



# The Cannabinoid Research Initiative of Saskatchewan (CRIS)

Dec. 1 2017 – Café Scientifique



# Overview

The Cannabinoid Research Initiative of Saskatchewan

(**CRIS**) is a Saskatchewan health care-centric

collaborative research team that seeks to apply our

home-grown talent, expertise, and tools to respond to

patient and caregiver needs.



# Overview

Today, we want to showcase the **nation-leading research** happening here with CRIS to provide a **framework** we hope that **you can contribute to.**



# Goals for Today

## Introduction

- CRIS
  - Who are we?
  - Who are we partnering with?

## Research

- Ongoing research projects
- Looking forward
- CannabiNet





# Goals for Today

We would like to get a sense of:

- 1) Who you are,
- 2) What you hope to accomplish (i.e. what is your research question), and
- 3) How you can contribute to CRIS.

Please fill out your information on the pages circulated. We will provide a brief presentation on our group, followed by a time for discussion and questions.



# About CRIS

The Cannabinoid Research Initiative of Saskatchewan is an interdisciplinary team of clinician researchers (medical and veterinary), basic and social scientists.

**Scope:** A strategic management executive committee coordinates activities and develops research opportunities in:

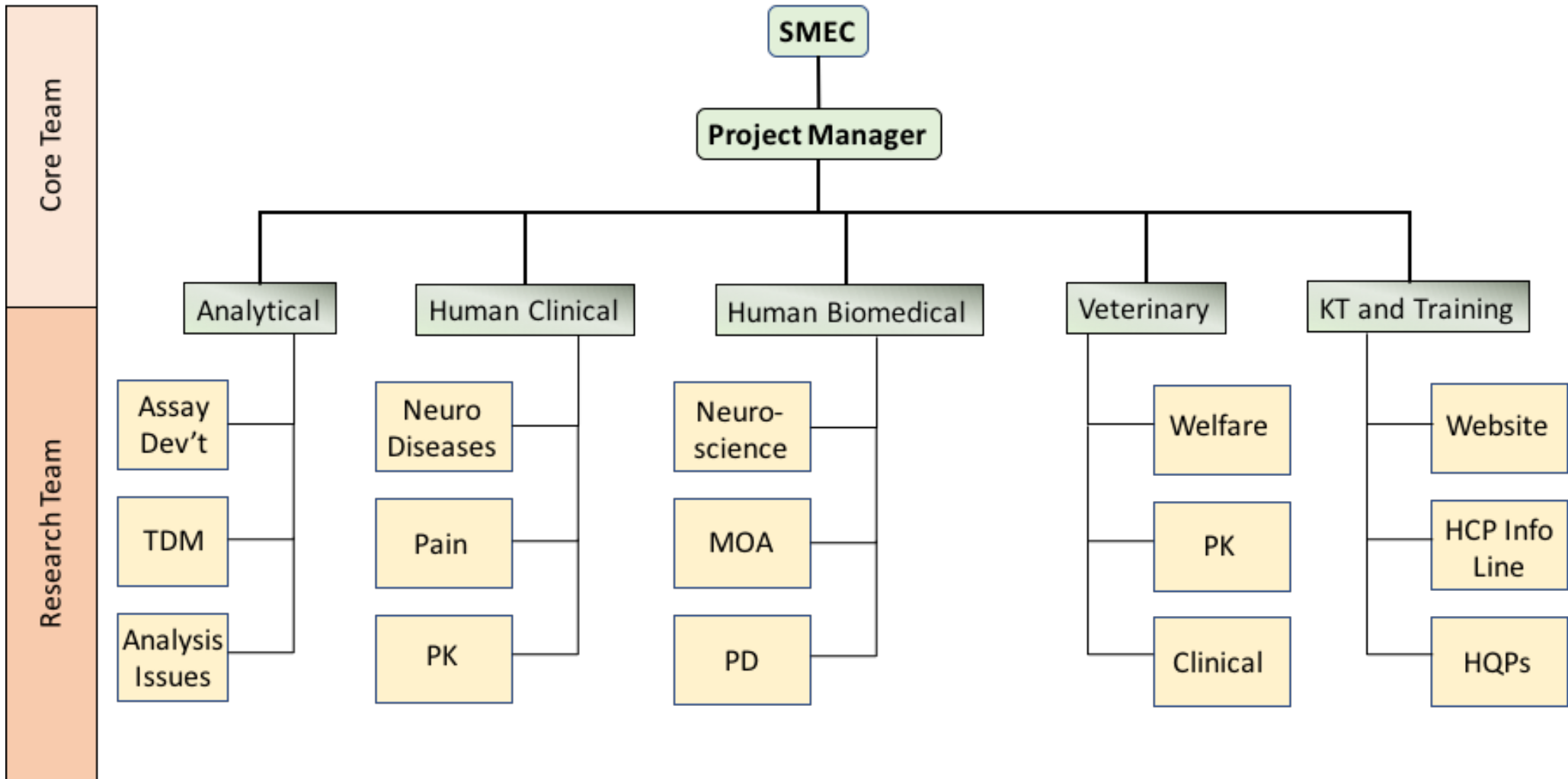
- ❖ Analytical Evaluations
- ❖ Human clinical studies
- ❖ Biomedical studies
- ❖ Veterinary studies
- ❖ Knowledge Translation
- ❖ Studies of cannabinoids and society.

