



RESEARCH UPDATE

A WEEKLY COMMUNICATION FROM THE OFFICE OF RESEARCH & SPONSORED PROGRAMS

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GENERAL INFORMATION

- **New Student Research Reporting Policy**

On February 2, 2021 students were notified of a change in the [Student Handbook Section on Research & Scholarly Activity](#). The essence of this new policy centers on students informing the Office of Research & Sponsored Programs of research plans and activities in advance of beginning a research project, submitting an abstract to a conference, or submitting a communication for publication. The reporting involves completion of a short online form to ORSP to ensure that the research is conducted in compliance with institutional policies, as well as any applicable regulations that the College has a responsibility to comply with. Please feel free to [contact us](#) with any questions that you may have regarding this new policy and associated procedures. Additional information and access to the online forms are available on the [ORSP Medical Student Research Starting Your Research](#) web page or Dr. Ontiveros.

- **Institutional Biosafety Adopts Quarterly Meeting Schedule**

The Institutional Biosafety Committee voted to move to a schedule of 4 meetings per year at their last meeting. The 2021 IBC meetings will be on March 10, April 14, July 14 and November 10. Principal Investigators needing approval for Summer Research should submit protocols for either March or April review. For more information contact Dr. Woods or the Office of Research.

- **New Mexico Biotechnology & Biomedical Association**

The Office of Research has an institutional membership in [NMBIO](#) which provides discounts to research supplies from different vendors, as well as access to other organizational events. Contact the Research Office for additional information.

- **AACOM Annual Meeting (Virtual Meeting)**

The 2021 AACOM Educating Leaders Conference is scheduled for April 20-22 as a virtual conference. Meeting registration will open up on February 16, 2021. Regular registration is \$395 and registration for students/interns/residents is \$225.

- **AACOM Grants to Fund Medical Education Research**

- Apply for AACOM's annual, highly competitive [Research Grant Program](#). Topics of particular interest include those that promote wellness, diversity and inclusion in osteopathic medical education; assess student readiness for residency using Entrustable Professional Activities, milestones or other residency performance measures; and those that advance the selection of students and residents who embrace the osteopathic philosophy and are successful at colleges of osteopathic medicine (COMs). Primary investigators must be educators at a US COM. The deadline for applications is March 1, 2021.

- **AACOM [Grants to Reduce Opioid Use](#) in Pain Management**

- The AACOM Opioid Advisory Task Force is organizing a multi-institutional study on the use of osteopathic manipulative medicine (OMM) as an adjuvant to reduce analgesics (including NSAIDs, APAP and opioids) in pain management. The Task Force welcomes both basic science and clinical researchers in the osteopathic medical education community to submit project ideas. The deadline for applications has been extended to February 23, 2021.

- **AOA Grant Opportunities**

- The [2021 AOA Research Grant Program](#) offers opportunities for grants of up to \$100,000. The deadline for all applications is Monday, February 15, 2021. Please contact the Research Office if you plan to submit a proposal.

MEDICAL STUDENT RESEARCH

- **AOA Research Training Grants**
 - The [AOA Research Training Grants](#) for medical students program will begin receiving applications this month. The application cycle will open on December 15, 2020 and close on February 15, 2021. These training grants provide up to \$5,000 in funding for medical students and aim to promote the osteopathic approach to care through AOA-funded research. All individuals planning to submit a grant must contact the Office of Research & Sponsored Programs and submit a [Proposal Transmittal Form](#) along with other requisite information at least five (5) business days in advance of the submission deadline. *Please contact [Dr. Benoit](#) for more information regarding the grant submission process*
- **Student Research Support Fund**
 - In support of Burrell College medical student research and creative scholarship endeavors, the Office of Research and Sponsored Programs (ORSP) is pleased to announce the new 2020-2021 Student Research Support Fund and invites student researchers to submit an application. This funding opportunity provides Burrell College medical students with limited funds to support their research and creative scholarship. Applications are available on the [program website](#)
- **Distinction in Research**
 - The Office of Research and Sponsored Programs (ORSP) is pleased to announce the [Distinction in Research](#) that will begin accepting applications on **January 15, 2021**. The Distinction is a highly intensive and optional path that provides opportunities for medical students who seek higher levels of mentored research experiences.
Contact: sjontiveros@bcomNM.org or research@bcomNM.org

RESEARCH LABORATORIES

- **Director's Corner**

On sterilizing immunity and COVID-19 vaccines

As the COVID-19 pandemic has now made one full trip around the sun we all want to know when it will “end”. That’s a difficult question to answer and the reality is that SARS-CoV-2 will likely be with us at some level for many years, if not the rest of our lives. This means that we all must learn to live with the virus and the easiest way to do this is through vaccination, which we already know is an effective means of avoiding severe disease. The unanswered question everyone wants to know the answer to is whether vaccination prevents infection and transmission of the virus. The answer to this has many important implications, including how long we can expect the pandemic to continue and how long it will be until we can resume normal activities, including in-person face-to-face teaching and research. Our understanding of this important issue is evolving daily.

