Pune District Education Association's
Seth Govind Raghunath Sable College of Pharmacy, Saswad, Pune

Attendance cum response sheet for Journal Club of Department of Pharmaceutical Chemistry

Date & Time: 04/01/2018

Name of the Facilitato: Mrs. R. S. Chavan

Title of the Research Project: Thiazolyl/oxazolyl formazanyl indoles as potent anti-inflammatory agents

Sr. No.	Name of the member	Signature	Evaluation of today's meeting/suggestions
1.	Dr. M.N. Deodhar		satisfactory discussion.
2.	Mrs. R.S. Chavan	Rschavan	Discussion threw light on indoles with ~~fused~~ other rings & their activity.
3.	Mrs. S.J. Pawar	Sawal	The discussion was useful. It gives idea about exploring indole with other ring as antiinflammatory agents.
4.	Mrs. J.R. Jagtap		Discussion on thiazole & oxazole derivatives of indole as antiinflamatory agents was fruitful.
5.	Mr. A.P. Kale		Discussion regarding synthesis of indole derivatives and their activity was good.
6.	Mr. G.B. Nigade		satisfactory discussion

Available online at www.sciencedirect.com
ScienceDirect
European Journal of Medicinal Chemistry 43 (2008) 2597–2609
EUROPEAN JOURNAL OF MEDICINAL CHEMISTRY
http://www.elsevier.com/locate/ejmech

Preliminary communication

Thiazolyl/oxazolyl formazanyl indoles as potent anti-inflammatory agents

Nisha Singh[1], Sudhir Kumar Bhati, Ashok Kumar*

Medicinal Chemistry Division, Department of Pharmacology, L.L.R.M. Medical College, Gangh Road, Meerut 250004, Uttar Pradesh, India

Received 21 March 2007; received in revised form 22 September 2007; accepted 11 December 2007
Available online 5 January 2008

Abstract

A series of 3-(2′-substituted indolidene aminothiazol-4′-yl)-2-(4-chlorophenyl) indoles (**3a–3d**), 3-(2′-substituted indolidene amino oxazol-4′-yl)-2-(4-chlorophenyl) indoles (**3a′–3d′**) and 3-[2′-(1′-substituted phenyl-3′-substituted indolyl formazan-4′-yl) thiazol-4′-yl]-2-(4-chlorophenyl) indoles (**4a–4h**), 3-[2′-(1′-substituted phenyl-3′-substituted indolyl formazan-4′-yl) oxazol-4′-yl]-2-(4-chlorophenyl) indoles (**4a′–4h′**) were synthesized and evaluated for their anti-inflammatory activity against carrageenan induced oedema in albino rats at a dose of 50 mg/kg p.o. The structure of all these compounds were established on the basis of elemental and spectral (IR, ^{1}H NMR and mass spectral data) studies. All the compounds of this series show moderate to good activity. The most active compound of this series 3-(2′-methyl indolidene aminothiazol-4′-yl)-2-(4-chlorophenyl) indole (**3b**) is found to be the most potent and has shown higher percent of inhibition of oedema, lower ulcerogenic liability and acute toxicity than the reference drug phenyl butazone.

Keywords: Substituted indoles; Oxazole; Thiazole; Formazan; Anti-inflammatory activity; Ulcerogenic activity; Acute toxicity studies

1. Introduction

Acute and chronic inflammation and different type of arthritis are the inflammatory disorders which are a big blow to humanity and continual search for newer non-steroidal anti-inflammatory agents is the only way to fortify against this awful threat. The discovery of indomethacin [1] as a successful agent for clinical treatment of anti-inflammatory disorders has led to the exploration of indole moiety to obtain better anti-inflammatory agents. Furthermore indole and its analogs constitute the active class of compounds possessing wide spectrum of biological activities, such as anti-inflammatory [2–12], anti-microbial [13–15], anti-bacterial [16,17], anti-convulsant [18–21], and cardiovascular [22,23]. Moreover, thiazoles [24–27], oxazoles [28], formazanes [29,30] are well famed for their anti-inflammatory activities. In the light of the above report and also in continuation of our laboratory work on chemoselective reaction of indole derivatives, a drug strategy has been planned to synthesize several indole derivatives possessing thiazole, oxazole and formazan moieties with the hope to get better anti-inflammatory molecules. All compounds have been screened for their anti-inflammatory, ulcerogenic, analgesic and acute toxicity activities.

