**The** **3rd Annual Joseph Moerschbaecher III, PhD Graduate Research Day**

**ABSTRACT SUBMISSION FORM 2024**

**DEADLINE: October 6th, by 11:59pm**

**Instructions:**

1. Please complete the form by inserting the requested information on this and the next page. Select and replace the placeholder text (type or paste over) designated as “Input”.
2. Save these two pages (**Part 1 and Part 2**) as a single Word document with the file name (replace red text): “**YOUR LAST NAME**\_**DEPARTMENT\_GRD24\_grad**”
3. Email your abstract with the subject line (replace red text): “**YOUR** **LAST NAME\_GRD24\_grad**” to: gs-researchday@lsuhsc.edu

**Form Part 1: Project Background**

***1. Presenter’s Name:*** Last, First

***2. Primary Mentor’s Name:*** Last, First

***3. Date you entered graduate school:*** MM/YYYY

***4. Anticipated graduation date:*** MM/YYYY

***5. Briefly summarize your contribution to the work (2-3 sentences):*** Input

***6. Select your presentation mode (Choose one or both):***

**\*Talk**: [ ]

**Poster:** [ ]

***\*If your abstract is not selected for a talk, you will be given the opportunity to present a poster***

**See page 2 for detailed abstract instructions.**

**Form Part 2: Project Abstract** **(Arial 11-point black font; Single spaced within paragraphs, double spaced between paragraphs).** *Please make every effort to comply with the formatting guidelines and the example abstract. Failure to comply with guidelines may result in the return of your abstract for further corrections, which will cause significant delays in the subsequent administrative processes.*

Replace this with the abstract Title (200-character limit, spaces not included)

Replace this with the authors and co-authors; Bold **presenter’s name** and italicize *mentor(s)’ name(s)*;

Replace this with the departmental affiliations.

**Background:** Input

**Methods:** Input

**Results:** Input

**Conclusions:** Input

**Word Count:** Input total words starting from the word “**Background**”/300

**See Example below (delete this example before submission):**

**Alcohol exposure impairs myeloid dendritic cell function in rhesus macaques**

**Robert W Siggins**, Gregory J Bagby, Patricia Molina, Jason Dufour, Steve Nelson, *Ping Zhang*

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**Background:** Alcohol intoxication suppresses both the innate and adaptive immunities. Dendritic cells (DCs) are the major cell type bridging the innate and acquired immune responses. At the present time, the effects of alcohol on DC development in hematopoietic tissues and the functional activities of DCs are incompletely elucidated. This study investigated the impact of chronic alcohol exposure on the alteration of hematopoietic precursor cell and DC populations in the bone marrow and peripheral blood of rhesus macaques.

**Methods:** Rhesus macaques were administered alcohol or isocaloric sucrose daily for a period of 3 months through surgically implanted gastric catheters. Peripheral blood mononuclear cells (PBMCs) and bone marrow cells (BMCs) were isolated for flow cytometric analysis after 3 months. Monocytes were cultured with human IL-4 (10 ng/ml) and GM-CSF (50 ng/ml) in the absence and presence of alcohol (50 mM). On day 6 of the culture, a cocktail of stimulants including IL-1beta (18 ng), IL-6 (1800 U), TNF-alpha (18 ng), and PGE(2) (1.8 microg) were added to the designated wells for transformation of immature dendritic cells (iDCs) to mature myeloid DCs. The cells were analyzed on day 8 by flow cytometry for expression of DC costimulatory molecule expression.

**Results:** EtOH-treated animals had significantly lower numbers of myeloid DCs (lineage-HLA-DR+CD11c+CD123-) in both the PBMCs and BMCs compared to controls. Under culture conditions, the numbers of lineage-HLA-DR+CD83+ cells were low in control wells. Alcohol inhibited the increase in the number of lineage-HLA-DR+CD83+ cells in iDC wells. Alcohol also inhibited the increase in the number of lineage-HLA-DR+CD83+ cells in mature DC wells.

**Conclusions:** Chronic EtOH decreases the bone marrow and circulating pools of myeloid DCs. Additionally, EtOH suppresses costimulatory molecule CD83 expression during DC transformation, which may attenuate the ability of DCs to initiate T-cell expansion. (Supported NIH AA009803)

**Word count:** 294/300