AUGUSTA UNIVERSITY
MEDICAL PARTNERSHIP
UNIVERSITY OF GEORGIA

Medical Scholars Program – Athens Campus
AY 2022-2023

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I. INTRODUCTION TO MEDICAL SCHOLARS PROGRAM

Scientific discovery is the essence of progress in health-related science and the hope in medicine for uncovering the unknown to identify treatments and cures to human disease. The Medical Scholars Program at the Medical College of Georgia offers the opportunity for all medical students in good academic standing to become engaged in a scholarly project, whether basic biomedical, clinical, or translational research, educational research, analysis of existing heath care data, or medical humanities, in close mentorship with faculty who are nationally and internationally distinguished scientists, clinicians, and academic scholars. The goals of the program are to:

- expand scholarly experiences as a means to provide an understanding of how medical knowledge is scientifically and ethically derived;

- provide an understanding of how to frame a relevant hypothesis, how to construct a testable research design, and how to evaluate critically scientific and medical data using quantitative and qualitative methods;

- provide opportunities to think creatively about solutions - to see obstacles as invitations to problem solve, typically within the context of colleagues of distinct expertise;

- provide opportunities to communicate knowledge, old and new, to colleagues through participation at local, regional, and national scientific meetings;

- provide interactive workshops to expose medical students to multiple facets encompassed within the biomedical research continuum – bench to bedside to communities and populations, and back;

- expand scholarly experiences as a means to foster an increase in the number of medical students pursuing clinical and/or translational research as a component in their clinical careers.

Program Overview

Most students choose to engage a research project during the summer (9 - 10 weeks) following completion of their first-year of medical school.

An array of research opportunities are available at the Medical College of Georgia and the University of Georgia, including:

- basic biomedical research,
- patient-oriented clinical and/or translational research,
- medical education research,
- bioinformatics and biostatistics,
- community and population healthcare services: policy development and/or analysis,
- medical humanities – ethics, history, philosophy, and literature.

Students may also choose to pursue research at an outside institution. The first step in the process is identification of an area of research that is of interest to you and of a faculty mentor who is working in your area of interest.

You should identify your research question and have finalized your choice of faculty mentor prior to the end of your first semester.

You will use the month of January 2023 to craft a formal research proposal - which presents your research question/hypothesis and significance, explains your experimental design, and tells how you will evaluate your results - in collaboration with your faculty mentor.

Your research proposal and program application will need to be submitted to the Medical Scholars Program by **Friday, February 17th, 2023.** Your application needs to be accompanied by a supporting application from your mentor with submission also by **Friday, February 17th, 2023.**

Medical Scholars Program Application forms and additional resources are available in BOX. Discussion about crafting your research proposal and the process of submission is found in **Section III – Application Process**.

Athens campus Medical Scholars Program Director Dr. Leslie Lee (lpetch@uga.edu), Associate Dean for Research, Dr. Jonathan Murrow (jmurrow@uga.edu) and Associate Dean for Student & Multicultural Affairs, Dr. Robert Mcclowry (mcclowry@uga.edu), are available to assist at any stage of the research endeavor - the planning (discussion of research interests and identification of potential mentors), the implementation (development of a research proposal), and the completion (written summary and poster presentation) of an MSP project. **We strongly advise you to start early and plan ahead.**

Program Requirements

- Students must have successfully completed all Phase I requirements and **be in good academic standing.**

- Students are **expected to a make a full-time commitment.** No activities that conflict with this effort are permitted without approval of the mentor and the Director of Medical Scholars Program (including sponsored medical mission works). Students may not have other daytime, paid employment.

- The research project must be based on a specific hypothesis that addresses an original question. Retrospective clinical chart reviews are permitted, but only if they are designed about a specific and testable hypothesis. Findings should be subjected to statistical analysis and the conclusions of the research should support or lead to the rejection of the original hypothesis. **Literature-based reviews are not appropriate.**

- Multiple student participation on a single project (shared effort) is **not** permitted. The student is expected, with guidance from the mentor, to develop the hypothesis and specific aims of the project, as well as to participate in the experimental design of the study. Students are expected to assume responsibility for performing experiments and interpretation of data.

- At the conclusion of the program, each student is required to submit a **Scholarly Abstract** of his or her findings. The Scholarly Abstract will be placed in the Program Guide to the Annual Medical Scholars Research Day and should be submitted to the Medical Scholars Program Dr. Leslie Lee (lpetch@uga.edu) by **Friday August 11th, 2023**.

- At the conclusion of the program, each student is required to present his or her research findings in poster format at the **Annual Medical Scholars Research Symposium** to be held on **Monday, October 23rd**.

II. CONSIDERATIONS IN SELECTING A MENTOR

Selection of a faculty mentor is a key step to the success of your research project as well as to your overall enjoyment of the research experience. Your mentor will help you to identify a specific research question that makes a meaningful intellectual contribution and, additionally, will help you to craft a brief, but rigorous and well-defined, research proposal. The mentoring relationship is not only crucial to the success of your research experience, but also to the initial stages of your career.

- A good mentor has the time and interest to train **you**. A good mentor is **accessible** and **willing -** willing to help you identify and discuss an appropriate research project - willing to help you craft an appropriate research plan - willing to help you problem-solve and trouble-shoot and to set and review project goals and expectations throughout your research time.

