KALASALINGAM
ACADEMY OF RESEARCH AND EDUCATION
(DEEMED TO BE UNIVERSITY)
Under sec. 3 of UGC Act 1956. Accredited by NAAC with "A" Grade

Anand Nagar, Krishnankoil - 626126, Srivilliputtur (via), Virudhunagar District, Tamilnadu.

APPLICATION FOR ADMISSION TO Ph.D. PROGRAMMES

Date of Application:05-07-2021

Department	BIOTECHNOLOGY	Application No.	202110145
Area of Research	PREGNANCY DISORDERS	Research Mode	FULL TIME

Name :C. RADHALAKSHMI

Date of Birth / Age :19-09-1996 / 24 Years

Gender :FEMALE

Category :OC

e-Mail ID :radhalakshmi1809@gmail.com

Mobile :7708108191

Father's/Husband's Name	S. ANDAL	Father's/Husband's Occupation	DEALINGS BUSINESS
Family Income	2,40,000	Residental Type	RURAL
Birth Place	SRIVILLIPUTHUR	Mother Tongue	TAMIL
Religion	HINDU	Martial Status	SINGLE
Aadhaar No.	972746679323	PAN No.	BWAPR4190R
Physically Challenged	NO	Type of Disability	-

Address for Communication:	Permenant Address:
9/1 GOTHAI NAGAR SRIVILLIPUTHUR VIRUDHUNAGAR DISTRICT TAMILNADU INDIA Pin-626125	9/1 GOTHAI NAGAR SRIVILLIPUTHUR VIRUDHUNAGAR DISTRICT TAMILNADU INDIA Pin-626125

Qualification

Degree	Discipline	College/university	Year Passed	AVG/CGPA	Class	Mode
M.TECH	BIOTECHNOLOGY	KALASALINGAM ACADEMY OF RESEARCH AND EDUCATION	2020	8.6	FIRST CLASS WITHDISTINCTION	REGULAR
B.TECH	BIOTECHNOLOGY	KALASALINGAM ACADEMY OF RESEARCH AND EDUCATION	2018	7.66	FIRST	REGULAR
12TH	BIOLOGY, PHYSICS, CHEMISTRY AND MATHS	M. N. R. D. GIRLS HIGHER SECONDARY SCHOOL	2014	78.4	FIRST	REGULAR
10TH	STATEBOARD	M. N. R. D. GIRLS HIGHER SECONDARY SCHOOL	2012	90	FIRST	REGULAR

Experience

Organization	Designation	Experience From	Experience TO	Work Nature
ANAND INSTITUTE OF HIGHER TECHNOLOGY	ASSISTANT PROFESSOR	2021-04-01	2021-07-31	TEACHING

Payment Details				
Transaction ID	Reference	Date of transaction	Amount	Status
202110145_210706003912	VHD40092340820	06-07-2021	600	SUCCESS

Deciphering the role of C5a-C5aR axis in the sFlt1 production from endometrial stromal cells: Implications in preeclampsia

1. Project Summary

Preeclampsia is a pregnancy related hypertensive disorder. The symptoms of the disorder exhibit only after the 20th week of pregnancy. Untreated preeclampsia leads to eclampsia, a condition of multiple organ failure, coma or even death of mother. The pathophysiology leading to the disorder is currently unknown. Several theories including placental hypoxia, shallow invasion of trophoblasts and immunological pathways have been proposed for development of the disorder. sFlt1 (soluble form of VEGFR1) is the pathogenic molecule which is reported to be elevated during preeclampsia. Stromal cells of uterine endometrium (endometrial stromal cells; ESCs) also produce sFlt1. Decidual cells are differentiated ESCs by decidualization, a process which differentiates the more proliferative and less secretive stromal cells to less proliferative and more secretory decidual cells.

Complement system is important for our immunity. Among complements dissociated products of C3 and C5 namely C3a and C5a also act as anaphylatoxins. In particular C5a has an extensive role in activation of immune cells, pain responses in nerves, allergies etc. In preeclamptic patients, C5a deposition has been elevated in macrophages and C5aR (C5a Receptor) is upregulated in trophoblasts along with increase in the expression of sFlt1 in them. Yet the role of C5a-C5aR in sFlt1 expression remains to be studied in ESCs. This study aims at investigating the role of the C5a-C5aR axis in sFlt1 expression in ESCs. All the studies will be performed in human endometrial stromal cells (hESCs). The cells will be decidualized using excess cAMP. ESCs will be treated with C5a under both decidualized and non decidualized conditions. Initially sFlt1 expression will be quantified by real-time PCR, western blot and ELISA. This will be followed by studying the expressions of proteins including C5aR, transcription factors of sFlt1 gene like TFAP2A, CBP, PPAR-γ etc. Finally, c5aR will be knocked down in hESCs using siRNA followed by the treatment with C5a. Initially, the expression of sFLt1 will be checked followed by other proteins lists.

