ANNEXURE - 1
Table Annexure 1. The baseline characteristic of liver and kidney function test and lipoprotein cholesterol profile of diabetic, non-diabetic and prone chances for diabetes subjects are illustrated in the table with mean ± SD: The data are within normal limit and there is no any clinically significant elevation. The above parameters are not discussed in the chapters due to thesis and time limit.

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Diabetic subjects</th>
<th>Non-diabetic subjects</th>
<th>PCD subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subjects (n)</td>
<td>39</td>
<td>65</td>
<td>36</td>
</tr>
<tr>
<td>Age (Mean)</td>
<td>55.52 ± 11.01</td>
<td>40.34 ± 13.88</td>
<td>39.15 ± 14.47</td>
</tr>
<tr>
<td>Male (%)</td>
<td>55</td>
<td>60</td>
<td>68</td>
</tr>
</tbody>
</table>

**Liver function test**

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Diabetic subjects</th>
<th>Non-diabetic subjects</th>
<th>PCD subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bilirubin Tot. (Mean)</td>
<td>1.22 ± 0.16</td>
<td>0.75 ± 0.015</td>
<td>0.95 ± 0.05</td>
</tr>
<tr>
<td>Total Protein (Mean)</td>
<td>6.9 ± 0.28</td>
<td>76.21 ± 1.12</td>
<td>7.12 ± 1.015</td>
</tr>
<tr>
<td>Albumin (Mean)</td>
<td>4.02 ± 0.21</td>
<td>4.6 ± 1.24</td>
<td>4.35 ± 1.12</td>
</tr>
<tr>
<td>Alkaline phosphatase (Mean)</td>
<td>244.2 ± 51.25</td>
<td>193.85 ± 22.18</td>
<td>217.6 ± 32.15</td>
</tr>
<tr>
<td>SGOT (Mean)</td>
<td>34.2 ± 3.32</td>
<td>25.33 ± 2.14</td>
<td>27.21 ± 2.67</td>
</tr>
<tr>
<td>SGPT (Mean)</td>
<td>28.2 ± 4.36</td>
<td>25.12 ± 3.65</td>
<td>26.45 ± 4.25</td>
</tr>
</tbody>
</table>

**Kidney Function Test**

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Diabetic subjects</th>
<th>Non-diabetic subjects</th>
<th>PCD subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creatinine (Mean)</td>
<td>1.095 ± 0.20</td>
<td>0.93 ± 0.15</td>
<td>1.012 ± 0.55</td>
</tr>
<tr>
<td>Urea (Mean)</td>
<td>26.4 ± 7.76</td>
<td>22.16 ± 5.76</td>
<td>24.17 ± 6.12</td>
</tr>
<tr>
<td>Uric acid (Mean)</td>
<td>4.86 ± 0.53</td>
<td>5.5 ± 1.02</td>
<td>5.12 ± 0.98</td>
</tr>
<tr>
<td>Calcium (Mean)</td>
<td>8.83 ±0.24</td>
<td>10.86 ± 1.67</td>
<td>9.52 ± 1.35</td>
</tr>
<tr>
<td>Phosphorous (Mean)</td>
<td>3.89 ± 0.29</td>
<td>3.20 ± 0.12</td>
<td>3.51 ± 0.18</td>
</tr>
<tr>
<td>Sodium (Mean)</td>
<td>138.1 ± 1.66</td>
<td>136.5 ± 0.75</td>
<td>137.2 ± 1.12</td>
</tr>
<tr>
<td>Potassium (Mean)</td>
<td>4.34 ± 0.32</td>
<td>3.83 ± 0.15</td>
<td>4.12 ± 0.25</td>
</tr>
<tr>
<td>Chloride (Mean)</td>
<td>101.9 ± 0.87</td>
<td>96.53 ± 1.25</td>
<td>100.5 ± 1.75</td>
</tr>
</tbody>
</table>

