

5th LRAC

Minutes of Meeting of Local Research Advisory Committee-MRU-IGMC Shimla

The 5th Local Research Advisory Committee meeting of MRU-IGMC was held on 3rd March 2021 at 10:00AM under the Chairmanship of Dr. J.S. Thakur (Chairperson Local-RAC), coordinated from the Office of Dr. PC Negi, IGMC Shimla through Zoom app.

Members present voting

Dr. J.S. Thakur (Chairperson Local-RAC)

Dr. Madhu Khullar (Co-Chairperson Local-RAC)

Dr. Rajneesh Pathania (The Principal IGMC Shimla)

Dr. PC Negi (Nodal Officer-cum-member Secretary Local RAC)

Dr. Ashoo Grover (Member ICMR)

Dr. Biman Saikia (Member Local RAC)

Dr. Balbir Singh Verma (Member Local RAC)

Dr. Sudarshan K Sharma (Lab Incharge MRU IGMC)

Dr. Neelam Verma (Lab Incharge MRU IGMC)

Dr. Arvind Bhatt (Co-PI) (Prof. Biotechnology, HP University Shimla)

All worthy members were available through Zoom app.

Dr. P.C. Negi (Nodal Officer MRU-IGMC) welcomed the members of research committee and after obtaining permission from the Chairperson, briefly informed the committee about the action taken report on suggestions and decisions taken in the 4th LRAC meeting held on 14th March 2020. Dr Negi informed the members about the reasons for delayed completion of the remaining work and not been able to convene quarterly LRAC meeting primarily due to covid pandemic and non availability of funds under contingency head for purchase of reagents. He also informed members about two new research proposals received from faculty members for review by committee for funding under MRU scheme. This was followed by presentation of the final reports of the three approved projects before the committee.

- 1. Project 1: titled “Role of elevated levels of omega 6:omega 3PUFA ratio and Vit. D deficiency in obese metabolic syndrome; worksite based cross sectional study”**

Status: Out of 418 obese subjects identified during worksite surveys, only 145 consented for estimation of Omega6 and Omega 3 PUFA, vit D, adipokines, cytokines, hsCRP, and Insulin levels.

Out of 145, 105 were with metabolic syndrome (MS) and 40 were without MS

The pending work is completed.

- Estimation of Adipokines, Cytokines, hsCRP and Insulin done in 145 subjects.
- A total of 145 sera samples were carried in cold chain to State Forensic Lab (SFL) Junga for estimation of Omega6 and Omega3 PUFA from December 2020 to March 2021. Dr. Kapil Sharma Astd. Director, NDPS division collaborated and helped to standardize techniques for LCMS.
- Dr Kunal Mahajan Assistant Prof. Cardiology presented the results of the work done.
- In brief the levels of EPA (Omega3 PUFA and Arachidonic acid (Omega 6 PUFA) was significantly low in subjects with Metabolic syndrome. The ratio of Omega6: Omega 3 PUFA was raised in group with MS but was not statistically significant. The levels of Vit D were not significantly different between group with and without MS.
- The levels of Leptin, Adiponectin and TNF alpha were significantly low in MS group.
- There was no association of consumption of high glycemic index foods, physical activity, tobacco consumption with MS
- No significant association of adipokines, cytokines, insulin levels and HOMA-IR was found with group with elevated ratio of Omega6:Omega3 PUFA and vitamin D Deficiency.

Suggestion and comments by the members

- Dr. Madhu Khullar: Questioned the likely reasons for recording lower levels of TNF alpha in MS group and enquired whether the inflammatory markers like hsCRP was measured. P.I. clarified that the levels of hsCRP as the marker of inflammatory state was also measured and was similar between the groups. Dr Madhu Khullar suggested to explore mechanisms of lower levels of TNF alpha in obese MS group in new research project.
- Dr. Biman Saikia suggested that low level may indicates that the lower levels of TNF α might be the result of its consumption in the pathogenic pathways and

suggested to develop a new proposal including healthy non obese subjects to gain further insights.

- Dr.Ashoo Grower: Enquired about any possibility of lower levels of TNF alpha being related to age factor. Dr Negi (P.I.) responded by highlighting that the mean age of group with and without MS was not significantly different thus unlikely to be cause of the observed low levels in group with MS.

Member appreciated the work done and expressed their views about importance of the findings and need for future studies to unravel the unexpected findings of lower levels of cytokines in obese MS subjects, The final results presented under the project were approved for its closure.

