February 1, 2019-April 31, 2019

- Interdisciplinary team building to complete NIH Biomedical Research Facilities (C03) proposal
- Preparation of CAS budget presentation in collaboration with CAS senior staff and with input from CAS chairs/directors
- Collaborative work with the Advancement Division, Disability Resources for Students, and Career Services on new programs and/or problem resolution

**Associate Dean,** College of Arts and Sciences, University of Memphis, 2014-2019

- Research development (Faculty Research Grant program, collaborative grant team assembly, Dean's representative on the University Research Council)
- Faculty development (Professional Development Award Program, collaborative faculty development workshops with Office of Research and Engineering and Herff College of Engineering)
- Dean's liaison with the College of Arts and Sciences External Advisory Board
- Dean's liaison to the Peer Power Foundation (led to Peer Power Institute at the University of Memphis)
- Contributor, STEM building proposal team, STEM building recommended for funding to the State of Tennessee by the Tennessee Higher Education Commission
- Work with Dean's senior staff to develop actions for the college consistent with the University strategic plan

**Chair,** Department of Chemistry, University of Memphis, 2010-2014

- Lead team of six full-time staff, fifteen tenure-track and one non tenure-track faculty
- Managed departmental budget
- Networked with chemical industry leaders in Memphis to create student internship opportunities and solicit donations of funds and instrumentation

**Chair,** Board of Directors, The PRIZM Ensemble, 2016-present

- Lead strategic planning efforts
- Provide oversight of Executive Director (hire, promote professional development, manage annual performance review process, review budget and spending)

- Fundraising (donor stewardship activities, phone-a-thon contributor, routinely promote organization, grant writing)

## ACADEMIC/SCIENTIFIC EXPERIENCE

| RANK/POSITION                       | DEPARTMENT              | ORGANIZATION                          | PERIOD          |
|-------------------------------------|-------------------------|---------------------------------------|-----------------|
| Assistant/Associate/ Full Professor | Chemistry               | University of Memphis                 | 1998/2002/2006- |
| Visiting Scientist                  | Structural Biology      | St. Jude Children's Research Hospital | 2004-2005       |
| Adjunct Assistant Professor         | Medicinal Chemistry     | University of Mississippi             | 2000-           |
| Adjunct Assistant Professor         | Pharmaceutical Sciences | University of Tennessee, Memphis      | 2000-           |
| Lumsden Valrance Lecturer           | Chemistry               | Michigan State University             | 1996-1998       |
| Instructor                          | Chemistry               | Columbia Review (MCAT Review)         | 1993-1996       |
| Graduate Teaching Assistant         | Chemistry               | University of Arizona                 | 1992-1996       |
| Co-op. Education Student            | Analytical Chemistry    | The DOW Chemical Co.                  | 1990-1992       |

## HONORS/AWARDS

| HONOR/AWARD                              | INSTITUTION/COMPANY/ORGANIZATION  | YEAR      |
|--|---|-----------|
| Commencement Speaker                     | University of Memphis   | 2017      |
| Willard Sparks Eminent Faculty Award     | University of Memphis Board of Visitors   | 2017      |
| Distinguished Research Award             | University of Memphis Alumni Association  | 2011      |
| Distinguished Research Award             | College of Arts and Sciences, The University of Memphis   | 2008      |
| Olin Atkins Professorship                | University of Memphis   | 2007-2010 |
| Award for Teaching Excellence            | College of Arts and Sciences, The University of Memphis   | 2007      |
| Research Paper Competition Award         | University of Memphis Sigma Xi Chapter  | 2001      |
| Early Career Research Award              | University of Memphis College of Arts and Sciences  | 2000      |
| Golden Apple Award (teaching excellence) | Michigan State University Chapter of the American Medical Student Association                                 | 1997      |
| Outstanding Student Presentation         | International Cannabis Research Society Symposium on Cannabis and Cannabinoids                                | 1995      |
| Presentation Award                       | University of Arizona Student Showcase  | 1995      |
| Excellence in Teaching                   | Department of Chemistry – University of Arizona   | 1994      |
| Gregson Scholarship                      | Department of Chemistry – University of Arizona   | 1994      |
| Meritorious Performance in Teaching      | University of Arizona Foundation  | 1993      |
| Excellence in Teaching                   | Department of Chemistry – University of Arizona   | 1993      |
| Entrance Scholarship                     | Department of Chemistry – University of Arizona   | 1992      |
| Outstanding College Chemistry Student    | Midland American Chemical Society Section   | 1992      |
| Special Recognition Award                | The DOW Chemical Company  | 1992      |
| Special Recognition Award                | The DOW Chemical Company  | 1991      |
| National Merit Scholar                   | National Merit Awards based on Preliminary Scholastic Aptitude Test (PSAT) and Scholastic Aptitude Test (SAT) | 1988      |

## TEACHING EXPERIENCE

### University of Memphis

- Developed first online general education chemistry course (lecture and at-home laboratory)
- Undergraduate and graduate organic, medicinal, computational, and biochemistry courses
- Honors forum course

### University of Mississippi

- Graduate computational courses (adjunct)

### Michigan State University

- Undergraduate organic courses

5. Appointment of Interim Provost

- Undergraduate laboratory courses and recitations

## STUDENT ADVISING/MENTORING:

| Former and Current | Name  | Timeframe    |
|--------------------|---|--------------|
| High School        | 11 students mentored in summer projects   | 2007-2012    |
| Undergraduate      | Over 80 students mentored for periods of 1 semester-2 years                     | 1998-present |
| Masters            | 5 students earned thesis MS degrees   | 2004-present |
| Doctoral           | 18 students defended doctoral dissertations<br>2 students currently co-mentored | 2001-present |
| Postdoctoral       | 5 postdoctoral scholars mentored  | 1998-2017    |

## RESEARCH/SCHOLARSHIP/CREATIVE ACTIVITIES:

### PUBLICATIONS

#### Books (authored, edited)

1. Parrill, A.L., Lipkowitz, K., eds., Reviews in Computational Chemistry, Volume 32, Wiley, **forthcoming**.
2. Parrill, A.L., Lipkowitz, K., eds., Reviews in Computational Chemistry, Volume 31, Wiley, **2018**.
3. Parrill, A.L., Lipkowitz, K., eds., Reviews in Computational Chemistry, Volume 30, Wiley, **2017**.
4. Parrill, A.L., Lipkowitz, K., eds., Reviews in Computational Chemistry, Volume 29, Wiley, **2016**.
5. Parrill, A.L., Lipkowitz, K., eds., Reviews in Computational Chemistry, Volume 28, Wiley, **2015**.
6. Reddy, M.R.; Parrill, A.L., eds., Rational Drug Design: Novel Methodology and Practical Applications, ACS Symposium Series, Vol 719, 1999.

#### Refereed journal publications (Invited publications indicated by bold numbers)

7. Thomas, B.N.; Parrill, A.L.; Baker, D.L.; "Self-docking and cross-docking simulations of G protein-coupled receptor-ligand complexes: Impact of ligand type and receptor activation state", *J. Mol. Graph. Model.*, **2022**, 112, 108119.
8. Castleman, P.; Szwabowski, G.; Bowman, D.; Cole, J.; Parrill, A.L.; Baker, D.L.; "Ligand-based G Protein Coupled Receptor Pharmacophore Modeling: Assessing the Role of Ligand Function in Model Development", *J. Mol. Graph. Model.*, **2022**, 111, 108107.
9. Szwabowski, G.L.; Castleman, P.N.; Sears, C.K.; Wink, L.H.; Cole, J.A.; Baker, D.L.; Parrill, A.L.; "Benchmarking GPCR Homology Model Template Selection in Combination with De Novo Loop Generation", *J. Computer-Aided Mol. Des.*, **2020**, 34(10), 1027-1044.
10. Morstein, J.; Dacheux, M.A.; Norman, D.D.; Shemet, A.; Donthamsetti, P.C.; Citir, M.; Frank, J.A.; Schultz, C.; Isacoff, E.Y.; Parrill, A.L.; Tigyi, G.J.; Trauner, D. "Optical Control of Lysophosphatidic Acid Signaling", *J. Am. Chem. Soc.*, **2020**, 142(24), 10612-10616.
11. Banerjee, S.; Norman, D.D.; Deng, S.; Fakayode, S.L.; Lee, S.C.; Parrill, A.L.; Li, W.; Miller, D.D.; Tigyi, G.J. "Molecular Modelling Guided Design, Synthesis and QSAR Analysis of New Small Molecule Non-Lipid Autotaxin Inhibitors", *Bioorg. Chem.*, **2020**, 103:104188
12. Wink, L.H.; Baker, D.L.; Cole, J.A.; Parrill, A.L. "A Benchmark Study of Loop Modeling Methods Applied to G Protein-Coupled Receptors", *J. Computer-Aided Mol. Design*, **2019**, 33:6, 573-595.
13. Morstein, J.; Hill, R.Z.; Novak, A.J.E.; Feng, S.; Norman, D.D.; Donthamsetti, P.C.; Frank, J.A.; Harayama, T.; Williams, B.M.; Parrill, A.L.; Tigyi, G.J.; Riezman, H.; Isacoff, E.Y.; Bautista, D.; Trauner, D. "Optical Control of Sphingosine-1-phosphate Formation and Function", *Nature Chemical Biology*, **2019**, 15:6, 623-631.
14. Castleman, P.N.; Sears, C.K.; Cole, J.A.; Baker, D.L.; Parrill, A.L. "GPCR homology model template selection benchmarking: Global versus local similarity measures", *J. Mol. Graph. Model.*, **2019**, 86:235-246 DOI: 10.1016/j.jmgm.2018.10.016.
15. Gacasan, S.; Baker, D.L.; Parrill, A.L. "G Protein-Coupled Receptors: The Evolution of Structural Insight", *AIMS Biophysics*, **2017**, 4(3): 491-527.
16. Banerjee, S.; Norman, D.D.; Lee, S.C.; Parrill, A.L.; Pham, T.C.T.; Baker, D.L.; Tigyi, G.; Miller, D.D. "Highly Potent Non-Carboxylic Acid Autotaxin Inhibitors Reduce Melanoma Metastasis and Chemotherapeutic Resistance of Breast Cancer Stem Cells", *J. Med. Chem.*, **2017**, 60(4), 1309-1324. DOI: 10.1021/acs.jmedchem.6b01270
17. Ragle, L.E.; Palanisamy, D.J.; Joe, M.J.; Stein, R.S.; Norman, D.D.; Tigyi, G.; Baker, D.L.; Parrill, A.L. "Discovery and Synthetic Optimization of a Novel Scaffold for Hydrophobic Tunnel-Targeted Autotaxin Inhibition", *Bioorg. Med. Chem.*, **2016**, 24(19), 4660-4674.

18. Ragle, L.E.; Baker, D.L.; Parrill, A.L. "Structure-activity relationships of autotaxin inhibition", **2016**, Current Topics in Biochemical Research, 17, 1-18.
19. Parrill, A.L. "Synthetic Lipids and their Role in Defining Macromolecular Assemblies", Chem. Phys. Lipids, **2015**, 191, 38-47.
20. McMillan, J.E.; Bukiya, A.N.; Terrell, C.L.; Patil, S.A.; Miller, D.D.; Dopico, A.M.; Parrill, A.L. "Multi-generational pharmacophore modeling for ligands to the cholane steroid-recognition site in the  $\beta 1$  modulatory subunit of the BKCa channel", J. Mol. Graph. Model., **2014**, 54C:174-183. doi: 10.1016/j.jmgm.2014.10.008
21. Bukiya, A.N.; McMillan, J.; Liu, J.; Shivakumar, B.; Parrill, A.L.; Dopico, A.M. "Activation of Calcium- and Voltage-Gated Potassium Channels of Large Conductance by Leukotriene B<sub>4</sub>", J Biol Chem. **2014** Nov 4. pii: jbc.M114.577825. PMID: 25371198
22. Parrill, A.L. "Design of Anticancer LPA Agonists and Antagonists", Future Medicinal Chemistry, **2014**, 6(8), 871-883.
23. Fells, J.I.; Lee, S.C.; Norman, D.D.; Tsukahara, R.; Kirby, J.R.; Nelson, S.; Seibel, W.; Papoian, R.; Patil, R.; Miller, D.D.; Parrill, A.L.; Pham, T.C.; Bittman, R.; Tigyi, G. "Targeting the hydrophobic pocket of autotaxin with virtual screening of inhibitors identifies a common aromatic sulfonamide structural motif", FEBS J., **2014**, 281(4), 1017-1028.
24. Norman, D.D.; Ibezim, A.; Scott, W.E.; White, S.; Parrill, A.L.; Baker, D.L. "Autotaxin Inhibition: Development and Application of Computational Tools to Identify Site-Selective Lead Compounds", Bioorg. & Med. Chem., **2013**, 21(17), 5548-5560.
25. Fells, J.I.; Lee, S.C.; Fujiwara, Y.; Norman, D.D.; Lim, K.G.; Tsukahara, R.; Liu, J.; Patil, R.; Miller, D.D.; Kirby, R.J.; Nelson, S.; Seibel, W.; Papoian, R.; Parrill, A.L.; Baker, D.L.; Bittman, R.; Tigyi, G. "Hits of a High-Throughput Screen Identify the Hydrophobic Pocket of Autotaxin/Lysophospholipase D as an Inhibitory Surface", Mol. Pharmacol., **2013**, 84(3), 415-424.
26. Bukiya, A.; McMillan, J.; Fedinec, A.; Patil, S.; Miller, D.; Leffler, C.; Parrill, A.; Dopico, A. "Cerebrovascular Dilation Via Selective Targeting of the Cholane Steroid-Recognition Site in the BK Channel  $\beta 1$  Subunit by a Novel Nonsteroidal Agent", Mol. Pharmacol., **2013**, 83(5), 1030-1044.
27. Ren, F.; Bhana, S.; Norman, D.; Johnson, J.; Xu, L.; Baker, D.; Parrill, A.; Huang, X. "Gold nanorods carrying paclitaxel for photothermal - chemotherapy of cancer", Bioconjugate Chem., **2013**, Bioconjug. Chem., 24(3), 376-386.
28. Parrill, A.L. "Computational Design and Experimental Characterization of GPCR Segment Models", Methods Enzymol., **2013**, 522, 81-95.
29. Young, J.K.; Clayton, B.T.; Kikonyogo, A.; Pham, T.C.T.; Parrill, A.L. "Structure Characterization of an LPA<sub>1</sub> Second Extracellular Loop Mimetic with a Self-Assembling Coiled-Coil Folding Constraint", Int. J. Mol. Sci., **2013**, 14, 2788-2807. Doi:10.3390/ijms14022788
30. Parrill, A.L.; Tigyi, G. "Integrating the puzzle pieces: The current atomistic picture of phospholipid-G protein coupled receptor interactions", Biochim. Biophys. Acta, **2013**, 1831(1), 2-12. PMID: 22982815
31. Baker, D.L.; Parrill, A.L. "Polymer Concepts Illustrated in the Context of Biopolymers", in Introduction of Macromolecular Science/Polymeric Materials into the Foundational Course in Organic Chemistry, Chapter 7, **2013**, 85-93, *ACS Symposium Series*, Volume 1151. doi: 10.1021/bk-2013-1151
32. Ruddick, K.; Parrill, A.L. "JCE Classroom Activity #113: An Interlocking Building Block Activity in Writing Formulas of Ionic Compounds", J. Chem. Educ., **2012**, 89(11), 1436-1438. DOI: 10.1021/ed200513y
33. Ruddick, K.; Parrill, A.L.; Petersen, R. "Introductory Molecular Orbital Theory: An Honors General Chemistry Computational Lab as Implemented in ChemBio3D Ultra 12.0", J. Chem. Educ., **2012**, 89(11), 1358-1363. DOI: 10.1021/ed2003719
34. Kiss, G.N.; Fells, J.I.; Gupte, R.; Lee, S.C.; Liu, J.; Nusser, N.; Lim, K.G.; Ray, R.M.; Lin, F.T.; Parrill, A.L.; Sumegi, B.; Miller, D.D.; Tigyi, G.J. "Virtual Screening for LPA<sub>2</sub>-Specific Agonists Identifies a Nonlipid Compound with Antiapoptotic Actions", Mol. Pharmacol., **2012**, 82(6), 1162-1173. PMID: 22968304
35. Parrill, A.L.; Lima, S.; Spiegel, S. "Structure of the first sphingosine 1-phosphate receptor", Sci. Signal., **2012**, 5, pe23.
36. Singh, A.K.; McMillan, J.; Bukiya, A.N.; Burton, B.; Parrill, A.L.; Dopico, A.M. "Multiple cholesterol recognition/interaction amino acid consensus (CRAC) motifs in the cytosolic C tail of the  $\text{slo1}$  subunit determine cholesterol sensitivity of Ca<sup>2+</sup> and voltage-gated K<sup>+</sup> (BK) channels", J. Biol. Chem., **2012**, 287:20509-20521, DOI:10.1074/jbc.M112.356261.
37. Parrill, A.L. "Comparative modeling of lipid receptors", Chapter 12 in Membrane Protein Structure: Methods and Protocols, Methods in Molecular Biology Series, edited by N. Vaidehi and Klein-Seetharaman, J.; 2012, vol. 914, 207-218. DOI 10.1007/978-1-62703-023-6\_12.
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**Refereed conference publications - note that many of these duplicate publications from the preceeding section**

