 Dr. D.Y. PATIL VIDYAPEETH, PUNE <small>(DEEMED UNIVERSITY)</small>	<p align="center">Dr. D. Y. Patil Medical College, Hospital and Research Centre (Accredited by NAAC with 'A' grade) Pimpri, Pune - 411 018</p>
Ref. No.	Date :

DEPARTMENT OF BIOCHEMISTRY

1. List of publications in Vancouver style yearwise(calendar year) (Period 2014 to 2019)

2014

1. Sharma SK, Tilak MA. A Comparative study of deritis in alcoholic and non-alcoholic liver disease patients in Pune Maharashtra. Indian Journal of Public Health Research & Development. April-June 2014;6(2):18-21.
2. Sontakke AN, Tilak MA, Dhat VV, More UK, Shinde SA, Phalak PJ, Deshmukh AD. Prevalence of Elevated Serum Homocysteine and Serum Lipoprotein 'a' in Women. Journal of Clinical and Diagnostic Research. October 2014; 8(10):CC13-CC15.
3. Dhat VV, Murhe S, Sontakke A. Serum High Sensitivity CRP (HsCRP) in Psoriasis. International Journal of Medical Research.2014; 2(5): 409-413.
4. Choudhury I, Tilak MA, Patra AK. A Rare Case of Mucopolysaccharidosis . Indian J Clin Biochem. 2014;29(1):101-106.
5. Shinde SA, Deshmukh AD, Suryakar AN, More UK, Tilak MA. The levels of oxidative stress and antioxidants in diabetes mellitus before and after diabetic treatment with or without antioxidants. Indian Journal of Basic and Applied Medical Research. March 2014;3(2):455-460.
6. Mushtaq S, MA Tilak, Rashid MR, Shinde SA, Phalak PJ. Biochemical evaluation of myopathy in Patients of hypothyroidism. Indian Journal of Basic and Applied Medical Research. March 2014; 3(2):364-372.
7. Banerjee S, More UK, Tilak MA, Deshmukh AD, Takale L. Lipid alterations in psoriasis. Indian Journal of Basic and Applied Medical Research. March 2014;3(2):350-357.
8. Pratap A, Tilak MA, Phalak PJ. Thyroid profile in geriatric population ,Indian Journal of Basic and Applied Medical Research. September 2014;3(4):297- 303.

2015

1. Joshi S., Naoley RD, Tilak MA. Study of Free and Total PSA levels in Patients with Benign Prostatic Hyperplasia and Carcinoma Prostate. International Journal for Pharmaceutical Research Scholars. 2015;4(1):205-209.
2. Thorat S, Tilak MA. Lipid profile in chronic renal failure patients- Pre and post hemodialysis. International Journal for pharmaceutical research scholars. 2015;4(1):236-241.

2016

1. Ghatak I, Dhat VV, Tilak MA, Roy I. Analysis of Arterial Blood Gas Report in Chronic Kidney Diseases- Comparison between Bedside and Multistep Systematic Method. Journal of Clinical and Diagnostic Research. 2016;10(8):BC01-BC05.
2. Mulgund S, Dhat VV. Indicators of sepsis: Microalbuminuria and serum Nitric oxide. Indian Journal of Basic and Applied Medical Research. June 2016;5(3):437-441 437.
3. Dhat VV, Murhe S, Sontakke A, Tilak MA. A study of dyslipidemia in patients of psoriasis. Indian Journal of Basic and Applied Medical Research. June 2016; 5(3):169 - 173 169.
4. Singh S, Shinde SA, Tilak MA. Alteration of Renal Profile in Patients with Hypothyroidism. Indian Journal of Basic and Applied Medical Research. Sept 2016; 5(4):259-262.
5. Sharma SK, Kumar Y, Dubey T, Tilak MA. A Study on Hypolipidemic effect of Garlic in Dyslipidemic Patients. Advances in Bioresearch. Jan. 2016; 7(1).90-93.

2017

1. Palshikar P, Tilak MA, Dhat VV. Raised uric acid level- A risk factor in myocardial infarction. International Journal of Healthcare and Biomedical Research; 2017;5(2)105-111.
2. Mehra A, Takale L, Tilak MA. Screening for vitamin D deficiency in pregnant women. International Journal of Clinical Biochemistry and Research. July-September 2017;4(3):266-269.
3. Debnath J, Dhat VV, Tilak MA. Study of thyroid hormone status in patients of iron deficiency anemia. Indian Journal of Basic and Applied Medical Research. December 2017; 7(1)367-372.

2018

1. Phalak PJ, Pratap A. Urine Protein Creatinine Ratio a better routine test for Proteinuria. Indian Journal of Basic and Applied Medical Research. March 2018; 7 (2):567-572.
2. Sharma SK, Singh N, Thimmaraju KV, Tilak MA. Assessment of Ionized Calcium Status in Febrile Seizures. International journal of clinical and biomedical research. July 2018;4(3):35-37.
3. Singh N, Sharma SK, Thimmaraju KV, Tilak MA. Prevalence of thyroid dysfunction in population of shahjahanpur district: A study in tertiary care hospital. Journal of Medical science and clinical research. July 2018;6(7):925-927.
4. Sharma SK, Singh N, Thimmaraju KV, Tilak MA. A comparative study on salivary glucose level in diabetic patients and healthy individuals. National journal of laboratory medicine; July 2018;7(3):BO01-BO04.
5. Sharma SK, Dhakad GS, Tilak MA. Study of thyroid profile in dysfunctional uterine bleeding. Indian journal of basic and applied medical research. June 2018;7 (3):161-164.
6. Sharma SK, Singh N, Thimmaraju KV, Tilak MA, To study biochemical markers in chronic obstructive pulmonary disease patients. International journal of clinical and biomedical research.Oct.- Dec2018; 5(4):627-630.
7. Singh S, Takale LR, MA Tilak. Antenatal Detection of hemoglobinopathies using red blood cells indices for screening .Indian journal of medical Biochemistry. July-Dec 2018; 22(2):100-104.