- You should discuss possible research projects with multiple prospective mentors who work in a field of interest to you and carefully choose an active, ongoing research setting where the necessary techniques and resources are already established.

- You should make every effort to meet with other members of the laboratory/environment under your consideration: technical staff, other medical students, graduate students, summer undergraduate students, post-doctoral fellows, research faculty, etc – a stimulating research environment is a real positive additional factor to consider in selecting a mentor.

You are strongly encouraged to discuss your mentor selection with Drs. Lee, Murrow, or McClowry, before committing to a choice of mentor:

- this is particularly important if you have selected a mentor who has not had a student previously or is at the beginning stages of defining their research program.

- new investigators may indeed make for a great mentor (often the best) but confirm first that he or she has significant time for you and that the research environment is appropriate.

III. THE APPLICATION PROCESS

Once you have chosen a mentor, you should identify, with extensive discussion between you and your mentor, a research goal <u>that can be addressed during the program's eight to ten-week time period</u>.

- It is critical that you undertake a research problem that enables you to develop a sense of "personal ownership and commitment" and that allows you to make a meaningful intellectual contribution.

- It is not necessary that the research problem or idea originate with you; the best projects for students are those that fit into the mentor's ongoing funded research efforts.

- Research questions that use human subjects, or human derived materials, including charts and human specimens must be part of an active program already approved by IRB – <u>**no new proposal with human subjects will be accepted – no exceptions**</u>.

After identifying a specific problem and feasible course of study, you with the help of your mentor will need to craft and submit a brief research proposal describing your research plan. Please note the student application form requires your mentor's signed approval.

MSP Student Application and Mentor Forms

Forms are common to all applicants – (see Appendix C and D. Forms are also available in BOX and on the MP website)

Please prepare information for application and submit to Dr. Leslie Lee (lpetch@uga.edu). **DO NOT SUBMIT APPLICATIONS VIA THE AUGUSTA MSP WEBSITE**

IV. APPROVAL AND NOTIFICATION OF SUPPORT:

Notification of Proposal Approval and Stipend Support will be given by: **Friday, March 17th, 2023**.

V. POST-AWARD REQUIREMENTS

INSTITUTIONAL COMPLIANCE COMPONENTS

Students awarded Medical Scholars Program funding will be notified of Institutional Compliance concerns, but it is the **responsibility of the student and his/her mentor** to ensure approval of all compliance requirements. Projects will become ineligible for funding and study unless all compliance documentation is provided by the program's starting date. Approval of compliance components takes considerable time, so submit your required elements promptly upon request. For questions regarding institutional compliance please see Dr. Lee (lpetch@uga.edu).

PROGRESS REPORTS

All MSP students are required to complete and submit a brief (no more than 1 page) progress report in order to receive their stipends. **Progress reports will be due June 15th, 2023** This is a hard deadline, no exceptions. Progress reports should include the following:

- o Restatement of your research question
- o Progress made thus far (data gathered /preliminary results/ etc.)
- o Problems, roadblocks encountered and how they are being addressed
- o Changes to original proposal

STIPENDS

The Medical Scholars Program participation stipends will be processed as a payment from UGA Accounts Payable. There will be a single payment at the end of June. Note that taxes will not be withheld, and you will be provided a 1099 Form at a later date for tax purposes.

If you choose to have a check mailed to you (vs. direct deposit), and you won't be living at your current home address, make sure you **enter the actual address you want the check mailed to** when registering.

Please follow these steps so we have the information required to process your payments.

1) Register as a UGA supplier at https://suppliers.uga.edu/ (as an individual) per the instructions on the Fillable Student Employee Form (Appendix E)

2) Download and fill out only #1-8 and sign the UGA Non-Employee Payment Form (found at https://busfin.uga.edu/forms/Non_emp_payment.pdf). **DO NOT FILL OUT THE PAYMENT CATEGORIES**

3) When you register as a vendor with UGA you will be given a Vendor Registration #. You will also receive a follow up email with a Supplier ID#. **Please enter your Supplier ID# on the Non-Employee Payment Form – NOT the Vendor Registration #**

   NOTE:

   - When you register you will receive a confirmation of your registration as a supplier with a registration ID#. Your registration is then submitted to UGA's accounts payable for approval. At this point you are not yet approved as a supplier.

   - Once your registration as a supplier has been approved you will receive a second email with a supplier ID#.

   - Enter the **supplier ID#** on the Non-Employee Payment Form, item #3: University assigned Vendor Number (VN)

4) Complete the bottom sections of this form and email completed, signed copies of the UGA Non-Employee Payment Form for approval to Dr. Leslie Lee (lpetch@uga.edu) by **May 15, 2023.**

VI. SCHOLARLY ABSTRACT

At the conclusion of the program, each student is required to submit a **Scholarly Abstract** of his or her findings. The Scholarly Abstract will be placed in the Program Guide to the Annual Medical Scholars Symposium.

- The abstract should include: the question that the research sought to answer, the approach/experiments used to test the hypothesis, the results obtained, the interpretations drawn, and the significance of the findings to medicine.

- Students must submit an Abstract Approval Form, signed by their research mentor (Appendix F) as well as a separate, formatted abstract as a MSWord document. For abstract formatting guidelines see Appendix G.