2. Objectives of the project

1. To determine the role of C5a-C5aR axis in sFlt1 production in normal and decidualized human endometrial stromal cell lines (hESCs).
2. To determine the status of C5aR when treated with retinoic acid and/in combination with c5a and check the sFlt1 production in normal and decidualized hESCs.
3. To check the effect of retinoic acid and C5a on C5aR knocked-down hESCs.

3. Detailed Methodology

3.1 Cell line and culture condition

Human Endometrial Stromal cell line (HESC) will be used for the studies. The cells will be grown in the ESC complete medium composed of DMEM/Hams F12 50/50 (Corning) supplemented with 10% FBS, and 1 % Penicillin/Streptomycin with 1% amphotericin B (Sigma). Cells will be maintained in T-Flasks in a humidified CO_2 incubator and the medium will be renewed every 4 days. For experiments cells will be seeded according to the recommended seeding densities and used for further studies.

3.2. Decidualization experiments

HESCs will be decidualized by treating the cells 0.5 mmol/L cAMP (N6,2′-O-Dibutyryladenosine 3′,5′-cyclic monophosphate sodium salt; Sigma Chemicals) for 12 days in DMEM/High Glucose medium (Hyclone) with 5% charcoal stripped fetal bovine serum and 1 % Penicillin/Streptomycin with 1% amphotericin B (Sigma). The medium will be renewed every 4th day.

3.3 Treatment with C5a, RA and BMS498

HESCs will be cultured as given in 3.1.1 and 3.1.2 followed by the treatment with C5a (optimal concentration), 0.1 μM RA and 1 μM BMS498 (Sigma). The cells will be treated for 96 hours followed by collection of cells and supernatant. Cells will be snap-frozen in liquid nitrogen and supernatant will be stored in -80ºC deep freezer until used for further experiments.

3.4 mRNA isolation

mRNA will be isolated from both the tissues and cells using Trizol. Trizol will be added to the tissues and cells immediately after harvesting and homogenized in a homogenizer. To the obtained sample 200 µL of chloroform will be added and incubated for 2-3 minutes. Then the sample will be centrifuged at 12,000 x g for 15 minutes. Three layers will be separated. The clear aqueous phase will be collected and 1 mL of isopropanol will be added to it. The solution will be incubated for further 10 minutes and the obtained pellet will be washed with 70% ethanol. Later the pellet will be allowed to air dry to remove traces of ethanol and the pellet will be dissolved in nuclease free water. This mRNA will be quantified and stored in -80°C for further use.

3.5 cDNA conversion

mRNA will be converted to cDNA using Superscript III reverse transcriptase (Invitrogen). Isolated mRNA will be added to random primers, dNTPs, 0.1 M DTT, 10x First strand buffer and RNase inhibitor and incubated in a thermocycler according to manufacturer's instructions. Synthesized cDNA will be diluted before subjecting them to qPCR.

3.6 qPCR

SYBR green method will be used to determine the expression of various genes in both villous tissues and cells. The cDNA will be added to SYBR green master mix with primers of a specific gene and CoT values will be obtained. The 2ΔCt method will be used to compare the gene expression pattern between the experiments. Human ribosomal protein L17 will be used as a housekeeping gene.

3.7 Western Blot

The extracellular protein will be concentrated using heparin agarose and eluted in an extraction buffer. The intracellular protein will be isolated by sonication (with protease inhibitors) and will be used. The protein concentration will be determined. Briefly, SDS-Polyacrylamide gel will be prepared and proteins isolated from cells and prepared in Laemmli buffer will be loaded into the gel. The separated bands will be transferred to the nitrocellulose membrane and appropriate primary antibodies will be added. The solution will be incubated in rocker at 4ºC overnight followed by the addition of a secondary antibody. The developed bands will be studied in a Chemdoc. The proteins which will be studied but not limited to are C5aR, TFAP2A, ID1, RAR, PPAR-γ and CBP.

3.1.8 ELISA

The extracellular proteins will be studied by using ELISA (including prolactin and sFlt1). Briefly supernatant will be collected and diluted to an appropriate amount. Supernatant will be added to pre coated 96 well plate (R & D systems), followed by the addition of secondary antibody and substrate according to manufacturer's instructions.

3.1.9 C5aR siRNA knockdown

For knockdown experiments, the provided siRNA will be mixed with lipofectamine (Thermofisher) in a serum free medium and later added to the cells with the diluted final concentration of 10 nM. The expression of sFlt1 and other signaling molecules related with decidualization will be determined.

3.10. Fluorescent Microscopy

HESCs will be grown on coverslips. After treatment with RA, BMS498 and C5a for 96 h, cells will be fixed and permeabilized using 4% paraformaldehyde. The fluorescent labelled antibodies for C5aR will be added and kept in a rocker overnight at 4ºC. The resulting stained cells will be visualized under a fluorescent microscope and analyzed. DAPI will be used as a nuclear stain.