<http://research-groups.usask.ca/cris/about.php>

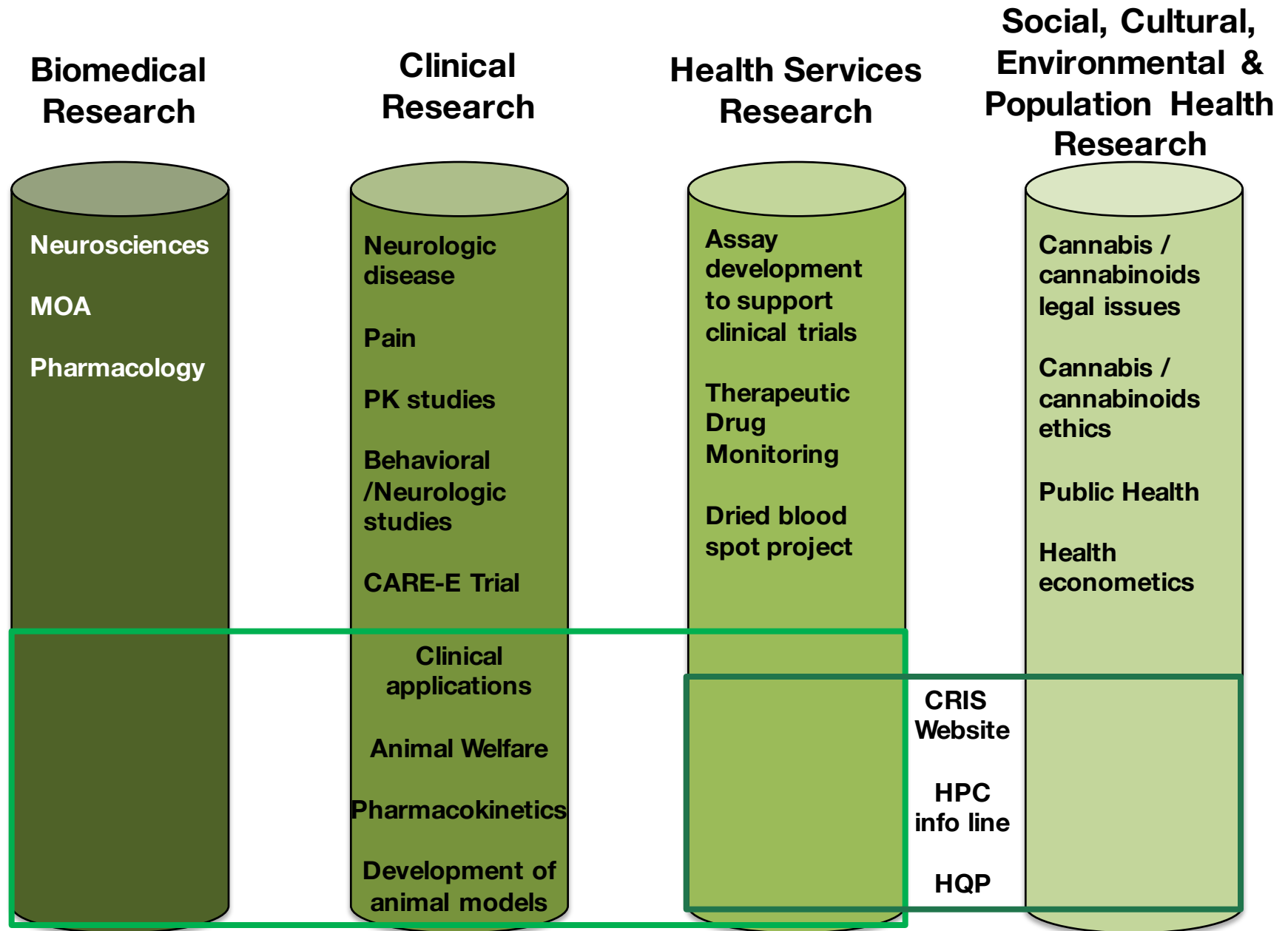


# About CRIS

## CANNABINOID RESEARCH INITIATIVE OF SASKATCHEWAN (CRIS)



# Four Pillars of CIHR



# Activities Under Development

## **CURRENT ACTIVITIES:**

*Human Clinical Studies*  
CARE-E Trial

*Analytical Evaluations*  
Clinical assay development  
Therapeutic Drug Monitoring  
Dried blood spot project

*Biomedical Sciences*  
Neurosciences  
Mechanism of Action  
Pharmacology

*Knowledge Translation*  
CRIS Website  
HQP

## **PROJECTS ACTIVELY IN DEVELOPMENT:**

*Human Clinical Studies*  
Dementia

Pharmacokinetic studies  
Endometriosis

Cerebrovascular physiology

*Veterinary Sciences*  
Clinical applications  
Animal Welfare  
Pharmacokinetics  
Development of animal models

*Biomedical Sciences*  
Brain bank eCBS survey  
PET tracer development and monitoring  
Infantile spasm & epilepsy  
PTSD

*Knowledge Translation*  
HPC Info Line  
Systematic Reviews (MS and Dementia)  
*Cannabis* User knowledge tools &  
survey

## **FUTURE PROJECTS:**

*Human Clinical Studies*  
Neurologic disease  
Pain

Behavioral /Neurologic studies

*Studies of cannabinoids & society*  
Cannabis legal issues  
Cannabis ethics  
Public Health  
Health econometrics



# Researchers - Alphabetical



**Dr. Jane Alcorn**

Professor, Associate Dean (Research and Graduate Affairs),  
College of Pharmacy and Nutrition



**Dr. Richard Huntsman**

Faculty, Pediatric Neurology