- **Both** the Abstract Approval Form AND formatted abstract Word file should be submitted to Dr. Leslie Lee (lpetch@uga.edu) by **Friday, August 11th, 2023.**

VII. ANNUAL MEDICAL SCHOLARS RESEARCH SYMPOSIUM

At the conclusion of the program, each student is required to present his or her research findings in poster format at the **Annual Medical Scholars Research Symposium.**

- This forum provides an important arena for you to present your work to a cross-departmental and cross-school audience of students and faculty. Many of you will use this platform as a stepping-stone to future presentations at regional, national and/or international scientific meetings.

- Your poster need not present a completed project. Ten weeks is a short period of time and it is unlikely that all will proceed as you planned at the outset, so your findings may best be discussed as "work in progress" – this is quite acceptable.

- For instructions on how to prepare and design a research poster see Appendix H.

VIII. INFORMATION FOR MENTORS OF MEDICAL SCHOLARS PROGRAM STUDENTS

The Medical Scholars Program at the AU/UGA Medical Partnership offers the opportunity for all medical students in good academic standing to engage in research activities, and considers research experiences as a valuable component of medical student education, regardless of student's ultimate career choice – academic medicine, private practice medicine, or biomedical research scientist.

The following suggestions are offered to ensure a better understanding of the expectations of the research mentor's role:

> The research project must be based on a specific hypothesis that addresses an original question. Clinical chart reviews are permitted, but only if they are designed about a specific and testable hypothesis. Findings should be subjected to statistical analysis (if appropriate) and the conclusions of the research should support or lead to the rejection of the original hypothesis. Literature reviews are *not* permitted.

> For projects that lend themselves to statistical analysis, please contact Dr. Leslie Lee (lpetch@uga.edu).

> The student's project should be of a scope to ensure the likelihood that the student will be able to obtain results that confirm or negate his/her hypothesis within the Program's timeframe – 9 to 10 weeks.

> It is not necessary that the research problem or idea originates with the student, but it is critical that the student undertakes a research problem that he/she can develop a sense of "personal ownership and commitment" and make a meaningful intellectual contribution. The student should be expected to contribute significantly to the crafting of the research proposal under your guidance and should not be viewed as only "a pair of hands" or "help" for another's research efforts.

> During the research period, the student and the mentor should meet at least weekly to problem-solve and trouble-shoot student efforts, and to set and review project goals and expectations.

> The mentor should facilitate the student's participation in regular laboratory meetings, journal clubs or other research activities that enhance the student's scientific and communication awareness.

> The mentor should discuss with the student how the projects goals and accomplishments should be organized and presented in the Scholarly Abstract as well as in the research poster presented at the Annual Medical Scholars Symposium.

> The mentor should be available to attend their student's presentation at the Medical Scholars Symposium to provide any necessary feedback to others in attendance.

> The mentor is responsible for all research direction and efforts as well as experimental results.

APPENDIX A

MEDICAL SCHOLARS PROGRAM - IMPORTANT DATES

CALENDAR ACADEMIC YEARS 2022 - 2023

- Proposal Application Submission Deadline: February 17,2023.

- Notification of Proposal Approval: March 17, 2023.

- M1 School Year Ends: May 12, 2023.

- Progress Report: June 15, 2023

- M2 School Year Begins: July 31, 2023

- Program Abstract Submission Deadline: August 11, 2023.

- Program Poster Print Submission Deadline: TBD

- Annual Medical Scholars Program Student & Resident Research Symposium: October 23, 2023

APPENDIX B

CRITERIA TO CONSIDER WHEN CRAFTING YOUR RESEARCH NARRATIVE

The following points comprise some general criteria that may help you in crafting your research application.

Specific Aims
- describe the research problem or question that you intend to answer.
- describe the approach that you will use to test your hypothesis.

Background and Significance
- discuss the state of knowledge in your field of investigation.
- identify existing gaps in the knowledge of your field of study.
- discuss how your investigations will fill the existing gaps and further advance the field of study.

Research Methods and Design
- discuss in sufficient detail how you will accomplish each Specific Aim.
- identify appropriate methodology, but do not let the specifics of the methodology become the focus of your proposal.
- discuss the strengths and weaknesses of your approach.
- discuss how you will analyze your data as it relates to your hypothesis.

Anticipated Results
- discuss anticipated outcomes and potential difficulties that you might encounter in your study and how you will overcome those difficulties.
- discuss how you will interpret the outcome of your study as it relates to your hypothesis.

Relevance of Research to Medicine
- discuss how your research lends itself to progress in the field of medicine: e.g., elucidation of a basic mechanism of disease; health care practice or policy; community health care or policy; world health care or policy; etc.

Selective References
- selected references should convey the context and validity of your research question and experimental design – it is not intended to be a literature review.

Personal Statement
- discuss what you hope to learn from participation in the program and how your participation will benefit you in meeting your future educational and career goals.

** Review carefully your proposal application to ensure that it contains all requested elements prior to submitting it as a single document. Applications with missing components will not be reviewed.

MEDICAL SCHOLARS PROGRAM APPLICATION FORM

STUDENT INFORMATION

Name:

Date of birth:	Cell Phone Number:

Current address:

City:	State:	ZIP Code:

School Email:	Alternate Email:

EDUCATION BACKGROUND

Please list the colleges/universities you have attended prior to matriculating at the AU/UGA Medical Partnership.

