



DEPARTMENT OF BIOCHEMISTRY & MOLECULAR BIOLOGY  
SCHOOL OF BIOLOGICAL SCIENCES  
CENTRAL UNIVERSITY OF KERALA  
(Established under the Central Universities Act, 2009)  
Website: [www.cukerala.ac.in](http://www.cukerala.ac.in)

CUK/SBS/BCMB/BOS/Minutes/Dec-2018

18-12-2018

**Minutes** of the meeting of Board of Studies in Biochemistry & Molecular Biology held on 18-12-2018 at 10.30 AM in Department of Biochemistry and Molecular Biology, Central University of Kerala, Periyar, Kasaragod.

**Agenda:**

1. Reporting the renaming of the M.Sc. program
2. Revision of syllabus
3. Updating the panel of question paper setters and evaluators
4. Framing model question paper
5. Any other item

**Members attended the meeting:**

- |                                      |    |                 |
|--------------------------------------|----|-----------------|
| 1. Prof. (Dr). Govinda Rao Duddukuri | -- | Chairperson     |
| 2. Prof. (Dr). Annie Abraham         | -- | External member |
| 3. Prof. (Dr). T. Rajamohn           | -- | External member |
| 4. Prof. (Dr). Sathisha G J          | -- | External Member |
| 5. Dr. K. Arunkumar                  | -- | Member          |
| 6. Dr. Rajendra Pilankatta           | -- | Member          |
| 7. Dr. R. Aswati Nair                | -- | Member          |



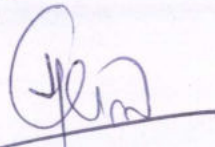


**Resolutions:**

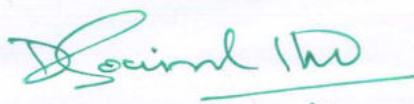
1. The chairperson has welcomed the BOS committee members and thanked the members for their consent and endorsement for renaming the M.Sc. Biochemistry and Molecular Biology program as M.Sc. Biochemistry program and informed the members that the same was approved by Academic council held on 12-12-2018. And this would come into effect for students admitted in 2018-19 batch.
2. The chairperson has explained the scheme of present syllabus of M.Sc. Biochemistry. The committee has discussed and suggested some constructive changes in the syllabus of two year M.Sc. Biochemistry program as per the Choice Based Credit System (CBCS) for further strengthening the curriculum and recommended its implementation from next academic year (Annexure- I).



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3. The committee has discussed elective papers and their syllabi and approved (Annexure-II)
4. The committee has resolved and approved the question paper model for the End semester examinations as per CUK guidelines. (Annexure-III)
5. The committee has resolved and approved the panel of examiners for question paper setting and evaluation for End-semester examinations as per guidelines of Central University of Kerala (Annexure-IV)

Member	Signature
1. Prof.(Dr). Annie Abraham Department of Biochemistry, University of Kerala, Kariyavattom, Thiruvananthapuram - 695 581	 .....
2. Prof. (Dr). T. Rajamohan Department of Biochemistry, University of Kerala, Kariyavattom, Thiruvananthapuram - 695 581	 .....
3. Prof. (Dr). Sathisha G J Department of Biochemistry, Kuvempu University Shankaraghatta Shimoga, Karnataka - 577 451	 .....
4. Dr. K. Arun Kumar Associate professor, Dept. of Plant Science, Central University of Kerala, Kasaragod	 .....
5. Dr. Rajendra Pilankatta Associate professor, Dept. of Biochemistry & Molecular Biology, Central University of Kerala, Kasaragod	 .....

  
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6. Dr. R. Aswathi Nair  
Associate professor,  
Dept. of Biochemistry & Molecular Biology,  
Central University of Kerala, Kasaragod



Dr. Govinda Rao Duddukuri,  
Professor, Chairperson,  
PG Board of Studies of Department  
of Biochemistry and Molecular  
Biology

## **BBM 5204: Clinical Biochemistry (3-1-0-1)**

### **UNIT-I**

Diseases related to digestion and absorption of foods:

Gastritis and gastric atrophy (hyperacidity), Achlorhydria (hypochlorhydria), ulcers (peptic ulcer, Zollinger –Ellison syndrome) Pancreatitis, lactose intolerance, sucrose deficiency, disacchariduria, monosaccharide malabsorption, steatorrhea, chyluria and deficiency of bile salt – cholelithiasis, Sprue.

### **UNIT-II**

Diseases related to carbohydrate metabolism:

hypo and hyperglycemia, diabetes mellitus- classification, complications and biochemical tests, diabetes insipidus, glucose tolerance test, oral hypoglycemic agents, pentosuria, fructosuria, galactosuria, glycogen storage diseases, hereditary fructose intolerance, fructose 1, 6 diphosphatase deficiency, mucopolysaccharidosis.

### **UNIT-III**

Diseases related to lipid metabolism:

Spingolipidosis, hyper and hypo lipoproteinemia, hypercholesterolemia, atherosclerosis-pathogenesis, and clinical features, lipid and other risk factors for atherosclerosis, hypolipidemic drugs.

### **UNIT-IV**

Diseases related to amino acid metabolism and liver:

Defect of  $\gamma$ - glutamyl cycle transport of amino acids, phenyl ketonuria and alkaptonuria, histidinemia, Maples syrup disease, Albinism, methyl malonic acidemia, glutathionuria, homocystinuria. Jaundice.

### **UNIT-V**

Diseases related to Nucleic acid and Hemoglobin Metabolism and brain:

Gout, Lesch-Nyhan syndrome, Abnormal Hemoglobin and their deficiencies - Macrocytic and microcytic anemia, Sickle cell anemia, Thalassemia, Hereditary methemoglobinemia. Porphyria. Neurodegenerative diseases and their biochemical basis.

### **Recommended Books**

1. Nelson, David L., Albert L. Lehninger, and Michael M. Cox. Lehninger principles of biochemistry. Macmillan, 2008.
2. Textbook of Biochemistry with clinical correlations. Thomas M. Devlin.
3. Bishop, Michael L., Edward P. Fody, and Larry E. Schoeff, eds. Clinical Chemistry: Principles, Techniques, and Correlations. Lippincott Williams & Wilkins, 2013.

4. Bahr, Manson, and D. R. Bell. "Manson's Tropical Diseases." The English Languages Book Society, Billiere, Tindall and Cassell, Ltd (1996).
5. Lawrence A.K. Amedeo J. P. and Steven C.K. Clinical Chemistry