2. Chemistry

The synthetic route of compounds is shown in Scheme 1. Reaction of 2-(4-chlorophenyl) indole and chloroacetyl chloride yielded the starting compound **1** i.e. 3-chloroacetyl-2-(4-chlorophenyl) indole. This compound on reaction with thiourea and urea yielded compounds **2** and **2′**, respectively. These compounds on refluxing with 2-substituted-3-indolealdehyde in the presence of glacial acetic acid result in the next compounds i.e. 3-(2′-substituted indolidene aminothiazol-4′-yl)-2-(4-chlorophenyl) indoles (**3a–3d**) and 3-(2′-substituted indolidene amino oxazol-4′-yl)-2-(4-chlorophenyl) indoles

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[1] Part of Ph.D. thesis.

0223-5234/$ - see front matter © 2007 Elsevier Masson SAS. All rights reserved.
doi:10.1016/j.ejmech.2007.12.024

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Attendance cum response sheet for Journal Club of Department of Pharmaceutical Chemistry

Date & Time: 19/01/2018 2:00 Pm

Name of the Facilitator: Mrs. Jagtap J.R.

Title of the Research Project: Antimalarial Drug discovery : old & new approaches.

Sr. No.	Name of the member	Signature	Evaluation of today's meeting/suggestions
1.	Dr. M.N. Deodhar	M.	Interesting paper on antimicrobial approaches.
2.	Mrs. R.S. Chavan	Rschavan	The discussion on Antimalarial drug discovery was fruitful.
3.	Mrs. S.J. Pawar	Sawal	The discussion on various approaches in antimalarial drug discovery is useful.
4.	Mrs. J.R. Jagtap	JRJ.	Discussion was very beneficial regarding old & new approaches for antimalarial Drug Discovery.
5.	Mr. A.P. Kale		The dessision on discovery of antimalarial drugs was very beneficial, and informative.
6.	Mr. G.B. Nigade		Interesting paper on antimicrobial approaches

The Journal of Experimental Biology 206, 3735-3744
© 2003 The Company of Biologists Ltd
doi:10.1242/jeb.00580

Review

Antimalarial drug discovery: old and new approaches

Philip J. Rosenthal
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Accepted 2 July 2003

Summary

New drugs against malaria are greatly needed. Many approaches to antimalarial drug discovery are available. These approaches must take into account specific concerns, in particular the requirement for very inexpensive and simple to use new therapies and the need to limit the cost of drug discovery. Among important efforts that are currently ongoing are the optimization of therapy with available drugs, including the use of combination therapy, the development of analogs of existing agents, the discovery of natural products, the use of compounds that were originally developed against other diseases, the evaluation of drug resistance reversers, and the consideration of new chemotherapeutic targets. The last category benefits from recent advances in malaria research technologies and genomics and is most likely to identify new classes of drugs. A number of new antimalarial therapies will likely be needed over the coming years, so it is important to pursue multiple strategies for drug discovery.

Key words: malaria, *Plasmodium falciparum*, drugs, chemotherapy, drug discovery, resistance.

Introduction

Malaria is one of the most important infectious diseases in the world (Breman, 2001). Unfortunately, mortality from malaria appears to be increasing in the highest risk group, African children (Snow et al., 2001). A major contributor to malarial morbidity and mortality is almost certainly the increasing resistance of malaria parasites to available drugs (Olliaro and Bloland, 2001). Resistance is primarily seen in *Plasmodium falciparum*, the most virulent human malaria parasite. Antimalarial drug resistance is discussed in detail in other reviews in this volume.

Considering increasing resistance to available agents, there is broad consensus that there is a need to develop new antimalarial drugs (Ridley, 2002). Antimalarial drug development can follow several strategies, ranging from minor modifications of existing agents to the design of novel agents that act against new targets. Increasingly, available agents are being combined to improve antimalarial regimens. This review will discuss multiple approaches to antimalarial drug discovery, emphasizing the varied strategies that have led to available drugs and that are likely to provide important new drugs in the future. Additional detailed reviews of antimalarial chemotherapy and potential new targets for drug discovery have been published recently (Olliaro and Yuthavong, 1999; Ridley, 2002; Rosenthal, 2001a).