3.11. Flow cytometry

Flow cytometry work will be performed in the laboratory of Dr. M. Amudhan, Assistant Professor, Theni Government Medical College, Theni, TN, India. Immunophenotyping will be performed on the HESCs to identify the populations of interest using the following antibodies: C5aR, RARetc. All experiments in this study will be performed using a 13-color, 4-laser CytoFLEX S Flow Cytometer- Beckman Coulter.

4. Expected output:

The expected outputs are of two parts, one involving c5a and the other involving retinoic acid. We expect c5a to modulate the sFlt1 expression in both normal and decidualized cells. This will be confirmed using c5aR knocked down experiments. The molecular biology experiments will identify the intracellular signaling molecules which are involved in the signaling.

Sl.No: 20200475

KALASALINGAM ACADEMY OF RESEARCH AND EDUCATION

(Deemed to be University)
(Under Section 3 of UGC Act 1956)

Register No.

9918102001

The Board of Management of the Kalasalingam Academy Of Research And Education, hereby makes known that Ms./Mr. .... **RADHALAKSHMI C** .... has been admitted to the Degree of .... **Master of Technology in Biotechnology** ....

he / she having been certified by duly appointed examiners to be qualified to receive the same and having been placed in the .... **First Class with Distinction** ....

at the examination held in .... **May/Jun 2020** ....

Given under the seal

Anand Nagar,
Krishnankoil - 626 126,
Tamil Nadu, India

Date: 03-04-2021

Controller of Examinations   Registrar   Vice - Chancellor

Sl.No: 20180175

KALASALINGAM ACADEMY OF RESEARCH AND EDUCATION

(Deemed to be University)
(Under Section 3 of UGC Act 1956)

Register No.

9914001035

The Board of Management of the Kalasalingam Academy Of Research And Education,

RADHALAKSHMI C

hereby makes known that Ms./Mr. .... has

Bachelor of Technology in Biotechnology

been admitted to the Degree of ....

he / she having been certified by duly appointed examiners to be qualified to receive the same

First Class

and having been placed in the ....

Apr/May 2018

at the examination held in ....

Given under the seal

Anand Nagar,
Krishnankoil - 626 126,
Tamil Nadu, India

Date: 28/10/2018

Controller of Examinations   Registrar   Vice - Chancellor

சான்றிதழ் வ.எண் /
Certificate Sl. No. HSG

8714786

அரசுத் தேர்வுகள் துறை, சென்னை – 600006
DEPARTMENT OF GOVERNMENT EXAMINATIONS, CHENNAI - 600006

மேல்நிலைப் பள்ளிக் கல்வியச் சான்றிதழ்

HIGHER SECONDARY COURSE CERTIFICATE

பொதுக்கல்வி / GENERAL EDUCATION

தமிழ்நாடு அரசின் அதிகாரத்திற்கு உட்பட்டு வழங்கப்படுகிறது
ISSUED UNDER THE AUTHORITY OF THE GOVERNMENT OF TAMILNADU

தேர்வர் **RADHALAKSHMI C** **MAR. 2014** இல் மேல்நிலைப்
பள்ளிக் கல்விப் பொதுத் தேர்வெழுதிக் கீழ்க்காணும் மதிப்பெண்களைப் பெற்றுள்ளார் என்று
சான்றளிக்கப்படுகிறது.

Certified that the above mentioned candidate appeared for the Higher Secondary Public Examination
and obtained the following marks :

பாடம் SUBJECT	கருத்தியல் THEORY 150	செய்முறை PRAC. 50	பெற்ற மதிப்பெண்கள் 200க்கு MARKS OBTAINED FOR 200		
TAMIL			179	ONE SEVEN NINE	(P)
ENGLISH			168	ONE SIX EIGHT	(P)
PHYSICS	090	050	140	ONE FOUR ZERO	(P)
CHEMISTRY	110	050	160	ONE SIX ZERO	(P)
BIOLOGY	097	050	147	ONE FOUR SEVEN	(P)
MATHEMATICS			147	ONE FOUR SEVEN	(P)
மொத்த மதிப்பெண்கள் TOTAL MARKS		0941	ZERO NINE FOUR ONE		(PASS)

பிறந்த தேதி / DATE OF BIRTH	பதிவெண் / REGISTER NO.	ம.ஆ.ப.குறியீட்டெண் & நாள் / TMR CODE NO.& DATE	
18.09.96	126751	G202420	09.05.2014

பயிற்று மொழி / MEDIUM OF INSTRUCTION	பாடத்தொகுப்பு எண் / GROUP CODE
ENGLISH	103

பள்ளியின் பெயர் / NAME OF THE SCHOOL

(14 \ 0051) M N R D GHSS SRIVILLIPUTHUR

Radhalakshmi
தோராண ஒப்பம்
CANDIDATE'S SIGNATURE

செயலாளர்
மாநிலப் பள்ளித் தேர்வுகள் குழுமம்(மேல்நிலை) தமிழ்நாடு
SECRETARY
STATE BOARD OF SCHOOL EXAMINATIONS(HR SEC), TAMILNADU