**Lipoprotein Cholesterol Profile**

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Diabetic subjects</th>
<th>Non-diabetic subjects</th>
<th>PCD subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>LDL (Mean)</td>
<td>112.2 ± 31.47</td>
<td>98.66 ± 10.08</td>
<td>102.5 ±11.25</td>
</tr>
<tr>
<td>VLDL (Mean)</td>
<td>31.6 ± 16.21</td>
<td>25.54 ± 08.15</td>
<td>28.8 ± 09.15</td>
</tr>
<tr>
<td>HDL (Mean)</td>
<td>37 ± 2.44</td>
<td>56 ± 2.30</td>
<td>49 ± 3.25</td>
</tr>
</tbody>
</table>
Table Annexure 2. The baseline characteristic of patients of diabetes with CKD and ND-CKD. The parameters are liver and kidney function test along with lipoprotein cholesterol parameters are illustrated in the table as mean ± SD. The above parameters are not discussed in the chapters due to thesis and time limit.

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Diabetic CKD subjects</th>
<th>Non-diabetic CKD subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subjects (n)</td>
<td>39</td>
<td>65</td>
</tr>
<tr>
<td>Age (Mean)</td>
<td>55.52 ± 11.01</td>
<td>40.34 ± 13.88</td>
</tr>
<tr>
<td>Male (%)</td>
<td>55</td>
<td>60</td>
</tr>
<tr>
<td><strong>Liver function test</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bilirubin Tot. (Mean)</td>
<td>0.629 ± 0.27</td>
<td>0.94 ± 0.52</td>
</tr>
<tr>
<td>Total Protein (Mean)</td>
<td>6.53 ± 0.89</td>
<td>6.21 ± 1.0</td>
</tr>
<tr>
<td>Albumin (Mean)</td>
<td>3.56 ± 0.85</td>
<td>3.10 ± 0.71</td>
</tr>
<tr>
<td>Alkaline phosphatase (Mean)</td>
<td>112.4 ± 55.57</td>
<td>93.87 ± 52.11</td>
</tr>
<tr>
<td>SGOT (Mean)</td>
<td>18.6 ± 9.97</td>
<td>34.33 ± 27.94</td>
</tr>
<tr>
<td>SGPT (Mean)</td>
<td>19.8 ± 13.22</td>
<td>32.91 ± 35.65</td>
</tr>
<tr>
<td><strong>Kidney Function Test</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creatinine (Mean)</td>
<td>5.51 ± 2.08</td>
<td>6.63 ± 3.72</td>
</tr>
<tr>
<td>Urea (Mean)</td>
<td>95 ± 46.89</td>
<td>122.91 ± 59.07</td>
</tr>
<tr>
<td>Uric acid (Mean)</td>
<td>6.06 ± 1.82</td>
<td>8.9 ± 3.02</td>
</tr>
<tr>
<td>Calcium (Mean)</td>
<td>8.3 ± 1.21</td>
<td>7.86 ± 0.67</td>
</tr>
<tr>
<td>Phosphorous (Mean)</td>
<td>4.68 ± 1.47</td>
<td>5.50 ± 1.12</td>
</tr>
<tr>
<td>Sodium (Mean)</td>
<td>138.4 ± 6.76</td>
<td>135 ± 4.75</td>
</tr>
<tr>
<td>Potassium (Mean)</td>
<td>4.4 ± 0.93</td>
<td>4.83 ± 0.75</td>
</tr>
<tr>
<td>Chloride (Mean)</td>
<td>105.8 ± 3.32</td>
<td>106.63 ± 3.95</td>
</tr>
<tr>
<td><strong>Lipoprotein Cholesterol Profile</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LDL (Mean)</td>
<td>69 ± 16.96</td>
<td>93.66 ± 18.87</td>
</tr>
<tr>
<td>VLDL (Mean)</td>
<td>30.55 ± 8.67</td>
<td>29.54 ± 4.15</td>
</tr>
<tr>
<td>HDL (Mean)</td>
<td>27.5 ± 6.29</td>
<td>36 ± 7.40</td>
</tr>
</tbody>
</table>
ANNEXURE 3