School Name:

Major:	Degree:

Graduation Date:

School Name:

Major:	Degree:

Graduation Date:

MENTOR INFORMATION

Name (title, first, last, suffix):

Department:

Institution / Organization:

City:	State:	ZIP Code:

Mentor Email:	Mentor Phone Number:

Work will be performed: ☐ In person   ☐ Remotely

MEDICAL SCHOLARS PROGRAM APPLICATION FORM

RESEARCH PLAN INFORMATION
(Attach a separate sheet)

PROJECT TITLE:

PROJECT AIMS
Briefly state Project Specific Aims: *(Maximum of 250 words)*

PROJECT BACKGROUND & SIGNIFICANCE
Summarize previous studies in the field and describe how additional studies, including your proposed work, would add knowledge to the field.
(Maximum of 500 words)

RESEARCH METHODS & DESIGN
Outline exactly what you propose to do during the summer with some brief experimental details. *(Maximum of 500 words.)*

RELEVANCE OF RESEARCH TO MEDICINE
Summarize how this research is/will be relevant to medicine. *(Maximum of 250 words.)*

GOALS
Please discuss what you hope to learn from participation in the Medical Scholars Program and how your participation will benefit you in meeting your future education and career goals. *(Maximum of 250 words.)*

SELECTIVE REFERENCES
Enter up to 10 references below. List journal articles that are referenced in the research proposal/application
– i.e., the published work that supports the ideas/approach of proposed work.

EXPERIENCE
Have you had any previous research experience(s)? Yes ☐ No ☐

Advisor Signature

_____

[**By signing**, I indicate my approval and certify that this proposal represents the student's project specifically NOT the broader scope of my research]

MEDICAL SCHOLARS PROGRAM
Athens, Georgia

INSTRUCTIONS
Please complete this fillable PDF application and submit it to the Student Applicant. It will be the student's responsibility to submit ALL of the MSP paperwork at one time to the Office of Educational Enrichment. The Mentor Application Form includes a Mentor Support Statement that should be submitted as a separate attachment.

For questions or concerns, please contact Office of Educational Enrichment:
Leslie Petch Lee, PhD, Associate Dean for Academic Enhancement & Campus Integration
(706) 713-2182 or lpetch@uga.edu

MSP MENTOR APPLICATION FORM

MENTOR INFORMATION

Name (Principal Investigator):		
Department:		
Office Address:		
City:	State:	ZIP Code:
Email:		
Lab Location (Site of work performance):		
Phone Number:	Lab Phone Number:	

STUDENT INFORMATION

Name:
Student Email:
Project Title:

MSP MENTOR APPLICATION FORM

INSTITUTIONAL COMPLIANCE COMMITTEE INFORMATION

1. Where will the project be conducted?   AU Campus ☐   AU Medical Center ☐   UGA ☐   Other ☐

2. If the project involves **humans, human blood or tissue, or human data** (including review of charts):

   - Provide the existing IRB File #:

   - Provide the existing title:

   - Provide the named PI:

   - Does this project require a new IRB application?   Yes ☐   No ☐

3. If the project involves **animals**:

   - Provide the existing IACUC File #:

   - Provide the existing title:

   - Provide the named PI:

   - Does this project require a new IACUC application?   Yes ☐   No ☐

4. If project is performed in a **laboratory**:

   - Provide the PI's Institutional Chemical #:

   - Provide the address of the laboratory to be used:

5. If project requires use of **radioisotopes**:

   - Provide the PI's User Authorization #:

MENTOR SUPPORT STATEMENT (Please attach a separate sheet)
In the Support Statement, the mentor should discuss the following elements:

   1. Description of ongoing research activities.
   2. Identification of current research support pertinent to student's project.
   3. Description of what the student is expected to accomplish and the mentor's role in the process.
   4. Assurance that the student will have appropriate work space, reasonable access to supplies, and access to the mentor's time.
   5. Assurance that the mentor will help craft and review the Scholarly Abstract for the student's education portfolio, as well as, the poster for presentation at the **Annual Medical Scholars Research Day**.

Save this form before you submit it.

AU/UGA Medical Partnership

Medical Scholars Program

The Medical Scholars Program participation stipends will be processed as a payment from UGA Accounts Payable. You will receive one payment for the full amount at the end of June. Note that taxes will not be withheld and you will be provided a 1099 Form at a later date for tax purposes. Please follow these steps so we have the information required to process your payments.

1) Register as a UGA supplier at https://suppliers.uga.edu/ (as an individual). At the end of the registration you have the option of electronic/ACH payment (by entering banking information) or a hard copy check mailed to the address entered in the registration. A video tutorial is available here if needed. Click See It! to view the video.

2) Download and fill out numbers 1-8 on the UGA Non-Employee Payment Form (found at https://busfin.uga.edu/forms/Non_emp_payment.pdf). Sign on the Payee line.

   - For number 3, you will receive your UGA supplier number by email after registering.
   - For numbers 5/6/8, please mark as follows: 5 – No, 6 – No (unless enrolled in another program other than the Medical Partnership), 8 – "Medical Scholars Program participant".

3) Complete the bottom sections of this form and submit this and a signed copy of the UGA Non-Employee Payment Form to Dr. Leslie Lee at lpetch@uga.edu (Winnie Davis Hall, Rm 106) by **May 15, 2022**.

Contact Missy Kinney, Medical Partnership Senior Accountant, with any questions at mkinney@uga.edu or 706-713-2678.

