# **2018 Summer Undergraduate Poster Session Abstracts**

## Is rRNA Copy Number Linked to Increased Growth Rates in Bacterial Feeding Nematodes?

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### Depalmitoylation of the Dopamine Transporter by Acyl Protein Thioesterase 2 In Vitro

Jasmine Cano<sup>1</sup>, Alexandra M. Ward<sup>2</sup>, Moriah J. Hovde<sup>2</sup>, James D. Foster<sup>2</sup>

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### Food-Allergy-Induced Proliferation of Astrocytes, Microglia, and CD4<sup>+</sup> T Lymphocytes in the Murine Brain

<u>Lauren E. Clark<sup>1</sup></u>, Danielle L. Germundson<sup>2</sup>, Nicholas A. Smith<sup>2</sup>, and Kumi Nagamoto-Combs<sup>2</sup>

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Department of Pathology<sup>2</sup>, University of North Dakota School of Medicine and Health Sciences, Grand Forks, ND

### Interdependence of Vascular and Neural Stem Cells in the Embryonic Mouse Cortex

<u>Valerie Doze<sup>1</sup></u>, Jadyn Cox<sup>2</sup>, Kayla Michelson<sup>2</sup>, Ella Tkach<sup>2</sup>, and Diane Darland<sup>2</sup>

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#### The Role of Vascular Cell Influence on Cortical NSC Fate Choice

<sup>1</sup>Ekman, D.; <sup>2</sup>Michelson, K.M.; <sup>2</sup>Tkach, E.; <sup>2</sup>Cox, J.; <sup>2</sup>Darland, D.C. <sup>1</sup>University of Minnesota Crookston Biology Department, <sup>2</sup>University of North Dakota Biology Department

### EMT Markers and Progenitor Characteristics in TERT and Cd<sup>2+</sup> or As<sup>3+</sup> Transformed TERT Cells

Lauren A. Fleming, Natisha J. Corum, Ashlee E. Nelson, Scott H. Garrett, Andrea Slusser-Nore Department of Pathology, University of North Dakota School of Medicine & Health Sciences, Grand Forks, ND

#### CD24+ RPTEC/TERT1 Cells in the Context of Acute and Chronic Cadmium Exposure

Rachel Guyer, Natisha J. Corum, Ashlee E. Nelson, Scott H. Garrett, Andrea Slusser-Nore, Swojani Shrestha Department of Pathology, University of North Dakota School of Medicine & Health Sciences, Grand Forks, ND

### Gut Microflora of the Western Honey Bee

Wendie Hasler<sup>1</sup>, Madison Jochim<sup>1</sup>, Carrie Pratt<sup>1</sup>, Abby Keller<sup>1</sup>, Brian Darby<sup>1</sup>, and Rebecca Simmons<sup>1</sup> <sup>1</sup> Dept. of Biology, University of North Dakota

## Metallothionein Isoform and ZIP Transporter Expression in RPTEC/TERT1 and CD24<sup>+</sup> cells

Jacob O. Haugen, Natisha J. Corum, Ashlee E. Nelson, Scott H. Garrett, Andrea Slusser-Nore, Swojani Shrestha Department of Pathology, University of North Dakota School of Medicine and Health Sciences, Grand Forks, ND

### Validation of RNA-Seq differentially expressed genes from a murine neonate model of antidepressant exposure using qPCR.

Ashley Henderson<sup>1,2</sup>, Meghan A. Rodriquez<sup>2</sup>, Matthew Kretschmar<sup>2</sup>, Michael D. Allen<sup>2</sup>, Madhur Shetty<sup>2</sup>, Danielle Perley<sup>2</sup> and L. Keith Henry<sup>2</sup>

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### **Effects of Embryonic Cocaine Exposure in Zebrafish**

Brook M. Jensen<sup>1</sup>, Hannah G. Johnson<sup>2</sup>, Tristan Darland<sup>3</sup>

- <sup>1</sup> California State University of Stanislaus, Department of Biology
- <sup>2</sup> College of Saint Benedict, Department of Chemistry
- <sup>3</sup> University of North Dakota, Department of Biology

#### **Epigenetic Effects of Cocaine on Zebrafish**

Hannah G. Johnson<sup>1</sup>, Brook M. Jensen<sup>2</sup>, Tristan Darland<sup>3</sup>

<sup>1</sup>Department of Chemistry, College of Saint Benedict <sup>2</sup> Department of Biology, California State University of Stanislaus <sup>3</sup> Department of Biology College of Art and Sciences, University of North Dakota

### Cadmium Exposure is Detrimental to Cardiovascular Development and Function

Amber Juran<sup>1</sup>, Jie Wu<sup>2</sup>, Kurt Zhang<sup>2</sup>

<sup>1</sup> Biology Department, St. Olaf College, Northfield, MN

### CD44 variant 4 (CD44s) expression and localization in 4.5 uM transformed TERT cells

<u>Matthew J. Kalonick</u>, Natisha J. Corum, Ashley E. Nelson, Scott H. Garrett, Andrea Slusser-Nore Department of Pathology, University of North Dakota School of Medicine & Health Sciences, Grand Forks, ND