1. Questionnaire cum Consent Form

2. Permission Letters
Questionnaire cum Proforma and consent form

Name:

OP / IP No. :

Address:

Contact Number: Date of Birth:

Age/Sex:  Male  Female

Background

1. Ethnic region

2. Highest Education:
   - Illiterate
   - PSC
   - MSC
   - HSC
   - IM/Diploma
   - UG/PG
   - Professional/ Honours

3. Occupation: (unemployed, labour, staff, business, semi-professional and professional)
   - UE
   - USW
   - SSW
   - SW
   - Clerical/Shop Owner/Farmer
   - Semi Profession
   - Profession

4. Family Income per month:
   - 3000
   - 5000
   - 10000
   - 15000
   - 20000
   - 50k – 1 lakh & above

5. Are you currently:
   - Single
   - Married
   - Widowed

6. Please indicate below which chronic condition you have:
   - DMT2
   - DMT1
   - High Cholesterol
   - High BP
   - Heart disease
   - Type of heart disease:
   - Lung disease
   - Type of lung disease:
   - Kidney disease
   - Type of kidney disease:
   - Other chronic conditions specify:

History:  Diagnosis: Diabetic / Non-Diabetic

© Designed and developed by Mr. Mohammed Farhan Katheem, Senior Research Fellow, Bio-Medical Wing, Bio-Products Laboratory, CLRI Diabetic Research Wing, SP Road, Adyar, Chennai, TN, India – 600020.
Duration of Diabetic:

Whether Parents are diabetes? Father / Mother; Duration
Whether children's are diabetes? 1. Son - Duration
2. Daughter – Duration

Hypertension: Yes / No; Duration and levels:
BP:
Kidney Disease:
Stages of Disease: CKD III / IV / V
Whether the Patient is Retinopathy: Yes/No
If yes state whether it is diabetic/hypertension retinopathy?

**Habits:**
At the present time, do you following habits:

<table>
<thead>
<tr>
<th>Habits</th>
<th>Not at all</th>
<th>Occasionally</th>
<th>Daily</th>
<th>Total Duration Over life time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking (Beedi/Cigaretes)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drinking (Alcohol)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tobacco chewing (Panprag/tobacco leaves)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Physical activities:**
1. Walk for exercise:
   - Daily  ☐  Alternate days  ☐  Weekly ☐  Monthly ☐  Occasionally

**Food Habits:**
1. You are belongs to Veg/ Non-veg?
2. If your non-veg you will how many times in a month?
   - Daily  ☐  Weekly  ☐  15 days once  ☐  Monthly  ☐  Occasionally
Medications:
1. In the past week did you take pills for diabetes? □ Yes □ No □ Don’t know
   Please specify the name(s) of the diabetic pills you took:
2. In the past week did you get insulin injections? □ Yes □ No □ Don’t know
   How many units per day………
3. In the past week did you take pills for high BP? Yes No Don’t know
   Please specify the name(s) of the BP pills you took:
4. In the past week did you take pills for Cholesterol? □ Yes □ No □ Don’t know
   Please specify the name(s) of the Cholesterol pills you took:
5. In the past week did you take pills for Heart disease? □ Yes □ No □ Don’t know
   Please specify the name(s) of the Heart disease pills you took:
6. In the past week did you take pills for CKD (Kidney Disease)? □ Yes □ No □ Don’t know
   Please specify the name(s) of the Heart disease pills you took:

