Research Proposal Form

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| **This section is for official use only** |

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| **Research No.:** |

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| **Date: ( / / )** |

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| * **About 2000 word limit** applies, excluding references.
* Use **Times New Romans** Font, **size 14** and adjust **line spacing to 1.5** all through the application form.
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**Part 1: General**

**M.Sc. Degree M.D Degree**

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| * 1. **Applicant Name**(responsible for all correspondences and accuracy of data)**:**

**Aml Ahmed Shohdy Ahmed** | **Department:****Internal Medicine Department** |
| **e-mail address:** **aaml72356@gmail.com** | **Mobile Phone:** 01001749149 |

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| * 1. **Title of research project**: (**English Title)**
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Correlation of both Serum albumin and renal doppler with myocardial function in patients with Nephrotic Syndrome .

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| * 1. **Title of research project**:**(Arabic Title**) العنوان باللغة العربية
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الترابط بين نسبه الالبومين والدوبلر الكلوي بوظيفة عضلة القلب لدى المرضي المصابين بمتلازمه نفروز .

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| * 1. **Do you need fundingfrom South Valley University?**
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Yes  No  (If no, skip 1.4)

**Funding (Mandatory for those requesting funding from South Valley University)**

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| **1.4 Total funds requested: LE** |

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**Part 2: Research Details**

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| * 1. **Background** (Research Question, Available Data from the literature, Current strategy for dealing with the problem, Rationale of the research that paves the way to the aim(s) of the work). **(200-250 words max.)**
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Proteinuria can be a marker of kidney damage .Patients with higher levels of protein in their urine are at increased risk of developing heart disease and progressive kidney damage.(1)

Nephrotic syndrome is characterised by significant proteinuria and hypoalbuminemia, which may progress to renal failure, it is important to evaluate the correlation of renal resistive index( RRI )with serum albumin level. The purpose of this study is to assess the relation between renal resistive index and serum albumin in nephrotic syndrome.(2),(3)

Renal resistive index (RRI) is a non-invasive marker of renal function, which can be measured by renal ultrasonography(USG) Doppler. High renal index(RI) indicates poor prognosis, which has been associated with conditions such as proteinuria, hypertension, chronic kidney diseaseand and renal failure. (2),(3)

The resistive and pulsatility indices are known tools for assessing renal function in kidney diseases, especially in proteinuric conditions like Nephrotic syndrome (NS).(3)

Motion-mode echocardiography was used to determine Fractional shortening, while Speckle tracking echocardiography was applied to determine left ventricular (LV) ejection fraction (EF) and GLS (global longitudinal strain). Finally, we employed combined conventional and tissue Doppler to determine LV E/e′ ratio (ratio of early transmitral inflow and average early diastolic basal septal and mitral annular velocities). (4),(5) (6)

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| **2.2Aim(s) of the Research (100 words max.):** |

**Our study aims**

The aim of the study is to assess the impact of both hypoalbuminemia and renal doppler on myocardial function in patient with nephrotic syndrome for sake of early detection of myocardial dysfunction by speckle tracking echocardiography.

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| **2.3Research Area (Faculty Research Plan). (Choose one only).** |
| 1. Decreasing disabilities, morbidity and mortality resulting from traumatic injuries.
2. **Screening early detection of common and serious diseases.**
3. Introduction of evidence – based, cost effective management strategies in common health problems.
4. Infection control and hospital acquired infection.
5. Decreasing maternal and perinatal morbidity and mortality.
6. Family planning and population growth problems.
7. Basic researches that may lead to possible/definite improvement in health services and solving the above problems.
8. Others, clarify,--------------------------------------------------------------------
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| **2.4. Research Methods and techniques** |
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|  2.4.1- **Type of the study:** Cross- sectional study**.**2.4. 2- **Study Setting:** Internal Medicine Department, Qena University Hospitals.2.4. 3- **Study subjects:** **a. Inclusion criteria:** **1)** All patients of 18 years of age and more**.**  **2)** Nephrotic syndrome.  **3)** patient with hypoalbuminemia and protinuriawith albumin / creatinine ratio in nephrotic range **b. Exclusion criteria: patients proved to have**1. Patients with proteinuria and albumin / creatinine ratio show microalbuminuria.
2. Patients with myocardial dysfunction with normal urine analysis and serum

 Albumin. |

 **Supervisors Signature****c. S****Sample Size C­alculation:** This work will include 100 patients with hypoalbuminemia subjected to the inclusion and exclusion Criteria .They will be selected from in-patients and out patients (Qena University Hospitals, South Valley University )2.4.4–**Study tools (in detail, e.g., lab methods, instruments, steps, chemicals, …):*** Written consent; A discussion with the participants about the risks(none) and benefits of participation will be done and a signed written consent will be taken (a form in the Arabic language is attached).

**All included subjects will have the following:*** Clinical assessment including detailed history taking, and full clinical examination.
* Full lab assessment including: CBC, renal function & urine analysis.
* Albumin / creatinine ratio (3-3.5 g) Sometimes referred to as “nephrotic range”.