Most vaccines prevent disease in vaccinated hosts but in only a few instances do vaccines produce “sterilizing immunity,” which is the type of immunity that completely prevents a pathogen like SARS-CoV-2 from establishing an infection, eliminating any chance for transmission. The human papillomavirus (HPV) vaccine is one such example. So-called “leaky” or “imperfect” vaccines, on the other hand, prevent or alleviate disease symptoms in vaccinated individuals but may not prevent transmission, which has important implications for persistence and evolution of pathogen virulence. The acellular pertussis vaccine, given to children as part of the Tdap vaccine, prevents the symptoms of whooping cough but may fail to stop transmission. This was demonstrated in a 2014 study in baboons,ⁱ and according to a 2015 analysis by authors affiliated with the Santa Fe Institute may explain the whooping cough resurgence that has puzzled public health officials.ⁱⁱ

Scientists have yet to demonstrate that any of the currently available or emerging COVID-19 vaccines prevent transmission of SARS-Cov-2 but there are hopeful signs on the horizon. Phase III clinical trials of the Pfizer and Moderna mRNA vaccines demonstrated robust protection against moderate and severe disease but did not assess infection and/or transmission rates in trial participants. A study of the Moderna vaccine in nonhuman primates demonstrated that while vaccination did not prevent infection, it did prevent early viral replication in the upper and lower airways after a high-dose challenge.ⁱⁱⁱ New, non-peer-reviewed data released this week in preprint form suggests that the AstraZeneca ChAdOx1

nCoV-19 vaccine significantly reduces transmission of the virus in people;^{iv} however, this effect was diminished after the second booster dose, an effect the authors cannot currently explain.

Many scientists anxiously await confirmation of whether vaccination will block—or at least significantly reduce—transmission; however, even a sustained impact on severe disease will be a significant achievement. According to news reports a robust vaccination effort in Israel has been met with a sustained drop in the number of people age 60 and older who are severely ill.^v It's too early to tell if Israel's high rate of vaccination coverage is solely responsible for this drop; however, the world is optimistically awaiting confirmation.

Future additions of the Director's Corner will address the potential impact of viral variants on our future.

References Cited:

1. J.M. Warfel, L.I. Zimmerman and T.K. Merkel, "Acellular pertussis vaccines protect against disease but fail to prevent infection and transmission in a nonhuman primate model," *Proceedings of the National Academy of Sciences*, January 2014, Vol. 111, No. 2, pp. 787–792.
2. B.M. Althouse and S.V. Scarpino, "Asymptomatic transmission and the resurgence of *Bordetella pertussis*," *BMC Medicine*, June 2015, Vol. 13, No. 146
3. K.S. Corbett, B. Flynn, K.E. Foulds, et al., "Evaluation of the mRNA-1273 vaccines against SARS-CoV-2 in nonhuman primates," *The New England Journal of Medicine*, October 2020, Vol. 383, No. 16, pp. 1544–1555
4. M. Voysey, S.A. Costa Clemens, S.A. Madhi, et al., "Single dose administration, and the influence of the timing of the booster dose on immunogenicity and efficacy of ChAdOx1 nCoV-19 (AZD1222) vaccine," *The Lancet (Preprint)*, 01 February 2021, 37 pages
5. Peter Althouse, "Israel is now the first country where vaccinations are starting to curb the pandemic," *BuzzFeed News*, 03 February 2021, available at: <https://www.buzzfeednews.com/article/peteraldhous/israel-coronavirus-vaccines>

[Michael E. Woods, Ph.D.](#)
Director, Research Laboratories
Associate Professor of Pathology

- ***Laboratory Services for Faculty Investigators***
 - The Research Laboratories are pleased to announce a new effort to advance faculty-driven research by offering Laboratory Services in support of college-sponsored research. All you need to do is submit a request using a [Research Services Request Form](#).
- ***Bio-Rad BioPlex 200 Installed in Research Laboratories***

The Bio-Rad BioPlex 200 instrument has been installed in the BioScience Research Laboratory. Kalli Martinez will receive training from the vendor on instrument maintenance and operation and will be available to assist investigators with accessing this new capability. Please contact Dr. Woods or Ms. Kalli Martinez if you have any questions about BioPlex multiplexed immunoassays.
- ***Research Laboratory Access***
 - We wish to remind laboratory users to contact [Ms. Kalli Martinez](#) before visiting the Research Laboratories. We continue to operate at a reduced capacity and it is important that we maintain awareness of laboratory user access.
- ***Human Physiology Laboratory***
 - The IRB and Office of Research are working with Principal Investigators towards a plan for resuming face to face human subjects research in the Human Physiology Laboratory. Each project is being considered on a project-by-project basis from a risk/benefit perspective by the IRB based on information provided by the principal investigators. Assessment of risks and benefits includes those imposed to both subjects and investigators during the current COVID-19 pandemic. Contact the [IRB](#) or [Research Office](#) for more information.