2. Research and extension(From 1st January 2014 to till 2019)yearwise (calendar year)

(a) Research summary

Sr. No.	Name of the project and duration	Name of Teachers	Amount of seed money provided (INR in Lakhs)	Sanctioned Year
1.	HbA1C for diagnosis of Prediabetes. It is the time for mid-course correction – 3 yrs 2 year	PI- Dr. A. D. Deshmukh co-I-Dr. Sarita Shinde	1.5	2015
2.	Prevalence of vitamin D deficiency and thyroid dysfunction in Type 2 diabetes mellitus 2 year	PI- Dr. L. Takale Co-I-Dr. Pradnya Phalak	1.5	2015
3.	Screening for Thyroid function in newly diagnosed hyperlipidemia 2 year	PI- Dr. L. Takale Co-I-Dr. Pradnya Phalak	1.5	2015
	Acute Coronary Syndrome and Hypotestosteronemia 2 year	PI- Dr. Abhijit Pratap Co-I-Dr. Mona A. Tilak	1.5	2015

(b) List of PhD Students

Sr. No.	Name of the faculty	Title of the Research Topic	Name of the Research Student	Date of enrolment of the Research Student
1.	Dr. R. D. Naoley	Role of Methylglyoxal in diabetic complications	Mrs. M. A. Jagtap	27/03/14
2.	Dr. U. K. More	Evaluation of various biochemical parameters in Polycystic ovary syndrome	Mrs. S. N. Dhotre	08/12/17
3.	Dr. R. D. Naoley	Estimation of pro-inflammatory cytokines in the various knee joint stages of osteoarthritis.	Mrs. Ankita Dweivedi	01/02/19

(c) List of ICMR – STS Research projects sanctioned (From 1st January 2014 to till 2019) yearwise (calendar year)

Sr. No.	Name of the Project	Investigators	Name of the Guide	Year of Award	Duration of the project	Funding Agency	Total amount of funds received
1	Screening for vitamin D deficiency in pregnant women	Mr. Ashir Mehra	Dr. Lalana Takale	2015	2 months	ICMR STS	10,000/-
2	Antenatal detection of hemoglobinopathies using RBC indices for screening	Sukanya Singh	Dr. Lalana Takale	2016	2 months	ICMR STS	10,000/-
3	Study of minerals in hypothyroidism	Isha Agrawal	Dr. Sandesh Thorat	2018	2 months	ICMR STS	10,000/-

3. PO and CO Analysis (UG as well as PG)

Programme Outcomes

No.	By the end of the programme, the Medical Graduate will:
1	Be a Clinician , who understands and provides preventive, promotive, curative, palliative and holistic care with compassion
2	Be a Leader and member of the health care team and system
3	Be a Communicator with patients, families, colleagues and community
4	Be a Lifelong learner committed to continuous improvement of skills and knowledge
5	Be a Professional who is committed to excellence, is ethical, responsive and accountable to patients, community and the profession

Format for Course Outcomes Biochemistry

Course	Class	CO No	Statement
Biochemistry	I MBBS	Bio.1	Describe the molecular and functional organization of a cell and list its subcellular components.
		Bio.2	Delineate structure, function and inter-relationships of biomolecules and consequences of deviation from normal.
		Bio.3	Summarize the fundamental aspects of enzymology and its clinical application. Describe enzyme inhibitors as poisons and drugs and as therapeutic enzyme.
		Bio.4	Describe digestion and assimilation of nutrients and consequences of malnutrition.

Format for Course Outcomes

Course	Class	CO No	Statement
Biochemistry	I MBBS	Bio.5	Integrate the various aspects of metabolism and their regulatory pathway with structure and function of human body in health & disease.
		Bio.6	Explain the biochemical basis of inherited disorders with their associated sequelae.
		Bio.7	Describe mechanisms involved in maintenance of body fluid and pH homeostasis.
		Bio.8	Outline the molecular mechanisms of gene expression and regulation; the principles of genetic engineering and their application in medicine

Format for Course Outcomes

Cours	e Class	CO No	Statement
Biochemistry	I MBBS	Bio.9	Summarize the molecular concept of body defences and their application in medicine.
		Bio.10	Make use of conventional techniques / instruments to perform biochemical analysis relevant to clinical screening and diagnosis..
		Bio.11	Analyze and interpret investigative data
		Bio.12	Demonstrate the skills of solving scientific and clinical problems and decision making

Course Name	CO/PO	PO.1	PO.2	PO.3	PO.4	PO.5
	Bio.1	3	1	1	2	2
	Bio.2	3	-	-	2	2
Biochemistry I MBBS	Bio.3	3	-	-	3	3
	Bio.4	3	-	2	-	3
	Bio.5	3	-	-	2	2
	Bio.6	3	-	3	2	3
	Bio.7	3	-	-	1	3
	Bio.8	3	-	-	2	2
	Bio.9	3	-	-	3	3
	Bio.10	3			3	2
	Bio.11	3	2	2	1	3
	Bio.12	3	3	3	2	3
	Avg	3	2	2.2	2.1	2.6

