Kasiska Division of Health Sciences
RESEARCH AND SCHOLARSHIP DAY

Technology in Healthcare

April 9, 2021
Event will occur in a virtual format via Zoom

Idaho State University | Kasiska Division of Health Sciences

For More Information
Pocatello: Karissa Miller, maiekari@isu.edu  |  Meridian: Mary Van Donsel, vandmary@isu.edu
Welcome

I’d like to welcome you to the 2021 Kasiska Division of Health Sciences’ Research and Scholarship Day, “Technology in Health Care.” Thank you to the Research and Scholarship Day Committee for all of their work on this event!

Perhaps now more than ever, the utilization of technology is critical in providing the best possible care for patients and as we endeavor to continuously advance our capabilities. Breakthrough technologies are helping in new and inspiring arenas, such as emergency response, disease mitigation, and biomedical research, all which have already shown to, and have immense potential to improve quality of life for so many.

We’ve seen the explosion of telehealth in recent months, with Idaho expanding its telehealth offerings over 4000% in response to COVID-19, the highest increase in the nation. The benefits of telehealth touch everyone involved: patients in rural areas, the economically disadvantaged, with limited mobility, or who are more susceptible to disease are able to access the services they need more easily and conveniently. As technology is enhanced and more providers are able to reach their patients in this way, it can help bring down health care costs.

Beyond telehealth, the continued advancements in virtual reality, artificial intelligence, augmented reality, visual health data charting and 3D bioprinting, just to name a few, are having lasting impact on people right here in Idaho, and beyond. Students and faculty in every area of the KDHS are working to create and to employ further advancements that stand to benefit all humankind.

As Idaho’s leader in health sciences education, we need to “up our tech game” and the 2021 Research and Scholarship Day provides an opportunity to examine some of these technological advances and many others. I hope that all of today’s attendees can glean new ideas and perspectives by the work that will be presented.

Have a great day and thanks for your attendance!

Rex W. Force
Vice President for Health Sciences and Senior Vice Provost
Idaho State University
2021 KDHS Research and Scholarship Day Committee

Committee Co-Chairs

Karissa Miller, MS, CCC-SLP
Communication Sciences and Disorders
College of Health

Mary Van Donsel, MSR, CCC-SLP
Communication Sciences and Disorders
College of Health

Committee Members

John Holmes, PharmD, MPH
Pharmacy Practice and Administrative Sciences
College of Pharmacy

Elaine Nguyen, PharmD, MPH
Pharmacy Practice and Administrative Sciences
College of Pharmacy

Mary Nies, PhD, RN
Nursing
College of Health

Christopher Wertz, EdD, MSRS
Radiographic Science
College of Health

Rachelle Williams, RDH-EA, MS
Dental Hygiene
College of Health

Melanie Wright, PhD
Research
College of Pharmacy

Acknowledgements

We wish to thank the many individuals who provided time and effort to make this day successful. Thank you to LeeAnn Waldron for promotional assistance, Joey Gifford for creation of flyers, and Stefanie Shadduck for her administrative support. We appreciate our Keynote Panel Speakers for sharing their valuable time and experiences with us. Lastly, thank you to all of the presenters and attendees for participation in today’s programming.
## Agenda

All events are virtually via Zoom

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<td>Applications of the Virtual Reality Environment for Improving Physical</td>
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<td>Accelerating Autism Healthcare Before, During and After COVID-19:</td>
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<td>CEO, Behavior Imaging®</td>
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Keynote Panel Speakers

Brian Hoffmann, MBA
President, Intermountain 3D Inc.

Mr. Hoffmann is the president of Intermountain 3D Inc., a 3D design engineering, prototyping and production printing company focused on bringing advanced manufacturing techniques to the intermountain west. Mr. Hoffmann worked as an engineering manager at Hewlett Packard for over 26 years, contributing to the product development and growth of the laser printing industry. Named inventor on 12 laser printing patents, Mr. Hoffmann has had an interest in 2D and 3D printing for many years. Mr. Hoffmann and his wife and business partner Lynn started Intermountain 3D Inc. in 2014.