Unique aspects of antimalarial drug discovery

Antimalarial drug development is constrained by the same factors as any drug development program in that new agents must demonstrate efficacy, be safe and have additional properties important for the specific disease indication. In the case of malaria, the major need is for widespread treatment of malaria in developing countries. Considering resource limitations in this setting, it is generally agreed that new antimalarials should be dosed orally and be effective with single-daily dosing, and that curative regimens should be short, ideally 1–3 days in length. The critical consideration in antimalarial drug development is economic. Financial constraints are relevant in two key regards. First, to be widely useful, antimalarial drugs must be very inexpensive so that they are routinely available to populations in need in developing countries. Indeed, even a price of $1 per treatment is probably unacceptable in many regions, considering severe poverty in most of the malarious world and familiarity with available drugs, especially chloroquine, that are very inexpensive (less than $0.1 per treatment), albeit increasingly ineffective. Second, since malaria markets are primarily in poor countries, marketing opportunities have generally been considered to be limited, and so investment in antimalarial drug discovery and development has been small. Thus, drug discovery directed against malaria is particularly reliant upon shortcuts that may obviate excess cost. A number of such approaches will be discussed below. Antimalarial drug discovery is also dependent on support outside of large pharmaceutical companies. Such support includes grants to academic and industry groups from research agencies and new

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Attendance cum response sheet for Journal Club of Department of Pharmacology and Pharmacognosy

Date & Time: 20|3|2018 3-4 Pm

Name of the Facilitator: Dr. R.Y. Patil

Sr. No.	Name of the member	Signature	Evaluation of today's meeting/suggestions
1.	Dr.R.Y.Patil		Good Paper.
2.	Mr.V.C.Shilimkar		Good informative article.
3.	Mrs.P.N.Jagtap		Good paper & presentation of antimicrobial activity
4.	Ms.V.V.Jagtap		Very well informative Paper.

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Attendance cum response sheet for Journal Club of Department of Pharmacology and Pharmacognosy

Date & Time: 24/4/18

Name of the Facilitator: Mr. V.C. Shilimkar.

Sr. No.	Name of the member	Signature	Evaluation of today's meeting/suggestions
1.	Dr.R.Y.Patil		Informative Paper
2.	Mr.V.C.Shilimkar		This Paper methods for evaluation will help for feature study
3.	Mrs.P.N.Jagtap		Nice information on current trends in drug discovery
4.	Ms.V.V.Jagtap	Ab	

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Attendance cum response sheet for Journal Club of Department of Pharmacology and Pharmacognosy

Date & Time: 28/4/18

Name of the Facilitator: Mrs. P.N.Jagtap.

Sr. No.	Name of the member	Signature	Evaluation of today's meeting/suggestions
1.	Dr.R.Y.Patil		Well informative to future study
2.	Mr.V.C.Shilimkar		Well explained Anti-inflammatory activity
3.	Mrs.P.N.Jagtap		Good paper on models of Antiinflammatory & antioxidant activity
4.	Ms.V.V.Jagtap		Informative Paper

PBL -1 TRIGGER

Class: Third Year B. Pharm. (Sem.-V) **Subject:** Medicinal Chemistry-I

A patient is a 67- year – old man who was admitted with a complaint of shortness of breath that has increased over the last few months. He also indicated that he has recently gained more than 12 pounds without changing his eating or exercise habits and that he often has trouble breathing when climbing stairs at home. Physical examination reveals signs and symptoms consistent with both right sided and left sided heart failure. A diagnosis of Congestive heart failure is established, and a decision is made to limit sodium intake and to initiate oral therapy with digitalis to improve heart function. A diuretic also will be added to help remove edema fluid and decrease the workload on the heart. What diuretics would be appropriate to use in this patient?

SJP (1)

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FACILITATOR ASSESSMENT FORM

PBL No.: 1 **Subject: Medicinal Chemistry-I**

Please rate in the 5 point scale: 5- Excellent, 4- Very Good, 3- Good, 2- Satisfactory, 1 - Not satisfactory

Roll No. of the student / Criteria	1	2	3	4	5	6	7	
Application of knowledge base	4	2	2	4	4	4	4	
Applies previous knowledge to clarify and define the problem.	3	2	2	3	3	3	3	
Answers questions and shares his/her opinions by applying acquired knowledge.	4	2	2	4	4	4	4	
Critical Thinking	4	2	2	4	4	4	4	
Demonstrate, evidence, critical understanding and critical analysis facts.	3	2	2	3	3	3	3	
Is applicable making conclusion and decision regarding the diagnostic / therapeutic approaches?	3	2	2	3	3	3	3	
Demonstrates evidence of following a sequential analysis of the problem.	3	2	2	3	3	3	3	
Self Directed Learning(Self study)	3	2	2	3	3	3	3	
Defines learning objectives and learning goals.	3	2	2	3	3	3	3	
Demonstrates evidence of accomplishment of learning objectives.	4	2	2	4	4	4	4	
If necessary, seeks counseling to orient His/her study and willing to improve	4	2	2	4	4	4	4	
Collaborative work								
Works towards achievement of the groups learning goals with commitment.	4	3	3	4	4	4	4	
Demonstrates effective interpersonal attributes.	4	3	3	4	4	4	4	
Accepts feedback with openness.	4	3	3	4	4	4	4	
Reacts positively to feedback and criticism.	4	3	3	4	4	4	4	
Stands up for his/her points of view.	4	3	3	4	4	4	4	
Shows ability to change his/her point of view of new information given/ obtained.	4	3	3	4	4	4	4	