அரசுத் தேர்வுகள் துறை, சென்னை – 600 006
DEPARTMENT OF GOVERNMENT EXAMINATIONS, CHENNAI - 600 006

இடைநிலைப் பள்ளி இறுதி வகுப்புச் சான்றிதழ்
SECONDARY SCHOOL LEAVING CERTIFICATE

புதிய பாடத்திட்டம் / NEW SYLLABUS

பத்தாம் வகுப்பு / X STANDARD

தமிழ்நாடு அரசின் அதிகாரத்திற்கு உட்பட்டு வழங்கப்படுகிறது
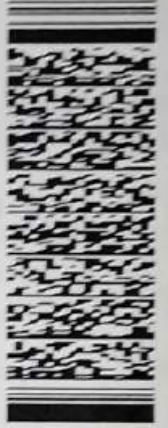### ISSUED UNDER THE AUTHORITY OF THE GOVERNMENT OF TAMILNADU

தேர்வர்   **RADHALAKSHMI C**   **APR 2012** இல் இடைநிலைப்
பள்ளி இறுதி வகுப்புச் சான்றிதழ் பொதுத் தேர்வெழுதிக் கீழ்க்காணும் மதிப்பெண்களைப் பெற்றுள்ளார் என்று
சான்றளிக்கப்படுகிறது.
Certified that the above mentioned candidate appeared for the Secondary School Leaving Certificate
Public Examination and obtained the following marks :

பாடம் SUBJECT		பெரும அளவு மதிப்பெண்கள் MAX. MARKS	பெற்ற மதிப்பெண்கள் MARKS OBTAINED	
தமிழ் TAMIL		100	088	ZERO EIGHT EIGHT
ஆங்கிலம் ENGLISH		100	083	ZERO EIGHT THREE
கணிதம் MATHEMATICS		100	091	ZERO NINE ONE
அறிவியல்* SCIENCE*	கருத்தியல் THEORY 069	100	094	ZERO NINE FOUR
	செய்முறை PRACTICAL 025			
சமூக அறிவியல் SOCIAL SCIENCE		100	094	ZERO NINE FOUR
மொத்தம் TOTAL		500	450	FOUR FIVE ZERO

பிறந்த தேதி / DATE OF BIRTH	பதிவெண் / REGISTER NO.	ம.அ.பகுறிப்பீட்டெண் & நாள் / TMR CODE NO & DATE	
18.09.96	1159608	G5148065	04.06.2012

பயிற்று மொழி / MEDIUM OF INSTRUCTION

ENGLISH

பள்ளியின் பெயர் / NAME OF THE SCHOOL

M N R D GHSS SRIVILLIPUTHUR

இடைநிலைப் பள்ளி இறுதி வகுப்புச் சான்றிதழ் பொதுத் தேர்வில் தேர்ச்சி பெற ஒவ்வொரு பாடத்திலும், 100-க்குக் குறைந்த அளவு முப்பத்தைந்து
மதிப்பெண்கள் பெறுதல் வேண்டும். அறிவியல் பாடத்தில்* கருத்தியலில் 75-க்கு 20 மதிப்பெண்களும் மற்றும் செய்முறைத் தேர்வில் 25-க்கு 15
மதிப்பெண்களும் பெறுதல் வேண்டும். இது பகுதி முறையில் தேர்வெழுதித் தேர்ச்சி பெறுவதற்கும் பொருந்தும்.

A PASS IN THE SSLC PUBLIC EXAMINATION REQUIRES A MINIMUM OF THIRTY FIVE PERCENT OF MARKS IN EACH SUBJECT. IN
SCIENCE SUBJECT* 20 MARKS OUT OF 75 IN THEORY AND 15 MARKS OUT OF 25 IN PRACTICAL IS REQUIRED. THIS INCLUDES
PASSING UNDER THE COMPARTMENTAL SYSTEM ALSO.