3 = Strong mapping, 2= Moderate mapping, 1= Weak mapping, 0 = Not mapping

Programme Outcomes

No.	By the end of the programme, the Medical Graduate will:
1	Be a Clinician , who understands and provides preventive, promotive, curative, palliative and holistic care with compassion
2	Be a Leader and member of the health care team and system
3	Be a Communicator with patients, families, colleagues and community
4	Be a Lifelong learner committed to continuous improvement of skills and knowledge
5	Be a Professional who is committed to excellence, is ethical, responsive and accountable to patients, community and the profession

Format for Course Outcomes Biochemistry

Course	Class	CO No	Statement
Biochemistry	MD	Bio.1	Explain concepts and principles of biochemistry and cell biology, including correlations of these with cellular and molecular processes involved in health , in disease states for clinical problem solving and research.
		Bio.2	Describe pathways of the intermediary metabolism along with their individual and integrated regulation and apply that in understanding the functioning of the body.
		Bio.3	Describe and apply the concept of nutrition in health and disease, micro- and macronutrition and essential nutrients, and interlinks of nutrients with metabolism and functions of a living system.
		Bio.4	Acquire knowledge on application of various aspects of genetic engineering in Medicine.

Format for Course Outcomes

Course	Class	CO No	Statement
Biochemistry	MD	Bio.5	Acquire knowledge and apply the principle of statistics, biostatistics and epidemiology to the evaluation and interpretation of molecular and metabolic disease states.
		Bio.6	Evaluate, analyze and monitor disease states by applying relevant biochemical investigations and interpreting the clinical and laboratory data and integrate principles of immunology in biochemistry.
		Bio.7	Demonstrate knowledge of basics of research methodology, develop a research protocol, analyse data using currently available statistical software, interpret results and disseminate these results , to pursue further specializations and eventually be competent to guide students.
		Bio.8	Describe the principles of teaching - learning technology towards application . Take interactive classroom lectures, prepare modules organize and conduct PBLs, case discussions, small group discussions, Seminars, Journal club and research presentations

Format for Course Outcomes

Cours	e Class	CO No	Statement
Biochemistry	MD	Bio.9	Demonstrate knowledge about recent advances and trends in research in the field of clinical biochemistry.
		Bio.10	Communicate biochemical reasoning effectively to the members of the health care team and demonstrate empathy and respect towards patients, families, peers, and other healthcare professionals. regardless of the biochemical nature of their disease.
		Bio.11	Develop differential diagnoses for molecular and metabolic causes of diseases, Suggest preventive, curative, and/or palliative strategies for the management of disease and Predict effectiveness and adverse effects associated with disease intervention.
		Bio.12	Demonstrate skills for clinical diagnosis, testing, understanding of biochemical conditions and diagnostic service.

Course Name	CO/PO	PO.1	PO.2	PO.3	PO.4	PO.5
	Bio.1	3	2	1	2	3
	Bio.2	3	-	-	2	2
Biochemistry MD	Bio.3	3	2	1	2	3
	Bio.4	3	-	2	3	2
	Bio.5	3	3	2	2	2
	Bio.6	3	2	1	2	3
	Bio.7	3	1	2	2	2
	Bio.8	3	2	2	1	3
	Bio.9	3	-	1	2	2
	Bio.10	3	1	3	1	2
	Bio.11	3	2	3	1	3
	Bio.12	3	1	1	2	3
	Avg	3	2	2	2	3

3 = Strong mapping, 2= Moderate mapping, 1= Weak mapping, 0 = Not mapping

4. Alumni Placement (Till date)

Year of Passing	Name of the student	Placement	Mobile Number	Email Id
2009	Dr. Manoj Paliwal	HOD, Govt. Medical College, Ratlam	9752386921	-
2009	Dr. Anita Deshmukh	Dr. D. Y. Patil Medical College, Pimpri	9422987665	anita deshmukh1@gmail.com
2010	Dr. Soumitra Chakravarty	Medical College Barbados (West Indies)	-	-
2010	Dr. Lalna Ghodekar	Bharti Vidyapeeth Medical College, Pune	9922431810	drlalna@yahoo.com
2011	Dr. Vrushali Suryakar	KGMU, Lucknow	-	-
2011	Dr. Sandeep Sharma	Medical College, Mathura,UP.	8887941358	-
2012	Dr. Abhijit Pratap	Dr. D. Y. Patil Medical College, Pune	9657192022	abhijit_pratap@hotmail.com
2014	Dr. Saima Mushtaq	Medical College, Kashmir	9561286899	drsaimamushtaq@gmail.com
2014	Dr. Susmita Banerjee	Medical College, Kolkatta	9326049798	Susmitasahoo80@gmail.com
2015	Dr. Shilpa Joshi	Dr. D. Y. Patil Medical College, Pimpri	9975104725	shilpajoshi@pune@gmail.com
2016	Dr. Ishita Ghatak	Tata Memorial Kolkata	9175124870	ishitaghatk@vsnl.net
	Dr. Shikha Singh	Primary Health Centre, Gorakhpur	8446070702	shikha.trust@gmail.com
	Dr. Sandesh Thorat	Dr. D. Y. Patil Medical College, Pimpri	9860971019	sgt3974@gmail.com
2018	Dr. Jayita Debnath	-	9923916426	debnath_jayita@rediffmail.com

5. Wall magazine

Link between exercise & better memory not a myth: Study

GRETCHEN REYNOLDS

EXERCISE seems to be good for the human brain, with many recent studies suggesting that regular exercise improves memory and thinking skills. But an interesting new study asks whether the apparent cognitive benefits from exercise are real or just a placebo effect — that is, if we think we will be “smarter” after exercise, do our brains respond accordingly? The answer has significant implications for any of us hoping to use exercise to keep our minds sharp throughout our lives.