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**Nonrefereed publications and patent applications**

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12. Walker, M.D.; Liliom, K.; Wang, D.A.; Fujiwara, Y.; Osborne D.; Parrill, A.L.; Tigyi, G. "Computational and Pharmacological Identification of the Binding Pocket of the S1P<sub>1</sub> Receptor", **2005**, *FASEB J.*, 19(4), A526-A526.
13. Inagaki, Y.; Parrill, A.L.; Tigyi, G.; Igarashi, Y. "Identification of Ligand Recognition Sites of S1P(4)/Edg-6 Receptor Using Computational Modeling", **2004**, *Yakugaku Zasshi-Journal of the Pharmaceutical Society of Japan*, 124, 205-208.
14. Virag, T.; Elrod, D.B.; Liliom, K.; Sardar, V.M.; Parrill, A.L.; Yokoyama, K.; Durgam, G.; Miller, D.D.; Tigyi, G. J. "Fatty Alcohol Phosphates are Subtype-Selective Agonists and Antagonists of Lysophosphatidic Acid Receptors", **2003**, *FASEB J.*, 17(4), A169-A169.
15. Parrill, A.L.; Bautista, D.L.; Baker, D.L.; Wang, D.A.; Fischer, D.J.; Tigyi, G.; van Brocklyn, J.; Spiegel, S. "Dynamic Modeling of EDG1 Receptor Structural Changes Induced by Site-Directed Mutations", **2000**, *Biochemistry*, 39(6), 1565-1565.
16. Parrill, A.L. "Periodic 2.0 for Macintosh", *J. Chem. Inf. Comput. Sci.*, **1997**, 37(4), 820.
17. Parrill, A.L. "gNMR version 3 for Macintosh", *J. Chem. Inf. Comput. Sci.*, **1996**, 36(1), 153.

## PRESENTATIONS

### INVITED PRESENTATIONS

#### Conferences

1. Parrill, A.L. "A Career Built on Collaborative Investigations of Membrane Protein Structure, Function, and Ligand Discovery", Women in Chemistry Symposium, Southeast Regional Meeting of the American Chemical Society, Birmingham, AL, November 10-13<sup>th</sup>, 2021.
2. Parrill, A.L. "Collaborative Investigations of Membrane Protein Structure and Function", Diversity Awareness Symposium Highlighting Research and Collaboration, Saturday, April 27<sup>th</sup>, 2013
3. Parrill, A.L. "Rational Approaches to Discovery of Autotaxin Inhibitors", 2011 FASEB Summer Research Conference on "Lysophospholipid Mediators in Health and Disease", Lucca, Italy, August 14-19<sup>th</sup>, 2011.
4. Parrill, A.L. "Computer-Guided Discovery of Autotaxin Inhibitors", 2nd Western Canadian Medicinal Chemistry Workshop (WCMCW), Saskatoon, Canada, September 24-26, 2010.
5. Parrill, A.L. "Discovering Autotaxin Inhibitors", Bioactive Lipids Meeting, Cancun, Mexico, October 25-28, 2009.
6. Parrill, A.L. "Development, Validation, and Application of Binary QSAR Models to Identify and Optimize Leads to Interface with Bioactive Phospholipid Function", Chemical Computing Group North American User Group Meeting 2009, Montreal, Quebec, Canada, June 25-26<sup>th</sup>, 2009.
7. Parrill, A.L. "In-Silico Discovery of Potent, Non-Lipid Lysophosphatidic Acid Receptor Antagonists", 2007 FASEB Summer Research Conference on "Lysophospholipid Mediators in Health & Disease", Tucson, AZ, June 9-14, 2007.
8. Parrill, A.L. "Molecular Insights into Lysophosphatidic Acid Receptor Agonism", BioScience2005 - from genes to systems, Glasgow, Scotland, July 17-21, 2005.
9. Parrill, A.L. "Structural characterization of lysophospholipid receptors", 2005 FASEB Summer Research Conference on "Lysolipids in Health and Disease", Snowmass, Colorado, June 11-16, 2005.
10. Parrill, A.L. "A molecular modeling approach to identify LPA and S1P receptor subtype-selective pharmacophores", Experimental Biology 2005, San Diego, CA, April 2-6, 2005.



11. Parrill, A.L. "Characterization of Lysophospholipid Receptors", 2003 FASEB Summer Research Conference on "Lysophospholipids and Related Bioactive Lipids in Biology and Diseases", Snowmass, Colorado, June 28-July 3, 2003.
12. Parrill, A.L.; Bautista, D.L.; Wang, D.; Baker, D.L.; Lorincz, Z.; Tigyi, G. "Homology Modeling of Endothelial Differentiation Gene Family Identifies Single Point Mutation for Ligand Selectivity Switching", 222<sup>nd</sup> American Chemical Society National Meeting and Exposition, Chicago, IL August 2001.
13. Parrill, A. L.; Bridson, P. K.; Cundari, T. R. "Undergraduate Introduction to Computational Chemistry Through Research Projects", 222<sup>nd</sup> American Chemical Society National Meeting and Exposition, Chicago, IL August 2001.
14. Parrill, A. L. "Characteristics of Ligand Recognition by LPL Receptors", 2001 FASEB Summer Research Conference on "Lysophospholipids and Related Bioactive Lipids in Biology and Diseases", Tucson, Arizona, June 9-16, 2001.
15. Miller, D. D.; Sardar, V. M.; Elrod, D.; Sun, G.; Xu, H.; Dalton, J. T.; Tigyi, G.; Baker, D.; Virag, T.; Nusser, N.; Fischer, D.; Lorincz, Z.; Jennings, L.; Bao, J.; Parrill, A. L.; Bautista, D.; Liliom, K. "Search for Selective Lysophosphatidic Acid (LPA) Antagonists", 220<sup>th</sup> American Chemical Society National Meeting and Exposition, Washington, D. C., August 19-24, 2000.
16. Parrill, A. L. "Computational Studies of HIV Integrase Inhibition", 10<sup>th</sup> Annual Great Lakes College Chemistry Conference, Michigan State University, April 8, 2000.
17. Parrill, A.L.; Deng, J. Schroeder, S.; Roaten, J.B.; Sweatman, T. and Israel, M. "Protein Kinase C Isoforms as Targets for 14-Acyl Anthracycline Antitumor Drugs", 218<sup>th</sup> National Meeting and Exposition, New Orleans, LA August 1999.
18. Parrill, A.L.; Nakhleh, M.; Donovan, W. "Student Motivation: The Leveling Impact of Activities Outside the Box", 218<sup>th</sup> National Meeting and Exposition, New Orleans, LA August 1999.
19. Parrill, A. L., Dewan, M., Ellsworth, J. Donovan, W., Nakhleh, M. "Facilitating Chemical Education with Computers: Interactive Materials for Students and Organizational Tools for Teachers", Central Regional ACS Meeting, Columbus, OH, June 21-23, 1999.
20. Parrill, A.L.; Harrison, J.F. "Incorporating Computational Chemistry and Molecular Modeling into the Curriculum: The Short Version of a Very Long Story", 15<sup>th</sup> Biennial Conference on Chemical Education, Waterloo, Ontario, Canada, August 1998.
21. Nakhleh, M.B.; Donovan, W.J.; Parrill, A.L. "Evaluation of Interactive Technologies for Chemistry Websites: Educational Materials for Organic Chemistry (EMOC)", 15<sup>th</sup> Biennial Conference on Chemical Education, Waterloo, Ontario, Canada, August 1998.
22. Parrill, A.L. "Establishing a Learning-Centered and Non-Threatening Environment in Large Classrooms", American Chemical Society 215<sup>th</sup> National Meeting and Exposition, Dallas, TX Spring 1998.
23. Parrill, A.L.; Harrison, J.F. "History of Incorporating Computational Chemistry and Molecular Modeling into the Chemistry Curriculum" American Chemical Society 215<sup>th</sup> National Meeting and Exposition, Dallas, TX Spring 1998.

#### **Other (universities/industry)**

24. Parrill, Abby L., "G-Protein Coupled Receptor Studies: From Structural Details to Functional Definition", Outstanding Women in Science Seminar Series, University of Alabama-Birmingham, Tuesday, February 7, 2017.
25. Parrill, Abby L. "Undergraduate Investigations of G Protein-Coupled Receptor Structures and Ligand Interactions", Freed-Hardeman University, Thursday, November 10, 2016.
26. Parrill, Abby L. "Undergraduate Investigations of G Protein-Coupled Receptor Structures and Ligand Interactions", Rust College, Thursday, October 20, 2016.
27. Parrill, Abby L. "Evolving Approaches to Characterization of the Structure-Function Relationship in Lipid Receptors", Lipids at Wayne seminar series, Wayne State University, Wednesday, March 4<sup>th</sup>, 2015.
28. Parrill, Abby L. "Progress Toward a Transferable Water Soluble GPCR Design", Department of Chemistry Seminar, University of Missouri St. Louis, Monday, October 27<sup>th</sup>, 2014.
29. Parrill, Abby L. "Rational Approaches to Autotaxin Inhibition", Department of Chemistry Seminar, Union University, Friday, April 20<sup>th</sup>, 2012.
30. Parrill, Abby L. "Rational Approaches to Autotaxin Inhibition", Department of Chemistry Seminar, Jacksonville State University, Wednesday, October 19<sup>th</sup>, 2011.
31. Parrill, Abby L. "Rational Approaches to Autotaxin Inhibition", Department of Chemistry Seminar, Auburn University, Thursday, October 20<sup>th</sup>, 2011.
32. Parrill, Abby L. "Computer-Guided Discovery of Autotaxin Inhibitors", Department of Chemical Biology Seminar, St. Jude Children's Research Hospital, Friday, December 17<sup>th</sup>, 2010.
33. Parrill, Abby L. "Computer-Guided Discovery of Autotaxin Inhibitors", McGovern Lecture, University of Houston, December 9<sup>th</sup>, 2010.
34. Parrill, Abby L. "Computer-Guided Discovery of Autotaxin Inhibitors", Department of Chemistry Seminar, University of Mississippi, October 9<sup>th</sup>, 2010.
35. Parrill, Abby L. "Computer-Guided Discovery of Autotaxin Inhibitors", Department of Pharmaceutical Sciences Seminar, University of Tennessee Health Sciences Center, August 30<sup>th</sup>, 2010.
36. Parrill, Abby L. "Rational Approaches to Autotaxin Inhibition", Department of Pharmacology Seminar, University of Tennessee Health Sciences Center, Wednesday, March 24<sup>th</sup>, 2010.
37. Parrill, Abby L. "Targeted Intervention in Phospholipid Function", Department of Medicinal Chemistry Seminar, University of Utah, Monday, April 20, 2009.