Student Personal Information

Name: _____

Email: _____

Phone Number: _____

Project Information

Project Name: _____

Mentor's Name: _____ Work Location: _____

Start Date: _____

Director of MSP Approval: _____ **Date:** _____
Leslie Petch Lee, PhD

AUGUSTA UNIVERSITY

MEDICAL PARTNERSHIP

UNIVERSITY OF GEORGIA

13th Annual Medical Scholars Research Day
(October 23, 2023)

Abstract & Poster Submission Procedure

Abstract Approval Form and Formatted Abstract:

- Complete the abstract approval form below and obtain advisor's signature.

- Prepare a formatted version of abstract

    o Refer to Abstract Formatting Guidelines for the appropriate font, spacing and margin settings

- Submit:
    o Formatted abstract (in Word format – <u>not PDF</u>) as an e-mail attachment
    o An electronic copy/scan of the abstract approval form <u>signed by your advisor</u>.

Abstract Submission Deadline

- <u>Friday, August 11, 2023</u> (*at the latest* – earlier is better)

Poster Submission & Deadline

- For help with poster design/formatting contact Jennifer Stowe (jmstowe@uga.edu)

- Submit electronic file (in PPT format – not PDF)

- MSP Poster Submission Deadline: <u>TBD</u>

Abstract Documents & Poster Submission:

- **Abstract** submission: to Dr. Leslie Lee (lpetch@uga.edu)
- **Poster** submission: to Jennifer Stowe (jmstowe@uga.edu) with cc to Dr. Lee

Questions

- Dr. Leslie Lee – lpetch@uga.edu , Winnie Davis Hall, Rm 106, 706-713-2182 (office phone)

Abstract Approval Form:
Provide the following information

Student (submitting author):

Primary Advisor:

Institution:

Department or Program:

Contributing Authors:

Student e-mail:

Student phone #:

ABSTRACT:
Max 2000 characters, including spaces: equates to ~280 - 300 words.
NO figures or tables.

Paste or type abstract in gray area provided below- box will expand as needed for text

Advisor Signature

_____

[By signing, I indicate my approval of this abstract and certify that this research represents the student's work]

1" top & bottom margins

Calibri / 20pt / Bold
(type '#N' – no number)

#N

TITLE: Calibri / 12pt / **Bold**

Can We Predict who will Need a Feeding Gastrostomy in Premature Babies at Discharge from the NICU: Validation Cohort

TITLE:
Max 160 characters

AUTHORS: Calibri / 11pt / **Bold**

Emily Anderson[1,2], William Taylor Head[3], Dr. Aaron Lesher[4], Dr. Alison Chapman[5], Dr. Rita Ryan[5]

AFFILIATIONS:
Calibri / 9pt / Light
Superscript affiliation numbers

[1]Medical Scholars Program; [2] Augusta University/University of Georgia Medical Partnership, Athens, Georgia; [3]Medical University of South Carolina School of Medicine, Charleston, South Carolina; [4]Department of Surgery (Pediatric), Medical University of South Carolina Children's Hospital, Charleston, South Carolina; [5]Department of Pediatrics (Neonatology), Medical University of South Carolina Children's Hospital, Charleston, South Carolina

BODY OF ABSTRACT:
Calibri / 11pt
Bold Subheadings

Background: Some premature babies struggle to achieve full oral feeds and need a gastrostomy tube (GT) to be discharged from the NICU. Placing a GT can delay discharge for several weeks (w). If we can create a tool to predict which NICU babies are likely to need GT, we may be able to achieve earlier discharge, giving the baby more time at home.

BODY OF ABSTRACT:
Max 2000 characters (with spaces)

Methods: An original cohort of 204 NICU babies from 2015-2016 born <30w demonstrated 5 predictive factors for GT: postmenstrual age (PMA) at time of first oral feed, respiratory mode at 32w PMA, need for high frequency ventilation (HFV), diagnosis of necrotizing enterocolitis, or a significant patent ductus arteriosus. The validation cohort consisted of 201 NICU babies from 2017-2018 studied to confirm whether these five factors were universally predictive for a GT in premature babies.

Results: Fourteen babies were excluded due to transfer or death before discharge. The cohort of 187 babies had 37 GT and 150 with no GT. Univariate analysis compared GT vs. non-GT babies in the validation cohort. Common factors such as gestational age at birth, birth weight, and PMA at discharge remained significant. Differences between ml/kg/day of oral feeding at days 10, 20, and 30 of feeding were also significant. Of the five predictive factors in the original cohort, only PMA at first oral feed, respiratory mode at 32 weeks PMA, and HFV remained significant in the validation cohort. Additional statistical analysis is underway to determine how well the validation cohort represents the original cohort but going forward we may have to alter the predictive factors included for the final model.

Conclusion: These data contributed to the development of a model to facilitate earlier gastrostomy tube placement and therefore earlier discharge, which overall may lower healthcare costs and improve neurodevelopmental outcomes based on shorter NICU stay. Using this second data set we will further refine the model to find more universal predictors.

2" left & right margins

2" left & right margins

SPACING BETWEEN ¶:
In Word, under *Line Spacing Options*, add 6pts "After" each paragraph.