In experimental science, the best, most reliable studies randomly divide participants into two groups, one of which receives the drug or other treatment being studied and the other of which is given a placebo, similar in appearance to the drug, but not containing the active ingredient.

Recently, some scientists have begun to question whether the apparently beneficial effects of exercise on thinking might be a placebo effect. While many studies suggest that exercise may have cognitive benefits, those experiments all have had a notable scientific limitation: They have not used placebos.

Studying this issue, however, is difficult. There is no placebo for exercise and no way to blind people about whether they are exercising. They know if they are walking or cycling or not.

So researchers at Florida State University in Tallahassee and the University of Illinois at Urbana-Champaign came up with a clever workaround. They decided to focus on expectations, on what people anticipate that exercise will do for thinking. If people's expectations jibe closely with the actual benefits, then at



least some of those improvements are probably a result of the placebo effect and not of exercise.

The scientists had seen this situation at work during an earlier study of video games and cognition. Past research had suggested that playing ac-

tion-oriented video games improves players' subsequent thinking skills. But when scientists in the new study asked video-game players to estimate by how much the games would improve their thinking, the players' estimates almost exactly matched the gains seen on cog-

nitive tests after playing. In other words, the cognitive benefits of playing video games appear to be largely a result of a placebo effect.

For the new study, which was published last month in PLOS One, the researchers repeated this experiment but focused on exercise. Recruiting 171 people through an online survey system, they asked half of these volunteers to estimate by how much a stretching and toning programme performed three times a week might improve various measures of thinking, including memory and mental multitasking. The other volunteers were asked the same questions, but about a regular walking programme.

In actual experiments, stretching and toning regimens generally have little if any impact on people's cognitive skills. Walking, on the other hand, seems to substantially improve thinking ability.

But the survey respondents believed the opposite, estimating that the stretching and toning programme would be more beneficial for the mind than walking. The volunteers' estimates of the likely cognitive improvements from gentle toning averaged about a three on a scale from one to six. The estimates of benefits from walking were lower.

These data, while they do not involve any actual exercise, are good news for people who do exercise. “The results from our study suggest that the benefits of aerobic exercise are not a placebo effect,” said Cary Stothart, a graduate student in cognitive psychology at Florida State University, who led the study. If expectations had been driving the improvements in cognition, Stothart said, then people should have expected walking to be more beneficial than stretching.

—NYT

Atherosclerosis: Research reveals new mechanism and therapeutic target

5. New research offers fresh insights into how a type of immune cell can destabilize the fatty deposits, or plaques, that form in arteries during atherosclerosis.
- 6.
7. Healthy arteries keep the heart healthy. A new study may help prevent atherosclerosis — a disease that affects our blood vessels.
8. **Atherosclerosis** is a persistent, inflammatory condition in which plaques build up inside arteries, causing them to narrow and restrict blood flow.
9. When an atherosclerotic plaque bursts or breaks, it can trigger a **heart attack** or **stroke**.
10. Neutrophils are an abundant type of leukocyte (white blood cell) that defend against infection by attacking microbes. They also serve "**many roles in inflammation**."
11. The new international study reveals that neutrophils can aggravate atherosclerosis by triggering a previously unknown type of cell death that destabilizes arterial plaques.
12. A recent **Nature** paper describes how neutrophils can induce a series of molecular events that also kills the smooth muscle cells that help to retain the plaques in the artery wall.
13. "Every inflammatory reaction," says co-corresponding study author Prof. Oliver Söhnlein, from the Institute for Cardiovascular Prevention at the Ludwig Maximilian University (LMU) of Munich in Germany, "results in some collateral damage, because neutrophils also attack healthy cells."
14. He and his colleagues have also designed and made a "tailored peptide" that could potentially target and block the cell-death process.
15. **Embryo stem cells created from skin cells**
16. Researchers at the Hebrew University of Jerusalem (HU) have found a way to transform skin cells into the three major stem cell types that comprise early-stage embryos. The work (in

mouse cells) has significant implications for modelling embryonic disease and placental dysfunctions, as well as paving the way to create whole embryos from skin cells.