**Dr. Robert Laprairie**

Assistant Professor, GlaxoSmithKline Chair in Drug  
Discovery and Development, College of Pharmacy and  
Nutrition



# Researchers - Alphabetical



**Dr. Matthew Links**

Assistant Professor, Department of Animal and Poultry Science, College of Agriculture and Bioresources



**Dr. Andrew Lyon**

Faculty, Pathology and Laboratory Medicine



**Dr. Darrell Mousseau**

Professor, Department of Psychiatry, College of Medicine



# Researchers - Alphabetical

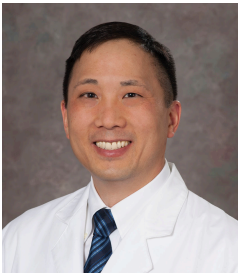


**Dr. Patrick Neary**

Professor, University of Regina

**Dr. Blair Seifert**

Clinical Coordinator – Pediatric Pharmacy Services,  
Saskatoon Health Region



**Dr. Richard Tang-Wai**

Faculty, Division of Pediatric Neurology, University of Alberta



**Dr. Fang Wu**

Faculty, Pathology and Laboratory Medicine





# Researchers – New Members



**Dr. Charity Evans**

Associate Professor, College of Pharmacy and Nutrition



**Dr. Kerry Mansell**

Associate Professor, College of Pharmacy and Nutrition



**Dr. Holly Mansell**

Assistant Professor, College of Pharmacy and Nutrition



**Dr. José Tellez-Zenteno**

Faculty, Neurology



# Partners



College of Medicine  
College of Pharmacy and Nutrition  
Western College of Veterinary Medicine  
College of Agriculture and Bioresources



# Ongoing Research I

## **1. CARE-E: Cannabidiol in Children with Refractory Epileptic Encephalopathy**

This trial is funded, has ethic approval and has Health Canada approval.