1" top & bottom margins

Presenting Like a Pro
DESIGNING *ENGAGING* ACADEMIC POSTERS

Creating an academic or research poster from scratch can seem like a daunting process, especially if you have never made one before. It can be even more overwhelming when you realize that it's not just the content and research story that needs to be clear and succinct, but the layout and design can be equally important when attempting to draw in viewers in a room of 300 other posters. The main point of a poster is to share your research, create or encourage discussion, and to meet others in your field. This quick guide booklet will help you avoid some amateur mistakes, show you some best practices, tools and resources, and hopefully, get you on the road to creating your own poster masterpiece!

(*But remember, good design cannot compensate for poor content.)

AMOUNT OF CONTENT

Contrary to what you might think, creating a poster that could be an entire journal article is an amateur move. Including 'everything' and not taking the time to pare down your content to the most important pieces of your research story can mean the difference between an award-winning poster and one that people just walk past.

Consensus among many conference poster judges is:

300-800 words should be your content goal range!

WHITE/NEGATIVE SPACE

White space, also referred to as negative space, is the space left empty within the poster layout and design. This includes any margins or space between columns and sections. Ideally, there should be **40 % of white space**. Leaving a good amount of white space allows the eye to breathe as it moves around the poster. Doing this also prevents you from filling up every square inch with text and data, basically creating an overwhelming, visually overstimulating poster.

GET TO THE POINT:

Keep it short & simple

As the adage goes, keep it simple Simon. In this age of short attention spans, trim your content to the essentials! This is not a paper, just a visual representation of your abstract.

Make it obvious

Let's be honest, people don't like to read. Enhance you poster experience by making it easy on your audience. **TELL them what they should remember** about your research by making that summary sentence or phrase the largest text on your poster.
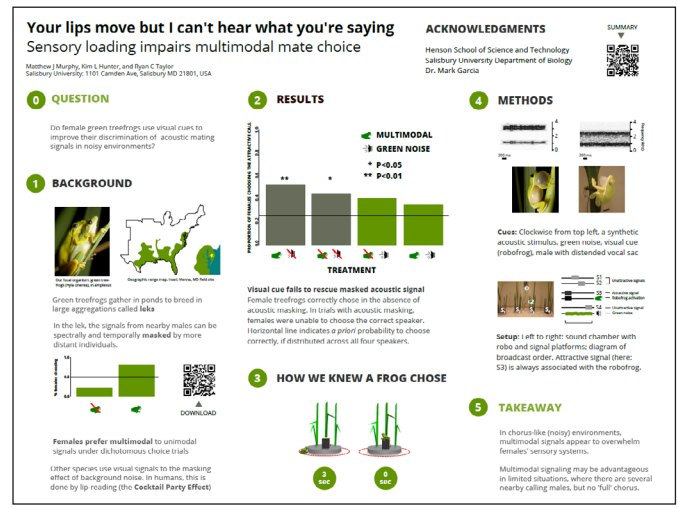
QR Codes are a great way to house "extra" info, data, or references without taking up valuable real estate!

Created by Jennifer Stowe, MS | Questions? Contact me at jmstowe@uga.edu.

SELECTING FONTS & USING TEXT

Fonts may seem like a trivial decision, but they can either 'up' your poster game or make you look inexperienced and amateurish. For example, the font **Comic Sans** is infamous among designers and some academics because it looks very elementary and unprofessional, yet you will still see it being used on academic posters. So, Comic Sans and any other cutesy or novelty fonts should be avoided!

Fonts are divided into serif and sans serif categories. Serif fonts have little 'feet' and are commonly used in body text and printed materials like books. The feet create the feel of a line and make reading small type easier. Sans serif fonts don't have the feet and have blunt ends to the letters, seen in the font used here, and are easier to read from a distance.

- Sans serif fonts are good for titles and sub-headers.
- Serif fonts are good for body text
- No more than two typefaces (fonts)

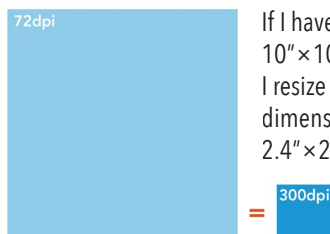A few modern fonts: (all are 10pts; * are free Google fonts)

Sans Serif	Serif
Alegreya Sans*	Alegreya*
Helvetica	Century
Monserrat*	Libre Baskerville
Noto Sans*	Lora*
Open Sans*	Noto Serif*
Raleway*	Palatino
Roboto*	Times
Tahoma	

USING IMAGES

Any images or graphics used in your poster should be of high resolution, meaning that they should be 300 dpi (dots per inch). Screen resolution of your monitor is 72 dpi, so when creating your poster, be sure to zoom in to 100% to get an idea if your graphics will print crisp and clear. Anything less than 300 dpi and you run the risk of the image being pixelated, 'crunchy', or fuzzy.

10dpi   25dpi   72dpi   300dpi

Designer Melissa Tatge explains it best: "When you have a seemingly large image (dimension-wise) that is lower-res, the dimensions decrease greatly when bumping up the resolution. For example: If I have an image that is 10"×10" at 72dpi and I resize it to 300dpi, the dimensions decrease to 2.4"×2.4"."

72dpi = 300dpi

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Catchy and short title here in a sa

① White Space is OK

Your poster should ideally be 40% empty! Leaving white space (sometimes referred to as negative space) allows the 'eye' to breathe.