17. As published in *Cell Stem Cell*, Dr. Yossi Buganim of HU's Department of Developmental Biology and Cancer Research and his team discovered a set of genes capable of transforming murine skin cells into all three of the cell types that comprise the early embryo: the embryo itself, the placenta and the extra-embryonic tissues, such as the umbilical cord. In the future, it may be possible to create entire human embryos out of human skin cells, without the need for sperm or eggs. This discovery also has vast implications for modelling embryonic defects and shedding light on placental dysfunctions, as well as solving certain infertility problems by creating human embryos in a petri dish.
18. Back in 2006, Japanese researchers discovered the capacity of skin cells to be "reprogrammed" into early embryonic cells that can generate an entire fetus, by expressing four central embryonic genes. These reprogrammed skin cells, termed "Induced Pluripotent Stem Cells" (iPSCs), are similar to cells that develop in the early days after fertilization and are essentially identical to their natural counterparts. These cells can develop into all fetal cell types, but not into extra-embryonic tissues, such as the placenta.
19. Now, the Hebrew University research team, headed by Dr. Yossi Buganim, Dr. Oren Ram from the HU's Institute of Life Science and Professor Tommy Kaplan from HU's School of Computer Science and Engineering, as well as doctoral students Hani Benchetrit and Mohammad Jaber, found a new combination of five genes that, when inserted into skin cells, reprogram the cells into each of three early embryonic cell types -- iPS cells which create fetuses, placental stem cells, and stem cells that develop into other extra-embryonic tissues, such as the umbilical cord. These transformations take about one month.
20. The HU team used new technology to scrutinize the molecular forces that govern cell fate decisions for skin cell reprogramming and the natural process of embryonic development. For example, the researchers discovered that the gene "Eomes" pushes the cell towards placental stem cell identity and placental development, while the "Esrrb" gene orchestrates fetus stem cells development through the temporary acquisition of an extra-embryonic stem cell identity.
21. To uncover the molecular mechanisms that are activated during the formation of these various cell types, the researchers analyzed changes to the genome structure and function inside the cells when the five genes are introduced into the cell. They discovered that during the first stage, skin cells lose their cellular identity and then slowly acquire a new identity of one of the three early embryonic cell types, and that this process is governed by the levels of two of the five genes.
22. Recently, attempts have been made to develop an entire mouse embryo without using sperm or egg cells. These attempts used the three early cell types isolated directly from a live, developing embryo. However, HU's study is the first attempt to create all three main cell lineages at once from skin cells. Further, these findings mean there may be no need to "sacrifice" a live embryo to create a test tube embryo.
23. End to Aids in sight as huge study finds drugs stop HIV transmission
24. An end to the Aids epidemic could be in sight after a landmark study found men whose HIV infection was fully suppressed by antiretroviral drugs had no chance of infecting their partner.
25. The success of the medicine means that if everyone with HIV were fully treated, there would be no further infections.
26. Among nearly 1,000 male couples across Europe where one partner with HIV was receiving treatment to suppress the virus, there were no cases of transmission of the infection to the HIV-negative partner during sex without a condom. Although 15 men were infected with HIV during the eight-year study, DNA testing proved that was through sex with someone other than their partner who was not on treatment.

27. “It’s brilliant – fantastic. This very much puts this issue to bed,” said Prof Alison Rodger from University College London, the co-leader of the paper [published in the Lancet](#) medical journal. Earlier studies have also shown the treatment protects heterosexual couples where one partner has HIV.
28. She added: “Our findings provide conclusive evidence for gay men that the risk of HIV transmission with suppressive ART [antiretroviral therapy] is zero. Our findings support the message of the [international U=U campaign](#) that an undetectable viral load makes HIV untransmittable.
29. “This powerful message can help end the HIV pandemic by preventing HIV transmission, and tackling the stigma and discrimination that many people with HIV face.
30. “Increased efforts must now focus on wider dissemination of this powerful message and ensuring that all HIV-positive people have access to testing, effective treatment, adherence support and linkage to care to help maintain an undetectable viral load.”
31. In 2017, there were almost 40 million people worldwide living with HIV, of whom 21.7 million were on antiretroviral treatment. An estimated 101,600 people are [living with HIV](#) in the UK, and of these, about 7,800 are undiagnosed, so do not know they are HIV positive.
32. Myron S Cohen of the UNC Institute for Global [Health](#) and Infectious Diseases at Chapel Hill in North Carolina, said in a commentary in the Lancet on the study that it should push the world forward on a strategy to test and treat everyone who has HIV. But, he added, maximising the benefits of treatment, particularly for men who have sex with men, has proved difficult.
33. “It is not always easy for people to get tested for HIV or find access to care; in addition, fear, stigma, homophobia and other adverse social forces continue to compromise HIV treatment,” he said.
34. “Diagnosis of HIV infection is difficult in the early stages of infection when transmission is very efficient, and this limitation also compromises the treatment as prevention strategy.”
35. According to the National Aids Trust, 97% of people on HIV treatment in the UK have an undetectable level of the virus, meaning they cannot pass it on. “Hearing this can be enormously empowering and reassuring to people living with HIV,” said Deborah Gold, the trust’s chief executive.
36. The latest findings reinforce the importance of people taking HIV tests frequently, which could ultimately end the transmission of the virus altogether in the future. New diagnoses have been declining since their peak in 2005, with figures from 2017 showing a 17% drop on 2016 and a 28% fall compared with 2015.
37. Late diagnosis remains a major challenge, still accounting for about 43% of new HIV diagnoses. This disproportionately affects certain groups, including black African heterosexual men and people aged 65 and older.
38. “If we don’t reduce late diagnosis, there will always be those who are not aware of their HIV status and who therefore cannot access treatment,” said Gold. “We think that the findings from this study could be incredibly powerful in breaking down

some of the barriers to testing in communities where there is still a lot of stigma around HIV.”

