Discussion: Foundational Neuroscience. As a psychiatric and mental health nurse practitioner, it is essential for you to have a strong background in foundational neuroscience. In order to diagnose and treat patients, you must not only understand the pathophysiology of psychiatric disorders but also how medications for these disorders impact the central nervous system. These concepts of foundational neuroscience can be challenging to understand. Therefore, this Discussion is designed to encourage you to think through these concepts, develop a rationale for your thinking, and deepen your understanding by interacting with your colleagues. For this Discussion, review the Learning Resources and reflect on the concepts of foundational neuroscience as they might apply to your role as the psychiatric mental health nurse practitioner in prescribing medications for patients. Use the following resources and peer review resources in your discussion. Be concise and make sure to answer the questions. Resources: Camprodon, J. A., & Roffman, J. L. (2016). Psychiatric neuroscience: Incorporating pathophysiology into clinical case formulation. In T. A. Stern, M. Favo, T. E. Wilens, & J. F. Rosenbaum. (Eds.), Massachusetts General Hospital psychopharmacology and neurotherapeutics (pp. 1–19). Elsevier. The University of British Columbia. (n. d.). Neuroanatomy videos. http://neuroanatomy.ca/videos.html Note: Please review all of the media under the neuroanatomy series. Pathopharmacology: Disorders of the Nervous System: Exploring the Human Brain Dr. Norbert Myslinski reviews the structure and function of the human brain. Using human brains, he examines and illustrates the development of the brain and areas impacted by disorders associated with the brain. (15m) Accessible player --Downloads-- Introduction to Advanced Pharmacology In this media presentation, Dr. Terry Buttaro, associate professor of practice at Simmons School of Nursing and Health Sciences, discusses the importance of pharmacology for the advanced practice nurse. (6m) Accessible player --Downloads-- Post a response to each of the following in as post discussion with references: 1. Explain the agonist-to-antagonist spectrum of action of psychopharmacologic agents, including how partial and inverse agonist functionality may impact the efficacy of psychopharmacologic treatments. 2. Compare and contrast the actions of g couple proteins and ion gated channels. 3. Explain how the role of epigenetics may contribute to pharmacologic action. 4. Explain how this information may impact the way you prescribe medications to patients. Include a specific example of a situation or case with a patient in which the psychiatric mental health nurse practitioner must be aware of the medication’s action. For this question, an example that can be discussed is the use of Lithium for Bipolar Disorder. Read a selection of your colleagues' responses. By Day 6 of Week 2 Respond to at least two of your colleagues on two different days in one of the following ways: If your colleagues’ posts influenced your understanding of these concepts, be sure to share how and why. Include additional insights you gained. If you think your colleagues might have misunderstood these concepts, offer your alternative perspective and be sure to provide an explanation for them. Include resources to support your perspective.