UWI
ST. AUGUSTINE CAMPUS
FACULTY OF SCIENCE & TECHNOLOGY

DEPARTMENT OF PHYSICS

SEMINAR SERIES: 2021/2022

Ph.D. Oral Examination

Effect of 150kHz Electromagnetic Radiation on the Development of Polycystic Ovaries in Sprague Dawley Rats

Presenter: **Stephanie Mohammed**

Date: Monday 13th June 2022

Time: 9:00 am

Supervisors: Dr. Nikolay Zyuzikov and
Dr. Venkatesan Sundaram

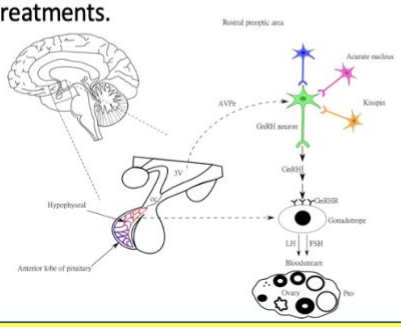
Please see the Zoom Meeting Room link,
https://sta-uwi-edu.zoom.us/j/93283801331?pwd=d01zUU1ZZEJYbjZqYloxMDhDYWtvdz09
Meeting ID: 932 8380 1331
Passcode: 830587
waiting room will be enabled.

Stephanie Mohammed, BSc

Ph.D. Oral Examination

Effect of 150kHz Electromagnetic Radiation on the Development of Polycystic Ovaries in Sprague Dawley Rats.

Healthy follicular development is dependent on a well-regulated hypothalamic-pituitary-gonadal axis. A disruption in this axis may result in one of the most common endocrine disorder known as Polycystic Ovarian Syndrome. Two to twenty percent of reproductive aged females suffer with this condition which can only be treated with diet and exercise, pharmaceuticals or invasive treatments.



Novel invasive treatment options are currently being investigated to help manage the development of polycystic ovaries and its associated complications. The application of 150kHz electromagnetic radiation during the development of polycystic ovaries is hypothesized to guarantee positive results by slowing the number and size of follicular cysts formed when an Estradiol Valverate induced animal model is used.

Sprague Dawley rats exposed for 8 weeks to this intermediate frequency showed changes in the hypothalamus-pituitary-ovary axis at the cellular, tissue and receptor levels. These changes will be discussed In the upcoming seminar.