More white space = less overwhelming

- Use bullet points to cut down text.
- Adding space between bullet points makes them easier to read.
- Be consistent with punctuation.
- Try to keep bullets short; no paragraph bullet points, please.
- Make your bullet points match your accent color for extra pizazz.

② G
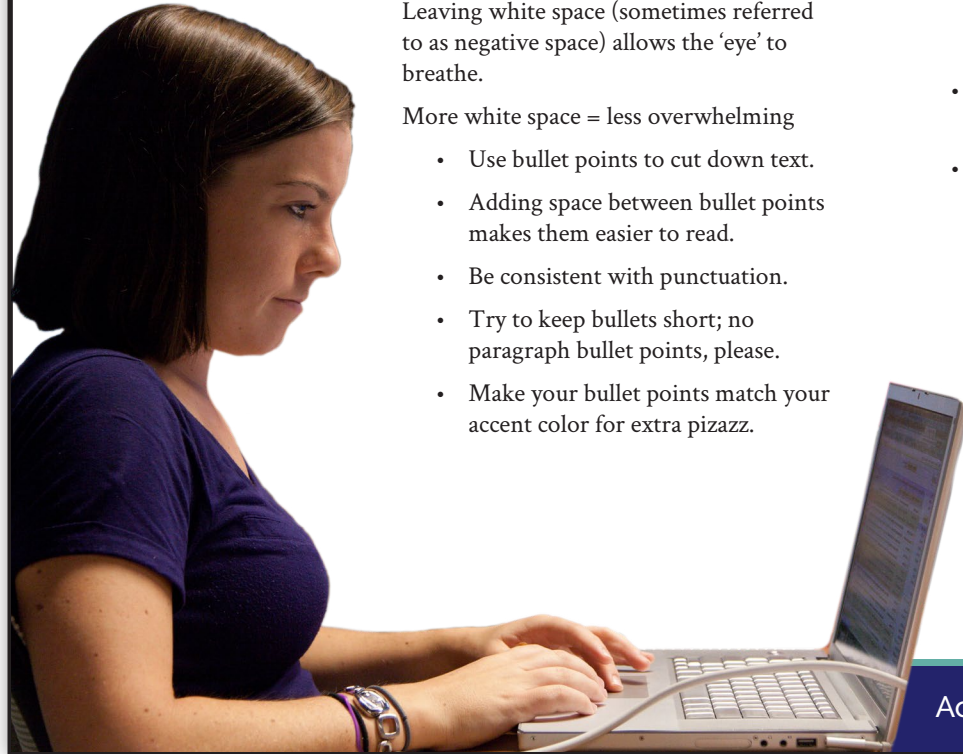
CHOOSING COLORS

Colors serve many purposes beyond just looking pretty. For posters, your color choices can draw viewers in, highlight important features or data, and/or make the poster 'pop' from across a room. The colors you choose can change the mood or feeling your poster radiates. Or, they can simply bring your whole research story together by making all the parts look cohesive.

Most good posters feature 2-3 colors beyond white and black. A small color palette is best to keep your poster from looking too busy or haphazard. If you have difficulty in choosing, look to a photo (next page, bottom left) or logo (below) to help you decide. In the poster sample above, here the purple/blue color from the student's shirt as the main color. Teal was chosen as the accent color.
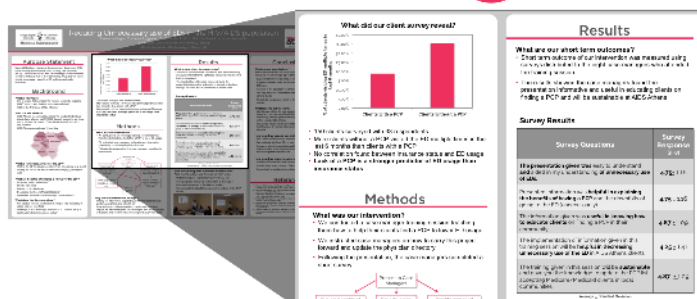
A truly professional poster will incorporate their color palette into all of their graphics, charts, tables, etc. to create unified design.

Color Theory Basics:

Warm colors 'pop' forward (yellows, oranges, and reds).

Cool colors recede (blues, greens, and purples).

ns serif font

Your name and any co-authors here
Institutional affiliations written out beneath authors' names

Graphs & Charts

Only use relevant graphs, charts, and tables. If the data doesn't help the research story, leave it out.

Use bold lines and eliminate extraneous data.

Label everything as close to the line, bar, etc to avoid keys or legends that slow the 'eye' down.

Fig. 1 Label your graphs & tables and include a short caption explaining its importance

Label here

Label here
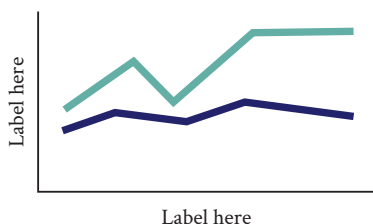
3 Color Palette Use

Use other elements of your poster to help influence your color choices (like photos or logos)

Color.adobe.com is a great website where you can search for color palettes based off of key words, like "clinical" for example.

4 Number Sections

- Numbering your sections can aid your viewer in knowing where to look next.

- Helpful if using a non-traditional layout. Also another opportunity to use your accent color.

References

1. List your references and keep them as short as possible
2. This section can use a much smaller font
3. If you have tons of references, consider having them in handout form tacked next to your poster.