C.Radha lakshmi

தேர்வரின் ஒப்பம்
CANDIDATE'S SIGNATURE

செயலாளர்
மாநிலப் பள்ளித் தேர்வுகள் குழுமம் (இடைநிலை), தமிழ்நாடு
SECRETARY
STATE BOARD OF SCHOOL EXAMINATIONS(SEC), TAMILNADU

KALASALINGAM UNIVERSITY
(Kalasalingam Academy of Research and Education)
(Under Section 3 of UGC Act 1956)
Anand Nagar, Krishnankoil – 626 126, Tamil Nadu, INDIA

Sl. No 1400291

GRADE CARD

B.Tech Degree Examinations Nov/Dec 2014

Name of the Student:	RADHALAKSHMI.C	Register №	9914001035
Branch:	Biotechnology	Batch:	2014-2018

SEM	COURSE CODE	NAME OF THE COURSE	ATT. CODE	CREDITS	GRADE
		CGPA COURSES			
1	CHY106	Chemistry	H	3	B
1	CIV101	Basic Civil and Mechanical Engineering	H	4	D
1	HSS101	English for Technical Communication I	H	2	B
1	MAT103	Mathematics I	H	3	B
1	MEC101	Engineering Drawing	H	2	B
1	MEC181	Workshop	H	1	A
1	PHY131	Physics I	H	3	B
1	PHY183	Physics Laboratory	H	1	S

CGPA CREDITS				NON-CGPA CREDITS	
Credits Earned	19	SGPA : 7.74		Credits Earned	0
Cumulative Credits Earned	19	CGPA : 7.74		Cumulative Credits Earned :	0

Please see overleaf for details

Place : Krishnankoil
Date : 09/02/2015

Controller of Examinations

KALASALINGAM UNIVERSITY

(Kalasalingam Academy of Research and Education)
(Under Section 3 of UGC Act 1956)
Anand Nagar, Krishnankoil – 626 126, Tamil Nadu, INDIA

Sl. № : 1401864

GRADE CARD

B.Tech Degree Examinations Apr/May 2015

Name of the Student: **RADHALAKSHMI.C** Register № 9914001035

Branch: **Biotechnology** Batch: 2014-2018

SEM	COURSE CODE	NAME OF THE COURSE	ATT. CODE	CREDITS	GRADE
		CGPA COURSES			
2	BIT103	Cell Biology and Genetics	H	3	A
2	CHY102	Environmental Sciences	H	2	B
2	CHY182	Chemistry Laboratory	H	1	A
2	CSE102	Programming Languages	H	2	C
2	CSE181	Programming Languages Laboratory	H	1	B
2	EEE101	Basic Electrical and Electronics Engineering	H	4	D
2	HSS036	Quantitative Aptitude	H	1	B
2	HSS102	English for Technical Communication II	H	2	B
2	MAT104	Mathematics II	H	3	B
2	PHY132	Physics II	H	3	B

CGPA CREDITS				NON-CGPA CREDITS	
Credits Earned	22	SGPA:	7.73	Credits Earned	0
Cumulative Credits Earned :	41	CGPA:	7.73	Cumulative Credits Earned :	0

Please see overleaf for details

Place : Krishnankoil

Date : 26/06/2015

Controller of Examinations

KALASALINGAM UNIVERSITY

(Kalasalingam Academy of Research and Education)
(Under Section 3 of UGC Act 1956)
Anand Nagar, Krishnankoil – 626 126, Tamil Nadu, INDIA

SI № :1403857

GRADE CARD

B.Tech Degree Examinations Nov/Dec 2015

Name of the Student:	RADHALAKSHMI.C	Register №	9914001035
Branch:	Biotechnology	Batch:	2014-2018

SEM	COURSE CODE	NAME OF THE COURSE	ATT. CODE	CREDITS	GRADE
		CGPA COURSES			
3	BIT204	Microbiology	H	3	A
3	BIT209	Molecular Biology	H	3	B
3	BIT211	Principles of Biochemistry	H	3	C
3	BIT214	Analytical Techniques in Biotechnology	H	3	C
3	BIT281	Biochemistry Laboratory	H	2	A
3	BIT283	Microbiology Laboratory	H	2	C
3	BIT286	Cell and Molecular Biology Laboratory	H	2	A
3	CHE253	Bioprocess Calculations	H	4	C
3	HSS037	Soft Skills II	9	1	E
3	MAT202	Mathematics III	H	3	C

CGPA CREDITS				NON-CGPA CREDITS		
Credits Earned :	26	SGPA :	7.58	Credits Earned :		0
Cumulative Credits Earned :	67	CGPA :	7.67	Cumulative Credits Earned :		0

Please see overleaf for details

Place : Krishnankoil
Date : 02/01/2016

Controller of Examinations

KALASALINGAM UNIVERSITY

(Kalasalingam Academy of Research and Education)
(Under Section 3 of UGC Act 1956)
Anand Nagar, Krishnankoil – 626 126, Tamil Nadu, INDIA

Sl. № : 1405707

GRADE CARD

B.Tech Degree Examinations Apr/May 2016

Name of the Student: RADHALAKSHMI.C

Branch: Biotechnology

Register № 9914001035

Batch: 2014-2018

SEM	COURSE CODE	NAME OF THE COURSE	ATT. CODE	CREDITS	GRADE
		CGPA COURSES			
4	BIT203	Bioenergetics and Metabolism	H	4	C
4	BIT205	Industrial Biotechnology	H	3	B
4	BIT215	Bioinformatics and Computational Biology	H	4	C
4	BIT216	Protein Science and Engineering	H	3	C
4	BIT288	Computational Biology Laboratory	H	2	S
4	CHE252	Unit Operations	H	4	C
4	CHE291	Chemical Engineering Laboratory	H	2	A
4	HSS006	Professional Ethics	9	3	C
4	HSS038	Soft Skills	H	1	C