Pawar

Signature of Facilitator

Dr. S. J. Pawar.

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Feedback of students on PBL conducted on 7/08/2017

Subject: Medicinal Chemistry-I **Class:** Third Yr. B. Pharm.

This questionnaire has been designed to understand the opinion of students involved in the PBL activity so that the activity can be improved in the future. The group leader is advised to answer the questions on behalf of all the group members.

Please **tick** the appropriate box:

Trigger	Yes	No	Can't say
Was the trigger provided to you easily understandable?	✓		
Was the trigger interesting?	✓		
Could you relate the trigger to your curriculum?	✓		
Role of facilitator			
Did you find the role of facilitator useful in understanding the problem?	✓		
Did you take the help of the facilitator in identifying the objectives of the problem?	✓		
Resources			
Did you refer to the books available in the library for compiling the data related to your problem?	✓		
Were there sufficient reference books available in the library for researching the problem?	✓		
Did you find the internet facility and online resources adequate?	✓		
Overall activity			
Do you think PBL is enhancing your comprehension and analytical skills?	✓		
Do you think PBL is enhancing your referencing & researching skills?	✓		
Do you think PBL is contributing towards improving your communication and presentation skills?	✓		
Do you think this activity should be continued in future also?	✓		

Suggestions if any,----

----------Pl. tear from here before submitting----------

Name of the group leader. Payal D. Borawake ...Signature..... Payal .....

Group No.: 1

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College of Pharmacy, Saswad.

Subject :- Medicinal Chemistry- I Group - 1
Problem Based Learning (PBL).

Sr.No.	Name of the Students	Sign
1.	Agrawal Aarati Rajesh. (Scriber)	ARAgrawal.
2.	Atole Swapnil Kisan	
3.	Bhalerao sandhya Sudhirrao	Bhalerao.
4.	Bhongale Suraj Vikas	S.V.Bhongale
5.	Bhosale Aishwarya Rajendra	Bhosale.
6.	Bhosale Shweta Madhukar (Reader)	
7.	Borawake Payal Dnyaneshwar. (Leader).	Payal

PAGE No.
DATE

* Asthma

Asthma is a common long-term inflammatory disease of the airways of the lungs. It is characterized by variable and recurring symptoms, reversible airflow obstruction and bronchospasm.

Asthma is thought to be caused by a combination of genetic and environmental factors. Environmental factors include exposure to air pollution and allergens.

Signs and Symptoms.

Asthma is characterized by recurrent episodes of wheezing, shortness of breath, chest tightness and coughing. Sputum may be produced from the lung by coughing but is often hard to bring up.

Symptoms are usually worse at night and in the early morning or in response to exercise or cold air. A number of other health conditions occur more frequently in those with asthma, including gastro-esophageal reflux disease (GERD), rhinosinusitis and obstructive sleep apnea.

Treatment Options for Asthma.

Since, asthma is a chronic disease, treatment goes on for a very long time.

- Long-acting beta-agonists (LABA) : This class of drugs is chemically related to adrenaline, a hormone produced by the adrenal glands.

- Salmeterol (Serevent), formoterol (Foradil), indacaterol (Arcapta) and vilanterol (used in Breo and Anoro) are long-acting beta-agonists

- Inhaled corticosteroids are the main class of medications in this group. Beclomethasone (Beclovent), fluticasone (Flovent, Arnuity), budesonide (Pulmicort) and triamcinolone (Azmacort) are examples of inhaled corticosteroids.

- Combination therapy with both a LABA and an inhaled corticosteroid : these include Advair (salmeterol), Symbicort (formoterol) and Dulera.