# An Analysis of the Expression of GAGE6, GAGE2A, GAGE12J, GAGE13, GAGE12C, and GAGE12B Genes in Thirteen Common Breast Cancer Cell Lines

Alexis Lohnes, Brent Voels1

<sup>1</sup>Cankdeska Cikana Community College, Fort Totten, ND

# Finding DNA Identifiers for the Different Sexes of the White-Tussock Moth (Lepidoptera: Lymantriidae) Arlete M. Lohnes<sup>1</sup>, Justin D. Burum<sup>2</sup>, and Rebecca B. Simmons<sup>3</sup>

<sup>1</sup>Cankdeska Cikana Community College, Fort Totten, North Dakota, <sup>2</sup>Dept. of Biology, Minnesota State University Mankato, Mankato, Minnesota, <sup>3</sup>Dept. of Biology, University of North Dakota, Grand Forks, North Dakota

### Reduction of Epileptiform Frequency by α<sub>1A</sub>-Adrenergic Receptor Agonists

<u>Maxime R. Munyeshyaka<sup>1</sup></u>, Joseph.P. Biggane<sup>2</sup>, <u>Jason A. Power<sup>3</sup></u>, Zachary O. Dent<sup>3</sup>, Van A. Doze<sup>2,3</sup>

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# Expression of CD47, CD66c, KRT14, SOX2 and SIITRK6 cancer stem cell marker in As<sup>3+</sup> and Cd<sup>2+</sup> transformed Urotsa monolayer and spheroids

<u>Prakash Pathak</u>, Natisha J. Corum, Zachary E. Hoggarth, Ashlee E. Nelson, Seema Somji, Andrea Slusser-Nore Department of Pathology, University of North Dakota School of Medicine and Health Sciences, Grand Forks, ND

### A Comparison of Coronal and Horizontal Sectioning for the Histologic Evaluation of the Dura Mater

Carrie Pratt, B.S., Ali Divan, Ph.D., & Catherine Brissette, Ph.D.

University of North Dakota School of Medicine & Health Sciences, Dept. of Biomedical Sciences

# Characterization of GAGE2B, GAGE2C, GAGE2E, GAGE12C, and GAGE12D Gene Expression in Breast Cancer Cell Lines

Isnala Roan Eagle<sup>1</sup>, Brent Voels<sup>1</sup>

<sup>1</sup>Cankdeska Cikana Community College, Fort Totten, ND

#### Stem cell and cancer stem cell markers in UROtsa vs As 6d & Cd #7

<u>Theoren M. Solseng, Natisha J. Corum, Ashlee E. Nelson, Zachary E. Hoggarth, Seema Somji, Andrea Slusser-Nore Department of Pathology, University of North Dakota School of Medicine & Health Sciences, Grand Forks, ND</u>

### L-Glutamate Treatment Alters Dopamine Transporter Palmitoylation in Vitro

Alexa Stampfli<sup>1</sup>, Alexandra M. Ward<sup>2</sup>, Moriah J. Hovde<sup>2</sup>, James D. Foster<sup>2</sup>

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#### Stem cell and cancer stem cell markers in UROtsa vs. As6d & Cd #7

<u>Alice M. Steffl.</u> Natisha J. Corum, Ashlee E. Nelson, Zachary E. Hoggarth, Seema Somji, Andrea Slusser-Nore Department of Pathology, University of North Dakota School of Medicine & Health Sciences, Grand Forks, ND

# Implementing Bio-Rad Labs and Meeting State Teaching Standards as a High School Science Teacher

Ajay Thomas<sup>1</sup>, Karen Cisek<sup>2</sup>, Lorraine O' Shea<sup>2</sup>, Don Sens<sup>2</sup>, and Van Doze<sup>2</sup>

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### The Impact of Oxysterols on the Cell Cycle in Colon Cancer

Andrew Wegner<sup>1</sup>, Jessica Warns<sup>2</sup>, and Othman Ghribi<sup>2</sup>

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# Tissue specific gene expression of *Chelydra serpentine* provides insight into the molecular mechanisms of temperature-dependent sex determination

Alexandria K. Wenz<sup>1</sup>, Paige Hanson<sup>2</sup>, Dr. Turk Rhen<sup>2</sup>

<sup>1</sup>Clarke University, <sup>2</sup> Department of Biology, University of North Dakota

### **Swimmer's Itch: Swimming with Schistosomes**

<u>Grace Werner<sup>1</sup></u>, <u>Riley White<sup>2</sup></u>, <u>Mitch Floura<sup>1</sup></u>, <u>Tyler Achatz<sup>1</sup></u>, and Vasyl Tkach<sup>1</sup>

<sup>1</sup>Department of Biology, University of North Dakota

# Discovering The Unknown Lineages of Haemosporida

Riley White<sup>1</sup>, Grace Werner<sup>2</sup>, Jeffrey Bell<sup>2</sup>, Tyler Achatz<sup>2</sup>, and Vasyl Tkach<sup>2</sup>

<sup>1</sup>Iowa Lakes Community College, Estherville, IA

# Effects of Dextran Sulfate Sodium-Induced Colitis on an APPNL-G-F Mouse Model of Alzheimer's Disease

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