CGPA CREDITS				NON-CGPA CREDITS	
Credits Earned	: 26	SGPA : 7.50		Credits Earned	: 0
Cumulative Credits Earned :	93	CGPA : 7.62		Cumulative Credits Earned :	0

Please see overleaf for details

Place : Krishnankoil
Date : 14/06/2016

Controller of Examinations

KALASALINGAM UNIVERSITY

(Kalasalingam Academy of Research and Education)
(Under Section 3 of UGC Act 1956)
Anand Nagar, Krishnankoil – 626 126, Tamil Nadu, INDIA

Sl. № : 1409302

GRADE CARD

B.Tech Degree Examinations Nov/Dec 2016

Name of the Student: RADHALAKSHMI.C

Register № 9914001035

Branch: Biotechnology

Batch: 2014-2018

SEM	COURSE CODE	NAME OF THE COURSE	ATT. CODE	CREDITS	GRADE
		CGPA COURSES			
5	BIT303	Bioprocess Principles	9	4	B
5	BIT304	Genetic Engineering	H	4	C
5	BIT309	Food Processing and Technology	H	3	C
5	BIT322	Enzyme Technology	H	4	B
5	BIT387	Bioprocess Laboratory	H	2	A
5	BIT388	Genetic Engineering Laboratory	H	2	A
5	BIT398	Community Service Project Phase I	H	1	B
5	CHE354	Mass Transfer	H	3	D
5	CHE357	Reaction Engineering for Biotechnologists	H	3	B
		Non-CGPA COURSES			
5	NCG1005	Extracurricular Activities		3	Pass
5	NCG2001	Industrial Training - I		3	Pass
5	NCG2004	Cocurricular Activities		3	Pass

CGPA CREDITS				NON-CGPA CREDITS	
Credits Earned	: 26	SGPA : 7.65		Credits Earned	: 9
Cumulative Credits Earned : 119		CGPA : 7.63		Cumulative Credits Earned : 9	

Please see overleaf for details

Place : Krishnankoil

Date : 31.12.2016

Controller of Examinations

KALASALINGAM UNIVERSITY

(Kalasalingam Academy of Research and Education)
(Under Section 3 of UGC Act 1956)
Anand Nagar, Krishnankoil – 626 126, Tamil Nadu, INDIA

Sl. № 1700336

GRADE CARD

B.Tech Degree Examinations Apr/May 2017

Name of the Student: RADHALAKSHMI.C

Register № 9914001035

Branch: Biotechnology

Batch: 2014-2018

SEM	COURSE CODE	NAME OF THE COURSE	ATT. CODE	CREDITS	GRADE
		CGPA COURSES			
6	BIT305	Biochemical Engineering	H	4	C
6	BIT306	Immunology	H	4	D
6	BIT389	Immunology Laboratory	H	2	S
6	BIT390	Biochemical Engineering Laboratory	H	2	S
6	BIT399	Community Service Project-Phase II	H	2	S
6	BIT409	Cancer Biology	H	3	B
6	CHE312	Electrochemical Engineering	H	3	D
6	CIV416	Industrial Waste Water Management	H	3	C
6	HSS002	Engineering Management	H	3	D
		Non-CGPA COURSES			
6	NCG1004	National Service Scheme		3	Pass
6	NCG2005	International Languages		3	Pass

CGPA CREDITS				NON-CGPA CREDITS	
Credits Earned :	26	SGPA :	7.42	Credits Earned :	6
Cumulative Credits Earned :	145	CGPA :	7.59	Cumulative Credits Earned :	15

Please see overleaf for details

Place : Krishnankoil

Date : 07/06/2017

Controller of Examinations

KALASALINGAM UNIVERSITY

(Kalasalingam Academy of Research and Education)
(Under Section 3 of UGC Act 1956)
Anand Nagar, Krishnankoil – 626 126, Tamil Nadu, INDIA

Sl. No : 1708883

GRADE CARD

B.Tech Degree Examinations Nov/Dec 2017

Name of the Student: RADHALAKSHMI.C

Register № 9914001035

Branch: Biotechnology

Batch: 2014-2018

SEM	COURSE CODE	NAME OF THE COURSE	ATT. CODE	CREDITS	GRADE
		CGPA COURSES			
7	BIT401	Animal Biotechnology	9	4	B
7	BIT402	Plant Biotechnology	9	3	C
7	BIT403	Downstream Processing	H	4	B
7	BIT419	Molecular Diagnostics and Therapeutics	H	3	C
7	BIT424	Clinical Trials and Management	9	3	B
7	BIT491	Downstream Processing Laboratory	H	2	A
7	EEE407	Electric Energy Generation,Utilization and Conservation	H	3	C
7	HSS001	Total Quality Management	9	3	C

