

وهزارهتى خويندنى بالاو تويزينهوهى زانستى وزارة التعليم العالي والبحث العلمي

Ministry of Higher Education & Scientific Research

-	l.Ph.D. Proposal		پپرۆپـۆزەڵـى تـوێـژيـنەوە بـۆ بـەدەستهێـنانـى بـپروانـامـەى دكـتۆرا
	Title of Ph.D. Research Proposal	عنوان البحث المقترح	نا وونیشانی تویّثرینه وه ی پیّشنیارکراو

Estimation of some factors associated with extracellular glutamate concentration in patients with chronic epilepsy.

2. General Information	المعلومات العامة	زانیاری گشتی
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(Abstract)	3.	Summary (Abstract)	الملخص	پــو وخـده
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Epilepsy is one of the chronic diseases that has spread in our societies in abundance at the present time, and due to the lack of studies related to this disease in our country, the research idea was designed, the focus of its work is to estimate some factors related to the concentration of glutamate outside the cells, since glutamate is one of the main neurotransmitters between neurons Where the study included the assessment of each of Glutamate dehydrogenase2, NAD-dependent ADP-ribosyltransferase sirtuin-4, Branched-chain-amino-acid Aminotransferase, Delta-1-pyrroline-5-carboxylate Synthase, Gamma-aminobutyric Acid Type B Receptor Subunit 2, glutamate decarboxylase1, Glutamate dehydrogenase 1, Glutamate Receptor 1, Glutamine synthetase, G-protein Coupled Receptor 55, Gamma-aminobutyric Acid Receptor Subunit Alpha-1, and Vesicular Glutamate Transporter 1.

In this study, the samples are divided into two main groups (patients and healthy persons), where the patient group includes samples of different types of epilepsy, finding differences between the two groups of patients and healthy people, in addition to finding differences between groups of different types of epilepsy. Differences are also found depending on age, gender and genetic status.

The ROC Curve is found and the AUC and Cut of value are calculated to find out the possibility of adopting the calculated variable as a diagnostic function of the disease. Also, the correlation coefficient is found between the measured variables and their impact on the disease.

نابئ ژمارهی ووشه کاان له 200 ووشه زیاتر بنت و نابی له 75 ووشه شه کهمتربنت

يجب ألا يزيد هذا عن 200 كلمة ولا يقل عن 75 كلمة

This should be not more than 200 words and not less than 75 words

4.	Introduction	المقدمة	پـێـشـه کــی
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Epilepsy is a group of non-communicable neurological disorders characterized by recurrent epileptic seizures(1). The occurrence of just one seizure may warrant the definition (set out by the International League Against Epilepsy) in a more clinical usage where recurrence may be able to be prejudged(2).

The underlying mechanism of an epileptic seizure is excessive and abnormal neuronal activity in the cortex of the brain(3). some cases occur as the result of brain injury, stroke, brain tumors, infections of the brain, or birth defects through a process known as epileptogenesis(4).

Epilepsy is broadly characterized by aberrant neuronal excitability. Glutamate is the predominant excitatory neurotransmitter in the adult mammalian brain; thus, much of past epilepsy research has attempted to understand the role of glutamate in seizures and epilepsy. Seizures induce elevations in extracellular glutamate, which then contribute to excitotoxic damage(5). It has been well-established that abnormally high concentrations of L glutamate (glutamate) in the brain's interstitial fluid and cerebrospinal fluid (CSF) are associated with several neurodegenerative conditions. An excess of glutamate in brain fluids may result from acute events such as stroke, bacterial meningitis, and traumatic brain injury(6). Abnormally high concentrations of glutamate in brain fluids have been shown to be neurotoxic and correlate with a poor neurological outcome following traumatic brain injury(7).

5.	Research Objective	أهداف البحث	ئامانجەكانى توپىژىنە وەكە
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- ➤ Glutamate is one of the important neurotransmitters, and it is the only one that works on four axes, so 80% of neurotransmission occurs through it. Therefore, the study aims to estimate the concentrations of factors affecting the increase in extracellular glutamate in patients with chronic epilepsy.
- > Compare different parameters between patients and healthy people.
- Finding differences between patients depending on gender, age, genetic status and BMI