Mr. Hoffmann holds an MBA and a BS degree in chemical engineering from the University of Michigan. He is an active member of Boise Straight Ahead, a 20-piece big band that performs at nonprofit events and galas throughout the area. In his spare time, you can find him restoring a 1946 Republic Seabee in what his wife thought was their garage, but he knows is actually a hangar.

Dr. Nancy Devine, PT, DPT, PhD
Idaho State University

Dr. Nancy Devine is a physical therapist and faculty member in the ISU Physical Therapy Program. She received her Bachelor of Science degree in Physical Therapy from the University of Vermont, a Doctor of Physical Therapy degree from the Massachusetts General Hospital Institute of Health Professions, and completed a Master of Science degree in Biology/Neuroanatomy and a PhD in Experimental Psychology at Idaho State University. Dr. Devine’s research interests include neuroplasticity, motor learning, and use of virtual reality as a rehabilitation intervention.
Ron Oberleitner, MBA
CEO, Behavior Imaging®

After his son was diagnosed with autism, Mr. Oberleitner left an executive management position in the medical device industry to develop and research telehealth solutions to help families with children with autism reach specialty doctors and educators earlier and remotely. Partnering with dedicated autism and telehealth researchers at ISU, then nationally and internationally, Mr. Oberleitner has been Principal Investigator on over $10 million of telehealth research projects funded by NIH, US Air Force, and Autism Speaks, and has over 25 peer-reviewed journal articles, chapters, or presentations on the subject.

Mr. Oberleitner is CEO of Idaho-based Behavior Imaging® (BI) - a telehealth technology company that has developed and commercialized web-based support and telehealth services NODA™, TalkAutism™, AssessmentView™ and AutismCares™. BI specializes in hybrid telehealth applications to increase access to healthcare for people with autism, and unique clinician decision support tools for clinicians and researchers. He has partnered with researchers in-State and internationally to publish in over 25 papers on the use of health informatics and telemedicine for autism and related behavioral disorders.

Mr. Oberleitner also serves as a board member on Global Ties Idaho, Idaho’s State Rehabilitation Council, and has served and/or chaired the Idaho Assistive Technology Project board for 10 years. He is father to a wonderful 28-year-old son who also has low-functioning autism.
**Poster Presentations**

**Session 1 (9:30am – 10:00am)**

**Breakout 1**

**The results of the community health needs assessment in Canyon County, Idaho**
Maya Tillotson¹, Ruiling Guo¹
¹Healthcare Administration, College of Business, ISU

**A 15-minute yoga intervention to reduce entry-level dental hygiene student’s stress**
Crystal Kanderis Lane¹, JoAnn Gurenlian¹, Jacqueline Freudenthal¹, Peter Denner²
¹Dental Hygiene, College of Health, ISU ²School Psychology and Educational Leadership, College of Education, ISU

**Idaho suicide prevention: A comprehensive analysis of suicide needs and resource assessments in Idaho**
Makayla Manfull¹, Elaine Nguyen¹, Russel Spearman²
¹Pharmacy Practice and Administrative Sciences, College of Pharmacy, ISU ²Institute of Rural Health, ISU

**Breakout 2**

**Patient’s perspectives of dental hygienists’ social intelligence on self-care commitment**
Ellen Rogo¹, Kathleen Hodges¹, Jennifer Evans²
¹Dental Hygiene, College of Health, ISU ²ISU Alumna

**Detecting parallax on flat panel detector flour system**
Emily Cook¹, Tamra Brewester¹, Natasha Bohm Smith¹, Hannah Livermont¹
¹Radiographic Science, College of Health, ISU