38. Parrill, Abby L. "Targeted Intervention in Phospholipid Function", Department of Chemistry Seminar, Duquesne University, Monday, February 23, 2009.
39. Parrill, Abby L. "Targeted Intervention in Phospholipid Function", Department of Medicinal Chemistry Seminar, The University of Mississippi, Tuesday, September 16, 2008.
40. Parrill, Abby L. "Targeted Intervention in Phospholipid Function", Department of Pharmacology Seminar, The University of Pittsburgh, Tuesday, September 9, 2008.
41. Parrill, A.L. "Integrating Experimental and Computational Approaches to Characterize S1P Receptor Structure and Ligand Recognition", National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases, Genetics of Development and Disease Branch, Wednesday, June 10, 2008.
42. Parrill, A.L. "Integrating Experimental and Computational Approaches to Characterize S1P Receptor Structure and Ligand Recognition", University of California Davis, Thursday, April 24, 2008.
43. Parrill, A.L. "Integrating Experimental and Computational Approaches to Characterize S1P Receptor Structure and Ligand Recognition", Exelixis, South San Francisco, CA, Friday, April 25, 2008.
44. Parrill, A.L. "Integrating Experimental and Computational Approaches for Therapeutic Lead Discovery", Plenary Lecture, The University of Memphis Department of Chemistry Undergraduate Research Conference, February 23, 2008.
45. Parrill, A.L. "In-Silico Discovery of Potent, Non-Lipid Lysophosphatidic Acid Receptor Antagonists", University of North Carolina Greensboro, Friday, September 28, 2007.
46. Parrill, A.L. "Structural Biology of Membrane Proteins: Complementary Experimental and Theoretical Approaches", Hood College, Wednesday, February 21, 2007.
47. Parrill, A.L. "Structural Characterization of Membrane Proteins: Complementary Experimental and Theoretical Approaches", University of Tennessee Health Sciences Center, Friday, May 12, 2006.
48. Parrill, A.L. "Modeling LPA Production and Action", National Institutes of Health, Wednesday, October 19, 2005.
49. Parrill, A.L. "Computational and Experimental Characterization of Phospholipid Growth Factor Receptor Structures", University of Tennessee Health Sciences Center, Pharmaceutical Sciences Departmental Seminar, Monday, April 25, 2005.
50. Parrill, A.L. "Computational and Experimental Characterization of Phospholipid Growth Factor Receptor Structures", Vanderbilt University, Institute for Chemical Biology Seminar, Wednesday, April 20, 2005.
51. Parrill, A.L. "Distinct and Conserved Residues Mediate Sphingosine-1-Phosphate Recognition by Sphingosine-1-Phosphate Receptors", University of Mississippi, Chemistry Departmental Seminar, Thursday, September 9, 2004.
52. Parrill, A.L. "Distinct and Conserved Residues Mediate Sphingosine-1-Phosphate Recognition by Sphingosine-1-Phosphate Receptors", University of Alabama, Chemistry Departmental Seminar, Thursday, November 11, 2004.
53. Parrill, A.L. "Distinct and Conserved Residues Mediate Sphingosine-1-Phosphate Recognition by Sphingosine-1-Phosphate Receptors", Murray State University, Chemistry Departmental Seminar, Monday, December 6, 2004.
54. Parrill, A. L. "Model-Driven Structural Characterization of Phospholipid Growth Factor Receptors", Western Kentucky University, Chemistry Departmental Seminar, Friday, January 30, 2004.
55. Parrill, A. L. "Model-Driven Structural Characterization of Phospholipid Growth Factor Receptors", St. Jude Children's Research Hospital – Structural Biology Seminar, Tuesday, January 20, 2004.
56. Parrill, A. L. "Structural Studies on Membrane Bound Receptors", Mississippi College – Chemistry Departmental Seminar, Monday, November 3, 2003.
57. Parrill, A. L. "Characterizing Membrane Protein Structure using Computational Modeling and Site-Directed Mutagenesis", Rhodes College – Departmental Seminar, Monday, October 1, 2001.
58. Parrill, A. L. "G Protein Coupled Receptors: Insights into Ligand Recognition and Selectivity from Molecular Modeling", University of Memphis and University of Tennessee Health Science Center – Joint Program in Biomedical Engineering Seminar, Friday, October 12, 2001.
59. Parrill, A. L. "G Protein Coupled Receptors: Insights into Ligand Recognition and Selectivity from Molecular Modeling", University of Memphis – Departmental Seminar, Friday, September 28, 2001.
60. Parrill, A. L. "Modeling and Validation of the EDG Receptors", University of Alberta – Signal Transduction Research Group Seminar, Thursday, August 9, 2001.
61. Parrill, A. L. "The Chemistry of Artificial Sweeteners", Collierville High School, Thursday, April 12, 2001.
62. Parrill, A. L. "Modeling HIV Integrase Inhibition", Austin Peay State University – Departmental Seminar, Thursday, March 22, 2001.
63. Parrill, A. L. "Ligand Recognition in the Endothelial Differentiation Gene Receptor Family", Ceretek, Friday, March 9, 2001.
64. Parrill, A. L. "Using computational chemistry to understand protein-ligand interactions", Tennessee State University, Department of Chemistry - Departmental Seminar, Thursday, September 28, 2000.
65. Parrill, A. L. "Molecular Modeling and Experimental Validation of Membrane Protein Structures", University of Missouri, St. Louis, Department of Chemistry - Departmental Seminar, Monday, September 18, 2000.
66. Parrill, A. L. "How phospholipid growth factors recognize their receptor: A computational modeling-driven approach", University of Tennessee, Memphis, Department of Physiology - Departmental Seminar, Thursday, September 14, 2000.
67. Parrill, A. L. "Modeling and Model Validation of the G Protein-Coupled Receptor, Edg-1", University of Tennessee, Memphis, Department of Pharmaceutical Sciences - Departmental Seminar, Monday, April 24, 2000.
68. Parrill, A. L. "Computational Investigations into the Mechanism of Metal Ion Influence on HIV Integrase Inhibition", University of Kentucky Department of Chemistry - Departmental Seminar, Thursday, January 27, 1999.

69. Parrill, A. L. "Dynamic Modeling of G Protein-Coupled Receptor Structural Changes Induced by Site-Directed Mutations", Murray State Department of Chemistry - Departmental Seminar, Monday, November 8, 1999.
70. Parrill, A. L. "Computational Exploration of the Anticancer Activity Mechanism for an Unusual Anthracycline", Tennessee Tech Department of Chemistry - Departmental Seminar, Friday, October 8, 1999.
71. Parrill, A.L. "Computer Modeling to Understand Antitumor Activity", Union University Department of Chemistry – Departmental Seminar, Thursday, April 15, 1999.
72. Parrill, A.L. "Computational Chemistry Applied to Understanding the Antitumor Activity of 14-Acyl Anthracyclines", University of Mississippi Department of Chemistry – Departmental Seminar, Friday, April 9, 1999.
73. Parrill, A.L. "Opportunities for Women in Science: Networking, Funding, and Training", Middle Tennessee State University – Women in Science Seminar Series, Wednesday, March 3, 1999.
74. Parrill, A.L. "Modeling Biochemical Interactions: Examples Relevant to HIV and Cancer", Middle Tennessee State University Department of Chemistry – Departmental Seminar, Thursday, March 4, 1999.
75. Parrill, A.L. "G-Protein Coupled Receptor Modeling: From Two-Dimensional Sequence to Three-Dimensional Structure", University of Memphis Department of Computer Science – Computational Biology Seminar, Tuesday, February 23, 1999.
76. Parrill, A.L. "Supplementing Experiment with Computational Chemistry to Better Understand Drug Action: The Role of Protein Kinase C in the Antitumor Activity of AD198", Arkansas State University Department of Chemistry – Departmental Seminar, Friday, February 12, 1999.
77. Parrill, A.L. "Computational Modeling of Protein-Ligand Interactions of the EDG Receptor Family and HIV-1 Integrase", University of Cincinnati Department of Chemistry – Biochemistry Divisional Seminar, Tuesday, December 1, 1998.
78. Parrill, A.L. "Modeling Protein/Ligand Interactions from Many Directions: A Look at HIV-Integrase Inhibition and the Lysophosphatidic Acid Receptor Family", University of Mississippi Department of Medicinal Chemistry – Departmental Seminar, Tuesday, November 10, 1998.
79. Parrill, A.L. "Computational Chemistry Methods and Applications in Pharmaceutical Research", University of Tennessee at Memphis Department of Pharmacology – Departmental Seminar, Friday, September 25, 1998.
80. Parrill, A.L. "Innovative Classroom Practices and Their Impact on Classroom Atmosphere", Louisiana State University Department of Chemistry – Departmental Seminar, Friday, September 11, 1998.
81. Parrill, A.L. "Innovative Classroom Practices: Their Impact on Student Learning and Assessment", Louisiana State University Teaching Series, Thursday, September 10, 1998.
82. Parrill, A.L. "Supplementing Chemical Education on the World Wide Web", Central Michigan University Department of Chemistry – Departmental Seminar, Fall, 1997.

## **OTHER PRESENTATIONS**

83. Szwabowski, G.L.; Griffing, M.C.; Guerrero, M.; Ruddick, K.R.; Cole, J.A.; Baker, D.L., Parrill A.L., "A Method of Automated Pharmacophore Model Generation Using Multiple Copy Simultaneous Search" National American Chemical Society Meeting, August 2021.
84. Orellana, K.\*; Dyer, C.\*; Parrill, A.L.; Baker, D.L., "Statistical Analysis of Protein Similarity Measures?" National American Chemical Society Meeting, August 2021.
85. Hoffman, B.\*; Wiley\*, E. R.; Baker, D.L., "Synthesis and Quantitative Analysis of Diffusible Signal Factor Analogs as Antibiofilm Agents" National American Chemical Society Meeting, August 2021.
86. Dyer, C.; Parrill, A.L.; Baker, D.L., "Hydrophobic Surface Patch Disruption to Produce Water-Soluble G-Protein Coupled Receptor Analogs" Southeast Regional Meeting of the American Chemical Society, November 2021.
87. Dyer, C.\*; Orellana, K.\*; Parrill, A.L.; Baker, D.L., "Statistical Analysis of Protein Similarity Measures", Southeast Regional Meeting of the American Chemical Society, November 2021.
88. Szwabowski, G.L.; Parrill, A.L.; Baker, D.L., "A method of automated, score-based pharmacophore generation using Multiple Copy Simultaneous Search" Southeast Regional Meeting of the American Chemical Society, November 2021.
89. Guerrero, M.; Szwabowski, G.L.; Ruddick, K.R.; Parrill, A.L.; Baker, D.L., "Experimental Validation of Computationally Generated Structure-Based Pharmacophores" Southeast Regional Meeting of the American Chemical Society, November 2021.
90. Hoffman, B. and Baker D.L., "Quantitative analysis of fatty acid diffusible signaling factors by HPLC-ESI-MS" Southeast Regional Meeting of the American Chemical Society, November 2021.
91. Wiley, E.R. and Baker, D.L., "Synthesis and characterization of novel diffusible signal factor analogs for analysis of structure activity relationships" Southeast Regional Meeting of the American Chemical Society, November 2021.
92. Ruddick, K.R., Elayan, A.M., Nelson, H.A., Lashet, C., Hanson, J., Parrill, A.L., Cole, J.A., and Baker, D.L., NanoLuc (NLuc) complementation assay elucidates role of specific G-proteins in GPR88 signaling. Experimental Biology National Meeting 2021. **CHOSEN** for additional GPCR colloquium by ASPET, ASBMB, and APS.
93. Castleman, G.L. Szwabowski, D. Bowman, J. Cole, A.L. Parrill-Baker, D.L. Baker "Pharmacophore benchmarking: The role of ligand function in pharmacophore development." 2020 Rocky Mountain Regional Meeting of the American Chemical Society. November 2020. **AWARD:** Division of Medicinal Chemistry Award for presentation.
94. Szwabowski, G.L., Parrill, A.L., Baker, D.L., "Automated construction of fragment-based pharmacophores to elucidate novel GPCR ligands", Rocky Mountain Regional Meeting of the American Chemical Society, November 2020

95. Dyer, C., Parrill, A.L., Baker, D.L., "Statistical Analysis of Protein-Protein Comparison Methods." Rocky Mountain Regional Meeting of the American Chemical Society, November 2020. **AWARD:** Stanley C. Israel Regional Award for Advancing Diversity in the Chemical Sciences
96. Hoffman, B. and Baker, D.L., "Quantitative analysis of diffusible signaling factors using negative ion liquid chromatography electrospray ionization mass spectrometry (HPLCESI-MS)" Rocky Mountain Regional Meeting of the American Chemical Society, November 2020.
97. Wiley, E. R., and Baker, D. L., "Modular synthesis and characterization of diffusible signal factor analogs for the study of structure activity relationships and mechanism of action." 2020 Rocky Mountain Regional Meeting of the American Chemical Society. Virtual. November 2020.
98. Thomas, B.N., Parrill, A.L., and Baker, D.L., "Self-docking and cross-docking simulations of G protein-coupled receptor-ligand complexes: analysis of ligand type and receptor activation state", Rocky Mountain Regional Meeting of the American Chemical Society, November 2020.
99. Griffing, M., Baker, D.L., and Parrill, A.L. "Systematic Analysis of Ligand Binding Site Locations Within Crystallized GPCR Complexes", American Chemical Society Rocky Mountain Region Meeting, November 2020.
100. Castleman, Paige N.; Szwabowski, Gregory L.; Baker, Daniel L.; Parrill, Abby L. "Pharmacophore benchmarking: The role of ligand function in pharmacophore development." 2019 Southeast Regional Meeting of the American Chemical Society. Savannah, GA. 2019.
101. Szwabowski, G.L.; Castleman, P.N.; Sears, C.K.; Wink, L.H.; Cole, J.A.; Baker, D.L.; Parrill, A.L. "Benchmarking GPCR homology model template selection in combination with de novo loop generation", 2019 Southeastern Regional Meeting of the American Chemical Society, 2019.
102. Hannie, K.D.; Parrill, A.L.; Baker, D.L., "Computational and Experimental Filtering of Potential Therapeutics using ADMET Properties," 258th American Chemical Society National Meeting and Exposition. San Diego, CA. August 26-28th, 2019.
103. Castleman, P.N., Cole, J.A., Baker, D.L., and Parrill, A.L., "Homology Model Template Selection Benchmarking: Global Versus Local Similarity Measures", National Meeting of the American Chemical Society, 2018.
104. Castleman, P.N., Cole, J.A., Baker, D.L., and Parrill, A.L., "Homology Model Template Selection Benchmarking: Global Versus Local Similarity Measures", 74th Annual Meeting of the Southwest Region of the American Chemical Society, 2018.
105. Sears, C.K., Parrill, A.L., and Baker, D.L., "Development of a G Protein-Coupled Receptor Deorphanization Protocol: Application to GPR37L1", 74th Annual Meeting of the Southwest Region of the American Chemical Society, 2018.
106. Emma G. Jackson and Abby L. Parrill, "GPR88 Modeling and Antagonist Discovery", 67th Southeast/71st Southwest Joint Regional Meeting of the American Chemical Society, Memphis, TN, United States, November 4-7 (2015).
107. Rachel Coleman and Abby Parrill-Baker, "Modeling GPR6: A Potential Therapeutic Target in the treatment of Parkinson's Disease", 67th Southeast/71st Southwest Joint Regional Meeting of the American Chemical Society, Memphis, TN, United States, November 4-7 (2015).
108. Natalie Galindo and Abby Parrill, "GPR31 Modeling and Pharmacophore-Guided Antagonist Discovery", 67th Southeast/71st Southwest Joint Regional Meeting of the American Chemical Society, Memphis, TN, United States, November 4-7 (2015).
109. Jay M. Yarbrow, Samantha B. Gacasan, Jesse Ziebarth, Yongmei Wang, Abby L. Parrill-Baker, Ramin Homayouni, "(NIPSNAP1) with NAD and NADH", 67th Southeast/71st Southwest Joint Regional Meeting of the American Chemical Society, Memphis, TN, United States, November 4-7 (2015).
110. L. Ragle, D.L. Baker, A.L. Parrill, "Expanded structure-activity relationship analysis of small molecule autotaxin inhibitors", 67th Southeast/71st Southwest Joint Regional Meeting of the American Chemical Society, Memphis, TN, United States, November 4-7 (2015).
111. S.B. Gacasan, V.I. Godwin, L. Wink, B. Nguyen, P. Kurtzweil, L. Church, S. Iqbal, A. Kikonyogo, A.L. Parrill, "Investigating function of water-soluble  $\beta 2$  adrenoreceptor mimics using circular dichroism", 67th Southeast/71st Southwest Joint Regional Meeting of the American Chemical Society, Memphis, TN, United States, November 4-7 (2015).
112. L. Wink, A. Kikonyogo, A.L. Parrill, "Applying comparative modeling strategies and virtual docking toward deorphanization of GPR26", 67th Southeast/71st Southwest Joint Regional Meeting of the American Chemical Society, Memphis, TN, United States, November 4-7 (2015).
113. Parrill, A.L.; Tigyi, G. "Integrating the Puzzle Pieces of Phospholipid-receptor Interactions", G-protein-coupled-receptors: from structural insights to functional mechanisms, co-organized by the Biochemical Society and Monash University, Prato, Italy, September 2012.
114. Pham, T. C. T.; Wanjala, I. W.; Howard, A. L.; Breland, D. K.; DeYonker, N. J.; Webster, C. E.; Parrill, A. L.; Baker, D. L. "Characterizing the structure and function of lipid preferring nucleotide pyrophosphatase phosphodiesterases using computational and experimental methods", 63<sup>rd</sup> Southeast Regional Meeting of the American Chemical Society, Richmond, VA, United States, October 26-29, 2011.
115. Norman, D. D.; Scott, W. E.; White, S.; Ibezim, A.; Parrill, A. L.; Baker, D. L. "ATX inhibition: Development of computational tools to identify hydrophobic tunnel targeted leads", 63<sup>rd</sup> Southeast Regional Meeting of the American Chemical Society, Richmond, VA, United States, October 26-29, 2011.
116. Baker, D.L.; Mize, C.; Abbott, A.; Parrill, A.L. "Design and application of computational tools for the rational design and discovery of Autotaxin inhibitors", 241<sup>st</sup> American Chemical Society National Meeting & Exposition, Anaheim, CA, United States, March 27-31, 2011.