39. However, she added that government funding cuts to specialist health services would make it more difficult to achieve a goal of eliminating transmission by 2030.
40. Jens Lundgren, a professor of infectious diseases at Rigshospitalet, University of Copenhagen, and joint-lead for the study, called Partner, said: “We have now provided the conclusive scientific evidence for how treatment effectively prevents further sexual transmission of HIV.”
41. Dr Michael Brady, the medical director at the Terrence Higgins Trust, said: “It is impossible to overstate the importance of these findings.
42. “The Partner study has given us the confidence to say, without doubt, that people living with HIV who are on effective treatment cannot pass the virus on to their sexual partners. This has incredible impact on the lives of people living with HIV and is a powerful message to address HIV-related stigma.”
43. Bruce Richman, the founding executive director of the Prevention Access Campaign, which launched U=U, said Pac was tremendously grateful to the researchers and participants. He said the study “has for ever changed what it means to live and love with HIV around the world”.
44. In a linked comment in the journal, Cohen expressed optimism for future treatment of Aids. “During the course of these studies, antiretroviral drugs have become more effective, reliable, durable, easier to take, well tolerated and much less expensive,” he said.
45. “The results ... provide yet one more catalyst for a universal test-and-treat strategy to provide the full benefits of antiretroviral drugs. This and other strategies continue to push us toward the end of Aids.”
46. Case study
47. Alex Sparrowhawk, 34, has been living with HIV for almost 10 years. When he was diagnosed in November 2009, he had two major concerns: how being HIV positive would impact his work as a financial analyst, and what it meant for future relationships.
48. “I was single at the time,” he said. “Just navigating what to do – when to tell people and how to talk to people was really difficult.”
49. Alex immediately began antiretroviral treatment, initially taking four pills a day, which was reduced to one pill once his viral load came down to undetectable levels several months later. The latest results confirm that for the past nine years, he has not been able to transmit the virus to anyone, although at the time, medical advice was less definitive.
50. Between his diagnosis and now, Alex spent six-and-a-half years in a relationship, and said the possibility – however tiny – of transmitting HIV to his partner was a source of anxiety. “You’d be told it was very unlikely, or that it was only possible under certain circumstances like having an STI,” he said. “But you’re constantly worried about these caveats and you go through this worry together.

51. “Now we can say zero risk, which is just so much more empowering for people. It’s a huge weight off your shoulders.”
52. Alex hopes the findings will help transform public attitudes about HIV, bringing them in line with medical evidence. “A lot of stigma is driven by fear of being exposed to HIV,” he said. “People still think you can get it from kissing and casual contact. If more people knew about this study, this would change.”

6. Integrated Teaching

INTEGRATION

The knowledge acquired in biochemistry shall help the students to integrate molecular events with structure and function of the human body in health and disease. Total – 38 lectures for Biochemistry are integrated with Anatomy, Physiology, Pathology, General Medicine, OBGY, Pediatric, and Microbiology

6) Dissertation

Year of Passing	Title of study	Pg student	Pg guide
2009	Study of antioxidant and lipid Peroxidation status in patient with osteoarthritis	Dr. Manoj Paliwal	Dr.A.N. Sontakke
2009	Study of nitric oxide level in Liver Cirrhosis	Dr. Anita Deshmukh	Dr. U. D. Deshmukh
2010	Antioxidants And Lipid Peroxidation Status – A Correlation between maternal Blood And Cord Blood Of Premature Infants	Dr. Soumitra Chakravarty	Dr. M.A.Tilak
2010	Serum Total And Free Calcium In Hypertension	Dr. Lalna Ghodekar	Dr. U. K. More
2011	Study of serum electrolyte, antioxidant and nitric oxide level in Essential Hypertension	Dr. Vrushali Suryakar	Dr. M.A.Tilak
2011	Lipid profile in habitual tobacco chewers	Dr. Sandeep Sharma	Dr. U. K. More
2012	Study of thyroid profile in geriatric population	Dr. Abhijit Pratap	Dr. M.A. Tilak
2014	Biochemical evaluation of Myopathy in patients of Hypothyroidism.	Dr. Saima Mushtaq	Dr. M.A.Tilak
	Dyslipidemia in Psoriasis.	Dr. Susmita Banerjee	Dr. U. K. More
2015	Study of free PSA, and total PSA levels in patients with prostatic hyperplasia, carcinoma prostate and its clinicopathologic correlation	Dr. Shilpa Joshi	Dr. R. D. Naoley
2016	Analysis of Arterial Blood Gas Reports in Critically Ill Patients.	Dr. Ishita Ghatak	Dr. M.A.Tilak
	Alteration of Renal Profile in Thyroid Dysfunction	Dr. Shikha Singh	Dr. S. A. Shinde

	Lipid profile and Renal function tests in chronic renal failure patients – pre and post hemodialysis.	Dr. Sandesh Thorat	Dr. M.A.Tilak
2018	Study of thyroid hormone status in patients of iron deficiency anemia	Dr. Jayita Debnath	Dr. V. V. Dhat

**7) Achievements/Awards of Faculty, UG Student, PG student
yearwise (calendar year)from 1st January 2014 to 2019 till date**

Sr. No.	Name	Designation	Details of achievements
Year 2015			
1	Dr Ishita Ghatak	PG Student	Univ. gold medal for preclinical (2015)
Year 2017			
1	Dr Jayita Debnath	PG Student	secured 1st Rank in PG Quiz Held during 3rd Maharashtra state conf of AMBI ON 28TH April 2017 at Bharati Vidyapeeth Medical College Pune

Conferences/CME/Workshop organized by department year wise (calendar year)from1st2014 to 2019 till date(With 2/3 photographs of each event)

Sr. No.	Title	Date	Guest Speaker	No. of Delegates Attended
Year 2015				
1	Newborn screening	06/04/2015	Dr. Pramod Ingle	200
				

Year 2017				
1	PG Quiz conducted in 3rd Maharashtra State Chapter Conference of Association of Medical Biochemists of India at Bharati Vidyapeeth Deemed University Medical College Pune	28th to 29th April 2017	-	300
Year 2019				
1	PG Quiz conducted in 4th Maharashtra State Chapter Conference of Association of Medical Biochemists of India at Krishna Institute of Medical Sciences, "Deemed To Be University, Karad.	1st -2nd March 2019	-	300

Conferences/CME/Workshop attended by faculty and students year wise (calendar year) from 1st 2014 to 2019 till date