 * Imaging: with the following procedures:
1. Echocardiography (Philips Affiniti70)

Motion-mode echocardiography will be used to determine Fractional shortening, while Speckle tracking echocardiography will be applied to determine left ventricular (LV) ejection fraction (EF) and GLS (global longitudinal strain). Finally, we will employ combined conventional and tissue doppler to determine LV E/e′ ratio (ratio of early transmitral inflow and average early diastolic basal septal and mitral annular velocities)1. Renal Doppler to show

(renal resistive index (RI) and pulsatitly index(PI) ) by LOGIC P7. **Supervisors Signature**2.4.5–**Research outcome measures:****Primary** (main):Assesment the impact of both hypoalbuminemia and renal doppler Indices on myocardial function in patient with nephrotic syndrome for sake of early detection of myocardial dysfunction by speckle tracking echocardiography. **Supervisors Signature** |
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| **2.5-Data management and analysis:** |
| **a. Data collection:** Data will be collected and analysed. Qualitative variables will be presented as frequencies and percentages and will be compared by chi-square test. Quantitative variables will be presented as means & standard deviations and compared using t-test.**b. Computer software:** Statistical Package for Social Sciences (SPSS) software program (version 20).**c. Statistical tests:** Quantitative measure will be presented as means ± standard deviation (SD) and will be compared by student *t*- test. Regression analysis and correlation between differents will be performed as indicated. P- value < 0·05 will be significant. |

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| 2.6-References and written in Vancouver style: |

Brantsma AH, Bakker SJ, de ZD, de Jong PE, Gansevoort RT. Extended prognostic value of urinary albumin excretion for cardiovascular events. *J Am Soc Nephrol* 2008;19:1785-91.

Sapartini G, Rachmadi D, Garna H. Correlation between serum albumin and creatinine levels in children with nephrotic syndrome. *Paediatrica Indonesiana* 2016;48(6):354.

Qin, Q, Xu R, Dong J, et al. Corrigendum to “evaluation of right ventricle function in children with primary nephrotic syndrome”. *Pediatr. Neonatol.* 2010; 51:166-171.

Hari P, Khandelwal P, Smoyer WE . Dyslipidemia and cardiovascular health in childhood nephrotic syndrome. *Pediatr Nephrol.* (2019) 35(9):1601–1619.

Bolog M, Dumitrescu M, Pacuraru E, Romanoschi F. Cut off value of rest left ventricular global longitudinal strain is important in selecting highrisk patients with stable symptoms and normal left ventricular systolic function. *J* *Am Coll Cardiol*. (2017) 69(11):1471.

 (6) Nagueh SF, Smiseth OA, Appleton CP, Byrd BF III, Dokainish H, Edvardsen T .Flachskampf FA, Gillebert TC, Klein AL, Lancellotti P, Marino P, Oh JK,Popescu BA, Waggoner AD . Recommendations for the evaluation ofleft ventricular diastolic function by echocardiography: an update from theAmerican Society of Echocardiography and the European Association of Cardiovascular Imaging. *J Am Soc Echocardiogr*.(2016) 29(4):277–314.

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| **Part 3: Ethical Considerations*(Written in details taking in consideration the items below):*** |
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| 3.1. Risk – benefit assessment.3.2. Confidentiality (dealing with data and data dissemination should be confidential).3.3. Statement describing the research procedure to be given to the participants.3.4. Informed consent.3.5.Other ethical concerns:* The research should be conducted only by scientifically qualified and trained personnel.
* The research should be based on relevant pre-clinical investigations in animals.

**The consent form must be provided with the proposal.** |

 **Supervisors Signature**

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| **Consent Form**Through getting a written consent from the responsible person on the selected patient before conducting the research.**Consent name:****patient name:****patient age:****patient address:****Male/Female:****Date:**I am who signed on this paper. I agree completely on participation of my patient in this research project as**resident** : **Aml Ahmed Shohdy Ahmed** explained to me obviously all benefits and hazards of participation in this research project.**Signature** |

 **Supervisors Signature****اقرار****الاسم/****السن/****العنوان/****الجنس/****التاريخ/****التليفون/** **أقر أنا الموقع علي هذا الإقرار أنني موافق تماما علي مشاركتي في البحث****وهذا إقرار مني بذلك.****التوقيع/**  |

**Supervisors Signature**

## Part 5 – Declaration (Name in printed letters):

I / we (all investigators) certify that, to the best of our knowledge and after reasonable inquiry, the information contained in this application, and any supporting documents provided with this application, are correct and complete, and that this research has not been conducted or published before.

يتعهد الباحثون بنشر نتائج البحث الممول من وحدة تمويل الأبحاث في إحدى الدوريات العلمية المحكمة في خلال الفترة الزمنية المحددة في البند السابق من قبلهم وإلا يتم خصم مبلغ التمويل من مرتباتهم بالتساوي فيما بينهم كما يتعهدوا بالإشارة إلى مساهمة وحدة تمويل الأبحاث بكلية طب قنا عند نشر البحث.