117. Parrill, A.L.; Howard, A.L.; Wanjala, I.W.; Baker, D.L. "Insights into substrate recognition and discrimination by the phospholipid-preferring Nucleotide Pyrophosphatase/Phosphodiesterase isoforms", 241<sup>st</sup> American Chemical Society National Meeting & Exposition, Anaheim, CA, United States, March 27-31, 2011.
118. Baker, D.L.; Wanjala, I.W.; Parrill, A.L. "Characterization of substrate specifying determinants of nucleotide pyrophosphatase phosphodiesterase sevrn", 66<sup>th</sup> SWRM/62<sup>nd</sup> SERMACS, New Orleans, LA, November 30<sup>th</sup>-December 4<sup>th</sup>, 2010.
119. Pham, T.T.; Wanjala, I.; Howard, A.; Parrill, A.L.; Baker, D.L. "Insights into the structure and function of lipid preferring Nucleotide Pyrophosphatase Phosphodiesterase isoforms", 66<sup>th</sup> SWRM/62<sup>nd</sup> SERMACS, New Orleans, LA, November 30<sup>th</sup>-December 4<sup>th</sup>, 2010
120. Parrill, Abby L.; North, E. Jeffrey; Hoeglund, Adrienne; Bostic, Heidi; Best, Michael D; Baker, Daniel L "Computer-Guided Discovery of Autotaxin Inhibitors", 240<sup>th</sup> ACS National Meeting & Exposition, Boston, Massachusetts , August 22-26, 2010.
121. Wanjala, Irene W.; Parrill, Abby L.; Baker, Daniel L. Structural and Functional Characterization of Alkaline Sphingomyelinase (NPP7). 38<sup>th</sup> Great Lakes Regional Meeting of the American Chemical Society, Chicago, IL, United States, May 13-16, 2009.
122. Xu, X.; Zhang, H.; Parrill, A.; Tigyi, G.; Prestwich, G. D. "Lysophosphatidic acid (LPA) antagonists treat breast and lung cancer in engineered tumor models" 237<sup>th</sup> ACS National Meeting, Salt Lake City, UT, March 22-26<sup>th</sup>, 2009.
123. Shaffer, R.; Bonilla, E.; Parrill, A.L. "Unlocking the Structure of G-Protein Coupled Receptors", 29<sup>th</sup> Annual Undergraduate Research Conference, The University of Memphis, February 28<sup>th</sup>, 2009.
124. McMillan, J.; Bukiya, A.; Dopico, A.; Parrill, A.L. "Computational Methods to Discriminate Between Active and Inactive Anti-Hypertensive Compounds", 29<sup>th</sup> Annual Undergraduate Research Conference, The University of Memphis, February 28<sup>th</sup>, 2009.
125. Ghaila, K. C.; Parrill, A.L. "A Computational Model of Nucleotide Pyrophosphatase/Phosphodiesterase 4 (NPP4) for Substrate Determination", 29<sup>th</sup> Annual Undergraduate Research Conference, The University of Memphis, February 28<sup>th</sup>, 2009.
126. Williams, J.R.; Perygin, D.H.; Parrill, A.L.; Fujiwara, Y.; Tigyi, G. "Identification of Cationic Residues Involved in Ligand Recognition at the Lysophosphatidate Receptor, LPA<sub>5</sub>", 60<sup>th</sup> Southeastern Regional Meeting of the American Chemical Society, Nashville, TN, United States, November 12-15 (2008).
127. Pham, Truc-Chi T.; Hoeglund, Adrienne; Baker, Daniel L.; Parrill, Abby. Pharmacological Characterization of Candidate Drug-Like Autotaxin Inhibitors. 60<sup>th</sup> Southeast Regional Meeting of the American Chemical Society, Nashville, TN, United States, November 12-15 (2008).
128. Wanjala, Irene W.; Parrill, Abby L.; Baker, Daniel L. Computational and Experimental Approaches for the Analysis of Alkaline Sphingomyelinase (Alk-SMase/NPP7). 60<sup>th</sup> Southeast Regional Meeting of the American Chemical Society, Nashville, TN, United States, November 12-15 (2008).
129. Williams, J.R.; Perygin, D.H.; Fujiwara, Y.; Tigyi, G.; Parrill, A.L. "Identification of Cationic Residues Involved in Ligand Recognition at the Lysophosphatidate Receptor, LPA<sub>5</sub>", 16<sup>th</sup> Annual NHLBI Cardiovascular Diversity Research Supplement Awardee Session, Saturday, 11/8/08.
130. North, E. J.; Baker, D. L.; Parrill, A. L. "Virtual and Combinatorial Advances in the Identification of Bioavailable Autotaxin Inhibitors," 60<sup>th</sup> Southeastern Regional Meeting of the American Chemical Society, Nashville, TN, November 12-15, 2008.
131. Montedonico, L.E.; Baker, D.L.; Parrill A.L. "Design and Biological Evaluation of Mechanism-Based Autotaxin Inhibitors", 60<sup>th</sup> Annual South Eastern Regional Meeting of the American Chemical Society, Nashville, TN, November 12-15, 2008.
132. Howard-Shearer, A.L.; Baker, D.L.; Parrill A.L. "Computational and Mutagenic Studies of NPP6", 60<sup>th</sup> Southeastern Regional Meeting (SERMACS), Nashville, TN, November 12-15, 2008.
133. Clayton, B. T.; Parrill, A. L. "Design of LPA<sub>1</sub> Receptor Peptide Loop Mimetics and Determination of Secondary Structure Using Circular Dichroism", 64<sup>th</sup> Southwest Regional Meeting of the American Chemical Society, Little Rock, AR, United States, October 1-4 (2008).
134. North, E. J.; Baker, D. L.; Parrill, A. L.. "Autotaxin Structure Activity Relationships Identified through Lysophosphatidylcholine Analogs", 64<sup>th</sup> Southwest Regional Meeting of the American Chemical Society, Little Rock, AR, United States, October 1-4 (2008).
135. Howard-Shearer, A. L.; Baker, D. L.; Parrill, A. L. "NPP6 Model Validation by Computational Docking and Mutagenesis", 64<sup>th</sup> Southwest Regional Meeting of the American Chemical Society, Little Rock, AR, United States, October 1-4 (2008).
136. Clayton, B. T.; Parrill, A. L. "Coiled-coils promote self-assembly of LPA receptor peptide loop mimetics", 236<sup>th</sup> ACS National Meeting, Philadelphia, PA, United States, August 17-21, 2008 (2008).
137. Williams, J. R.; Fujiwara, Y.; Tigyi, G.; Balasankoula, S.; Parrill, A. L. "Optimization of the LPA<sub>5</sub> receptor model for therapeutic lead discovery", 236<sup>th</sup> ACS National Meeting, Philadelphia, PA, United States, August 17-21, 2008.
138. Hoeglund, A.B.; Parrill, A.L.; Baker, D.L. "Screening and Identification of New Classes of Autotaxin (ATX) Inhibitors by Computational Modeling", Keystone Symposia: Computer-Aided Drug Design, Steamboat Springs, CO, March 29-April 3, 2008.
139. Parrill, A.L.; Hoeglund, A.B.; Echols, U.; Nguyen, T.; Pham, T.C.T.; Baker, D.L. "Computationally-Guided Discovery of Autotaxin Inhibitors", Joint Biophysical Society 52<sup>nd</sup> Annual Meeting & 16<sup>th</sup> IUPAB International Biophysics Congress, Long Beach, CA, February 2-6, 2008.
140. North, E. Jeffrey; Baker, Daniel L.; Parrill, Abby L. "Synthesis and Evaluation of Lysophosphatidylcholine Analogs as Tools to Determine Crucial Autotaxin Substrate Characteristics", 59<sup>th</sup> Southeast Regional Meeting of the American Chemical Society, Greenville, SC, October 24-27, 2007.
141. Fells, J. I. Jr.; Tsukahara, R.; Liu, J.; Fujiwara, Y.; Tigyi, G.; Parrill, Abby L. "Using Virtual Screening to Identify Bioactive Molecules", GTCbio 3rd Modern Drug Discovery & Development Summit, San Francisco, CA, November 28-30, 2007.

142. Howard, A.L.; Baker, D.L.; Parrill, A.L. "Spectroscopic and Functional Characterization of Human NPP6", 2007 FASEB Summer Research Conference on "Lysophospholipid Mediators in Health & Disease", Tucson, AZ, June 9-14, 2007.
143. North, E.J.; Baker, D.L.; Parrill, A.L. "Synthesis and Evaluation of LPC Analogues for Autotaxin Substrate Characterization", 2007 FASEB Summer Research Conference on "Lysophospholipid Mediators in Health & Disease", Tucson, AZ, June 9-14, 2007.
144. Pham, T.C.T.; Kriwacki, R.; Parrill, A.L. "Peptide Design and Structural Characterization of S1P<sub>4</sub> E1 Loop Mimetic", 2007 FASEB Summer Research Conference on "Lysophospholipid Mediators in Health & Disease", Tucson, AZ, June 9-14, 2007.
145. Tsukahara, T.; Tsukahara, R.; Cheng, Y.-H.; Zhang, C.; Balazs, L.; Du, G.; Frohman, M.A.; Baker, D.; Parrill, A.L.; Tigyi, G. "The Novel Second Messenger Cyclic Phosphatidic Acid Negatively Regulates Nuclear Hormone Receptor PPAR $\gamma$ ", 2007 FASEB Summer Research Conference on "Lysophospholipid Mediators in Health & Disease", Tucson, AZ, June 9-14, 2007.
146. Tsukahara, R.; Durgam, G.G.; Gududuru, V.; Fujiwara, Y.; Jiang, G.; Zhang, H.; Xu, Y.; Miller, D.D.; Prestwich, G.D.; Parrill, A.L.; Tigyi, G., "Identification and Classification of Selective Agonists and Antagonists of LPA Receptors", 2007 FASEB Summer Research Conference on "Lysophospholipid Mediators in Health & Disease", Tucson, AZ, June 9-14, 2007.
147. Valentine, W.J.; Mujahid, S.; Fells, J.; Yokoyama, K.; Fujiwara, Y.; Tsukahara, R.; Parrill, A.L.; Tigyi, G. "Conserved Residues Responsible for Ligand Recognition in the EDG-family Lysophosphatidic Acid Receptors", 2007 FASEB Summer Research Conference on "Lysophospholipid Mediators in Health & Disease", Tucson, AZ, June 9-14, 2007.
148. Clayton, Benjamin T.; Pham, Truc Chi; Parrill, Abby L. "Structural Characterization of Lysophosphatidic Acid G Protein-Coupled Receptors by NMR Spectroscopy", 19<sup>th</sup> Annual Univ. Memphis Student Research Forum, April 2, 2007.
149. Howard, Angela L.; Baker, Daniel L.; Parrill, Abby L. NPP6 as a Model of the Catalytic Domain of Autotaxin. 19<sup>th</sup> Annual University of Memphis Student Research Forum, April 2, 2007.
150. North, Elton Jeffrey; Baker, Daniel L.; Parrill, Abby L. Synthesis and Evaluation of Nonhydrolyzable Autotaxin Inhibitors. 19<sup>th</sup> Annual University of Memphis Student Research Forum, April 2, 2007.
151. Nau, F. J.; Parrill, A.L. "Toward Synthesis of Para-Alkyl Substituted Alcohols as Conformationally Constrained Fatty Alcohols", American Chemical Society 233<sup>rd</sup> National Meeting & Exposition, Chicago, IL, March 25-29, 2007.
152. Parrill, A.L., Fells, J.I.; Perygin, D.; Tsukahara, R.; Tigyi, G. "In-silico Discovery of Non-Lipid Lysophosphatidic Acid Receptor Antagonists", Gordon Research Conference: Molecular Pharmacology, Ventura Beach, California, January 28-February 2, 2007.
153. Fujiwara, Y.; Osborne, D.; Walker, M.; Wang, D.; Bautista, D.; Liliom, K.; Van Brocklyn, J.; Parrill, A.L.; Tigyi, G. "Identification of the Hydrophobic Ligand Binding Pocket of the S1P<sub>1</sub> Receptor", Gordon Research Conference: Molecular Pharmacology, Ventura Beach, California, January 28-February 2, 2007.
154. Tigyi, G.; E S.; Fujiwara, Y.; Tsukahara, R.; Li, C.; Naren, A.; Lin, F.; Parrill, A.L.; Deng, W. "Cellular Responses Mediated via C-terminal Macromolecular Complexes of LPA<sub>2</sub>", Gordon Research Conference: Molecular Pharmacology, Ventura Beach, California, January 28-February 2, 2007.
155. Osborne, D.A.; Fujiwara, Y.; Walker, M.D.; Wang, D.A.; Bautista, D.A.; Liliom, K.; VanBrocklyn, J.R.; Parrill, A.L.; Tigyi, G. "Identification of the Hydrophobic Binding Pocket of the S1P<sub>1</sub> Receptor", 15<sup>th</sup> Conference on Current Trends in Computational Chemistry, Jackson, MS November 3-4, 2006.
156. Afolabi, T.; Parrill, A.L. "QSAR Modeling of LPA<sub>3</sub> Receptor Activity" The 18<sup>th</sup> Annual Student Research Forum, The University of Memphis, Memphis, TN, April, 2006.
157. Afolabi, T.; Parrill, A.L. "QSAR Modeling of LPA<sub>3</sub> Receptor Activity" The 20<sup>th</sup> National Conference on Undergraduate Research, April 6-8, 2006.
158. James I. Fells, Sr., Abby L. Parrill, Ryoko Tsukahara, and Gabor Tigyi "Identifying Potential LPA<sub>3</sub> Antagonists Using In Silico Screening", 14<sup>th</sup> Conference on Current Trends in Computational Chemistry, Jackson, MS November 4-5, 2005.
159. Mor M. Naor and Abby L. Parrill "The Neighborhood Influence on Sphingosine 1-Phosphate pK<sub>a</sub>", 61<sup>st</sup> Southwest and 57<sup>th</sup> Southeast Joint Regional Meetings of the American Chemical Society, Memphis, TN, USA, Nov. 2005.
160. James I. Fells, Sr., Abby L. Parrill, Ryoko Tsukahara, and Gabor Tigyi "High-throughput Screening for LPA<sub>3</sub> Antagonist Selectivity", 57<sup>th</sup> Southeast / 61<sup>st</sup> Southwest Joint Regional American Chemical Society Meeting, Memphis, TN November 1-4, 2005.
161. Duane Miller, Gangadhar Durgam, Veeresa Gududuru, Gabor Tigyi, Abby Parrill, Eunju Hurh, Jim Dalton "Synthesis and Biological Evaluation of Lipid Ligands", 57<sup>th</sup> Southeast / 61<sup>st</sup> Southwest Joint Regional American Chemical Society Meeting, Memphis, TN November 1-4, 2005.
162. Truc-Chi T. Pham, Richard Kriwacki, Abby Parrill "Peptide Design and Structural Characterization of a GPCR Loop Mimetic", 57<sup>th</sup> Southeast / 61<sup>st</sup> Southwest Joint Regional American Chemical Society Meeting, Memphis, TN November 1-4, 2005.
163. Donna H. Perygin and Abby L. Parrill, "3-D Database Searching for the Identification of Novel LPA<sub>1</sub> Antagonists", 57<sup>th</sup> Southeast / 61<sup>st</sup> Southwest Joint Regional American Chemical Society Meeting, Memphis, TN November 1-4, 2005.
164. Baker, D.L.; Pigg, K. R.; Tsukahara, R.; Tigyi, G.; Parrill, A.L.; Li, Z.; Bittman, R. "Synthesis, Evaluation and Application of Benzophenone Analogs of Lysophosphatidic Acid and Alkyl Glycerophosphate", 2005 FASEB Summer Research Conference on "Lysolipids in Health and Disease", Snowmass, Colorado, June 11-16, 2005.
165. Tsukahara, T.; Yasuda, S.; Makarova, N.; Yuan, H.; Parrill, A.; Tigyi, G. "Analogues of Lysophosphatidic Acid are Novel Partial Agonists of PPAR $\gamma$ ", 2005 FASEB Summer Research Conference on "Lysolipids in Health and Disease", Snowmass, Colorado, June 11-16, 2005.