Health monitoring:
1. How many times you’re visiting your doctor in month?
   □ Weekly □ 15 days once □ Monthly □ Occasionally
2. What is your status of your health is:
   □ Excellent □ Very good □ Good □ Fair □ Poor
3. We are interested in learning whether or not you are affected by obesity? If yes rate your
   obesity: how long:----
   □ Not at all □ Mildly □ Moderately □ Severely □ Chronic obesity
4. We are interested in learning whether or not you are affected by pain? If yes rate your
   pain: how long:----
   □ Not at all □ Mildly □ Moderately □ Severely □ Chronic pain
5. We are interested in learning whether or not you are affected by Shortness of breath? If
   yes rate your Shortness of breath: how long:----
   □ Not at all □ Mildly □ Moderately □ Severely □ Chronic fatigue
6. Whether your hospitalized for last six months: Yes/No
   If yes how many days? For what reason you’re hospitalized?
**Investigations:**

1. **Diabetic Profile:**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>AC: mgs/dl</td>
<td>RBS (mgs/dl)</td>
<td>HbA1c %</td>
</tr>
<tr>
<td>PC: mgs/dl</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. **Liver function test:**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Bil D/I Mg/dl</td>
<td>Albumin gm/dL</td>
<td>Globulin gm/dL</td>
</tr>
</tbody>
</table>

3. **Kidney function test:**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Urea mg/dl</td>
<td>Cr (mg/dl)</td>
<td>Uric Acid</td>
</tr>
</tbody>
</table>

4. **Lipid Profile:**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Cholesterol (mgs/dl)</td>
<td>TG (mgs/dl)</td>
<td>LDL (mgs/dl)</td>
</tr>
<tr>
<td>VLDL (mgs/dl)</td>
<td>HDL (mgs/dl)</td>
<td>T.Chol./HDL ratio (&lt;4.5)</td>
</tr>
</tbody>
</table>

5. **Anthropometry:**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Wt in KG</td>
<td>Ht in CMs</td>
<td>BMI</td>
</tr>
<tr>
<td>Body Fat %</td>
<td>Visceral Fat level</td>
<td>S. Muscle %</td>
</tr>
<tr>
<td>Body Age yr</td>
<td>BMR kcal</td>
<td></td>
</tr>
</tbody>
</table>

6. **Spectroscopic examination of Nail and Hair of the both gender with D/ ND/ PD/ D-CKD and ND-CKD stages of III / IV / V.**

© Designed and developed by Mr. Mohammed Farhan Katheem, Senior Research Fellow, Bio-Medical Wing, Bioproducts Laboratory, CLRI Diabetic Research Wing, SP Road, Adyar, Chennai, TN, India – 600020.
Title of the Project:

“The novel detection of structural changes in diabetic, non-diabetic and prone to diabetic subjects nail and hair specimens by using spectroscopic techniques and its correlation study in diabetes with multi system disorder”.

Investigators:  Prof. Dr. A. B. Mandal, Director, CSIR-CLRI, Chennai.
Dr. T. P. Sastry, Head, Bio-products Lab., CSIR-CLRI, Chennai.
Mr. Mohammed Farhan K, CSIR-SRF, CSIR-CLRI, Chennai.
Dr. Aashish Parekh, Assistant Prof, Dept of Nephrology, INU, Bangalore.

Collaborators: CSIR-CLRI, Chennai, ESI TN, and INU, Bangalore.

Potential Funding Agency: NA

Informed Patient/Guardian Consent Form

PART I

<table>
<thead>
<tr>
<th>Item</th>
<th>Explained in Detail</th>
<th>Subject’s Response if any</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Purpose of the Study</td>
<td>[ ]</td>
<td>............................................................</td>
</tr>
<tr>
<td>2. Study Procedures</td>
<td>[ ]</td>
<td>............................................................</td>
</tr>
<tr>
<td>3. Risk of the Study</td>
<td>[ ]</td>
<td>............................................................</td>
</tr>
<tr>
<td>4. Benefits from the Study</td>
<td>[ ]</td>
<td>............................................................</td>
</tr>
<tr>
<td>5. Complications</td>
<td>[ ]</td>
<td>............................................................</td>
</tr>
<tr>
<td>6. Compensations</td>
<td>[ ]</td>
<td>............................................................</td>
</tr>
<tr>
<td>7. Confidentiality</td>
<td>[ ]</td>
<td>............................................................</td>
</tr>
<tr>
<td>8. Rights of Participants</td>
<td>[ ]</td>
<td>............................................................</td>
</tr>
<tr>
<td>9. Alternatives to Participation in the Study</td>
<td>[ ]</td>
<td>............................................................</td>
</tr>
<tr>
<td>10. Any Other…</td>
<td>[ ]</td>
<td>............................................................</td>
</tr>
</tbody>
</table>
PART II