**Development of a toolkit to support community pharmacy implementation and delivery of diabetes self-management education and support services**
Matthew Shin¹, Annette Mason¹, Renee Robinson¹, Shanna O’Connor¹, Elaine Nguyen¹
¹Pharmacy Practice and Administrative Sciences, College of Pharmacy, ISU
Breakout 3

*Cross-sectional analysis of the prevalence and demographic profiles of food insecurity college students at main and satellite campuses*

Bridgett Von Kahle¹, Madison Keller², Barbara Gordon³, Irene van Woerden⁴
¹ISU Alumna ²Boise Veterans Affairs Medical Center ³Nutrition and Dietetics, College of Health, ISU ⁴Community and Public Health, College of Health, ISU

*The speech-language pathologist’s perspective on telepractice since COVID-19*

Maesa Chaffin¹, Heather Ramsdell¹
¹Communication Sciences and Disorders, School of Rehabilitation and Communication Sciences, College of Health, ISU

Breakout 4

*Improving wellness visits scheduling in a residency primary care clinic*

Jessica Rolynn¹
¹ISU

*Exploration of a caregiver report screening instrument for infant speech patterns*

Brooke Swafford¹, Heather Ramsdell¹
¹Communication Sciences and Disorders, School of Rehabilitation and Communication Sciences, College of Health, ISU

*Valproic acid alters expression of key metabolic enzymes and transcription factors HIF-1α in embryonic brains in rodent model of autism*

Jordan Oman¹, Dominic Babah Ubah², Diana Rivas³, Korawin Triyasakorn², James Lai¹, Prabha Awale¹
¹Biomedical and Pharmaceutical Sciences, College of Pharmacy, ISU ²Pharmacy Practice and Administrative Sciences, College of Pharmacy, ISU ³ISU

*Mapping Alaska’s community pharmacies & population density to evaluate accessibility*

Jose Lopez¹, James Parrish¹, Austin Pothikamjorn², Elaine Nguyen¹, Renee Robinson¹
¹Pharmacy Practice and Administrative Sciences, College of Pharmacy, ISU ²Timberline High School
Poster Presentations
Session 2 (10:05am – 10:35am)

Breakout 1

**Southeast Idaho AHEC community partnership project: Addressing behavioral health through telehealth during the COVID-19 pandemic**
Diana Schow¹, Ann Thomson², Wilson Trusty³, Laurel Buchi-Fotre⁴
¹Community and Public Health, College of Health, ISU ²Southeast Idaho Area Health Education Center ³Psychology, College of Arts and Letters, ISU ⁴Nursing, College of Health, ISU

**Survey of women’s health knowledge among college-aged women**
Kate Fox¹, Makayla Manfull¹, Kathy Eroschenko¹
¹Pharmacy Practice and Administrative Sciences, College of Pharmacy, ISU

Breakout 2

**Increasing depression screening in the outpatient clinic setting**
Colby Brower¹
¹ISU

**Strategies towards inhibition of virulent bacterial phospholipases: A review**
Sameena Mateen¹, Amy Bryant¹, Marvin Schulte¹, Srinath Pashikanti¹
¹Biomedical and Pharmaceutical Sciences, College of Pharmacy, ISU

**Decreasing magnification in trauma imaging**
Veronica Nield¹, Kelsey Hagerty¹, Sydney Lammers¹
¹Radiographic Science, College of Health, ISU

**How visual feedback enhances client and clinician learning for teaching speech sounds: Student clinician perspectives**
David Woods¹
¹Communication Sciences and Disorders, College of Health, ISU
Breakout 3

**Flowsheet implementation for Medicare annual wellness visits**
Marcos Valdez¹, Jonathan Bennett¹, Robert Courtney¹
¹Family Medicine, College of Health, ISU

**Targeting oncostatin M receptor with radioimmune therapy in synovial sarcoma**
Sarah McCollum¹, Matthew Kirkham¹, Jared Barrott¹
¹Biomedical and Pharmaceutical Sciences, College of Pharmacy, ISU