166. Fujiwara, Y.; Sardar, V.; Tokumura, A.; Baker, D.; Murakami-Murofushi, K.; Parrill, A.; Tigyi, G. "Identification of Residues Responsible for Ligand Recognition and Regioisomeric Selectivity of LPA Receptors Expressed in Mammalian Cells", 2005 FASEB Summer Research Conference on "Lysolipids in Health and Disease", Snowmass, Colorado, June 11-16, 2005.
167. Osborne, D.A.; Fujiwara, Y.; Cseh, S.; Holdsworth, G.; Jo, E.; Tigyi, G.; Rosen, H.; Parrill, A.L. "Synergistic Computational and Experimental Investigations of S1P Receptor Agonist Selectivity", 2005 FASEB Summer Research Conference on "Lysolipids in Health and Disease", Snowmass, Colorado, June 11-16, 2005.
168. Walker, M.D.; Liliom, K.; Wang, D.; Fujiwara, Y.; Osborne, D.A.; Parrill, A.L.; Tigyi, G. "Computational and Pharmacological Identification of the Hydrophobic Ligand Binding Pocket of the S1P<sub>1</sub> Receptor", 2005 FASEB Summer Research Conference on "Lysolipids in Health and Disease", Snowmass, Colorado, June 11-16, 2005.
169. Tigyi, G.J.; Tsukahara, T.; Tsukahara, R.; Yasuda, S.; Yuan, H.; Allison, P.; Parrill, A. "Different Residues are Required for Lysophosphatidic Acid and Rosiglitazone Binding to PPAR $\gamma$ ", Experimental Biology 2005, San Diego, CA, April 2-6, 2005.
170. Walker, M.D.; Liliom, K.; Wang, D.; Fujiwara, Y.; Osborne, D.; Parrill, A.L.; Tigyi, G. "Computational and Pharmacological Identification of the Ligand Binding Pocket of the S1P<sub>1</sub> Receptor" Experimental Biology 2005, San Diego, CA, April 2-6, 2005.
171. Looney, A.L.; Sardar, V.M.; Parrill, A.L. "Computational Design and Analysis of Novel Peptide Mimics of LPA Receptor Loops", 56<sup>th</sup> Southeast Regional American Chemical Society Meeting, Research Triangle Park, NC, November 10-13, 2004.
172. Osborne, D.A., Fells, J.I., Fujiwara, Y., Cseh, S., Tigyi, G., and Parrill, A.L. "Modeling Aromatic Agonist Selectivity at the Sphingosine-1-Phosphate (S1P) Receptors." 13<sup>th</sup> Current Trends in Computational Chemistry International Conference. November 2004.
173. Fells, J.I., Osborne, D.A., Pham, T. C., Parrill, A.L. "Computational Studies of Agonist Selectivity at the S1P<sub>4</sub> Receptor", 13<sup>th</sup> Current Trends in Computational Chemistry International Conference. November 2004.
174. Osborne, D.A., Fujiwara, Y., Cseh, S., Tigyi, G., and Parrill, A.L. "Use of Poisson-Boltzmann methodology to quantitate sphingosine-1-phosphate receptor agonism" MALTO meeting, University of Tennessee Health Science Center, May 16, 2004.
175. Pham, T. C. T.; Inagaki, Y.; Igarashi, Y.; Fujiwara, Y.; Tigyi, G.; Parrill, A.L. "3-Dimensional Models of Sphingosine 1-Phosphate Receptors", MALTO meeting, University of Tennessee Health Science Center, May 16, 2004.
176. Osborne, D.A., Fujiwara, Y., Cseh, S., Tigyi, G., and Parrill, A.L. "Quantitative Modeling of Sphingosine-1-Phosphate (S1P) Receptor Agonism: the Use of Poisson-Boltzmann Methodology to Estimate Binding Free Energies" Southeast Theoretical Chemistry Association, University of Mississippi, May 21, 2004.
177. Pham, T. C. T.; Inagaki, Y.; Igarashi, Y.; Fujiwara, Y.; Tigyi, G.; Parrill, A.L. "3-Dimensional Models of Sphingosine 1-Phosphate Receptors", Southeast Theoretical Chemistry Association, University of Mississippi, May 21, 2004.
178. Christina Turner and Abby L. Parrill, "Two Distinct Integrase Binding Pockets for HIV Integrase Inhibitors", The 16<sup>th</sup> Annual Student Research Forum, The University of Memphis, Memphis, TN, April, 2004.
179. Osborne, D.A., Fujiwara, Y., Cseh, S., Tigyi, G., and Parrill, A.L. "Modeling Agonism in the Sphingosine-1-Phosphate (S1P) Receptors" Division of Physical and Applied Sciences, The 16<sup>th</sup> Annual Student Research Forum, University of Memphis. April 2004.
180. Fells, J.I., Osborne, D.A., Pham, T. C., Parrill, A.L. "Computational Evaluation of Receptor Selectivity for Phospholipid Growth Factors", Tennessee Louis Stokes Alliance for Minority Participation Undergraduate Research Conference, Nashville, TN, April 2004.
181. Pham, T. C.; Inagaki, Y.; Igarashi, Y.; Fujiwara, Y.; Tigyi, G.; Parrill, A. L. "Modeling and Mutagenesis of the Mouse S1P<sub>4</sub> Receptor", 227<sup>th</sup> American Chemical Society National Meeting and Exposition, March 28-April 1, 2004.
182. Osborne, D. A.; Fujiwara, Cseh, S.; Wang, Y.; Tigyi, G.; Parrill, A. L. "Modeling Agonist Selectivity at the Sphingosine 1-Phosphate Receptors", 227<sup>th</sup> American Chemical Society National Meeting and Exposition, March 28-April 1, 2004.
183. Fells, J. I.; Osborne, D. A.; and Parrill, A. L. "Computational Evaluation of Receptor Selectivity for Phospholipid Growth Factors", Southeastern Conference on Undergraduate Research at Emory, December, 2003.
184. Daniel A. Osborne, Sandor Cseh, Yuko Fujiwara, Natalia Makarova, Gabor Tigyi, and Abby L. Parrill "S1P Receptors and Their Differential Interactions with S1P Agonists", FASEB Summer Research Conference, Lysophospholipids and Related Lipids in Biology and Diseases, Snowmass, CO, June 28-July 3, 2003.
185. Vineet M. Sardar and Abby L. Parrill "Molecular Dynamics Simulations of LPA Receptor-Ligand Complexes", FASEB Summer Research Conference, Lysophospholipids and Related Lipids in Biology and Diseases, Snowmass, CO, June 28-July 3, 2003.
186. Gangadhar G. Durgam, Tamas Virag, Don B. Elrod, Karoly Liliom, Vineet M. Sardar, Abby L. Parrill, Kazuaki Yokoyama, Wenlin Deng, Gabor Tigyi, and Duane D. Miller, "Fatty Alcohol Phosphates are Subtype-Selective Agonists and Antagonists of Lysophosphatidic Acid Receptors", FASEB Summer Research Conference, Lysophospholipids and Related Lipids in Biology and Diseases, Snowmass, CO, June 28-July 3, 2003.
187. Tamas Virag, Gangadhar G. Durgam, Don B. Elrod, Karoly Liliom, Vineet M. Sardar, Abby L. Parrill, Kazuaki Yokoyama, Wenlin Deng, Gabor Tigyi, and Duane D. Miller, "Fatty Alcohol Phosphates are Subtype-Selective Agonists and Antagonists of Lysophosphatidic Acid Receptors", FASEB National Meeting, 2003.
188. Daniel A. Osborne and Abby L. Parrill, "Pi-Stacking Interactions Confer Immunosuppressant Binding Selectivity in the S1P Receptors", The 15<sup>th</sup> Annual Student Research Forum, The University of Memphis, Memphis, TN, April 28, 2003.
189. Christina Turner and Abby L. Parrill, "Docking Studies of Eleven Structural Types of HIV Integrase Inhibitors Demonstrate Two Non-Overlapping Binding Sites", The 15<sup>th</sup> Annual Student Research Forum, The University of Memphis, Memphis, TN, April 28, 2003.

190. Hongbin Yuan and Abby L. Parrill, "Three-Dimensional QSAR Study of HIV-1 Integrase Inhibition", The 15th Annual Student Research Forum, The University of Memphis, Memphis, TN, April 28, 2003.
191. Daniel A. Osborne and Abby L. Parrill, "Docking Studies to Examine Immunosuppressive Phospholipid Binding Selectivity", Eleventh Conference on Current Trends in Computational Chemistry, Jackson, Mississippi, November 1-2, 2002.
192. Christina Turner, Hongbin Yuan and Abby L. Parrill, "Docking Studies of Eleven Structural Types of HIV Integrase Inhibitors Demonstrate Two Non-Overlapping Binding Sites", Eleventh Conference on Current Trends in Computational Chemistry, Jackson, Mississippi, November 1-2, 2002.
193. Lynn Wincenciak, Charles Singer, Frank Onyemauwa, Dianqing Sun, Abby L. Parrill, Peter K. Bridson, "Molecular Modeling of the Human A<sub>2A</sub> Adenosine Receptor", 54<sup>th</sup> Southeast Regional Meeting of the American Chemical Society, Charleston, SC, November 13-16, 2002.
194. Sardar, V.M.; Virag, T.; Fischer, D.J.; Elrod, D.; Bautista, D.L.; Wang, D.; Nusser, N.; Yokoyama, K.; Baker, D.L.; Miller, D.D.; Tigyi, G.; Parrill, A.L. "Molecular Modeling Studies of Lysophosphatidic Acid Receptor Antagonists", 224<sup>th</sup> ACS National Meeting, Boston, MA, August 18-22, 2002.
195. Cundari, T.; Parrill, A.; Burke, T.J.; Anderson, M.E. "A Summer at the Interface of Theory and Experiment. The NSF-REU Site in Chemistry at The University of Memphis", 223<sup>rd</sup> ACS National Meeting, Orlando, FL, April 7-11, 2002.
196. Duke, C. B.; Parrill, A. L. "QSAR Modeling of Rat Adenosine A<sub>1</sub> Receptor Agonists", Tennessee Academy of Science West Tennessee Collegiate Meeting, Memphis, TN, March 23, 2002.
197. Parrill, A.L.; Yuan, H. "QSAR Studies of HIV-1 Integrase Inhibition", 222<sup>nd</sup> American Chemical Society National Meeting and Exposition, Chicago, IL August 2001.
198. Mineno, T.; Parrill, A.L.; Avery, M.A. "Modeling of Plasmeprins as Novel Targets Against *Plasmodium falciparum*", 222<sup>nd</sup> American Chemical Society National Meeting and Exposition, Chicago, IL August 2001.
199. Bautista, D.; Fischer, D.J.; Nusser, N.; Virag, T.; Wang, D.; Baker, D.L.; Tigyi, G.; Parrill, A.L. "Computational Studies of a Lysophosphatidic Acid Receptor Antagonist", 2001 FASEB Summer Research Conference on "Lysophospholipids and Related Bioactive Lipids in Biology and Diseases", Tucson, Arizona, June 9-16, 2001.
200. Wang, D.; Lorincz, Z.; Bautista, D.; Parrill, A.L.; Tigyi, G. "What Determines Ligand Specificity in the EDG Family?", 2001 FASEB Summer Research Conference on "Lysophospholipids and Related Bioactive Lipids in Biology and Diseases", Tucson, Arizona, June 9-16, 2001.
201. Singer, C.; Harper, B.; Onyemauwa, F.; Bridson, P. K.; Parrill, A. L. "Molecular Modeling of Adenosine Receptors and Their Ligands" 110<sup>th</sup> Annual Meeting of the Tennessee Academy of Science, Belmont University, Nashville, Tennessee, November 17, 2000.
202. Brooks, S. D.; Rubio, J.; Parrill, A. L. "Molecular Modeling of Protein Kinase C Isoforms" 110<sup>th</sup> Annual Meeting of the Tennessee Academy of Science, Belmont University, Nashville, Tennessee, November 17, 2000.
203. Parrill, A. L.; Bautista, D. L.; Van Brocklyn, J.; Spiegel, S.; Wang, D.; Lorincz, Z.; Fischer, D.; Liliom, K.; Baker, D.; Tigyi, G. "Computational Modeling and Experimental Validation of Phospholipid Growth Factor Recognition" 35<sup>th</sup> Annual Southeastern Regional Lipid Conference, Cashiers, North Carolina, November 1-3, 2000.
204. Sims, Y.\*; Parrill, A.L. "The Impact of Metal Ions on the HIV-Integrase Enzyme", National Minority Research Symposium, Washington, D.C., October 10-13, 2000.
205. A.L. Parrill, D.L. Bautista, D.L. Baker, D-A. Wang, Z. Lörinez, D.J. Fischer, K. Liliom, G. Tigyi, J. VanBrocklyn, S. Spiegel "Defining the ligand specificity of EDG1, 2, and 6 through mutagenesis, docking, and molecular dynamics studies" 220<sup>th</sup> American Chemical Society National Meeting and Exposition, Washington, D. C., August 19-24, 2000.
206. A.L. Parrill and P.K. Bridson "Student use of computational chemistry to justify proposed drug targets in a medicinal chemistry course: Integrating computational experiments and writing assignments", 220<sup>th</sup> American Chemical Society National Meeting and Exposition, Washington, D. C., August 19-24, 2000.
207. A.L. Parrill, H. Yuan, C. Turner, G.B. Ray, "Computational evidence for two HIV-1 integrase inhibitor interaction sites", 220<sup>th</sup> American Chemical Society National Meeting and Exposition, Washington, D. C., August 19-24, 2000.
208. Parrill, A.L.; Bautista, D.L.; Lorincz, Z.; Wang, D.; Baker, D.L.; Fisher, D.J.; Van Brocklyn, J.; Spiegel, S. Tigyi, G. "Computational Modeling and Experimental Validation of the Phospholipid Receptors, EDG1 and EDG2, and their Complexes with Sphingosine-1-Phosphate and Lysophosphatidic Acid", Gordon Research Conference: Glycolipid and Sphingolipid Biology, Barga, Italy, May 14-19, 2000.
209. Bautista, D. L.; Baker, D. L.; Wang, D.; Lorinez, Z.; Fischer, D. J.; Liliom, K.; Van Brocklyn, J.; Spiegel, S.; Tigyi, G. and Parrill, A. L., "Modeling Ligand Specificity Differences of EDG1 and EDG2 Using Molecular Dynamics and Docking", American Chemical Society Middle Atlantic Regional Meeting, Newark, DE, May 12-14, 2000.
210. Bautista, D.L.; Baker, D.L.; Lorinez, Z.; Wang, D.; Fischer, D.J.; Van Brocklyn, J.; Spiegel, S.; Tigyi, G. and Parrill, A.L. "Dynamic Modeling of EDG1 Receptor Structural Changes Induced by Site-Directed Mutations", 219<sup>th</sup> American Chemical Society National Meeting and Exposition, San Francisco, CA, March 26-30, 2000.
211. Abu-Khudeir, M.; Parrill, A. L. "Differential Influence of Metal Ions in the HIV Integrase Active Site", Tennessee Academy of Sciences, Christian Brothers University, Memphis, TN, March 25, 2000.
212. Bautista, D.L.; Baker, D.L.; Wang, D.; Fischer, D.J.; Van Brocklyn, J.; Spiegel, S.; Tigyi, G. and Parrill, A.L. "Dynamic Modeling of EDG1 Receptor Structural Changes Induced by Site-Directed Mutations", Eighth Conference on Current Trends in Computational Chemistry, Vicksburg, MI, November 5-6, 1999.
213. Yuan, H. and Parrill, A.L., "QSAR Study on HIV-1 Integrase Inhibition", Eighth Conference on Current Trends in Computational Chemistry, Vicksburg, MI, November 5-6, 1999.



