

**PG DEPARTMENT OF BIOCHEMISTRY**

**ANNUAL REPORT**

Markaz Arts and Science College, Athavanadu,  
Karthala, Pin: 679571. Malappuram Dt., Kerala

**2018-2019**

The college reopened after summer vacation on 7<sup>th</sup> June 2018.

## **STAFF AND STUDENTS**

Biochemistry Department has 6 faculty members and one lab attender. Mrs. Seena P was the Head of the Department. Other faculties were Arifa P.P., Jaseela K.P., Thasleena K.K., Athulya C.J. and Dr. Sajith U (resigned on 1<sup>st</sup> November 2018). Abitha P.P. was the Lab attender.

The Department has 102 students on roll of which 89 are degree students, in which there were 13 boys and 76 girls and 13 are PG students (all girls).

<b>NO</b>	<b>YEAR</b>	<b>NUMBER OF STUDENTS</b>
1	FIRST YEAR DEGREE	25
2	SECOND YEAR DEGREE	36
3	THIRD YEAR DEGREE	28
4	FIRST YEAR PG	7
5	SECOND YEAR PG	6
<b>TOTAL</b>		<b>102</b>

Table 1: students' details for the academic year 2018-2019

<b>NAME OF FACULTY</b>	<b>DESIGNATION</b>	<b>QUALIFICATION</b>
SEENA.P	Assistant professor &Head	M.Sc., M.Phil., NET
ARIFA.P.P	Assistant professor	M.Sc., NET
JASEELA.K.P	Assistant professor	M.Sc.
THASLEENA.K.K	Assistant professor	M.Sc.
ATHULYA C.J	Assistant professor	M.Sc.
Dr. SAJITH.U	Assistant professor	Ph.D

<b>LAB ATTENDER</b>	<b>ABITHA P.P.</b>
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Table 2: faculty details for the year 2018-19

### **ADVISORY DETAILS**

In the academic year 2018-2019 Mrs.Jaseela KP was the advisor of first year UG, Mrs. Seena P was the advisor of second year UG and Mis.Thasleena KK was the advisor of third year B.Sc. Mrs.Arifa PP and Mis.Athulya CJ were assigned as advisors of second year and first year PG respectively

### **ACADEMIC RESULTS (UG &PG)**

The Department has secured 100 % result for PG (2016-2018 batch). **Mubashira A** of PG batch bagged first position at Calicut University. This is a proud moment for Biochemistry Department because the first batch of PG itself secured 100% result with University top position.

The department has secured 62% result for Degree (2015-18 batch) (number of students appeared for the examination was 26 and number of students passed was 16)



Figure 1: Mubashira A (M.Sc. Biochemistry University topper)

### **DETAILS OF TRAINING PROGRAMMES ATTENDED BY STUDENTS**

#### **WORKSHOP ON MOLECULAR BARCODING AND BIOINFORMATICS**

- The students of first and second year M.Sc. Biochemistry attended two days workshop on 'MOLECULAR BARCODING AND BIOINFORMATICS' Organized by Amplicon Bio labs, park centre, KINFRA, Kakkancherry, Malappuram on 19<sup>th</sup> & 20<sup>th</sup> September 2018.



Figure 2: Copy of Certificate of workshop

## DETAILS OF INDUSTRIAL VISITS

- 1) Department of Biochemistry made study tour for final degree students to **Mysore University, Mysore** on 29<sup>th</sup> November 2018. They visited Biochemistry Department and they had given a lecture about snake venom and NETosis. The students also visited the Biochemistry laboratory and got an opportunity to get familiarize with many sophisticated instruments like UV-VIS Spectrophotometer, Ultracentrifuge, Atomic Absorption Spectrophotometer, Flame photometer etc.....

- 2) Another study tour was made for second year Biochemistry to **KFRI, Peechi, Thrissur** on 8th March 2019. They visited Biochemistry lab, museum, soil museum, botanical garden etc. They had given a lecture on Gas Liquid Chromatography. Athulya and Jaseela, faculties of Biochemistry accompanied the students.



Figure 3: IV-Mysore University, Mysore



Figure 4: IV- KFRI, Peechi, Thrissur

### **DETAILS OF PROGRAMMES CONDUCTED BY DEPARTMENT**

- 1) A program was organized on 20<sup>th</sup> December 2018 at MMC Hall for the inauguration of Biochemistry Association, “REPLICON”. Welcome speech was delivered by Head of the



Department, Mrs. Seena P. The session was addressed by honorable Principal Dr. CP Mohammed Kutty. Association was inaugurated by **Dr. SHONIMA GOVINDAN**, Assistant professor, Department of Biochemistry, **SAFI institute of Advanced Studies, Vazhayoor**. Vote of thanks was given by Lamiya Haneefa P, Association Secretary.

- 2) Biochemistry Department conducted a seminar on the topic “The Brain Story” on December 20, 2018, Thursday. Resource person was **Dr. SHONIMA GOVINDAN**, Assistant professor, Department of Biochemistry, **SAFI institute of Advanced Studies, Vazhayoor**. The resource person gave a beautiful lecture about how experiences shape our brain. She explained about positive stress, tolerable stress and toxic stress with simple and funny examples which made our students to reach a new world. She also gave an idea about the brains executive functions and self regulation skills. There was an interactive session after the talk and many students raised their queries. A token of appreciation was handed over to the resource person



Figure 5: Association inauguration & Talk on 'The Brain Story'

## **EXTENSION ACTIVITY**

Science exhibition was conducted on 27<sup>th</sup> & 28<sup>th</sup> Feb 2018 by Science Departments including Biochemistry. The session was inaugurated by Principal Dr. CP Mohammed Kutty. Students from outside schools and colleges came to watch the exhibition. Biochemistry department

students demonstrated various experiments. Different working and still models were made and kept in the exhibition hall.