CGPA CREDITS				NON-CGPA CREDITS	
Credits Earned	: 25	SGPA : 7.60		Credits Earned	0
Cumulative Credits Earned : 170		CGPA 7.59		Cumulative Credits Earned : 15	

Please see overleaf for details

Place : Krishnankoil
Date : 10/01/2018

Controller of Examinations

KALASALINGAM UNIVERSITY

(Kalasalingam Academy of Research and Education)

(Under Section 3 of UGC Act 1956)

Anand Nagar, Krishnankoil – 626 126, Tamil Nadu, INDIA

GRADE CARD

B.Tech Degree Examinations Apr/May 2018

Sl. № : 171193

Name of the Student: RADHALAKSHMI C

Register № 9914001035

Branch: Biotechnology

Batch: 2014-2018

SEM	COURSE CODE	NAME OF THE COURSE	ATT. CODE	CREDITS	GRADE
		CGPA COURSES			
8	BIT406	IPR in Biotechnology	H	3	C
8	BIT499	Project Work	9	10	A
		Non-CGPA COURSES			
8	NCG2002	Industrial Lectures		3	Pass

CGPA CREDITS				NON-CGPA CREDITS	
Credits Earned	: 13	SGPA : 8.54		Credits Earned	: 3
Cumulative Credits Earned : 183		CGPA : 7.66		Cumulative Credits Earned : 18	

Please see overleaf for details

Place : Krishnankoil

Date : 08/06/2018

Controller of Examinations

KALASALINGAM
ACADEMY OF RESEARCH AND EDUCATION
(Deemed to be University)
(Under Section 3 of UGC Act 1956)
Anand Nagar, Krishnankoil - 626 126, Tamil Nadu, INDIA

Sl. № : AUEP180006

GRADE CARD

M.Tech. Degree Examinations Nov/Dec 2018

Name of the Student:	RADHALAKSHMI C	Register № :	9918102001
Branch:	Biotechnology	Batch:	2018-2020

SEM	COURSE CODE	NAME OF THE COURSE	TYPE OF COURSE	ATT. CODE	CREDITS	GRADE
		CGPA COURSES				
1	BIT18R5001	Bioprocess and Bioseparation Technology	T	H	3.0	A
1	BIT18R5002	Advanced Bioinformatics	T	H	3.0	A
1	BIT18R5003	Immunotechnology	T	H	3.0	A
1	BIT18R5013	Biofuels	T	H	3.0	A
1	BIT18R5081	Advanced Immunology Laboratory	L	H	2.0	S
1	BIT18R5082	Bioinformatics and Drug Design Laboratory	L	9	2.0	S
1	MAT18R5002	Statistics and Computational Techniques	T	H	3.0	B

CGPA CREDITS				NON-CGPA CREDITS	
Credits Earned	19.0	SGPA	9.05	Credits Earned	0
Cumulative Credits Earned :	19.0	CGPA :	9.05	Cumulative Credits Earned :	0

Please see overleaf for details

Place : Krishnankoil

Date : 22/01/2019

Controller of Examinations

KALASALINGAM
ACADEMY OF RESEARCH AND EDUCATION
(Deemed to be University)
(Under Section 3 of UGC Act 1956)
Anand Nagar, Krishnankoil - 626 126, Tamil Nadu, INDIA

Sl. № : AUEP**180569**

GRADE CARD

M.Tech. Degree Examinations Apr/May 2019

Name of the Student: **RADHALAKSHMI C**

Register № : 9918102001

Branch: Biotechnology

Batch: 2018-2020

SEM	COURSE CODE	NAME OF THE COURSE	TYPE OF COURSE	ATT. CODE	CREDITS	GRADE
		CGPA COURSES				
2	BIT18R5004	Genomics and Proteomics	T	H	3.0	A
2	BIT18R5005	Bioprocess Modeling and Simulation	T	H	3.0	B
2	BIT18R5006	Research Methodology	T	H	1.0	B
2	BIT18R5011	Microbial Technology	T	H	3.0	A
2	BIT18R5083	Recombinant DNA Technology Laboratory	L	H	2.0	S
2	BIT18R5084	Bioprocess Engineering Laboratory	L	H	2.0	A
2	BIT18R6006	Stem Cell Technology	T	9	3.0	A
2	BIT18R6097	Mini Project	L	9	2.0	A

CGPA CREDITS			NON-CGPA CREDITS	
Credits Earned :	19.0	SGPA : 8.89	Credits Earned :	0
Cumulative Credits Earned :	38.0	CGPA 8.97	Cumulative Credits Earned :	0