214. Yuan, H. and Parrill, A.L., "QSAR Development to Describe the HIV-1 Integrase Inhibition", American Chemical Society Southeast Regional Meeting, Knoxville, TN, October 17-20, 1999.
215. Parrill, A.L.; Ray, G. B.; "Docking Studies of Salicylhydrazine Inhibitors to the HIV-1 Integrase Catalytic Domain", 218<sup>th</sup> National Meeting and Exposition, New Orleans, LA August 1999.
216. Parrill, A.L.; Roaten, J.B.; Sweatman, T.W. and Israel, M. "Dynamic Models of the N-benzyladriamycin-14-valerate Complex with the C1b Domain of Protein Kinase C- $\delta$ " 218<sup>th</sup> National Meeting and Exposition, New Orleans, LA August 1999.
217. Parrill, A.L.; Baker, D.L.; Wang, D.; Fischer, D.J.; Van Brocklyn, J.; Spiegel, S.; Tigyi, G. "Structural Features of EDG1 Receptor-Ligand Complexes Revealed by Computational Modeling and Mutagenesis", Lysophospholipids and Eicosanoids in Cancer and in Cardiovascular and Neurodegenerative Diseases, a New York Academy of Sciences Conference, New York, NY, June 25-28, 1999.
218. Deng, J.; Schroeder, S.; Roaten, J.B.; Sweatman, T. and Parrill, A.L. "Simulation of the Interaction between PKC- $\delta$  Mutants and Phorbol Esters", 26<sup>th</sup> Annual MALTO Meeting, Memphis, TN, May 23-25, 1999.
219. Jolly, A.; Hirsh, A.; Yuan, H.; Ray, G. and Parrill, A.L. "Modeling the Interactions of HIV Integrase with Inhibitors", 26<sup>th</sup> Annual MALTO Meeting, Memphis, TN, May 23-25, 1999.
220. Parrill, A.L.; Baker, D.L.; Wang, D.; Fischer, D.J.; Van Brocklyn, J.; Spiegel, S.; Tigyi, G. "G-Protein Coupled Receptor Model Development - Turning Primary Sequence into Tertiary Structure", 28<sup>th</sup> Southeast Theoretical Chemistry Association Meeting, April 23-24, 1999.
221. Deng, J.; Schroeder, S.; Roaten, J.B.; Sweatman, T. and Parrill, A.L. "Simulation of the Interaction between PKC- $\delta$  Mutants and Phorbol Esters", 28<sup>th</sup> Southeast Theoretical Chemistry Association Meeting, April 23-24, 1999.
222. Jayawardene, D.; Dass, C.; Parrill, A.L. "Pharmacophoric Comparison of Methionine Enkephalin Derivatives", 28<sup>th</sup> Southeast Theoretical Chemistry Association Meeting, April 23-24, 1999.
223. Ray, G.; Yuan, H.; Jolly, A.; Hirsh, A. and Parrill, A.L. "Computational Studies of HIV Integrase and Salicylhydrazine Inhibitors", 28<sup>th</sup> Southeast Theoretical Chemistry Association Meeting, April 23-24, 1999.
224. \*Roaten, J.B., Bertics, P.J., Kazanietz, M.G., Rodrigues, P.J., Lothstein, L., Parrill, A., Sweatman, T.W. "N-Benzyladriamycin-14-valerate (AD 198): A novel C1-antagonist of protein kinase C (PKC)", American Association for Cancer Research 90<sup>th</sup> Annual Meeting, Philadelphia, PA, Spring 1999.
225. Parrill, A. L.; Ellsworth, J. "Facilitating Chemical Education with Computers: World Wide Web-based Interactive Materials and Organizational Tools for Learning Exercises", American Chemical Society 217<sup>th</sup> National Meeting and Exposition, Anaheim, CA March 1999.
226. Sweatman, T.; Roaten, J. B.; Lothstein, L.; Israel, M.; Kazanietz, M.; Parrill, A. "Protein Kinase C: A Membrane Target for Novel Anthracycline Analogs", American Chemical Society 217<sup>th</sup> National Meeting and Exposition, Anaheim, CA March 1999.
227. Nakhleh, M. B.; Donovan, W. J.; Parrill, A. L. "Evaluation of interactive technologies for chemistry web sites: Educational materials for organic chemistry (EMOC)", American Chemical Society 217<sup>th</sup> National Meeting and Exposition, Anaheim, CA Spring 1999.
228. \*Nakhleh, M. B.; Donovan, W. J.; Parrill, A. L. "Interactive Technologies for Chemistry Websites: An Evaluation of Educational Materials for Organic Chemistry (EMOC)" National Association for Research in Science Teaching 1999 National Meeting, Boston, MA Spring 1999.
229. Roaten, J.B.; Kazanietz, M.G.; Israel, M.; Sweatman, T.; Parrill, A.L. "Molecular Modeling Studies of N-Benzyladriamycin-14-valerate in Complex with the Phorbol Ester Binding C1b Domain of Protein Kinase C- $\delta$ " Seventh Conference on Current Trends in Computational Chemistry, Vicksburg, Mississippi, November 6-7, 1998.
230. Nelson, S.; Parrill, A.L.; Azadnia, A. "Development of an Extended Collaborative Learning Experiment for Organic Chemistry Laboratories" 1998 Great Lakes College Chemistry Conference.
231. Parrill, A.L. "Everyday Chemical Reactions: Promoting Interest and Learning Through Relevant Writing Assignments" Fall 1998 ConfChem, Turning Students on to Science.
232. Parrill, A.L.; Ramamoorthy, P.S.; Gervay, J. "Molecular Dynamics Docking and Relative Binding Affinity Comparison of Potential Neuraminidase Inhibitors" American Chemical Society 215<sup>th</sup> National Meeting and Exposition, Dallas, TX Spring 1998.
233. Parrill, A.L. "The Internet as a tool for streamlining the use of self-and peer assessments in large classes", American Chemical Society (ACS) 214<sup>th</sup> National Meeting and Exposition, Las Vegas, NV Fall 1997.
234. Parrill, A.L.; Butler, S.; Byrum, D.L.; Wolpa, B.; Gervay, J. "Computational Chemistry for Large Classes - A Simple Online Laboratory Which Overcomes Cost Barriers", 213<sup>th</sup> ACS National Meeting and Exposition, San Francisco, CA, Spring 1997.
235. Parrill, A.L.; "Do Students Use Non-Required Materials on the WWW to Learn Chemistry?", ACS 213<sup>th</sup> National Meeting and Exposition, San Francisco, CA, Spring 1997.
236. Parrill, A.L.; Gervay, J. "Supplementing Traditional Chemical Education on the World Wide Web" Gordon Conference - *Innovations in College Chemistry Teaching*, June30-July 5, 1996, Plymouth, NH.
237. Parrill, A. L. "Hypermedia Tutorials Helping Students Understand Stereochemistry" National Science Teachers Association's Global Summit on Science and Science Education, San Francisco, CA December 27-29, 1996.
238. Gervay, J; Parrill, A.L. "Supplementing Traditional Chemical Education on the World Wide Web" National Science Teachers Association's Global Summit on Science and Science Education, San Francisco, CA December 27-29, 1996.
239. Parrill, A.L.; Dolata, D.P. "CLEW-Using A Genetic Algorithm to Determine Rules that Simplify Complex Pharmacological Data", ACS 211<sup>th</sup> National Meeting and Exposition, New Orleans, LA, Spring 1996.

240. Parrill, A.L.; Gervay, J. "Discovering Stereochemistry: Multi-media Discovery-Based Tutorials", ACS 211<sup>th</sup> National Meeting and Exposition, New Orleans, LA, Spring 1996.
241. Parrill, A.L.; Walters, W.P.; Dolata, D.P. "A New Pharmacophoric Mapping for Structurally Dissimilar Cannabinoids", International Cannabis Research Society 1995 Symposium, Scottsdale, AZ
242. Parrill, A.L.; Dolata, D.P.; Mamuya, N.; Roberts, G.; Gervay, J. "Comparison of Computational Methods for Determining Sialyllactone Conformations in Solution", ACS National Meeting, Anaheim, CA, 1995
243. Parrill, A.L.; Mamuya, N.; Gervay, J. "Computational Studies of Sialyllactones: Methods and Uses", First Electronic Glycoscience Conference, 1995.
244. Parrill, A.L.; Gervay, J. "Chemical Education: The Wonder of Discovery", Student Showcase '95, The University of Arizona, Tucson, AZ 85721.
245. Parrill, A.L.; Walters, W.P.; Dolata, D.P. "A Novel Pharmacophore Model of the Cannabinoids", 1995 International Cannabis Research Society Symposium on Cannabis and the Cannabinoids, Scottsdale, AZ, June, 1995.
246. Parrill, A.L.; Walters, W.P.; Dolata, D.P. "CLEW- A Learning-Based Approach to Pharmacophore Hypothesis Generation", ACS National Meeting, Anaheim, CA 1995.

## SUPPORT:

| EXTERNAL (Funded)  | AGENCY/SOURCE                                   | AMOUNT       | PERIOD     |
|--|---|--------------|------------|
| Regulation of arterial diameter through specific sensing of endogenous steroids and novel nonsteroidal analogs by BK channel subunits (subcontract PI, 100%) | UTHSC (subcontract from NIH grant)              | \$336,667    | 3/19-3/23  |
| GPR88 Ligand Discovery (PI, 60% with Dan Baker)  | NIH   | \$408,014    | 6/16-5/19  |
| MRI: Acquisition of a 400 MHz Spectrometer (senior personnel, 5%)  | NSF   | \$339,585    | 8/15-7/18  |
| Vasodilation of BK Channel Beta 1 (subcontract PI, 100%)   | UTHSC   | \$8,312      | 12/13-5/14 |
| Vasodilation of BK Channel Beta 1 (subcontract PI, 100%)   | UTHSC   | \$5,674      | 9/12-12/13 |
| LPA Receptors (subcontract PI, 100%)   | UTHSC   | \$5,000      | 1/13-8/13  |
| REU Site: University of Memphis<br>Interdisciplinary Research in Chemistry (PI, 50%)   | National Science Foundation                     | \$442,744    | 9/12-8/15  |
| REU Site: Collaborative Research in Chemistry at the University of Memphis (PI, 50%)   | National Science Foundation                     | \$220,000    | 6/09-5/12  |
| Identification of ATX Inhibitors as Potential Cancer Chemotherapeutic Leads (PI, 50%)  | Elsa Pardee Foundation                          | \$100,770    | 1/08-12/08 |
| MRI – Acquisition of a spectropolarimeter for Research and Education (PI, 30%)   | National Science Foundation                     | \$137,000    | 8/07-7/10  |
| MRI – Acquisition of an LC-MS for Research and Education (co-PI, 10%)  | NSF   | \$365,000    | 8/06-7/09  |
| LPA Targets and Cancer (subcontract)   | UTHSC/National Institutes of Health             | \$41,986/yr  | 8/06-7/10  |
| R01: Computational Approach to Ligand Discovery for LPA GPCR and PPAR  | National Institutes of Health                   | \$1,725,813  | 8/06-5/11  |
| Diversity Supplement – Rolanda London (undergraduate)  | National Institutes of Health                   | \$32,922     | 7/07-5/09  |
| Diversity Supplement – Jesica Williams (graduate)  | National Institutes of Health                   | \$116,328    | 6/08-5/11  |
| ARRA Supplement – Debra Bautista (secondary chemistry teacher)   | National Institutes of Health                   | \$50,762     | 6/09-6/11  |
| ARRA Supplement – Alexandra Kikonyogo (postdoctoral associate)   | National Institutes of Health                   | \$262,859    | 7/09-6/11  |
| CRIF: Acquisition of a 400 MHz NMR Spectrometer for Research and Education (Co-PI, 30%)  | National Science Foundation                     | \$262,500    | 2/05-6/07  |
| REU: A Summer at the Interface of Theory and Experiment  | National Science Foundation                     | \$173,250    | 4/04-3/07  |
| Characterization of Antagonist Binding to Lysophosphatidic Acid Receptors  | American Heart Association                      | \$140,000    | 7/03-6/06  |
| QM/MM Investigation of FTY720 Receptor Selectivity   | National Center for Supercomputing Applications | 10,000 units | 1/03-1/04  |
| Study of Phospholipid Growth Factor Receptors (Subcontract PI, 100%)   | UTHSC/National Institutes of Health (NIHLB)     | \$1,100,00   | 8/01-7/06  |

|  |                                       |             |             |
|--|---------------------------------------|-------------|-------------|
| REU: A Summer at the Interface of Theory and Experiment (Co-PI, 50%)                                     | National Science Foundation (REU)     | \$147,040   | 2/00-1/02   |
| Computer-Driven Structure-Function Analysis of Phospholipid Growth Factor Receptors - (PI, 50%)          | American Heart Association            | \$214,500   | 1/00-12/03  |
| R15: QSAR and Docking Studies of HIV-Integrase – (PI, 30%)   | National Institutes of Health (NIAID) | \$104,000   | 8/99-8/03   |
| Minority Supplement: QSAR and Docking Studies of HIV-Integrase – (PI)                                    | National Institutes of Health (NIAID) | \$24,192    | 8/99-8/03   |
| Michigan State Univ. Online Curriculum Initiative and Research Scholars (MSU-OCIRS) Program (CO-PI, 10%) | Howard Hughes Medical Institute       | \$1,000,000 | 1998-2003   |
| Interactive Technologies for Chemistry Websites  | National Science Foundation (POWRE)   | \$75,000    | 10/97-10/99 |
| Rational Drug Design Symposium   | Petroleum Research Fund               | \$2000      | 9/97        |

| INTERNAL  | SOURCE  | AMOUNT     | PERIOD      |
|---|---|------------|-------------|
| Water-Soluble GPCR (PI)   | FedEx Institute of Technology                         | \$32,000   | 7/2012-2015 |
| ATX Inhibitors – Diversification into New Chemical Entities (CO-PI, 50%)        | FedEx Institute of Technology                         | \$18,750   | 1/2013-2014 |
| A Water-Soluble G Protein Coupled Receptor Model (PI)                           | Faculty Research Grant                                | \$6500     | 2009-2010   |
| Computational Chemistry Seminar Program (PI)                                    | College of Arts and Sciences Academic Enrichment Fund | \$2000     | 2005-2006   |
| Personal Development Assignment   | College of Arts and Sciences                          | 1 semester | 1/04-6/04   |
| Undergraduate Research Conference (PI, 80%)                                     | College of Arts and Sciences Public Service Funds     | \$500      | 1998-1999   |
| Computational Chemistry Seminar Program (PI, 80%)                               | College of Arts and Sciences Academic Enrichment Fund | \$1000     | 1999-2000   |
| Modeling Ligand Specificity in the EDG Receptor Family (PI)                     | Faculty Research Grant                                | \$5000     | 10/99-10/00 |
| Modeling Differences between Activation and Inhibition of Protein Kinase C (PI) | New Faculty Research Initiation                       | \$8500     | 10/00-9/01  |
| Quantitating Selectivity of a Novel Immunosuppressive Agent (PI)                | Faculty Research Grant                                | \$6500     | 7/03-6/04   |
| Computational Chemistry Seminar and Workshop Program (PI, 100%)                 | College of Arts and Sciences Academic Enrichment Fund | \$2000     | 2005-2006   |