2. Project 2 : titled “To identify and characterize putative target valvular antigen(s) as the marker of susceptibility in patients of Rheumatic fever/RHD. Hospital based Case control study.

Work done: Dr Meenakshi Chandel research scientist II presented the results and work completed under this project.

- About 45 Rheumatic mitral valves and 7 control valves were processed for standardization of protocol for extraction of valvular proteins and in identification of target valvular antigen/protein.
- The protocol for extraction of valvular protein , partial purification/purification of proteins, protein bands separation using gradient SDS PAGE was standardized and identification of target valvular protein with immunoblotting was presented.
- Standardization of protocol for protein sample preparation for 2D electrophoresis was attempted but could not perused for refinement due to lack of available funds hence it was decided to go for SDS PAGE.
- 9 rheumatic and 4 normal valves were used for identification of target valvular protein/antigen.
- 6 out of 9 rheumatic valves showed specific protein bands that were not seen in the control valves cross reactive to both sera of RF and RHD patients. These protein bands had molecular weight ranging from 37 to 48 kDa.

Comments and suggestions by members:

- Dr.Madhu Khullar appreciated the work done and also suggested to subject these potential target proteins identified with MALDITOFF for its characterization. Dr Madhu khullar expressed her concerns about the use of 2D electrophoresis as the method for

protein separation due to its limited reproducibility of results and suggested to go for outsource for the separation of valvular proteins using standard techniques available with firms having expertise in valvular protein extraction and purification and to identify the target valvular antigen in future studies.

- Dr. Biman Sakia observed that new target antigen is expressed in RHD valve but not in normal valve and found it very interesting data.
- Dr. JS Thakur and members expressed their satisfaction of the work done under this project and accept the final report.

3. Project titled “Role of plasma level of s-RAGE in COPD patients-a hospital-based case-control study” progress was presented by Prof. Malay Sarkar (PI), HOD pulmonary department of IGMC Shimla.

Work Done: Dr Malay Sarkar P.I. presented the results of the study.

- The sRAGE was estimated in 161 subjects. (89 cases and 72 healthy controls).
- The mean age of COPD group was significantly higher as compared to controls (62 years vs. 50 years).
- The mean serum sRAGE levels were lower in control group as compared to COPD group but this was statistically not significant

Comments/Suggestions by members: Dr Madhu Khullar enquired from P I. about the relationship of sRAGE with diabetes. P.I informed that the data on Diabetic status was not recorded. Dr Madhu Khullar suggested to develop robust project including markers of oxidative stress to understand the role of sRAGE in patients with COPD. P.I. informed that he is keen on studying association of SNPS with sRAGE. Dr. Madhu Khullar informed that for determining the association of SNPs with sRAGE the required sample size would be large and advised P.I. to consult with statisticians in calculating sample size.

Dr. J.S. Thakur and members expressed their satisfaction of the work done under this project and accepted the final report.

4. Project titled :Enumeration and characterization of flow-cytometric immunophenotyping of circulating plasma cells and their role in post treatment monitoring (MRD assessment) in patients of Multiple myeloma and other plasma cell disorders in a hilly state of HP” PI: Dr. Pooja Murgai.

- Member secretary Dr. P C Negi informed that this project was discussed in 4th LRAC and was approved in principal for funding and suggested to incorporate certain changes to PI.

Dr. Pooja had submitted the revised proposal and was circulated to the members for their comments.

Comments/Suggestions by members: Dr. Biman Saikia enquired about the status of the purchase of flow cytometer. The member secretary informed that process for purchase of flow cytometer was delayed due to COVID Pandemic in 2020. However it is in the pipeline for floating e tender shortly. Dr. Biman Saikia suggested to expedite the procurement process for Flow Cytometry. He also highlighted the potential use of flowcytometer in development of number of research projects.

5. New Research Proposal(5LRACP1) titled: “To evaluate the prognostic impact of periprocedural change in hs-CRP and oxidative stress markers in predicting suboptimal coronary perfusion, and short term MACE among patients undergoing PCI in a tertiary hospital based prospective study” submitted by PI Dr. Kunal Mahajan, Assistant Professor, Department of Cardiology, IGMC Shimla.