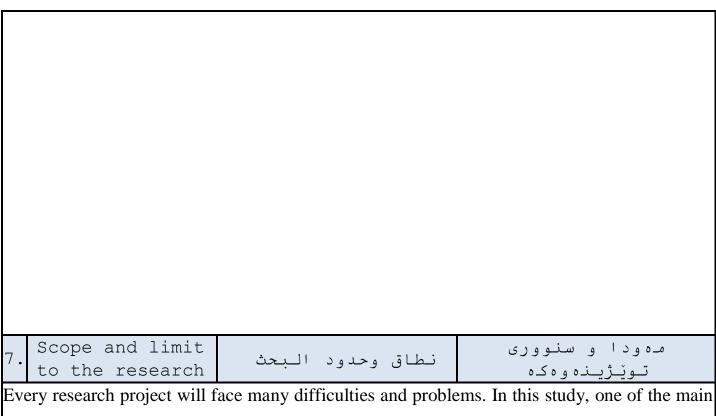
6.	Methodology and Data Collection	المنهجية وجمع البيانات	میتۆدۆلۆژیا و کۆکردنهوهی زانیاری
	COTTECTION		

The Data (blood) are collecting from individuals of different groups as follow:

- **1-** Group 1: healthy people
- **2-** Group 2: patients with Unknown cause
- **3-** Group 3: Patients with Symptomatic
- **4-** Group 4: patients with Provoked
- 5- Group 5: Patients with Cryptogenic

The blood is withdrawn and the serum is isolated from it by means of a centrifuge, and the samples are kept until the test is performed.

Comparing the various parameters between different groups by using Elisa instrument.



Every research project will face many difficulties and problems. In this study, one of the main problems is the lack of types of epilepsy samples. Therefore, it is necessary to rely on the diagnosis of the specialist doctor to determine the type of epilepsy in the patient. The researcher should also provide complete information about the patient's condition, including gender, age, genetic status, weight and height.

0	Duration and	المدة والجدول	ماوہی پیںویست بو
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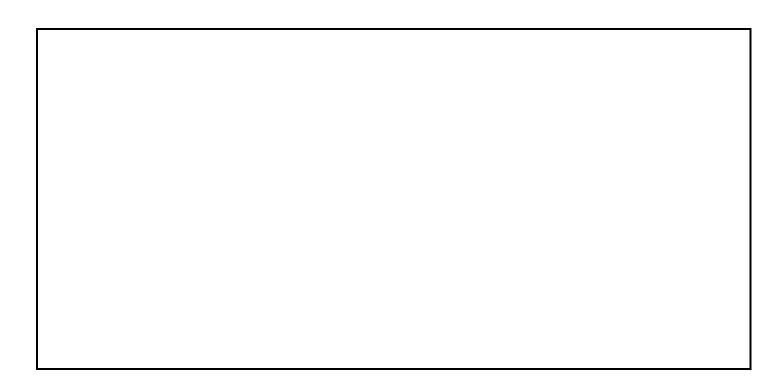
The sufficient time to performing this project is approximately two years

9.	Conclusion	الاستتنتاج	ئەنجام
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- The research is of scientific value because it shows the effect of factors related to the high concentration of glutamate outside the cells, which may be the reason for this increase in concentration.
- The project refers to finding correlations between the types of variables and their impact on the disease.
- The possibility of using the selected variables as early diagnostic functions of the disease

10 References المصادر .

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11	General notes	الملاحظات العامة	تێبینی گشتی

1 2	Approval of the
12	Proposal by
•	Postgraduate and

الموافقة على المشروع المقترح من پەسەنىدكىردنى پىرۆپسۆزەڭـەكە لـە لايـەن

	Scientific Committee		قبل اللجنة الدراسات	لیّژنهی زانستی و خویّندنی بالا
	ژمارهی کۆنووسی کۆبوونهوهی لێـژنـهی زانـستی و خوێـندنـی با لای بـهش		رۆژ الىيوم Day	
Nu	رقم وتاريخ محضر اللج العلمية والدراسات العليا للقسم mber of the minutes of the department's Scientific and ostgraduate Studies Committee		ړێکهوت التاريخ Date	
	بریار / القرار / The decision			

په در کرا /

پەسەنىد كىرا / اقىرت / لم رفضت / Refused

ناوی بریاردهری لیّژنهی خویّندنی

ناوی سهرۆکی بهش و سهرۆکی لیّژنهی زانستی و زانستی و خویّندنی بالا بالای بهش

مۆرى بەش

و ا ژ ۆ

په سه ندکردنی پرۆپۆزه ڵ له لایه ن ئه نجوومه نی کۆلیّژ الموافقة علی المشروع المقترح من قبل مجلس الکلیة Approval of the proposed project by the College Council