Patient/Guardian Consent

Name of the Subject:

Signature of Patient/Guardian:

Relationship to Subject:

Date:

Investigator's Statement:

I, the undersigned have explained to the parent/guardian in a language she/he understands the procedures to be followed in the study and risks and benefits.

Signature of the Investigator Date:

Name of the Investigator:

Signature of the Witness Date:

Name of the Witness:
PATIENT'S CONSENT FORM

The advantages and disadvantages of the research in which I am expected to participate, for which I have to donate blood / Nails / .hair sample has been explained to me.

I willingly, under no pressure from the researcher-

(i) agree to take part in this research, and agree to participate in all investigations which will help acquire knowledge for the benefit of the mankind,
(ii) agree to donate my hair and nail samples.

My consent is explicitly not for disclosing any personal information. For disclosing any such personal information obtained from the investigations conducted on my samples, further consent should be obtained.

I have been informed that CLRI, ESI-TN, Chennai and INU, Bangalore the researchers (PI -Prof. Dr. A.B.Mandal and his colleagues) will take my prior consent before they draw benefits from research based on my samples.

Signatures

Subject/patient         Witness         Principle Investigator.
Medical ethics and Permission
PERMISSION LETTER

Sub: Permission to carry on the research study reg.

***

As per the decision of the Research Review Committee meeting held on 22.03.2013, permission is hereby accorded to Mr. Mohammad Farhan K., M.Sc., (Ph.D) Research Scholar, CSIR-SRF, Bio-products Laboratory, CSIR-CLRI, Adyar, Chennai to carry on “The novel detection of structural change in Diabetic & Non-Diabetic Nail & Hair by using spectroscopic techniques and its correlation study in diabetes with multi system disorder” research study.

(Dr. C.S.Ratkal)
Prof. & HOD of Urology
& Chairman, Research Review Committee, I.N.U., Bangalore.
Communication of Decision of the institutional Ethics committee (IEC) for Biomedical Research

IEC No: CSIR-CLRI/IEC/2010-2015/001

Protocol title:
The novel detection of structural changes in diabetic, non-diabetic and prone to diabetic subjects nail and hair specimens by using spectroscopic techniques and its correlation study in diabetes with multi system disorder

Name of the Principle Investigator:
Prof. A.B. Mandal,
Director, CSIR-CLRI, Chennai

Name of the Principle Co-Investigator:
1. Mohammed Farhan K, CSIR-SRF, Bioproducts Lab., CSIR-CLRI, Chennai
2. Dr. Aashish Parekh, Asst. Prof, INU, Bangalore.
3. Dr. T.P. Sastry, Head, Bioproducts Lab., CSIR-CLRI, Chennai

☐ New review ☐ Revised review ☐ Expedited review

Date of review (D/M/Y): 15.01.2014

Date of previous review, if revised application: NA

Decision of the IEC
☐ Recommended ☐ Recommended with suggestions
☐ Revision ☐ Rejected

Suggestions/ Reasons/ Remarks:
No comments

Dated: 16.01.2014

Dr. A. Gnanamani
Member Secretary
IEC- CSIR-CLRI

Dr. A. Gnanamani
Sr. Scientist & Head
Microbiology Division
CSIR-Central Leather Research Institute
Adyar, Chennai-600 020
Health and Family Welfare Department

Letter No.13577/ F1 / 2014-1, Dated: 28.05.2014
Jeya, Vaigasi-14, Thiruvalluvar Aandu 2045

From
Dr.J. Radhakrishnan, I.A.S.,
Secretary to Government.