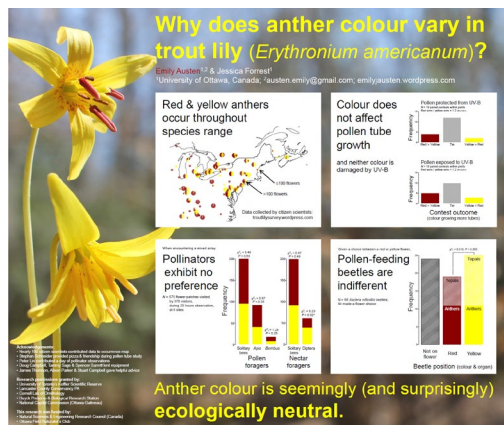knowledgments here in small type

Your picture(s) & contact info

AUGUSTA UNIVERSITY
MEDICAL PARTNERSHIP
UNIVERSITY OF GEORGIA

AUTHOR PHOTO(S)

Adding a headshot of yourself to you poster can be very advantageous, especially at large conferences. It allows people to put a face with a name if you happen to be away from your poster. It can also serve as one more tool to passively network.

SOFTWARE TOOLS

Microsoft PowerPoint® is the most commonly used software when it comes to creating posters. Most people already have it on their computers and have some, even if only a little, experience with it. The maximum size it will allow is 56" in either direction, where Publisher® is 240".

Microsoft Publisher® is another program that some use due to the large maximum size it can handle. Publisher® is a PC only program.

Some prefer the **Adobe** suite of software:

Photoshop®, Illustrator®, and InDesign®. This is feature-rich professional software that can have a steep learning curve. These programs are great for posters that feature lots of high resolution photos. Adobe software is now subscription-only and can be costly.

Some FREE software available:

OpenOffice™ is almost exactly like PowerPoint®

Inkscape is like Illustrator or Corel Draw and they offer a lot of tutorials on their website.

GIMP is basically Photoshop, but free. They also feature lots of tutorials on their website.

BACKGROUNDS

In general, using photos as backgrounds is frowned upon, but, in some rare circumstances it works! (below)

The main thing that your background and text needs to have is **contrast**. Black text on a white background is the easiest to read. Whatever color combo you decide on, keep in mind that your content needs to be legible from ~5 feet away.

A dark background with semi-dark text is straining on the eyes and no one will want to take the time to read what you have to say.

PRINTING RESOURCES

If your poster is being printed with Medical Partnership funds, it's more than likely coming from UGA's Bulldog Print for only $2/ft^2. They require 5 business days for turnaround time, so plan accordingly.
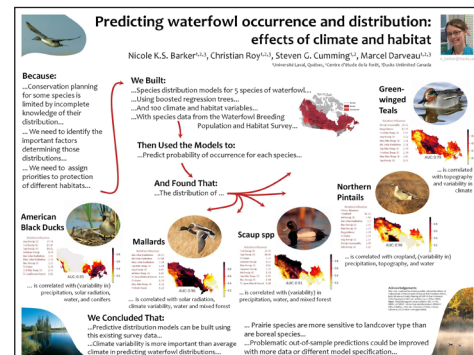
Other local options are Athens Printing Company, FedEx/Kinkos, and Office Depot/Max, or other UGA departments.

If you've got time, ordering online might be a good option. Some popular companies are Vistaprint, Poster Burner, Make Signs, and Spoonflower (for fabric posters–you select the fabric type). Fabric posters are loved by those who would rather not deal with a poster tube. They fold up nicely and fit in your luggage and can be ironed or hung up to let any wrinkles fall out.

Some conferences, especially international ones, will offer on-site or printing options in the city where the conference is taking place. This could be a better logistical option instead of flying with your conference poster.

"Did you remember to...?" Poster Checklist

- [ ] 300-800 words Keep it concise.
- [ ] Leave 40% white space.
- [ ] Make your most important point or takeaway message the largest thing on your poster.
- [ ] Use two fonts: one sans serif for titles & headers and one serif font for body text.
- [ ] Use high resolution images or graphics (300 dpi).
- [ ] Use 2-3 colors that unify your poster.
- [ ] Tie your color palette choices into your graphs, charts, and/or tables.
- [ ] Use high contrast between your text and background.
- [ ] Have a succinct research story.
- [ ] Label your graphs and figures so their significance is clear.
- [ ] Utilize bullet points throughout to avoid blocks of text.
- [ ] Make sure your text is legible from about 5 feet away. no tiny, unreadable type
- [ ] Decide on a catchy and short poster title.
- [ ] Add institutional logos, if required.
- [ ] PROOF READ EVERYTHING twice.
- [ ] Use columns or a grid to keep content neat and tidy.
- [ ] Utilize a 'hook' image or graphic to draw in viewers. (like the large photo of the student)
- [ ] Avoid Comic Sans font or any cutesy or unprofessional font.
- [ ] Include a personal headshot.
- [ ] PROOF READ EVERYTHING twice. (it's that important)

Have 20 minutes and want more poster inspiration?

Check out the awesome poster design animations by Mike Morrison, PhD

◄ https://bit.ly/3l5NXCG

His most recent follow-up animation and info:
https://bit.ly/3f6QJ6F ►

Have questions? Contact me (Jennifer Stowe, MS) at jmstowe@uga.edu.