Sr. No.	Name of the Participant	Designation	Name of the CME/Conference/Workshop	Date & Venue/place	Role (Delegate/Resource Person/Chairperson/Panelist)
Year 2014					
1	Dr. M. A. Tilak	Prof. & Head	Basic Course workshop in Medical Education Technologies	27/01/14 to 29/01/14 Dr. D. Y. Patil Medical College Pimpri Pune	Delegate
	Dr. U. K. More	Prof.			
2	Dr. V. V. Dhat	Prof.	Basic Course workshop in Medical Education Technologies	11/02/14 to 13/02/14 Dr. D. Y. Patil Medical College Pimpri Pune	Delegate
3	Dr. Abhijit Pratap	Asst. Prof.	Quality Conclave	15/04/14 to 16/04/14 New Delhi	Delegate
4	Dr. M. A. Tilak	Prof. & Head	40 th Annual conference of Research Society of BJMC & SGH	06/03/14 to 07/03/14 Pune	Delegate
	Dr. R. D. Naoley	Prof.			
	Dr. A. D. Deshmukh	Asso. Prof.			
	Dr. L. Takale	Asst. Prof			
	Dr. P. J. Phalak	Asso. Prof			
	Dr. Shilpa Joshi	Asst. Prof.			
	Mrs. M. A. Jagtap	Demo.			
5	Dr. M. A. Tilak	Prof. & Head	AMBI – BIOCON 14 State conference	05/04/14 to 06/04/14 Aurangabad	Delegate
	Dr. Ishita Ghatak	PG Student			

6	Dr. Shilpa Joshi	Asst. Prof.	CME in Biochemistry	5 th April 2014 Deenanath Mangeshkar Hospital Erandwane Pune	Delegate
7	Dr. R. D. Naoley	Prof.	Basic Course Workshop in Medical Education Technologies	16/10/14 to 18/10/14 Dr. D. Y. Patil Medical College, Pimpri Pune	Delegate
8	Dr. A. D. Deshmukh Dr. Shilpa Joshi	Asso. Prof.	22 nd AMBICON	14/11/14 to 16/11/14 Tirupati (Andhra Pradesh)	Delegate
9	Dr. Sandesh Thorat	Asst. Prof.	3 rd Annual Research Society Conference 2014	27 th Nov. 2014 MAEER'S MIMER MEDICAL COLLEGE, Talegaon Dabhade	Delegate
	Dr. Shikha Singh	PG student			
10	Dr. M. A. Tilak	Prof. & Head	International Multifocal Conference, 2014	4 th Dec. 2014Karad	Delegate
	Dr. U. K. More	Prof.			
Year 2015					
11	Dr. M. A. Tilak	Prof. & Head	41th Annual conference of Research Society	12/02/15 to 13/02/15 B. J. Medical College & Sassoon General Hospital Pune	Delegate
	Dr. R. D. Naoley	Prof.			
	Dr. A. D. Deshmukh	Asso. Prof.			
	Dr. L. Takale	Asst. Prof.			
12	Dr. M. A. Tilak	Prof. & Head	2 nd Maharashtra State Chapter Conference AMBI-BIOCON 2015	27/02/15 to 28/02/15 LTMMC, Sion, Mumbai	Delegate
	Dr. V. V. Dhat	Prof.			
	Dr. L. Takale	Asst. Prof.			
	Dr. Abhijit Pratap	Asst. Prof			
	Dr. Ishita Ghatak Dr. Shikha Singh	PG student			
		PG student			
13	Dr. Ishita Ghatak	PG student	Participated in PG Quiz at 2 nd Maharashtra State Chapter Conference AMBI-BIOCON 2015	27/02/15 to 28/02/15 LTMMC, Sion, Mumbai	Delegate
	Dr. Shikha Singh	PG student			
14	Dr. M. A. Tilak	Prof. & Head	CME in Psychiatric Neuroscience	10/06/15 to 11/06/15 Dr. D. Y. Patil medical College, Pune	Delegate
15	Dr. Abhijit Pratap	Asst. Prof.	Basic MET Workshop	28/07/15 to 30/07/15 Dr. D. Y. Patil Medical College Pimpri	Delegate
	Dr. Shilpa Joshi	Asst. Prof			
16	Dr. S. A. Shinde	Asso. Prof.	3T Bioethics Training	03/08/15 to	Delegate