To
The Director of Medical and Rural Health Services (ESI),
Chennai-6 (W.E)

Sir,


Ref: 1) G.O. (D) No.648, Health and Family Welfare (MCA1) Department, dated: 02.06.2009.

2) From the Director of Medical and Rural Health Services (ESI) Letter No.0167/ESI/P1/2014, Dated: 25.03.2014 (Address to the Principal Secretary, Labour and Employment Department, Chennai-9).

3) From Dr. T.P. Sastry, Senior Principal Scientist & Head, Bioproducts Laboratory, Central Leather Research Institute, Adyar, Chennai, letter dated: 08.05.2014.

3) From Thiru. Mohammed Farhan K, SRF-CSIR, CLRI, Adyar, Chennai letter dated 20.05.2014 (addressed to the Secretary, Health and Family Welfare Department)

I am directed to invite your attention to the references cited and to request you to permit Thiru. Mohammed Farhan K, a Phd., student, Bioproducts Laboratory, Central Leather Research Institute, Adyar, Chennai to collect sample in ESI dispensaries located in Vaniyambadi, Ambur, Pernambut, Gudiyatham for his research work on the field of non – invasive detection of diabetic by using Human nails and hair of the
patients for a period (May 2014 to May 2015) in which it is not involving any sensitive issues in the area like cancer, aids, mental health and drugs related issues and also permit him as per the direction of para 4 (i) and para 4 (ii (2)) issued in G.O. (D) No.648, Health and Family Welfare (MCA1) Department, dated: 02.06.2009 (copy enclosed).

Yours faithfully,

[Signature]

for Secretary to Government.

Copy:

The Labour and Employment (K1) Department, Chennai-9
The Director of Medical and Rural Health Services, Chennai-6.
The Medical Officers, ESI- Vaniyambadi, Ambur, Pernambut, Gudiyatham, Vellore District.
Thru. Mohammed Farhan K, SRF-CSIR, Central Leather Research Institute, Adyar, Chennai-35.
Ref. No.167/ESI/P1/2014

Office of the Director of Medical and Rural Health Services (ESI),
Chennai 6.

Date: 24.06.2014.

Sub: ESI Scheme – Research on Non-Diabetic, Diabetic prone to diabetic – Requesting permission to collect samples from ESI Dispensaries of Vaniyambadi, Ambur, Pernambut and Gudiyatham - Instructions issued.

Ref: 1) Representation of Dr. Asit Baran Mandal, Director, CSIR-Central Leather Research Institute, dt. 2nd January, 2014.
2) Government Letter No.13577/F1/2014-1, Health and Family Welfare Department, dt. 28.05.2014.

<> <> <> <>

The Government have granted permission to Thiru. Mohammed Farhan K, a Phd., Student Bioproducts Laboratory, Central Leather Research Institute, Adyar, Chennai to collect sample in ESI Dispensaries located in Vaniyambadi, Ambur, Pernambut and Gudiyatham for his research work on the field of non-invasive detection of diabetic by using Human nails and hair of the patients for a period (May 2014 to May 2015) in which it is not involving any sensitive issues in the area like cancer, AIDS, mental health and drugs related issues.

As per the instructions in the G.O. (D) No.648, Health and Family Welfare (MCA 1) Department, the student doing research works has to pay fee of Rs.6,000/- . Hence, Thiru. Mohammed Farhan K is instructed to remit Rs.6,000/- in this office at the earliest. The permission for taking samples from the patients attending the ESI Dispensaries for research will be issued from this office forthwith.