Congestive Heart Failure

Congestive heart failure or Cardiac failure can be described as inability of the heart to pump blood effectively at a rate that meets the needs of metabolizing tissues. This is the direct result of a reduced contractility of the cardiac muscles, especially those of the ventricles, which causes a decrease in cardiac output, increasing the blood volume of the heart. As a result, the systemic blood pressure and the renal blood flow are both reduced, which often lead to the development of edema in the lower extremities and the lung (pulmonary edema) as well as renal failure. A group of drugs known as the cardiac glycosides were found to reverse

most of these symptoms and complications.

Cardiotonics

Classification :-

These drugs increases the force of contraction of heart muscle without increasing heart rate.

Classified as follows :-

a) Cardiac Glycosides :-

Digitoxin, gitoxin, gitalin, Ouabain

b) Miscellaneous Cardiotonics :-

Aminone, Captopril, Enalapril, losartan, dobutamine.

Pathophysiology.

- Heart failure reduces the efficiency of the myocardium or heart muscle
- It can be caused by a wide number of conditions, including myocardial infarction, hypertension and amyloidosis.
- Reduced force of contraction, due to overloading of the ventricle takes place. As the ventricle is loaded with blood the heart muscle contraction becomes less efficient due to reduced ability to cross-link actin and myosin filaments in over-stretched heart muscle.
- A reduced stroke volume, as a result of a failure of systole, diastole or both is observed. Increased end systolic volume is usually caused by reduced contractility.

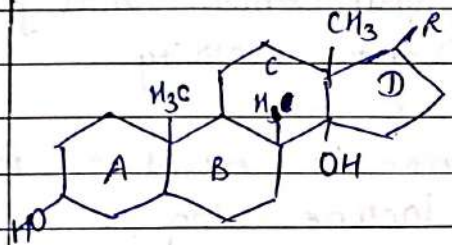
Treatment

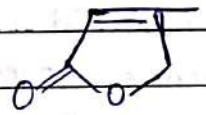
Cardiac Glycosides

(a) Chemistry

The structure of cardiac glycosides includes,

Cardiac glycosides { Non-sugar moiety + Sugar moiety.
Aglycone + Sugar moiety.





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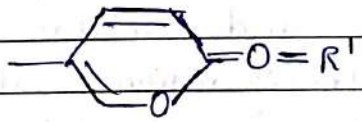
Cardenolide



Butadienolide.

Steroid skeleton composed of cyclopentanoperhydro-phenanthrene nucleus with fused rings i.e. A, B, C and D.

C-17 :- Lactone ring attaches to the cardiac aglycone part at C-17.

Cardenolides :- contain 5 membered lactone ring.

Bufadenolides :- Contain 6 membered lactone ring.

Angular methyl groups at C-10 & C-13.
-OH group at C-3 & C-14 position.

Structure - Activity Relationship

Cardiac glycosides, with recent recognition of Na^+ or K^- ATPase receptors, these molecules are assisted on their ability to inhibit this enzyme, or their ability to create inotropic effect, contractility in isolated cardiac tissue or whole heart preparations.

i) Lactone ring :-

It is not an absolute requirement for the cardiac activity, as several open chain analogues were found to possess significant activity.

ii) Aglycone steroid

Aglycone steroid nucleus is essential for the activity, rather than lactone ring.

iii) β-OH.

OH at 14-β position attached to C-D ring juncture and retains sp^3 character and cis- configuration of the ring.

iv) A-B cis -ring juncture

Also is not an essential requirement of cardiac glycosides. However, A-B ring cis juncture if replaced by A-B trans ring juncture causes decrease in the activity.

Therapeutic Uses :-

Used in treatment of congestive heart failure, arterial flutter or fibrillation and paroxysmal atrial tachycardia.

Toxicity :-

In mild to moderate toxicity the common symptoms are anorexia, nausea, vomiting, muscular weakness, bradycardia

and ventricular premature contraction.

Generally, accepted toxicity of cardiac glycosides results from inhibition of Na^+ or K^+ - ATP ase pump, resulting in used intracellular level of Ca^+ and hypokalemia.

Diuretics.

Diuretics are chemicals that increase the rate of urine formation. By increasing the urine flow rate, diuretic usage leads to increased excretion of electrolytes and water from the body without affecting protein, vitamin, glucose or amino acid reabsorption. These pharmacological properties have led to the use of diuretics in the treatment of edematous conditions resulting from a variety of causes and in the management of hypertension. Diuretic drugs also are useful as the sole agent or as adjunct therapy in the treatment of a wide range of clinical conditions, including hypercalcemia, diabetes insipidus, acute mountain sickness, primary hyperaldosteronism and glaucoma.