**Utilizing CliftonStrengths to increase professional development in dental hygiene students**
Leciel Bono¹, M. Colleen Stephenson¹, JoAnn Gurenlian¹, Rachelle Williams¹, Jessica August²
¹Dental Hygiene, College of Health, ISU ²Dental Hygiene, Quinsigamond Community College

Breakout 4

**Scatter radiation received at the console abstract**
McKinley Trappett¹, Mikaila Tanner¹, Andi Macki¹, Mari Hasebi¹
¹Radiographic Science, College of Health, ISU

**ARID1A deletion results in enhanced osteosarcomagenesis and altered chromosome structure**
Kaniz Fatema¹, Shawn Plyler, Adriene Pavek, Chris Nartker², Yanliang Wang³, Kevin Jones³, Jared Barrott¹
¹Biomedical and Pharmaceutical Sciences, College of Pharmacy, ISU ²Pharmacy Practice and Administrative Sciences, College of Pharmacy, ISU ³University of Utah

**Psychometric properties of multi-domain language tests for school-age children**
Diane Ogiela¹, Tabitha Syme
¹Communication Sciences and Disorders, College of Health, ISU ²ISU Alumna
Poster Presentations
Session 3 (10:45am – 11:15am)

Breakout 1

**The impact of changing distance-learning delivery formats in physical therapy professional education**
Derek Gerber
1Physical and Occupational Therapy, College of Health, ISU

**Role play enhances clinical instruction**
Dave Woods, Connie Miller, Wendy Morgan, Karissa Miller, Robin Falslev
1Communication Sciences and Disorders, College of Health, ISU

**Assessing diabetes mHealth applications on their ability to identify and alert patients at risk of hypoglycemia**
Joseph Davies, Cara Liday, Renee Robinson, Elaine Nguyen
1Pharmacy Practice and Administrative Sciences, College of Pharmacy, ISU

Breakout 2

**Test taking technology to predict national exam success**
Deanna Dye, Evan Papa
1Physical and Occupational Therapy, College of Health, ISU

**ADHD treatment methods**
Jayd Wartluft, Bethany Martinez, Mary Totten, Garrison Holdaway, Breanne Bishop, Jacob Kodanko
1Idaho State University Health Center, ISU

**Understanding relationships between patient empathy, emotional wellness, patient violence, and worker confidence for hospital nurses**
Melanie Wright
1Pharmacy Practice and Administrative Sciences, College of Pharmacy, ISU
Breakout 3

**The effects of a community-based boxing training program on balance in person’s with Parkinson’s disease: Preliminary findings**

Evan Papa¹, Savannah Kisling¹, Jonathan Brubaker¹, Jill Harris¹
¹Physical and Occupational Therapy, College of Health, ISU

**Methods of treatment for primary hyperhidrosis**

Nathan Hamm¹, Kevin Le¹, Savannah Hammer¹, Paula Hoggan¹, Afton Elam¹, Jennifer Thomas¹
¹Idaho State University Health Center, ISU

Breakout 4

**Effects of collimation in fluoroscopy exams**

Sydney Smyer¹, Brooke Anger¹, Kyler Cunningham¹
¹Radiographic Science, College of Health, ISU

**Periodontal disease susceptibility in patients with WHIM syndrome**

Laurie Brenchley¹, JoAnn Gurenlian¹, Leciel Bono¹
¹Dental Hygiene, College of Health, ISU

Breakout 5

**Nutrition and health behaviors influenced by COVID-19 using the information motivation behavior (IMB) health model**

Cynthia Blanton¹, Sydney Knight¹, Irene Van Woerden²
¹Nutrition and Dietetics, College of Health, ISU
²Community and Public Health, College of Health, ISU

**Idaho student pharmacists preparedness to address lesbian, gay, bisexual, transgender, queer, intersex, and asexual+ (L.G.B.T.Q.I.A.+ ) health**