Recvd. by
Director of Medical and Rural Health Services (ESI)

Thiru. Mohammed Farhan K

Copy to:
ESI Cash Section – request to receive Rs.6,000/- from the individual and remit into Government Account and intimate the fact to this Section at the earliest.
Ref. No.167/ESI/P1/2014

Office of the Director of Medical and Rural Health Services (ESI), Chennai 6.

Date: 07.08.2014.

Sub: ESI Scheme - Research on Non-Diabetic, Diabetic prone to diabetic - Requesting permission to collect samples from ESI Dispensaries of Vaniyambadi, Ambur, Pernambut and Gudiyatham - Instructions issued.

Ref: 1) Representation of Dr. Asit Baran Mandal, Director, CSIR-Central Leather Research Institute, dt. 2nd January, 2014.
2) Government Letter No.1357/F-1/2014-1, Health and Family Welfare Department, dt. 28.05.2014.

The Government have granted permission to Thiru. Mohammed Farhan K, a Phd., Student Bioproducts Laboratory, Central Leather Research Institute, Adyar, Chennai to collect sample in ESI Dispensaries located in Vaniyambadi, Ambur, Pernambut and Gudiyatham for his research work on the field of non-invasive detection of diabetic by using Human nails and hair of the patients for a period (May 2014 to May 2015) in which it is not involving any sensitive issues in the area like cancer, AIDS, mental health and drugs related issues. He has remitted Rs. 6000/- in this office as fees on 03.07.2014.

Thiru. Mohammed Farhan K, the Research Student is instructed to do his research works during the working hours of the ESI Dispensaries (7.00 AM to 10.30 AM and 4.00 PM to 6.30 PM) without any hindrance to the normal functioning of the ESI Dispensaries and harassment to the Insured Persons and their family members.

Hence, the Chief Medical Officers of ESI Dispensary, Vaniyambadi, Ambur, Pernambut and Gudiyatham are instructed to allow Thiru. Mohammed Farhan K for his research work on the field of non-invasive detection of diabetic by using Human nails and hair of the patients for a period (May 2014 to May 2015) in which it is not involving any sensitive issues in the area like cancer, AIDS, mental health and drugs related issues. They are also instructed to allow the individual to
do his research works during the working hours of the ESI Dispensaries (7.00 AM to 10.30 AM and 4.00 PM to 6.30 PM) without any hindrance to the normal functioning of the ESI Dispensaries and harassment to the Insured Persons and their family members and any complaint from the attendants.

Joint Director of Medical and Rural Health Services (ESIS)

To

Thiru. Mohammed Farhan K.
No.14/78, Charminar Street,
Pernambut -635 810,
Vellore District.

Copy to:
Chief Medical Officer, ESI Dispensary, Vaniyambadi, Ambur, Pernambut and Gudiyatham, Vellore District (w.e.)
Central Leather Research Institute (CSIR – CLRI)  
(Council of Scientific and Industrial Research)  
Sardar Patel Road, Adyar, Chennai – 600020

Communication of Decision of the institutional Ethics committee (IEC) for  
Biomedical Research


Protocol title:  
The novel detection of structural changes in diabetic, non-diabetic and prone to  
diabetic subjects nail and hair specimens by using spectroscopic techniques and its  
correlation study in diabetes with multi system disorder

Name of the Principle Investigator:  
Prof. A.B. Mandal,  
Director, CSIR-CLRI, Chennai

Name of the Principle Co-Investigator:  
1. Mohammed Farhan K, CSIR-SRF, Bioproducts Lab., CSIR-CLRI, Chennai  
2. Dr. Aashish Parekh, Asst. Prof, INU, Bangalore.  
3. Dr. T.P. Sastry, Head, Bioproducts Lab., CSIR-CLRI, Chennai

☐ New review  ☐ Revised review  ☐ Expedited review

Date of review (D/M/Y): 15.06.2015

Date of previous review, if revised application: NA

Decision of the IEC

☐ Recommended ☑ Recommended with suggestions

☐ Revision  ☐ Rejected

Suggestions:

Members are advised to windup the bench work and advised to submit synopsis followed by  
the thesis respectively.

