

1.	Ph.D. Proposal	مقترح البحث لغرض الحصول على شهادة الدكتوراه	پرۆپۆزه لی توئیزینه وه بو به دهستهینانی پروانامه ی دکتورا
	Title of Ph.D. Research Proposal	عنوان البحث المقترح	ناوونیشانی توئیزینه وه ی پیشنیارکراو
Estimation of some factors associated with extracellular glutamate concentration in patients with chronic epilepsy.			

2.	General Information	المعلومات العامة	زانیاری گشتی
	ناوی ته واوی سه رپه رشتیاری 1 الاسم الكامل للمشرف 1 Name and Surname of Supervisor 1		Ass. Prof. Dr. Zeyan Abdullah Ali
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	کۆلیژ الكلية College		Education
	ناوی زانکۆ اسم الجامعة University's Name		Salahaddin University – Erbil

ناوی ته و او ی سه رپه رشتیاری 2 الاسم الكامل للمشرف 2 Name and Surname of Supervisor 2	Prof. Dr. Firas Shawqi Abdul-razzaq Algburi
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3.	Summary (Abstract)	الملخص	پوخته
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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 ووشه‌کان له 200 ووشه زیاتر بیت و نابئ له 75 ووشه‌ش کهمتر بیت

یجب آلا یزید هذا عن 200 كلمة ولا یقل عن 75 كلمة

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

4.	Introduction	المقدمة	پیشہ کی
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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	ئامانجە کانی توئژینە وە کە
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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	میتۆدۆلۆژییا و کۆکردنه وهی زانیاری
<p>The Data (blood) are collecting from individuals of different groups as follow:</p> <ol style="list-style-type: none"> 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 <p>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.</p> <p>Comparing the various parameters between different groups by using Elisa instrument.</p>			



7.	Scope and limit to the research	نطاق وحدود البحث	مهودا و سنووری تویژینه وه که
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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.

8.	Duration and timeline	المدة والجدول الزمني	ماوهی پیویست بو کارکردن
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The sufficient time to performing this project is approximately two years

9.	Conclusion	الاستنتاج	نہ نجام
	<ul style="list-style-type: none">• 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	سہ رچا وہ کان
	<ol style="list-style-type: none">1. Ghosh S, Sinha JK, Khan T, Devaraju KS, Singh P, Vaibhav K, et al. Pharmacological and Therapeutic Approaches in the Treatment of Epilepsy. <i>Biomedicines</i>. 2021;9(5):470.2. Fisher RS, Acevedo C, Arzimanoglou A, Bogacz A, Cross JH, Elger CE, et al. ILAE Official Report: A practical clinical definition of epilepsy. <i>Epilepsia</i>. 2014;55(4):475-82.3. Fisher RS, Boas WvE, Blume W, Elger C, Genton P, Lee P, et al. Epileptic Seizures and Epilepsy: Definitions Proposed by the International League Against Epilepsy (ILAE) and the International Bureau for Epilepsy (IBE). <i>Epilepsia</i>. 2005;46(4):470-2.4. Goldberg EM, Coulter DA. Mechanisms of epileptogenesis: a convergence on neural circuit dysfunction. <i>Nature Reviews Neuroscience</i>. 2013;14(5):337-49.5. Barker-Haliski M, White HS. Glutamatergic Mechanisms Associated with Seizures and Epilepsy. <i>Cold Spring Harbor Perspectives in Medicine</i>. 2015;5(8).6. Castillo J, Dávalos A, Naveiro J, Noya M. Neuroexcitatory amino acids and their relation to infarct size and neurological deficit in ischemic stroke. <i>Stroke</i>. 1996;27(6):1060-5.7. Zlotnik A, Ohayon S, Gruenbaum BF, Gruenbaum SE, Mohar B, Boyko M, et al. Determination of factors affecting glutamate concentrations in the whole blood of healthy human volunteers. <i>J Neurosurg Anesthesiol</i>. 2011;23(1):45-9.		

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11	General notes	الملاحظات العامة	تیبینی گشتی
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12	Approval of the Proposal by Postgraduate and	الموافقة على المشروع المقترح من	په سه ندرنی پروپوزه له که له لایه ن
.			

	Scientific Committee	قبل اللجنة العلمية و الدراسات العليا		ليژنه‌ی زانستی و خويندنې بالآ
	ژماره‌ی كۆنوسى كۆبوونه‌وه‌ی ليژنه‌ی زانستى و خويندنې بالآ به‌ش رقم وتاريخ محضر اللجنة العلمية والدراسات العليا للقسم Number of the minutes of the department's Scientific and Postgraduate Studies Committee		رۆژ اليوم Day	
			رېځه‌وت التاريخ Date	
The decision / القرار / بيار				
<div style="display: flex; justify-content: space-between;"> <div data-bbox="110 751 435 835"> په سهند كرا / نه كرا / <input type="radio"/> </div> <div data-bbox="857 751 1507 856"> Appr <input type="radio"/> d / اقرت / Refused / رفضت </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div data-bbox="110 982 597 1108"> ناوى بيارده‌رى ليژنه‌ى خويندنې </div> <div data-bbox="792 982 1507 1150"> ناوى سه‌روكى به‌ش و سه‌روكى ليژنه‌ى زانستى و خويندنې بالآ بالآ به‌ش </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div data-bbox="110 1318 207 1360"> واژۆ </div> <div data-bbox="1036 1318 1133 1360"> واژۆ </div> </div>				
په‌سه‌ندكردنى پروپۆزهل له لايهن نه‌نجوومه‌نى كۆليژ الموافقة على المشروع المقترح من قبل مجلس الكلية Approval of the proposed project by the College Council				

ژماره ی کۆنوسی کۆبونده وه / عدد محضر الاجتماع / Number of meeting / minutes

رۆژ و رێکهوت / اليوم والتاریخ / Day and Date

په نه کرا /

Appr()d / اقرت / په سه نه کرا /
Refused / رفضت

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واژۆ

مۆری کۆلیژ

پ.ی.د.مازن عبدالخالق عثمان
راگری کۆلیژ