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| **Supervisors Responsibility** |
|  | **Title** | **Name** | **Role\*\*** | **e-mail** | **Phone** | **Department** | **Signature** |
| **1** | Associate professor | Abd Elkader Ahmed Hashim Mohammed | Supervisor | abdelkaderelhshimy@yahoo.com | 01226930195 | Internal Medicine  |  |
| **2** | Associate professor | Ghada Mohammed Abd-EL Razek | Supervisor | drghada@med.svu.eg.com | 01152806919 | Diagnostic and Interventional Radiology |  |
| **3** | Dr | Ahmed Gaber Bakry Ahmed  | Supervisor | ahmedgbakry@gmail.com | 01157073537 | Internal medicine |  |

**(Add others if required)**

**After completing the application form, please**

1. Record the completed and revised application form on a **CD** and present to the Vice Dean Research Office.
2. **All authors should sign a printed copy** of the completed application form that should be presented as well to the Vice Dean Research Office.
3. A **copy** of the printed and signed research application form should be presented to the **Ethical Committee**.

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| **Student Responsibility** |
|  | **Title** | **Name** | **Role\*\*** | **e-mail** | **Phone** | **Department** | **Signature** |
| 1 | Resident  | Aml Ahmed Shohdy Ahmed | Resident |  aaml72356@gmail.com | 01001749149 | Internal Medicine |  |

**(استمارة مقترح بحث)**

**التاريخ: ( / / )**

 **ماجستير دكتوراه**

**اسم الطالب:** أمل أحمد شهدي أحمد

**البريد الالكتروني: aaml72356@gmail.com**

**تليفون**: 01001749149

**اسم البحث:**

الترابط بين نسبه الالبومين والدوبلر الكلوي بوظيفة عضلة القلب لدى المرضي المصابين بمتلازمه نفروز.

**المشرفين/**

* د/ **عبدالقادر أحمد هاشم محمد** :أستاذ مساعد بقسم الأمراض الباطنة بكلية الطب جامعة جنوب الوادي
* د/ **غاده محمد عبد الرازق** : أستاذ مساعد الاشعة التشخيصية بكلية الطب جامعه جنوب الوادي.
* د/**احمد جابر بكري احمد**: مدرس القلب بقسم الامراض الباطنه بكليه الطب جامعه جنوب الوادي.

 **الملخص العربي**

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| **المقدمة:** |
| نسبة الزلال بالبول (الالبيومين) علامة على وجود خلل في وظائف الكلى والمرضى الذين لديهم مستويات عالية من البروتين في بولهم يكونون أكثر عرضة للإصابة بأمراض القلب وتلف الكلى التدريجي. الالتهاب النفروزي يتميز بوجود الزلال في البول ونقص ألبومين الدم ، والتي قد تتطور إلى الفشل الكلوي ،الهدف من هذه الدراسة هو تقييم العلاقة بين مؤشر المقاومة الكلوية والزلال في الدم في المتلازمة الكلوي مؤشر المقاومه الكلويه (هو علامة غير جراحية لوظيفة الكلى )، والتي يمكن قياسها عن طريق اشعه الدوبلر.ارتفاع المقاومه يدل علي سوء الحاله والذي ارتبط بحالات مثل زياده نسبه الزلال في البول وارتفاع ضغط الدم وأمراض الكلى المزمنة والفشل الكلوي.تعتبر مؤشرات المقاومه والنبض ادوات معروفه لتقييم وظائف الكلي في امراض الكلي ، علي وجه الخصوص الالتهاب النفروزي.تم استخدام تخطيط صدى القلب في وضع الحركة لتحديد قصور عضله القلب ، بينما تم تطبيق تخطيط صدى القلب لتحديد كفاءه البطين الأيسر(LV EF) و GLS(Global longitudinal strain) أخيرًا ، استخدمنا دوبلر تقليديًا ونسيجًا لتحديد نسبة التدفق عبر الإرسال المبكر ومتوسط الحاجز القاعدي الانبساطي المبكر )والحلقي التاجي. annular velocities ) , LV E / e ومتوسط الحاجز القاعدي الانبساطي المبكرهدف البحث .STEتهدف الدراسة الي الكشف عن قصور القلب المبكر عن طريق دراسه تخطيط صدي القلب بتقنيه  |

**المرضي وطريقة العمل: -**

**مكان الدراسة:** سوف تجرى هذه الدراسة بقسم أمراض الباطنة بمستشفيات قنا الجامعية.

**المرضي:** ستشمل هذه الدراسة 100 مريض مصابين بنقص نسبه البروتين بالدم وارتفاع نسبه الزلال بالبول. وسوف يتم استبعاد مرضي المصابين بنسبة ذلال في البول ب معدلات صغيرة ومن هم في عمر اقل من 18 سنة

**وسوف تخضع الحالات للاتي:**

 فحص اكلينيكي شامل بعد أخذ التاريخ المرضي وعمل اشعة تليفزيونية على الكلي وعمل دوبلر كلوى وعمل تحاليل نسبه الزلال في البول وعمل اشعه تلفزيونيه علي القلب عن طريق دراسه تخطيط صدي القلب.