## OUTREACH:

| PROJECT   | PARTICIPANTS                                       | PERIOD    | SPONSORSHIP (if any)                                      |
|---|--|-----------|---|
| Battle of the Brains Judge  | >100 (high school students)                        | 2010      | City of Germantown  |
| Science Fair Judge  | >100 (high school and junior high school students) | 3/2001    | American Chemical Society – Memphis Section               |
| SHADES workshop to attract 8 <sup>th</sup> grade girls to science and engineering careers | 35   | 3/11/2000 | American Association of University Women - Memphis Branch |
| Science Fair hands-on activities  | ~50  | 3/8/2000  | American Chemical Society - Memphis Section               |
| High School Research Seminar  | 100  | 2/19/2000 | American Heart Association                                |
| National Chemistry Week Library Demonstration at the Main Library-Polymers                | 20   | 11/9/1999 | American Chemical Society - Memphis Section               |
| Science Works "The Chemistry of Color"  | 25   | 6/5/1999  | American Chemical Society, Children's Museum              |
| International Chemistry Celebration "Colorful Chemistry"                                  | 50   | 5/1/1999  | American Chemical Society, Memphis Botanic Gardens        |
| Science-by-Mail   | 20 (students across the country)                   | 1998-2000 | Museum of Science   |
| Science Fair Judge  | 115 (high school students)                         | 3/2/99    | Ross Christian Academy                                    |

|  |                                       |           |                        |
|--|---------------------------------------|-----------|------------------------|
| Make-a-Wish Foundation visit             | 3 (St. Jude patient and siblings)     | Fall 1998 | Make-a-Wish Foundation |
| Science Olympiad (Michigan State Finals) | 80 (high school students in Michigan) | 1997-1998 | MI Science Olympiad    |

## SERVICE:

| UNIVERSITY                               | COMMITTEE/ACTIVITY (if Chair, add [C])  | PERIOD       |
|--|---|--------------|
| <b>Department</b>                        | Chair   | 2010-2014    |
|  | Undergraduate Studies Committee [C]   | 2001-2009    |
|  | Tenure and Promotion Committee [C]  | 2003-2009    |
|  | Faculty Search Committee  | 2004-2005    |
|  | Department WWW Development Committee  | 1998-1999    |
|  | Graduate Studies Committee  | 1998-2001    |
|  | Undergraduate Research Conference Planning  | 2/99         |
| <b>College/School</b>                    | Faculty Research Grant Review Panel   | 4/00-4/01    |
|  | Pre-health Professional Evaluation Committee [C]  | 8/00-2009    |
|  | Tenure and Promotion Committee [C during one of three years]                              | 2004-2007    |
| <b>University</b>                        | Van Vleet Fellowship Committee  | 2/99         |
|  | Information Technology Task Force   | 1998-1999    |
|  | Fluency in Information Technology (FITness) Task Force                                    | 2000-2001    |
|  | College of Arts and Sciences Dean Search Committee  | 2001         |
|  | Standing Committee for Awarding Honorary Degrees  | 2005-2007    |
|  | IT Research Advisory Committee [C, 2008-2009]   | 2007-2009    |
|  | Willard R. Sparks Board of Visitors Eminent Faculty Award selection committee             | 2008-2010    |
|  | Chemical Hygiene Committee  | 2010-present |
|  | Research Capacity Assessment Taskforce - Infrastructure Study Team                        | 2012-2013    |
|  | Research Services Implementation Team   | 2013-2014    |
| <b>Univ. Memphis Research Foundation</b> | Board Member  | 2009-present |
| <b>OTHER</b>                             |   |              |
| Society/Organization/Journal             | COMMITTEE/EDITORIAL BOARD/OFFICE (if Chair, add [C])                                      | PERIOD       |
| American Chemical Society                | SE/SW Regional ACS Meeting – Program Chair  | 2010-2015    |
| American Chemical Society                | COMP Division – Symposium Organizer   | 2010         |
| National Institutes of Health            | Standing Review Panel Member: Molecular Structure Function D                              | 2006-2011    |
| National Institutes of Health            | Standing Review Panel Member: International Collaborative Projects -1                     | 2003-2006    |
| American Chemical Society                | SE/SW Regional ACS Meeting – Symposium Organizer “Bioactive Lipids”                       | 2005         |
| National Institutes of Health            | International and Cooperative Projects Study Section (ICP, ICP-1)                         | 2003-2005    |
| American Chemical Society                | CHED Division – Symposium Co-organizer “Alternative Assessments”                          | 2002-2003    |
| National Institutes of Health            | International and Cooperative Projects Study Section (ICP), ad hoc member                 | 2001         |
| American Chemical Society                | COMP Division – Symposium Organizer “Modeling Ligand Interactions with Membrane Proteins” | 2001         |
| American Chemical Society                | Memphis Local Section Awards Committee [C]  | 2004-2006    |
| American Chemical Society                | Memphis Local Section [C]   | 2001         |
| American Chemical Society                | Memphis Local Section Chair-Elect   | 2000         |
| American Chemical Society                | Memphis Section Program Committee   | 1999         |
| American Chemical Society                | CHED Committee on Computers in Chemical Education   | 6/98-6/00    |
| American Chemical Society                | COMP Div.– Symposium Organizer “Using Computers to Facilitate Education”                  | 3/99         |
| American Chemical Society                | COMP Division – Symposium Co-organizer “Rational Drug Design”                             | 9/97         |
| S. E. Theoretical Chem. Conf.            | Planning Committee  | 1998-1999    |

|                              |                                  |               |
|------------------------------|----------------------------------|---------------|
| J. Coll. Math. Sci. Teaching | Review Board                     | 10/97-present |
| J. Chem. Educ.               | Reviewer                         |               |
| J. Med. Chem.                | Reviewer                         |               |
| Bioorg. Med. Chem. Letters   | Reviewer                         |               |
| J. Mol. Struct. THEOCHEM     | Reviewer                         |               |
| J. Mol. Graphics Modelling   | Reviewer, Editorial Board Member | 2004-present  |
| J. Comput. Chem.             | Reviewer                         |               |
| J. Am. Chem. Soc.            | Reviewer                         |               |
| J. Comput-Aided Mol. Design  | Reviewer                         |               |
| Structural Chemistry         | Reviewer                         |               |
| Biochim. Biophys. Acta       | Reviewer                         |               |
| National Science Foundation  | Reviewer                         |               |

## CONSULTING:

| ORGANIZATION/COMPANY  | PERIOD    |
|---|-----------|
| Allen, Summers, Simpson, Lillie & Gresham, PLLC (Robert Green, partner) | 1/14-2/14 |
| Predix Pharmaceuticals  | 8/05-2007 |
| Ceretek, Inc. (Science Advisory Board Member)                           | 8/01-8/03 |
| Exalpha Biologicals   | 2/01-2005 |
| Wiley College Publishing  | 1/99-1/03 |
| Brooks Cole College Publishing  | 1/00-1/03 |
| The University of Mississippi   | 8/00-6/01 |



## **6. Appointment of Student Trustee**

For Approval

Presented by Bill Hardgrave

**The University of Memphis Board of Trustees**  
Recommendation  
For Approval

**Date:** June 1, 2022

**Presentation:** Appointment of the Student Trustee

**Presented by:** Dr. Bill Hardgrave, President

**Background:**

The University of Memphis Board of Trustees Bylaws specify there be one nonvoting member of the Board who shall be a student representative to be appointed by the Board. I am recommending Marissa J. Clark as the selection for the Student Trustee during the 2022-23 academic year.

**Recommendation:**

The Board recommends approval of Marissa J. Clark as Student Trustee. Her one-year term will be effective immediately and continue through May 31, 2023.



# Marissa Jade Clark

**Objective: To obtain a Bachelors of Science degree in Biology at The University of Memphis to later attend Medical School to become a Cardiologist.**

[mjclark1@memphis.edu](mailto:mjclark1@memphis.edu)

## Current Education:

**University of Memphis:** Memphis, TN 38152

Classification: Sophomore

GPA: 3.89

Major: Biology

Minor: Spanish & Chemistry

## COLLEGE CLUB INVOLVEMENT:

**Black Student Association:** The African American students at the University come together and talk about ways to better our community as a whole through guest speakers, mental health awareness, etc.

**Campus Outreach:** Church group that allows us to grow our faith during the chaotic times of college.

**Blue Crew:** Volunteer group that helios organize and set up campus events while maintaining safety and sanitation during COVID 19.

**American Medical Women's Association:** National organization that is dedicated to the advancement of women in the medical field. They offer mentorship, volunteer, opportunities to better women in medicine.

**Le Bonheur's Paws for Service:** This club partners with the Le Bonheur children hospital in order to raise money, materials, and overall allow the children to have a good time while they are receiving treatment.

## WORK EXPERIENCE

Sonic Drive-In ( 2018-present)

Math Tutor (2017-present)

Babysitter (2017-2018)

## Volunteering:

I enjoy spending time volunteering with Memphis Rox. We pick up trash around the Soulsville community or work in the community garden every other Saturday.

## Previous Education:

**Nolensville High School:**

Nolensville, TN 37135

Attendance: 9th - 12th

GPA: 4.33

ACT: Composite- 27



# 7. Celebrating Student Success: Voices of Scholarship Recipients

Presentation

Presented by Karen Weddle-West



## 8. Reports and Recommendations of the Academic, Research and Student Success Committee

Presented by David Kemme

# The University of Memphis Board of Trustees

Recommendation

For Approval

**Date:** June 1, 2022

**Committee:** Academic, Research and Student Success Committee

**Presentation:** Tenure and Promotion, Recommendation for Approval

**Presented by:** Dr. Thomas Nenon, Executive Vice President for Academic Affairs and Provost

## **Background:**

Tenure is the principle that entitles a faculty member continuation of his or her annual appointment until relinquishment or forfeiture of tenure, or until termination of tenure for adequate cause. A healthy tradition of academic freedom and awarding tenure and promotion are uniquely fundamental to the academy and essential to the proper functioning of a university. Faculty members eligible for tenure must serve a probationary period and must demonstrate continuing value to the institution.

Tenure and promotion are granted only by positive action by the Board of Trustees to faculty members in a department, school, or college of the University of Memphis. The list of faculty members recommended for tenure and promotion is attached.

## **Recommendation:**

The Academic, Research, & Student Success Committee recommends that the Board approve and grant tenure and promotion to the faculty members recommended by the provost in the department, school or college of the University indicated in the meeting materials.

# The University of Memphis Board of Trustees

## Recommendation

### For Approval

**Date:** June 1, 2022

**Committee:** Academic, Research and Student Success Committee

**Presentation:** Tenure Upon Appointment – Ashish Joshi

**Presented by:** Dr. Thomas Nenon, Executive Vice President for Academic Affairs and Provost

#### **Background:**

Prior to joining the University of Memphis as the dean of the School of Public Health, Dr. Joshi served as a Senior Associate Dean Academic and Student Affairs and Professor of Epidemiology and Biostatistics at the CUNY Graduate School of Public Health and Health Policy-New York. Dr. Joshi joined CUNY in 2014 as a founding assistant dean of student affairs and was promoted to the Associate Dean of Student and Alumni Affairs and in 2018, appointed as Senior Associate Dean of Academic and Student Affairs of the CUNY Graduate School of Public Health and Health Policy. Before joining CUNY Graduate School of Public Health and Health Policy, Joshi was an Associate Professor at the Department of Health Services Research and Administration at the University of Nebraska Medical Center's College of Public Health. Dr. Joshi has participated in global health projects in India, Haiti, Nigeria, Bangladesh, Brazil, and Egypt and successfully implemented implementation of nearly two dozen health technological interventions in areas of population surveillance, m-health interventions, consumer health informatics, and population health dashboards across various countries globally. Dr. Joshi has been actively engaged in the response to COVID-19 in New York City as well as in other parts of the world. He has published more than 100 peer-reviewed articles in the area of population health informatics.

Dr. Joshi conceptualized the SMAART (Sustainable, Multisector, Accessible, Affordable, Reimbursable, and Tailored) model using combined principles of the human-centered approach, humanistic, behavioral, learning, and information processing theory to advance the achievement of Sustainable Development Goals. He has presented his work at the WHO, United Nations, and several other government agencies globally. Dr. Joshi was recently funded through the Open Society Foundation to establish globally the first Population Health Informatics Regional Hub at the James P Grant School of Public Health, BRAC University Bangladesh. The goal of this hub is to train students with population health informatics skills so that data and research capacity can be enhanced among the various public health practitioners in Bangladesh and other countries in the region.

Dr. Ashish Joshi received a bachelor's degree in medicine and surgery from The Punjabi University in India. He also received a Master of Public Health in Boston and a PhD in Health Informatics from the University of Texas Health Science Center, Houston.

#### **Recommendation:**

The Academic, Research, & Student Success Committee recommends that the Board approve and grant

tenure upon appointment for Dr. Ashish Joshi as professor in the School of Public Health.



# The University of Memphis Board of Trustees

## Recommendation

### For Approval

**Date:** June 1, 2022

**Committee:** Academic, Research and Student Success Committee

**Presentation:** Tenure Upon Appointment – Linda Haddad

**Presented by:** Dr. Thomas Nenon, Executive Vice President for Academic Affairs and Provost

#### **Background:**

Prior to coming to the University of Memphis as the dean of the Loewenberg College of Nursing, Dr. Linda Haddad, an Irwin Belk distinguished professor, served as the director of the School of Nursing at the University of North Carolina Wilmington (UNCW). She has also served as the associate dean for academic affairs at the University of Florida College of Nursing, the dean of the Faculty of Nursing at the Jordan University of Science and Technology (JUST), the director of the World Health Organization Collaborating Center for Health and Development, and the deputy director of the JUST-affiliated King Abdullah University Hospital.

A native of Jordan, she has extensive experience with international health initiatives through consulting and working on projects to train medical professionals and improve community health in the Middle East. Her research focuses on tobacco cessation among minority groups, and her background is in community and public health nursing. Dr. Haddad is a fellow of the American Academy of Nursing and a member of the Society on Research for Nicotine and Tobacco, Sigma Theta Tau International, and the Board of Commissioners for the National League for Nursing Commission for Nursing Education Accreditation.

Dr. Haddad earned a Doctor of Philosophy in nursing from the University of Maryland, a Master of Nursing Science from the University of Pennsylvania, and a Bachelor of Science in nursing from Jordan University.

