

CANDIDATE DECLARATION

*I, Samir Singh, hereby declare that work, which is being presented in the Thesis entitled “**Status of Thyroid Hormone Profile in Patients with Chronic Kidney Disease**” submitted in fulfillment of the requirements for the degree of **Doctor of Philosophy in Life Sciences (Biochemistry)** is my original work and has not, to the best of my knowledge, been presented by any other individual at any other institution of higher learning.*

This proposal represents an original study; and has not been presented to any other institution for review and approval.

It is also declared that I have taken course work of one semester at School of Life and Basic Sciences, Jaipur National University, Jaipur.

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DEDICATION

*In memory of my beloved father and mother
Late Prof. Shubhachandra Singh & Niirmala Singh*

and

to my wife and daughters

and

to all who believe in me

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I wish to express my sincere gratitude to all the people who helped me to accomplish my task successfully. Their continuous wholehearted support, encouragement, advice and enthusiasm inspired me to complete my Ph.D. thesis work.

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ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
ANOVA	Analysis of Variance
BMI	Body mass index
CAN	Chronic analgesic nephropathy
CAPD	Continuous ambulatory peritoneal dialysis
CCr	Creatinine clearance
CGN	Chronic glomerulonephritis
CKD	Chronic Kidney Disease
CLIA	Chemiluminiscence Immunoassay
CLS	Clinical Laboratory Service
CO	Cardiac output
CRF	Chronic renal failure
CVD	Cardiovascular Disease
DG	Director General
DIT	Di-iodotyrosine
DM	Diabetes Mellitus
DN	Diabetic nephropathy
DoHS	Department of Health Services
ECM	Extracellular grid
eGFR	Estimated Glomerular Filtration Rate
EGIR	European Group for the Study of Insulin Resistance
ESRD	End Stage Renal Disease
fT3	Free Triiodothyronine
fT4	Free Thyroxine
GBM	Glomerular basement membrane

GFR	Glomerular filtration rate
GN	Glomerulonephritis
HD	Hemodialysis
HDL	High-density lipoprotein
hsCRP	Highly sensitive C-reactive protein
HTN	Hypertension
IDF	International Diabetes Federation
IF- α	Interferon-alpha
IL	Interleukin
IPD	In Patient Department
IQC	Internal Quality Control
IRC	Institutional Review Committee
KDOQI	Kidney Disease Outcome Quality Initiative
KISTMCTH	KIST Medical College Teaching Hospital
LMICs	Low and middle income countries
MDRD	Modification of Diet in Renal Disease
MetS	Metabolic syndrome
MIT	Mono-iodotyrosine
NaPi	Na ⁺ /K ⁺ co-transporter
NCEP ATP	National Cholesterol Educational Program Adult Treatment Panel
NHE	Na ⁺ /H ⁺ exchanger
NKF	National Kidney Foundation
NSAID	Non-steroidal anti-inflammatory drugs
NTI	Non-thyroidal Illness
OPD	Out Patient Department
PCT	Proximal convoluted tubule
PD	Peritoneal dialysis

PGDF	Platelet-derived growth factor
PI	Principle Investigator
PRA	Plasma renin activity
PTH	Parathyroid hormone
PTRH	Pituitary Resistance to Thyroid Hormones
RAAS	Renin-angiotensin-aldosterone system
RAS	Renin-angiotensin system
RBF	Renal blood flow
RCC	Renal cell carcinoma
ROD	Renal osteodystrophy
RRT	Renal replacement therapy
rT3	Reverse Triiodothyronine
SD	Standard deviation
SOP	Standard Operating Procedures
T3	Triiodothyronine
T4	Thyroxine
TBG	Thyroxine binding globulin
TBPA	Thyroid binding prealbumin
TH	Thyroid hormone
TNF- α	Tumour Necrosis Factor Alpha
TR	Thyroid hormone nuclear receptor
TRH	Thyrotropin Releasing Hormone
TSH	Thyroid Stimulating Hormone
TT3	Total Thyroxine
TT3	Total Triiodothyronine
WHO	World Health Organization