**Figure 6: Science Exhibition -Inauguration**



**Figure 7: Experiment demonstration by students**



**Figure 6: outside students visiting exhibition**

## **ACHIEVEMENTS**

Suroor Jahan K.K., M.Sc. Biochemistry 2016-2018 batch has published her project entitled “Effect of Pro-oxidants In Erythrocyte Membrane Protein Patterns In Electrophoretogram” in Journal of Biochemistry International on 6<sup>th</sup> November 2018.



**EFFECT OF PRO-OXIDANTS IN ERYTHROCYTE  
MEMBRANE PROTEIN PATTERNS IN  
ELECTROPHORETOGRAM**

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**AUTHORS' CONTRIBUTIONS**

This work was carried out in collaboration between all authors. Author MJ designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors KKSJ and RS managed the analyses of the study. Author EM managed the literature searches. All authors read and approved the final manuscript.

**ARTICLE INFORMATION**

**Reviews:**

(1) Claudio De Felice, University Hospital, Siena, Italy.

(2) Hasmik Zanginyan, Gayane Ghazaryan, Institute of Molecular Biology NAS of Armenia, Yerevan.

(3) Dong Xu, School of Engineering, Tianjin University, China.

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Short Research Article

**ABSTRACT**

Erythrocytes are enucleated cells with plasma membrane envelope. Erythrocytes owing to its oxygen transport function are susceptible to continuous oxidative stress. The impact of this oxidative stress could affect the integrity of the erythrocyte membrane and thereby its constituents. Henceforth, the present study aimed to analyse the erythrocyte membrane protein changes in response to water-soluble pro-oxidant, hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) and lipophilic pro-oxidant, tertiary butyl hydroperoxide (t-BuOOH). The erythrocyte lysate after subjected to H<sub>2</sub>O<sub>2</sub> and t-BuOOH additions at various concentrations in the range 1 mM to 6 mM were subjected to electrophoresis (SDS-PAGE). We observed that the band intensity of most of the erythrocyte membrane proteins such as ankyrin, catalase, actin, glutathione peroxidase and peroxiredoxin appeared to fade upon increasing concentration of both pro-oxidants. This implicated that upon increasing oxidative stress, erythrocyte membrane proteins could be modified by oxidation and loses its very function of maintaining the integrity of the cell.

**Figure 7: Details Of Paper Publication**

**NSS DETAILS**

The students of second year B.Sc. Biochemistry selected as volunteers for the seven day camp were Shaheer, Mohamed Al Ghazi, Nizamudheen, Hana, Snaha, Shahanas, Mohamed Sawfan, Rasha and Nahma. The seven day camp "NANMA MARAM" was conducted at HALP SCHOOL, Valyakunnu, from 22<sup>nd</sup> December to 28<sup>th</sup> December 2018.

The following students of second year B.Sc. Biochemistry – Fathima Shahina KK, Fathima Shehala KK and Shamila Sherin C were selected as volunteers for the NSS camp of academic year 2019-2020.





Figure 8: NSS programme brochure



Figure 9: NSS Students

### **ALUMNI ASSOCIATION PROGRAMME DETAILS**

Alumni Association programs were conducted for different pass out batches during the academic year 2018-2019. An alumni meet of 2013-16 batch students were organized at Nila Park, Kuttipuram on 18<sup>th</sup> August 2018. About 10 students and Department faculties Mrs.Seena and Mrs.Arifa attended the function. 2014-17 batch students organized a meet up at Markaz Campus on 22<sup>nd</sup> September 2018. Total 18 batch members and 2 faculties attended the gathering. 2012-2015 Biochemistry batch students conducted an alumni meet-up on 12<sup>th</sup> February 2019 Tuesday at Markaz Campus. About 8 students participated in the programme. Mrs.Arifa and Mrs.Jumaila (faculty of Microbiology Department) joined in the session. Both the teachers were their mentors

during their academic year. Students of 2015-2018 Biochemistry batch conducted a get together on 15<sup>th</sup> March 2019, Friday at student Hiba House. 15 students attended the programme.



**Figure 10: Alumni photos**

## **ARTS FEST DETAILS**

In the arts fest 2018-2019 Department of Biochemistry along with Microbiology department bagged second position at college level. Students of the department participated in various events - both off stage & onstage and secured first, second and third positions. Athira K Raj has participated in C zone .



Figure 11: Arts programme photos

### **WOMEN EMPOWERMENT PROGRAMME DETAILS**

Aswathy , Assistant Professor, Department of English, was the in charge of WEC. The entire girl students of Biochemistry department were members of WEC. Various programmes were organized by WEC in the academic year 2018-19 and almost all the girl students of biochemistry department participated in the sessions. The highlighted programmes were “Health Awareness Class” on 29-07-2018 by .Dr.Jineesh, BHMS Valanchery, “Skill Development Programme” on 03-10-2018, seminar on “Medicinal Plants” on 27-10-2018 by Mr.Mahesh, Dept. of Agriculture,Kotakal AryaVaidyashala etc..



Figure 12: WEC programmes attended by Biochemistry students