#### **Recommendation:**

The Academic, Research, & Student Success Committee recommends that the Board approve and grant tenure upon appointment for Dr. Linda Haddad as professor in the Loewenberg College of Nursing.

# The University of Memphis Board of Trustees

## Recommendation

### For Approval

**Date:** June 1, 2022

**Committee:** Academic, Research and Student Success Committee

**Presentation:** Tenure Upon Appointment – Leanne Lefler

**Presented by:** Dr. Thomas Nenon, Executive Vice President for Academic Affairs and Provost

#### **Background:**

Dr. Leanne Lefler has served as a nursing academic researcher for over 15 years. She is coming from the University of Arkansas for Medical Sciences where she served as a tenured, endowed professor in women's cardiovascular health. As a researcher, Dr. Lefler has received close to \$5,000,000 in funding, from the Veteran's Administration, the John A. Hartford Foundation, HRSA, and the Patient Centered Outcomes Research Institute (PCORI). Her cardiovascular health research includes clinical trials for an mHealth management model for older adults with heart failure, the use of telemedicine during the COVID-19 pandemic for older adults with heart failure, and physical activity interventions for older, sedentary women to promote cardiovascular health. Dr. Lefler has also spent her career mentoring both faculty and students, with a proven track record of mentoring students to obtain pre-doctoral and post-doctoral awards and other scholarships. Dr. Lefler's research has led to an extensive scholarship portfolio. She has published 17 articles in peer-reviewed publications in the last five years alone, as well as more than 50 peer-reviewed presentations at regional, national, and international conferences.

Dr. Lefler has also demonstrated an outstanding track record of service. She has served on several boards of health care, nursing, and community organizations, as well as national organizations such as the Campaign Outreach Advocates for the Culture of Health through the Robert W. Johnson Foundation and AARP. She is a Fellow in the American Academy of Nursing, our profession's highest honor. She has also received numerous awards for her teaching and mentorship, including from the Southern Nursing Research Society and the American Heart Association. We are sure that her prestige, as well as her expertise in grant writing, funding, PhD education, and mentoring will serve to advance the college's research mission, as well as the university's in maintaining Carnegie R1 status.

These achievements and level of activities in research, instruction, and service are well above the minimum expectations for receiving tenure and are on par with other high achieving, high performing tenured full professors at the Loewenberg College of Nursing and chair of excellence professors at the University of Memphis.

#### **Recommendation:**

The Academic, Research, & Student Success Committee recommends that the Board approve and grant tenure upon appointment for Dr. Leanne Lefler as professor in the Loewenberg College of Nursing.

# The University of Memphis Board of Trustees

Recommendation

For Approval

**Date:** June 1, 2022

**Committee:** Academic, Research and Student Success Committee

**Presentation:** Tenure and Promotion and Academic Freedom

**Presented by:** Dr. Thomas Nenon, Executive Vice President for Academic Affairs and Provost  
Dr. Jeff Marchetta, Professor, Mechanical Engineering and Director, UofM Industrial Assessment Center

## **Background:**

This is a proposal for ratification of the provisions of the tenure and promotion process and academic freedom as prescribed by law that is contained in the Faculty Handbook. The Board of Trustees is required to promulgate a tenure policy or policies for faculty, which policy or policies shall ensure academic freedom and provide sufficient professional security to attract the best qualified faculty available for the institution. The highlighted portions in the Faculty Handbook are the relevant portions that come under the purview of the Board. In September, the Provost will bring a separate Board policy for approval.

## **Recommendation:**

The Academic, Research, & Student Success Committee recommends that the Board approve the faculty tenure and promotion and academic freedom provisions in the Faculty Handbook as outlined in the meeting materials.



## 9. Reports and Recommendations of the Governance and Finance Committee

Presented by Doug Edwards

# The University of Memphis Board of Trustees

Recommendation

For Approval

**Date:** June 1, 2022

**Committee:** Governance and Finance Committee

**Presentation:** FY2022-23 Proposed Budget  
FY2021-22 Estimated Budget  
Compensation Strategy  
FY2023-24 Capital Budget Request

**Presented by:** Raaj Kurapati, Executive Vice President and Chief Financial Officer

## Background:

**Budget Control Policy** (UM 1768) recognizes budgeting as the process whereby the plans of an institution are translated into an itemized, authorized, and systematic plan of operation, expressed in dollars, for a given period. This policy also recognizes that a budget is a plan and circumstances may necessitate revisions or changes from time to time. In view of this, we will submit budgets for approval three times each fiscal year. At this time, both the FY2022-23 Proposed budget and FY2021-22 Estimated budget are presented for consideration.

The **Proposed Budget** is prepared in the spring for implementation each fiscal year on July 1. This budget is based on the level of state funds recommended in the Governor's proposed budget as well as early estimates of factors such as enrollment projections, proposed tuition increases and research activities. The **Proposed Budget** is submitted to the Board for approval prior to the start of the subsequent fiscal year which includes the FY2023 Compensation Plans.

The final budget submitted for each fiscal year is the **Estimated Budget**. This budget includes carryforward balances from prior years that represent available resources at the departmental level. Although these funds are available, we do not anticipate that all resources will be spent in the current fiscal year. The **Estimated Budget** also includes final adjustments to the current year budget and is the budget against which final year-end actual amounts are compared. It is prepared, submitted, and considered by the Board at the same time as the **Proposed Budget** for the upcoming fiscal year.

**Capital Budget -Per Tennessee Higher Education Commission (THEC) Policy F4.0 Capital Projects:** As the coordinating body for higher education in Tennessee, THEC engages with institutions and governing boards on capital investment through its role to develop and approve recommendations for capital outlay and maintenance funding. THEC identifies capital investment needs and determines priorities for those investments for consideration by the Governor and the General Assembly as part of the annual

appropriations act. Categories of projects submitted to THEC in the annual Capital Budget Request are as follows:

**Capital Outlay:** In accordance with funding request guidelines annually disseminated by THEC staff, the Commission receives a prioritized list of capital outlay projects from each governing board for evaluation and scoring into a single prioritized list for the state. These projects either provide new space or major renovations (or a combination of both), and respond to: state goals for education, strategic plans, space guidelines, facility assessments, program plans, business plans, and/or external funding. LGI's may propose only one Capital Outlay project.

**Capital Maintenance:** THEC shall receive a prioritized list of capital maintenance projects from each governing board. THEC staff makes project recommendations to the Commission's Board in accordance with a capital maintenance formula. The formula may include, but not be limited to, the age, gross Education & General (E&G) square footage, usage, and conditions of institutions facilities. Individual projects should reduce deferred maintenance and protect the assets of the state.

**Disclosed Projects:** The reporting of disclosed capital projects to THEC should be performed at least quarterly and shall include all projects to be initiated in the following quarter that will have total expenditures on capital improvements exceeding \$100,000 or maintenance below \$500,000. Projects over \$500,000 or from Bonds must be disclosed in the annual state budget. Disclosed projects are those funded by campus funds, bonds, gifts or other non-appropriated sources

The **Capital Outlay** budget request for 2023/24 is due to THEC on August 26, 2022 and the **Maintenance, Disclosure and Demolition** budget request for 2023/2024 is due to THEC on June 17, 2022.

**Committee Recommendation:**

The Governance and Finance Committee met June 1, 2022, and recommended approval of the FY2021-22 Estimated Budget and the FY2022-23 Proposed Budget and assumptions as well as the Capital Budget and FY23 Compensation Plan as presented in the meeting materials.

## The University of Memphis Board of Trustees

Recommendation

For Approval

**Date:** June 1, 2022

**Committee:** Governance and Finance

**Presentation:** Leftwich Tennis Center

**Presented by:** Raaj Kurapati, Executive Vice President and Chief Financial Officer

### **Background:**

The City of Memphis is the owner of the Leftwich Tennis Center and is currently reconstructing the facility for continued use. The Facility is located at 4145 Southern Avenue, Memphis, Tennessee 38117 in T Links Audubon Park. The new building will include space for the university's men's and women's intercollegiate athletics home tennis activities for practice and tournaments as well as instruction and recreation. Approximately 6,574 square feet is dedicated for operations area for the University.

The University will have the use of the eight (8) indoor tennis courts and nine (9) outdoor tennis courts, concourses, restrooms, locker rooms, training rooms, office space and other public areas of the Premises that are made available for use by the City and the general public for Tennis Competitions.

The University shall pay the sum of \$ 5,000,000 as prepaid rent for 25 years which is to be used for design and construction of the Leased Premises. The University shall pay an annual rental fee in the amount of two hundred thousand dollars (\$200,000) per annum (or \$5,000,000 total over the Term) ("Base Rent") for the exclusive use of areas controlled by University Tiger Tennis, indoor courts, and for the South Court use. The Base Rent shall not be subject to any increases. Annual operating costs will be negotiated with the City if necessary.

University shall provide to City an annual master schedule ("Master Schedule") for use of the facility for training, practice, education, and competition that will be conducted at the Leftwich. SBC approval is required for this lease.

Additionally, a commitment for a \$2,500,000 funding back-stop maybe negotiated to allow for the project to continue to completion should fund raised dollars take additional time to be realized. This may be committed through one of the University foundations.

### **Committee Recommendation:**

The Governance and Finance Committee met June 1, 2022, and recommended approval of the Leftwich Tennis Center lease to proceed as outlined.



# The University of Memphis Board of Trustees

## Recommendation

### For Approval

**Date:** June 1, 2022

**Committee:** Governance and Finance

**Presentation:** Park Avenue Campus Student Housing

**Presented by:** Raaj Kurapati, Executive Vice President and Chief Financial Officer

#### Background:

The University of Memphis will seek proposals from qualified financiers and developers to fund, plan, design, construct, operate and maintain a student housing development on property owned by the University on the Park Avenue Campus.

The University will issue a Request for Proposals (“RFP”) to define the University’s leasing requirements, provide detailed proposal requirements; outline the University’s process for evaluating proposals for Proposer selection to then enter into a land lease agreement for the project.

The Development will serve as an enhancement to the existing University of Memphis Park Avenue Campus and the University intends on a schedule that allows construction to commence in 2023 with occupancy of the Development in 2025. To satisfy the housing needs on campus, the development is planned north of the athletic area and will consist of mid-rise buildings in accordance with the approved University Master Plan.

The apartment housing type will add to the diversity of offerings on campus and is a unit-type that is in demand. With increased enrollment in graduate and international students the proposed housing will supplement the current limited apartment inventory. This housing will be available for athletes, nursing students, and all other University students at market rates. The location is quiet, safe and on the shuttle route to main campus and the Development should convey through its design a strong “sense of place” such as a safe, vibrant, walkable environment for learning, living, and studying while ensuring quality and functionality at a price matching student need.

The Development will be fenced with gated vehicle access and the architectural style of the facilities shall be harmonious to other newer facilities on the Park Avenue Campus. Materials throughout the Development shall be attractive, long lasting, low maintenance and with sustainable design meeting requirements of the state high performance building requirements.

The land lease is expected to be in effect for between 30 and 45 years and the development will revert to the University at the end of the term. The lease will allow for buyout potential by the University and the development will be branded and operated as a university residence hall.

An affiliation agreement will provide the arrangement for directing University students to the facility after any current residence halls that have outstanding debt are filled. The cash flow structure will involve a Trustee that will hold revenue in escrow for payment of operations, debt service, debt service reserve, operating expense reserve, asset management fee, University services fees (if necessary), performance incentives and remaining cash flow to the University for the use of the land.

The construction will be completed in accordance with approved plans, and a maintenance plan and annual project budgeting will be completed in conjunction with the University. All insurance and default requirements of the State of Tennessee will be met. The project will be approved by the State Building Commission and the State School Bond authority.

The project program includes 128 four bedroom / 4 bath units, and one 2 bedroom / 2 bath unit for the Resident Coordinator. Resident Advisors will live in the units also. Ten thousand square feet will be constructed for leasing and administration, social center, computer room / study center, maintenance storage and a small grab and go concessions operation.

The project will also be disclosed with the State as a potential TSSBA funded as an alternative to a Public Private Partnership, which will be actively pursued, should the P3 approach not materialize.

**Committee Recommendation:**

The Governance and Finance Committee met June 1, 2022, and recommended approval of the Park Avenue Campus Student Housing project to proceed as outlined.

# **The University of Memphis Board of Trustees**

Recommendation

For Approval

**Date:** June 1, 2022

**Committee:** Governance and Finance Committee

**Recommendation:** FY23 Tuition Recommendation

**Presented by:** Raaj Kurapati, Executive Vice President/Chief Financial Officer

## **Background:**

Under the FOCUS Act, the Tennessee Higher Education Commission (THEC) now sets a binding range each year in which institutions can increase undergraduate in-state tuition, as well as a binding range for the combined undergraduate in-state tuition plus mandatory fees.

For 2022-23, THEC approved both of these ranges at 0.0% – 0.0% at its May 19, 2022, Commission meeting.

In our continued effort toward access and affordability initiatives, we are proposing a 0% in-state tuition increase for Undergraduate, Graduate and Law and a nominal 1-2.16% increase to the Nonresident and International overall tuition. There is no proposed mandatory fee increase at this time.

## **Committee Recommendation:**

For FY23, the Governance and Finance Committee recommends approval of a nominal 1-2.16% increase in the Non-resident and International tuition as presented in the meeting materials.



## 10. Reports and Recommendations of the Audit Committee

Presented by Carol Roberts

## Report to the Audit Committee of the Board of Trustees

Report  
For Approval

**Date:** June 1, 2022  
**Committee:** Audit Committee  
**Report Title:** Review and Approval of Office of Internal Audit and Consulting Charter  
**Presented by:** Vicki D. Deaton, Chief Audit Executive

### Synopsis:

The purpose, authority, and responsibility of the internal audit activity must be formally defined in an internal audit charter, consistent with The Institute of Internal Auditor's (IIA) *International Standards for the Professional Practice of Internal Auditing (Standards)*, Definition of Internal Auditing, Core Principles for the Practice of Internal Audit (Core Principles), and the Code of Ethics. The internal audit charter establishes the internal audit activity's position within the organization, including the nature of the chief audit executive's functional reporting relationship with the board; authorizes access to records, personnel, and physical properties relevant to the performance of engagements; and defines the scope of internal audit activities.

To comply with requirements of State of Tennessee statutes and the University of Memphis Audit Committee Charter, the attached University of Memphis Office of Internal Audit and Consulting Charter is presented to the Audit Committee. According to the Audit Committee Charter, the Audit Committee must "review, approve, and update the Internal Audit charter annually or more frequent if necessary."

The University of Memphis Office of Internal Audit and Consulting Charter was last reviewed and approved at the June 2, 2021 Board of Trustees meeting. Several revisions are currently proposed in response to the Quality Self-Assessment Review's observations for improvement. The revisions are highlighted in the attached charter.

## Report to the Audit Committee of the Board of Trustees

Report  
For Approval

**Date:** June 1, 2022  
**Committee:** Audit Committee  
**Report Title:** Proposed FY2023 Internal Audit Plan  
**Presented by:** Vicki D. Deaton, Chief Audit Executive

### Synopsis:

The Proposed FY2023 Internal Audit Plan for the University is presented for review and approval by the Audit Committee. Audit Committee approval of the Internal Audit Plan is required by the “State of Tennessee Audit Committee Act of 2005” (TCA 4-35-101 thru 108), the University of Memphis Audit Committee Charter, and the Office of Internal Audit & Consulting Charter.





# 11. Additional Business

Presented by Doug Edwards



## 12. Adjournment

Presented by Doug Edwards