Dated: 16.06.2015
Central Leather Research Institute (CSIR – CLRI)
(Council of Scientific and Industrial Research)
Sardar Patel Road, Adyar, Chennai – 600020

Communication of Decision of the institutional Ethics committee (IEC) for
Biomedical Research

IEC No: CSIR-CLRI/IEC/2010-2015/003

Protocol title:
The novel detection of structural changes in diabetic, non-diabetic and prone to
diabetic subjects nail and hair specimens by using spectroscopic techniques and its
correlation study in diabetes with multi system disorder

Name of the Principle Investigator:
Prof. A.B. Mandal,
Director, CSIR-CLRI, Chennai

Name of the Principle Co-Investigator:
1. Mohammed Farhan K, CSIR-SRF, Bioproducts Lab., CSIR-CLRI, Chennai
2. Dr. Aashish Parekh, Asst. Prof, INU, Bangalore.
3. Dr. T.P. Sastry, Head, Bioproducts Lab., CSIR-CLRI, Chennai

☐ New review ☐ Revised review ☐ Expedited review

Date of review (D/M/Y): 19.06.2016

Date of previous review, if revised application: NA

Decision of the IEC
☐ Recommended ☐ Recommended with suggestions
☐ Revision ☐ Rejected

Suggestions:
Work is successfully completed.

Dated: 19.06.2016

Dr. A. Gnanamani
Member Secretary
IEC- CSIR-CLRI
Dr. A. GNANAMANI
Principal Scientist & Head
Microbiology Division
CSIR-Central Leather Research Institute
Adyar, Chennai 600 020.
LIST OF PUBLICATIONS

A. Papers Published


2. **Farhan, K. M.; Sultana, M.; Aashish, P.; Sastry, T. P.; Mandal, A. B. J.** Diabetes Metab. 2015, 6, 49.


8. **Farhan KM** and Mandal AB. FT-Raman Spectroscopy as a tool to investigate the structural changes in human nails of diabetic, non-diabetic and prone to diabetic. Manuscript under construction.
B. Patent’s


C. Presentation in Scientific Meetings


4. Paper entitled “Preparation, characterization and clinical evaluation of biopolymer and Unani drug based dressing materials” national conference on ‘Biodiversity and human health; new prospective’ organized by the Department of Botany on 6th February 2015 held at Bharathi Women’s College (Autonomous), Chennai 600108.

5. Paper entitled “Preparation, characterization and clinical evaluation of biopolymer and Unani drug based dressing materials; DTL Drug Analysis – a initial study” national conference on ‘Biodiversity and human health; new prospective’ organized by the Department of Botany on 6th February 2015 held at Bharathi Women’s College (Autonomous), Chennai 600108.


9. Participated and presented a paper entitled “Diabetes and its prevalence in industry working people” at National Seminar on “Biochemistry in Health and Environment” held on 9th March 2013, organized by PG and Research Department of Biochemistry, St. Joseph College(Autonomous), Cuddalore-01.

D. Participation in Scientific Meetings and Workshops:

1. Participated in One day Author Workshop on "How to write for and get published in Journals" held on January 29, 2013, Conducted by SPRINGER in association with Dept of IST, CEG, Anna University, and Chennai.

2. Participated in “The YRG CARE Bioethics Symposium” held on 6th January, 2013 at Chennai organized by YRG CARE, NIE & Public Responsibility in Medicine and Research, Boston, USA.


4. Participated in national level seminar on “Recent Trends in Phytotherapy” (RTPT - 2012), held on 15th & 16th February, 2012 Organized by P.G. & Research Department of Biochemistry, Islamiah College and in collaboration with Department of Biochemistry, Guindy Campus, University of Madras Held at Islamiah College, Vaniyambadi – 635752.

5. Participated in “National Science Congress” held on 3-7 Jan 2011 at SRM University, Chennai.