- Dr Kunal Mahajan presented the proposed proposal highlighting the rationality, novelty, and implications of expected clinical outcomes.
- The study proposes to evaluate the impact of ischemia reperfusion induced changes in oxidative stress and inflammatory state on short term clinical outcomes patients with angiography proven 20 patients each with stable CAD and NSTEMI/Unstable angina undergoing PCI (cases) and 20 patients of stable CAD not undergoing PCI (control)

Comments/suggestions by members: Dr. Madhu Khullar and other members appreciated the quality of study designing and the novelty of the proposal. Dr. Ashoo Grover suggested to measure markers in normal patients as control, as well if feasible. PI explained that the control group will be formed by the patients undergoing angiography but not PCI. Nodal officer informed that the necessary equipment required for measurement of biomarkers is available in MRU. The committee approved the proposal and asked to go ahead.

6. New Research Proposal (5LRACP2) titled:“A pilot study using Multiplex assays for biomarker research and their clinical correlation with colorectal cancer stages and disease recurrence” PI Dr. Rashpal Thakur, Assistant Professor Oncosurgery, IGMC Shimla. PI could not attend meeting as he was engaged in operation theatre.

- Nodal Officer Dr. Negi informed members that necessary equipments required for the estimation of the proposed markers are available in MRU.

Comments/suggestions by members:

- Dr. J.S. Thakur suggested to review the submitted proposal of Dr. Rashpal by the members and to give their comments and suggestion through mail.
- Dr Negi requested members to kindly circulate the comments via mail.
- Dr. J S Thakur suggested to review the cancer registry data of the state about the burden of colorectal cancer whether it is a state health priority.

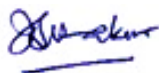
7. General comments and suggestions made

- The Principal IGMC Shimla welcomed and thanks all members for guiding and encouraging the MRU. He admitted the undue delays in procuring equipments/reagents while observing codal formalities and suggested to study the procedural norms followed by other research institutions to expedite the procurement processes.
- All members were of the view that the faculty members undertaking quality and impactful research should be rewarded in the form of best researcher award /certificate, promotional incentives etc. so that more and more faculty members are motivated to undertake research projects.
- Dr. J.S. Thakur appreciated the MRU IGMC in completing the projects in spite of the covid pandemic and found it to be one of the best MRU and congratulated the team.
- Dr. J.S. Thakur and Dr. Ashoo Grover suggested for forming inter-institutional collaborative networking, and holding formal meeting with faculty members once in 3-4 months to motivate and explore the possibility of developing collaborative research proposals. .
- Dr. Ashoo Grover suggested to publish the work done under completed projects as soon as possible and sharing minutes of meeting /achievements/publications with policy maker and state health secretary, publish MRU news-letter with permission and also suggested to discuss the state need priority with MD NHM and DHS of Himachal Pradesh.
- In response to the comments made by Dr. J.S. Thakur and Dr. Ashoo Grover on collaborative research, Dr. Negi informed the members that department of Cardiology is already working on collaborative research projects with IIT Mandi, NIT Hamirpur.
- Dr. Negi informed the members that Department of Cardiology has adopted Mashobra Block of Shimla district for implementation of CVD risk management care model linking all the health care centres in the block across the board with IGMC hospital for promotion of health, identifying high risk individuals in the community, linking them with health

system for risk assessment, and its management, monitoring of outputs and outcomes using Electronic health recording system developed in collaboration with HISP India.

- Dr. Ashoo Grover and Dr.J.S. Thakur appreciated Dr. Negi's work on NCD programme in Mashobra Block of Shimla and asked to promote it as model for other NCD studies.
 - Dr. Ashoo Grover suggested to recoup the money of umpire trials from contingency head of MRU which has been taken for the payment of consumables for RF/RHD project.
 - Dr. Ashoo Grover also suggested to circulate the detailed agenda of future meetings in advance so that the members are better prepared and focussed with their discussions on various aspects during the meeting.
 - Dr. Balbir Verma made his concluding remarks by appreciating the quality of research work being undertaken in MRU lab through approved projects. He stated the lack of response from faculty members in developing research proposals to be due to unprecedented burden of COVID cases in whole year and opined that in future more and more faculty members would come forward with new research proposals. .
8. The meeting ended with vote of thanks to the chair by member secretary.

The minutes were approved as an accurate record of the meeting.



Dr. J.S. Thakur

Prof. School of Public Health. PGIMER Chd-cum Chairperson Local RAC-IGMC
SHIMLA

Dr. P.C. Negi

Prof. and Head Department Of Cardiology –cum- Member Secretary-Local-RAC- MRU
IGMC SHIMLA