Megumi Olsen¹, Kasidy McKay¹
¹Pharmacy Practice and Administrative Sciences, College of Pharmacy, ISU

**College student food costs, dietary quality, and food security status**

Any Brown¹, Irene Van Woerden¹
¹Community and Public Health, College of Health, ISU
Poster Presentations
Session 4 (11:20am – 11:50am)

Breakout 1

**Doula presence and maternal labor satisfaction**
Emily Mepham¹, Alexandra Olson¹, Erica Meier¹, Natalia Jensen¹, Daniel Scott¹, Madeline Sessler¹
¹Nursing, College of Health, ISU

**Differences in drug rehabilitation attendance by injection drug use and non-injection drug use**
Anne McDonald¹, Irene van Woerden¹
¹Community and Public Health, College of Health, ISU

**Mapping Idaho’s community pharmacies and population density to evaluate accessibility**
James Parrish¹, Jose Lopez¹, Austin Pothikamjorn², Elaine Nguyen¹, Renee Robinson¹
¹Pharmacy Practice and Administrative Sciences, College of Pharmacy, ISU ²Timberline High School

Breakout 2

**Vaginal versus cesarean deliveries in complicated pregnancies: An analysis**
Carley Pickett¹, Katie Hall¹, Mamie Moreau¹, Isabella Smith¹, Kylee Holdaway¹, Makenzi Higinbotham¹
¹Nursing, College of Health, ISU

**Diet quality impact on mental health of female collegiate athletes during COVID-19**
Natalie Christensen¹, Nicki Aubuchon-Endsley², Cynthia Blanton¹, Irene van Woerden³, Pam Fleckenstein¹, Christian Chan⁴
¹Nutrition and Dietetics, College of Health, ISU ²Psychology, College of Liberal Arts and Sciences, ISU ³Community and Public Health, College of Health, ISU ⁴Counseling and Educational Development, University of North Carolina at Greensboro

**Frequency of QT prolongation drug alerts within a community hospital setting**
Kyle Logue¹, Angharad Ratliff¹, Thomas Wadsworth¹
¹Pharmacy Practice and Administrative Sciences, College of Pharmacy, ISU
Breakout 3

**Repeat rates in digital chest radiography**
Catherine Maxwell¹, Halie Craner¹, Diana Hernandez¹, Abi Zollinger¹
¹Radiographic Science, College of Health, ISU

**Teledentistry educational program to increase access to care in an assisted-living facility**
Melissa Ray¹, Ellen Rogo¹, Rachelle Williams¹
¹Dental Hygiene, College of Health, ISU

Breakout 4

**Are patients at risk for oral cancer screened for the disease?**
Sowmya Natarajan¹, Irene van Woerden¹
¹Community and Public Health, College of Health, ISU

**Identifying medication management needs of pre-teens and adolescents with attention deficit and hyperactivity disorder (ADHD): Opportunities for pharmacist to optimize therapy**
Renee Robinson¹, Walker Mink¹, Alexandra Garcia¹, Julianna Lambright¹
¹Pharmacy Practice and Administrative Sciences, College of Pharmacy, ISU

Breakout 5

**Food purchasing habits and emotional health indicators among younger adults in the United States**
Sarah Hibbert Johnson¹, Irene Van Woerden³
¹Community and Public Health, College of Health, ISU

**Extraction of microsomal fraction from prostate cancer cells toward the quantification of Ceramide**
Farjana Afrin¹, Sameena Mateen¹, Srinath Pashikanti¹, James Lai¹
¹Biomedical and Pharmaceutical Sciences, College of Pharmacy, ISU

**Improving in vitro analysis and drug panel screening of patient-derived cancer organoids through 3D bioprinting**
Matthew Kirkham¹, Jared Barrott¹, Sarah McColllum¹, Kaniz Fatema¹
¹Biomedical and Pharmaceutical Sciences, College of Pharmacy, ISU
Poster Presentations
Session 5 (11:55am – 12:35pm)

