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RESEARCH INTERESTS AND ACTIVITIES

Key Words: nutrition, nutrition therapy, mental disorders

Dr. Kaplan's research interests include the relationship between nutrition and brain development/brain function. Her research falls into these two categories: studying nutrition in relationship to brain development involves the Alberta Pregnancy Outcomes and Nutrition study (www.apronstudy.ca), and studying nutrition in relation to brain function involves studying broad spectrum micronutrient treatment of mental illness.

RESEARCH IN PROGRESS

| <u>ROLE</u> | <u>FUNDING AGENCY</u> | <u>TITLE OF PROJECT</u> | <u>2010/11 ALLOCATION</u> |
|------------------------|--|---|----------------------------------|
| Principal Investigator | Alberta Innovates – Health Solutions | <i>Alberta pregnancy outcomes and nutrition (APrON) (interdisciplinary team grant)</i> | 1,000,000 |
| | Alberta Health Services | <i>Pregnancy mood and cortisol</i> | 29,944 |
| | Alberta Centre for Child, Family, and Community Research | <i>Effects of maternal cortisol during gestation on infant stress reactivity</i> | 98,344 |
| Co-Investigator | Alberta Children's Hospital Research Institute | <i>Effects of antenatal maternal hypothalamic-pituitary-adrenal (HPA) axis activation on infant stress reactivity</i> | 2,908 |
| | Canadian Institutes Of Health Research | <i>Fetal programming of infant stress reactivity</i> | 130,000 |

PUBLICATIONS

Peer-Reviewed Journal Articles

Rucklidge JJ, Gately D, **Kaplan BJ**. Database analysis of children and adolescents with bipolar disorder consuming a micronutrient formula. *BMC Psychiatry* 2010;10:74.

Leung BM, Wiens KP, **Kaplan BJ**. Does prenatal micronutrient supplementation improve children's mental development? A systematic review. *BMC Pregnancy and Childbirth* 2011;11:12.

Shannon S, Weil A, **Kaplan BJ**. Medical decision making in integrative medicine. *Alternative and Complementary Therapies* 2011;17(2):84-91.

Simpson JSA, Crawford SG, Goldstein ET, Field C, Burgess E, **Kaplan BJ**. Safety and tolerability of a complex micronutrient formula used in mental health: A compilation of eight datasets. *BMC Psychiatry* 2011;11:62.

Kaplan BJ, Giesbrecht G, Shannon S, McLeod K. Evaluating treatments in health care: The instability of a one-legged stool. *BMC Medical Research Methodology* 2011;11:65.

Giesbrecht GF, Campbell T, Letourneau N, Kooistra L, **Kaplan BJ**, and the APrON Study Team. Psychological distress and salivary cortisol covary within persons during pregnancy. *Psychoneuroendocrinology* 2011.

Kooistra L, Crawford S, Gibbard B, **Kaplan BJ**, Fan J. Comparing attentional networks in fetal alcohol spectrum disorder and the inattentive and combined subtypes of attention-deficit/hyperactivity disorder. *Developmental Neuropsychology* 2011;36(5):566-77.

Abstracts Published in Journals

Giesbrecht G, **Kaplan BJ**, Campbell TS, Letourneau N. Momentary association of mood and cortisol in pregnancy: A fetal programming proof of concept. *Psychosomatic Medicine* 2011;73:A-114.

Giesbrecht G, Eliasziw M, Campbell TS, **Kaplan BJ**. A bean counter's guide to cortisol assay: The role of assay precision. *Psychosomatic Medicine* 2011;73:A-26.

UNDERGRADUATE STUDENT SUPERVISION

Lucas Badenduck, BHSc student, O'Brien Centre Bachelor of Health Sciences
Project Topic: Swallowing dynamics as a function of head posture

Laurissa Randall, BHSc student, O'Brien Centre Bachelor of Health Sciences
Project Topic: Perceived social support and maternal mood during pregnancy

Rachelle Kettner, BHSc student, O'Brien Centre Bachelor of Health Sciences
Project Topic: Validation of a training video to teach pill swallowing to children scheduled for surgery

Emily MacPhail, BHSc student, O'Brien Centre Bachelor of Health Sciences (Co-Supervisor)
Project Topic: Maternal haemoglobin and hematocrit levels as predictors of birth outcomes

GRADUATE STUDENT SUPERVISION

Brenda Leung, PhD student, Department of Community Health Sciences
Thesis Topic: The impact of nutrient status and nutrient intake during pregnancy on maternal mental health

Karen Davison, PhD student, Department of Community Health Sciences (completed in November 2010)
Thesis Topic: The determinants of food intake in individuals with mood disorders

Isma Ali, MD student, University of Aberdeen, Scotland (Co-Supervisor)
Thesis Topic: Is antenatal maternal anxiety associated with reported nausea and vomiting during pregnancy?

POSTDOCTORAL RESEARCH FELLOW

Gerry Giesbrecht, Postdoctoral Fellow, Department of Paediatrics
Research Topic: Pregnancy mood and cortisol