The study is open, all patients are enrolled.

Publication is underway

Enrollment in Montreal, Toronto, Edmonton and Vancouver is in progress.



# Ongoing Research II

## **2. The prevalence of prenatal exposure to Cannabis: a proof of principle study**

The trial is funded

Assay development and validation are underway

## **3. Characterizing novel allosteric ligands of the type 1 cannabinoid receptor**

Basic biomedical and molecular pharmacology

Discovery

Development

Characterization of non-intoxicating cannabinoids.



# Ongoing Research III

## **4. Impact of lipid/lipoprotein alterations on free plasma levels of cannabinoids**

Clinical and basic biomedical research.

## **4. Characterization of the lesser-known phytocannabinoids**

Basic biomedical and molecular pharmacology  
Characterization of the plant-derived bioactive molecules beyond THC and CBD.

Industrial partnership with CanniMed Therapeutics.



# Looking Forward I

1. **Pharmacokinetic Considerations of Long Half-Life Therapeutics in Pediatric Populations**
  - Pediatric Neurology, College of Medicine, and College of Pharmacy and Nutrition, U of S
2. ***In vivo* characterization of type 1 cannabinoid receptor allosteric ligands**
  - College of Pharmacy and Nutrition, College of Medicine, U of S
3. **Efficacy of Cannabinoids in a rat model of infantile spasm**
  - College of Pharmacy and Nutrition, College of Medicine U of S, in collaboration with College of Medicine U of C
4. **Modulation of the gut-brain axis in poultry through dietary inclusion of Cannabis**
  - College of Agriculture and Bioresources U of S



# Looking Forward II

5. **Systematic Review of Cannabinoid Treatment in Multiple Sclerosis**
  - College of Pharmacy and Nutrition, U of S
6. **Systematic Review of Cannabinoid Treatment in Dementia**
  - College of Pharmacy and Nutrition, U of S
7. **Clinical Treatment of Dementia with Cannabidiol**
  - College of Pharmacy and Nutrition, College of Medicine, U of S;  
Sherbrooke Community Centre
8. **Dose escalation study on cerebrovascular physiology**
  - Faculty of Kinesiology and Health Studies, University of Regina,  
MITACS



# Looking Forward II

## 9. **CARE-E Multi-centre Expansion Clinical Trial**

- Pediatric Neurology, College of Medicine, and College of Pharmacy and Nutrition, U of S; multi-centre trial

## 10. **Interactions Between the Gut Microbiome and Endocannabinoid System in a Chicken Model of Epilepsy**

- College of Agriculture and Bioresources, College of Pharmacy and Nutrition, U of S

## 11. **Use of Cannabinoids in Companion Animals - Veterinary Applications**

- College of Agriculture and Bioresources, Western College of Veterinary Medicine, College of Pharmacy and Nutrition, U of S

## 12. **Brain Bank Survey(s) of the Endocannabinoid System**

- College of Medicine, and College of Pharmacy and Nutrition, U of S





# Inaugural CRIS Workshop

Workshop to be held **summer 2018** to highlight cannabinoid research happening in Saskatchewan in partnership with CRIS.

Emphasis will be on **knowledge translation** to clinicians and caregivers within Saskatchewan as Canada transitions into *Cannabis* legalization.

An opportunity for our HQP and Faculty to highlight research, and **filter anecdotes to provide evidence-based medicine.**



# National Centres of Excellence (NCE)

## **“From Plant to Policy”**



**CANNABINET**

A National a multi-disciplinary and multi-sectoral national research network driven by that will be partners- and stakeholders-driven, will supporting the safe and responsible use of cannabis and cannabinoids in Canada.



# National Centres of Excellence

**CannabiNet** will undertake research and education on cannabis and cannabinoids across three solution- oriented and multi-disciplinary themes:

Theme 1. **Brain and Body:** safe(r) use over time, innovative therapeutic uses

Theme 2. **Home and Work:** policy, use patterns, education & training models

Theme 3. **The Marketplace:** agriculture to the retail outlet - genome to economics



# Questions & Discussion