Breakout 1

**Development and delivery of an educational intervention on vaccine information and hesitancy for K-12 school teachers and staff in Idaho**
Dalys Davenport¹, Kevin Cleveland¹, Elaine Nguyen¹, Kathy Eroschenko¹
¹Pharmacy Practice and Administrative Sciences, College of Pharmacy, ISU

**Cerebral palsy: Effects of botulinum toxin A injection on muscle spasticity in children with CP**
Kelly Giffey¹, Brittany Bliss¹, Luna Graves¹, Sage Martin¹, Sierra Skinner¹
¹Nursing, College of Health, ISU

**Improving analgesia in burn patients: Implementation of subanesthetic ketamine protocols in a regional medical center’s burn intensive care unit**
Rachel Proteau¹, Lindsey Reeder¹, Eliza Borzadek¹, Erin Berry²
¹Eastern Idaho Regional Medical Center
²Pharmacy Practice and Administrative Sciences, College of Pharmacy, ISU

Breakout 2

**Dress code variation across US colleges of Pharmacy**
James Parrish¹, Jennifer Adams¹
¹Pharmacy Practice and Administrative Sciences, College of Pharmacy, ISU

**A comparison of self-sampling and traditional cervical cancer screening methods**
Ann Anderson¹, Lauren Stephens¹, Bailey Schroeder¹, Laticia Lehman¹, Whitney Raver¹, Ann Anderson¹
¹Nursing, College of Health, ISU

**COVID-19 behaviors and attitudes of ISU students by college**
Addison Biason¹, Janette Olsen¹, Irene van Woerden¹
¹Community and Public Health, College of Health, ISU
Breakout 3

*Improving check-out rates at a FQHC*
Tyson Torgersen¹, James Marble¹
¹Health West - ISU Family Medicine

*Faculty and peer mentoring program for professional pharmacy students*
Brooke Buffat¹, Renee Robinson¹, Sage Nielsen¹, Melissa Downes¹
¹Pharmacy Practice and Administrative Sciences, College of Pharmacy, ISU

Breakout 4

*Impact of atorvastatin drug recall on statin medication utilization*
Griffin Loutzenhiser¹, John Holmes¹, Kasidy McKay¹, Jordan Ferro¹
¹Pharmacy Practice and Administrative Sciences, College of Pharmacy, ISU

*POCUS: A blessing or a curse for Family Medicine Residents*
Cameron MacInnis¹
¹Family Medicine, College of Health, ISU

Breakout 5

*Model for collaboration and pharmacy practice change: Social network analysis of COVID-19 related response in Idaho and Alaska*
Renee Robinson¹, Irene Van Woerden², Jen Adams¹, Madeline Foster¹, Hugo Rayo¹, Chris Nicolet¹, Talethia Bogart¹, Hayli Hruza¹
¹Pharmacy Practice and Administrative Sciences, College of Pharmacy, ISU
²Community and Public Health, College of Health, ISU

*Systematic review of mental health outcomes impacted by pharmacist integration into primary care*
Jordin Millward¹, John Holmes¹
¹Pharmacy Practice and Administrative Sciences, College of Pharmacy, ISU

*Water birth and maternal and fetal outcomes*
Dexter Loder¹, Lisa Marie Hannon¹, Christina Dorlig¹, Michelle Franks¹, Andrea Campbell¹, Amy Duval¹, Nicole Hatch¹, Dexter Loder¹
¹Nursing, College of Health, ISU

*Improving allergy electronic medical record documentation in the outpatient setting*
Kailey Murphy¹, Logan Jones¹, Chance Christensen¹, John Holmes¹, Jordan Ferro¹, Kathleen Johnson¹, Lori Chacon¹
¹Family Medicine, College of Health, ISU