			Program Workshop,	06/08/15	
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			for Medical Teachers	Dr. D. Y. Patil Vidyapeeth Pimpri Pune	
17	Dr. V. V. Dhat	Prof.	Internal Auditors Training as per ISO 9001-2008	07/08/15 to 08/08/15 Dr. D. Y. Patil Dental College, Pimpri Pune	Delegate
18	Dr. Abhijit Pratap	Asst. Prof.	6 th East Zone Conference of Association of Clinical Biochemists of India Host: Jharkhand Branch, ACBI	26/09/15 to 27/09/15 Bokaro Steel City, Jharkhand	Delegate
Year 2016					
19	Dr. M. A. Tilak	Prof. & Head	42 nd Annual Conference	24/02/16 to 26/02/16 The Research Society of B. J. Government Medical College and Sassoon General Hospitals, Pune	Delegate
	Dr. R. D. Naoley	Prof.			
	Dr. V. V. Dhat	Prof.			
	Dr. P. J. Phalak	Asso. Prof.			
	Dr. A. D. Deshmukh	Asso. Prof.			
	Dr. L. Takale	Asst. Prof.			
	Dr. P. Palshikar	Asst. Prof.			
20	Dr. S. A. Shinde	Asso. Prof.	Women's Health A Holistic Approach	08/03/16 to 13/03/16 Dr. D. Y. Patil Vidyapeeth, Pune	Delegate
21	Dr. M. A. Tilak	Prof. & Head	National Seminar on Web Scale Discovery Service-A New Avatar in Medial Information Retrieval	4 th April 2016 AIIMS, New Delhi	Delegate
22	Dr. P. J. Phalak	Asso. Prof.	3T Bioethics Training Program Workshop, for Medical Teachers	04/04/16 to 06/04/16 Dr. D. Y. Patil Vidyapeeth Pimpri Pune	Delegate
23	Dr. Abhijit Pratap	Asst. Prof.	Flow Cytometry Workshop	12th March 2016 Dr. D. Y. Patil Medical College Pimpri	Delegate
	Dr. P. A. Palshikar	Asst. Prof.			
24	Dr. Abhijit Pratap	Asst. Prof.	3rd APPI Conference	11/06/16 to 12/06/16 Mumbai	Delegate
25	Dr. Lalna Takale	Asst. Prof.	Fourth Scientist Research Conference	28/07/16 to 29/07/16 IISER Pune	Delegate
26	Dr. Abhijit Pratap	Asst. Prof.	PATHOCON	18th Dec 2016 New Delhi	Delegate
27	Dr. Abhijit Pratap	Asst.	HPLC workshop	17th Dec.	Delegate


		Prof.		2016New Delhi	
28	Dr. Jayita Debnath	PG Student	Workshop on Research Methodology for Residents	17th to 28th June 2016Dr. D. Y. Patil Medical College Pimpri	Delegate
29	Dr. Jayita Debnath	PG Student	Workshop on Bioethics Health Baw and Professionalism	17th August 2016Dr. D. Y. Patil Vidyapeeth Pune	Delegate
30	Dr. Jayita Debnath	PG Student	Workshop on Microteaching for residents/Demonstrators	27th to 28th sept and 4th oct. 2016Dr. D. Y. Patil Medical College Pimpri	Delegate
Year 2017					
31	Dr. P. J. Phalak	Asso. Prof.	Revised Basic Course Workshop in Medical Education Technologies	03rd Jan to 5th Jan 2017DYPMC Pimpri	Delegate
	Dr. P. A. Palshikar	Asst. Prof.			
32	Dr. M. A. Tilak	Prof. & Head	43rd Annual Conference	21st to 23rd Feb. 2017B. J. Govt. Medical College and Sasoon General Hospitals Pune	Delegate
	Dr. R. D. Naoley	Prof.			
	Dr. V. V. Dhat	Prof.			
	Dr. Chetan Deogade	Demo.			
	Dr. Pragati Kurme	Demo.			
	Dr. Chitralekha Thenge	Demo.			
33	Dr. R. D. Naoley	Prof.	Midterm National Conference of Geriatric Society of India, Pune	15th and 16th April 2017Dr. D. Y. Patil Medical College Pimpri	Delegate
34	Dr. M. A. Tilak	Prof. & Head	3rd Maharashtra State Chapter Conference of Association of Medical Biochemists of India	28th and 29th April 2017Bharati Vidyapeeth, Pune	Delegate
	Dr. V. V. Dhat	Prof.			
	Dr. P. J. Phalak	Asso. Prof.			
	Dr. A. D. Deshmukh	Asso. Prof.			
	Dr. L. Takale	Asst. Prof.			
	Dr. Abhijit Pratap	Asst. Prof.			
	Dr. P. Palshikar	Asst. Prof.			
	Dr. Sandesh Thorat	Asst. Prof.			
	Dr. Jayita Debnath	PG student			
35	Dr. Abhijit Pratap	Asst. Prof.	44th National Conference of Association of Clinical Biochemists of India	3th to 6th Dec. 2017Scientific Convention Centre KGMU, Lucknow	Delegate
Year 2018					
36	Dr. Sarita Shinde	Prof.	Workshop on Research	4th August	Delegate

			Methodology	2018Dr. D. Y Patil Vidyapeeth, Pune	
37	Dr. M.A. Tilak	Prof. & Head	Latest Trends in Quality Control	28th September ,2018BioRad Laboratories at Sheraton Grand, Pune	Delegate
	Dr. V.V.Dhat	Prof.			
	Dr. S.A. Shinde	Prof.			
38	Dr. Abhijit Pratap	Asst. Prof.	45th National conference of association of clinical Biochemists of India	24th to 27th Oct. 2018Kala Academy, Goa	Delegate
Year 2019					
39	Dr. M. A. Tilak	Prof. & Head	AMBICON 4th Maharashtra State Chapter Conference of Association of Medical Biochemists of India	01/03/19 to 02/03/19 Karad	Delegate
	Dr. Vaishali Dhat	Prof.			
	Dr. Pradnya Phalak	Asso. Prof.			
	Dr. Shilpa Joshi	Asst. Prof.			
	Dr. Sandesh Thorat	Asst. Prof.			
40	Dr. Vaishali Dhat	Prof.	Curriculum Implementation Support Programme	22/04/19 to 24/04/19 Dr. D. Y. Patil Medical College, Hospital and Research Centre, Pimpri	Delegate
	Dr. Pradnya Phalak	Prof.			
41	Dr. U. K. More	Prof.	CME on Quality Control and Chromatogram Interpretation	6th June 2019 Bio-Rad Laboratories, Pune	Delegate


8) Best Practices

BEST PRACTICES


- Power point presentation
- Small group teaching
- Horizontal Integrated teaching
- Quiz and Seminar



Quiz 17



Quiz 18



Seminar