DATES AND DEADLINES

- Institutional Review Board (IRB) – February 22, 2021; 12:00 – 1:30 p.m.
 - Last day to submit materials for this meeting: February 9, 2021
 - Email: IRB@bcomnm.org
- Institutional Biosafety Committee (IBC) – March 15, 2021, 12:00-1:00 p.m.
 - Last day to submit materials for this meeting: March 5, 2021
 - Email: Research@bcomnm.org
- Research Advisory Council (RAC) – February 19, 2021, 1:00 - 3:00 p.m.

- [Distinguished Researcher Seminar Series](#)
 - The Distinguished Researcher Seminar Series will continue as an online series through the Spring Semester. Dates will be announced as speakers are confirmed. Hosts for the Spring Seminars are as follows:
 - January: Department of Clinical Medicine
 - February: Department of Physiology & Pathology
 - March: Department of Biomedical Sciences
 - April: Medical Student Body

POLICY & REGULATORY UPDATE

- **Burrell College New or Updated Policies and Procedures**
 - The Biosafety Manual has been updated after undergoing IBC review and is available on the Burrell College website. A minor modification has been made to the Blood-borne Pathogen Exposure Control Plan and we are still finalizing an SOP to inform the process by which Burrell Investigators can document Hepatitis B vaccination.
 - [Biological Safety Manual](#)
 - [Bloodborne Pathogen Exposure Control Plan](#)
 - Research Laboratories Services Request, [RSP.018](#)
 - ⑩ This policy defines the procedure whereby a Burrell College faculty may request Laboratory Services in support of College-sponsored research projects.
- **Human Research Protection** ○ [AHRQ Guide Notice on Exception to the Use of the Single IRB Review Requirements During the Coronavirus Disease 2019 \(COVID-19\) Public Health Emergency](#)
- **CDC**
 - [Biosafety in Microbiological and Biomedical Laboratories \(BMBL\) 6th Edition](#) **New Edition!** *Download your Free Copy.*
- **World Health Organization**
 - [Laboratory Biosafety Manual, 4th Edition](#) (**New Edition**, December 2020)

FUNDING OPPORTUNITIES, MEETINGS, and NOTICES

- Guidance on new proposal submission and related information is available in MS Teams and on the Research Office Website. Please submit a completed [Proposal Transmittal Routing Request](#) in advance of the deadline. Allow five (5) business days for institutional review and signatures.
- [NIH Weekly Funding Opportunities and Notices](#) – February 5, 2021
- American Osteopathic Association
 - [AOA Research Grants](#) for DOs, MDs, and PhDs
 - [Research Opportunities](#) for resident physicians, fellows and osteopathic medical students
- [Wells Fargo Philanthropic Services](#) (Search for Opportunities)
- [Experimental Biology 2021](#) will be held April 27-30, 2021 as a virtual meeting.
- [AACOM Educating Leaders 2021](#) will be held April 20-22 as a virtual event.
- [American Academy of Osteopathy Convocation](#) will be held March 17-21, 2021 (*Currently being planned as a hybrid event*)

CLINICAL TRIALS INFORMATION

- **Clinical Trials Information**
 - [TrialSite News](#) is a digital media resource dedicated to transparent and open coverage of clinical research trial sites around the globe.

INFORMATION FOR AUTHORS

- **Case Report Guidance** ○ Many of you have informed us of your intent to publish a case report. Please consult our [Case Report Publication Guidance](#) for additional information as you prepare your manuscripts for submission. While IRB approval is generally not required for Case Reports, the College expects that authors have secured permission for medical record access and follow all applicable regulations, policies and procedures. Please feel free to contact the [Office of Research](#) if you need additional guidance.
- **Information on Publishing Venues**
 - The Office of Research and the Burrell College Health Sciences Library are available to assist with any questions that you may have regarding appropriate places to publish your research.
- **Cureus Journal of Medical Sciences**
 - Cureus is an open access peer reviewed medical journal based in San Francisco, CA that offers free publication for articles that follow their author instructions.
- **Journal of Osteopathic Medicine**
 - The Journal of the American Osteopathic Association (JAOA) is now the Journal of Osteopathic Medicine (JOM). The first issue of the new Journal will be out in January.
- **Call for COVID-19 Research Papers:** The JAOA editors invite researchers to share information and data about their experiences with COVID-19 with the osteopathic community.
- Are you interested in publishing a literature review? The Journal of the American Osteopathic Association has created a video that provides tips for putting together a quality [Systematic Literature Review](#)

RECENT AND FORTHCOMING SCHOLARLY WORK BY BURRELL COLLEGE RESEARCHERS

(Please [email us](#) with your news and we will add it to future Updates.)

[Email](#) Us Information About Your Scholarly Activity
Include Full Citations in the Correspondence