Please see overleaf for details

Place : Krishnankoil

Date : 02/07/2019

Controller of Examinations

KALASALINGAM
ACADEMY OF RESEARCH AND EDUCATION
(Deemed to be University)
(Under Section 3 of UGC Act 1956)
Anand Nagar, Krishnankoil - 626 126, Tamil Nadu, INDIA

GRADE CARD

M.Tech. Degree Examinations Nov/Dec 2019

Name of the Student: **RADHALAKSHMI C**

Branch: Biotechnology

Register № : 9918102001

Batch: 2018-2020

SEM	COURSE CODE	NAME OF THE COURSE	TYPE OF COURSE	ATT. CODE	CREDITS	GRADE
		CGPA COURSES				
3	BIT18R6002	Drug Design and Targeting	T	H	3.0	A
3	BIT18R6003	Metabolic Regulation and Metabolomics	T	H	3.0	A
3	BIT18R6098	Project Phase- I	L	H	10.0	S
3	MEC18R6052	Safety in Construction	T	H	3.0	C
		AUDIT COURSES				
	AUD18R5001	English for Research Paper Writing				Pass
	AUD18R5002	Pedagogy Studies				Pass

CGPA CREDITS				NON-CGPA CREDITS		
Credits Earned	19.0	SGPA :	9.21	Credits Earned		0
Cumulative Credits Earned :	57.0	CGPA :	9.05	Cumulative Credits Earned :		0

Please see overleaf for details

Place : Krishnankoil

Date : 21/01/2020

Controller of Examinations

KALASALINGAM
ACADEMY OF RESEARCH AND EDUCATION
(Deemed to be University)
(Under Section 3 of UGC Act 1956)
Anand Nagar, Krishnankoil - 626 126, Tamil Nadu, INDIA

Sl. № : AUEP **182401**

GRADE CARD

M.Tech. Degree Examinations May/Jun 2020

Name of the Student: **RADHALAKSHMI C**

Register № : 9918102001

Branch: Biotechnology

Batch: 2018-2020

SEM	COURSE CODE	NAME OF THE COURSE	TYPE OF COURSE	ATT. CODE	CREDITS	GRADE
		CGPA COURSES				
4	BIT18R6099	PROJECT PHASE II	Project	8	16.0	C

CGPA CREDITS			NON-CGPA CREDITS	
Credits Earned	16.0	SGPA : 7.00	Credits Earned :	0
Cumulative Credits Earned :	73.0	CGPA : 8.60	Cumulative Credits Earned :	0

Please see overleaf for details

Place : Krishnankoil

Date : 03/08/2020

Controller of Examinations

KALASALINGAM
Academy of Research and Education
DEEMED TO BE UNIVERSITY
(Under Section 3 of UGC Act 1956)
Anand Nagar, Krishnankoil - 626 126.
Srivilliputtur (Via), Virudhunagar (Dt), Tamil Nadu, India

TRANSFER CERTIFICATE

1. Name of the pupil : RADHALAKSHMI C

2. Date of Birth : 18/09/1996

3. Nationality, Religion and Caste : Indian, Hindu and Brahmin

4. Date of joining to the university : 06/08/2018

5. Course Details

    a) Registration no. : 9918102001

    b) Degree : M.Tech.

    c) Specialization : Biotechnology

    d) Batch : 2018 - 2020

6. Whether qualified for promotion to a higher class : Yes (Refer the Grade Sheet)

7. Is there any break during the studies (if so specify the period) : No

8. Whether the pupil has paid all the fees to the University : Yes

9. Date on which application for TC was made : 31/07/2020

10. Date on which actually the pupil left the university : 09/05/2020

11. Medium of instruction : English

Date: 31/07/2020

REGISTRAR

आयकर विभाग
INCOME TAX DEPARTMENT

भारत सरकार
GOVT. OF INDIA

स्थायी लेखा संख्या कार्ड
Permanent Account Number Card

BWAPR4190R

नाम/ Name
RADHALAKSHMI C

पिता का नाम/ Father's Name
CHITHAMBARAKRISHNAN

जन्म की तारीख/ Date of Birth
18/09/1996

C·Radhalakshmi
हस्ताक्षर/ Signature

09102017

ராதாலட்சுமி சி
Radhalakshmi C
பிறந்த நாள்/DOB: 18/09/1996
பெண்/ FEMALE

9727 4667 9323
VID : 9101 4636 3757 9439

எனது ஆதார், எனது அடையாளம்

முகவரி:
D/O சிதம்பரகிருஷ்ணன், 9/1, கோதை நகர்,
மாவட்ட நீதிமன்றம் அருகில், ஸ்ரீவில்லிலிபுத்தூர்,
விருதுநகர்,
தமிழ நாடு - 626125

Address:
D/O Chidambarakrishnan, 9/1, GOTHAI
NAGAR, NEAR DISTRIC COURT,
Srivilliputhur, Virudhunagar,
Tamil Nadu - 626125

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