The primary target organ for diuretics is the kidney, where these drugs interfere with the reabsorption of sodium and other ions from the lumina of the nephrons.

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Classification :-

I] Drugs acting on Proximal Convoluted Tubule :-

(a) Osmotic diuretic.
- Isosorbide.
- Mannitol.

(b) Carbonic anhydrase inhibitors.
- Acetazolamide.

(c) Acidifying agents.
- Ammonium chloride.

II] Loop Diuretic :- High Ceiling Diuretics :-

(a) Mercurials
(b) Phenoxy acetic acid derivatives
- Ethacrynic acid
(c) Sulfamyl - anthranilic acid derivative
- Furosemide

III] Drugs acting on Distal Convoluted Tubule :-

A] Benzothiadizines or
(a) Thiazides :- Flumethiazide
(b) Hydrothiazides.

B] Quinazoline derivatives
- Quinethazone.

C] Pthalamide derivatives.
- Chlorthialidone.

IV] Potassium sparing Diuretics :-

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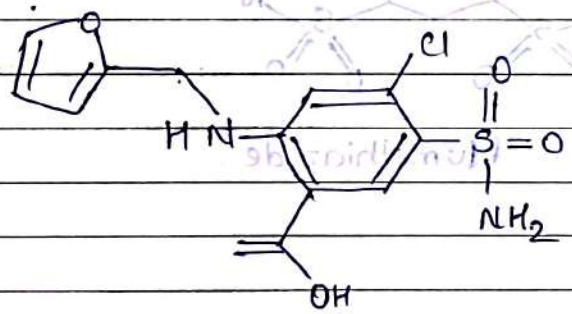
Treatment.

1) Furosemide :-

Furosemide is a loop diuretic, used for the treatment of hypertension and edema. It is the first-line agent in patients with edema due to congestive heart failure. It is also used for hepatic cirrhosis, renal impairment, nephrotic syndrome, in adjunct therapy for cerebral or pulmonary edema where rapid diuresis is required, and in the management of severe hypercalcemia it is used in combination with optimal rehydration therapy.

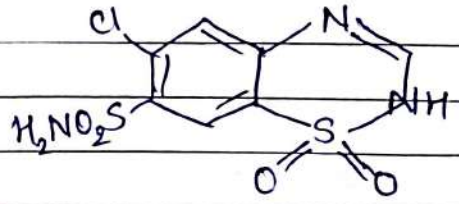
furosemide.



2) Thiazides

(a) Chlorthiazide

- Structure :-



IUPAC Name :-

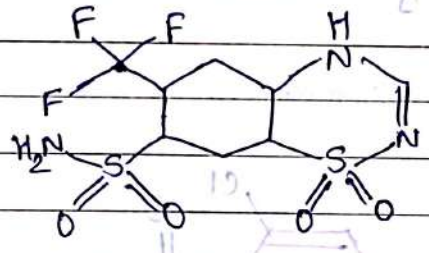
6-chloro-1,1-dioxo-2H-1,2,4-benzothiadiazine-7-sulfonamide.

Side effects :-

Headache, nausea, vomiting, dizziness, excess urine prodiction, hypoelectrolytemia and dehydration are side effects of Chlorthiazide.

b) Flumethiazide

Structure :-



flumethiazide.

IUPAC Name :-

6-(Trifluoromethyl)-2H-1,2,4-benzothiadiazine-7-sulfonamide 1,1-dioxide.

Uses :-

It is used in treatment of hypertension and heart failure.

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PBL-1, Subject: Human Anatomy and Physiology-I (29/07/2016)

Group	Facilitator's name and signature	Names of the students	signature
I	Dr. Vaishali Undale	1 Lonkar Rani Rajendra	Lonkar
		2 Bhagwan Shravani Manoj	
		3 Bhagwat Trupti Bhanudas	Bhagwat
		4 Phadtare shital satyavan	
		5 Pansare Gauri Bhimrao	Pansare
		6 Kumbharkar Ashwini Dnyandeo	Ashwini
		7 Jagtap Vikas Arun	
		8 Mali Sandip Dattatray	
		9 Avhad Nilesh	
		10	
II	Dr. Rajashri Chavan	1 Zori Priya Gururaj	Zori
		2 Bhondve Pragati Vitthal	
		3 Khatat Kartika Mahanand	
		4 Ghitole Shubhangi Anil	
		5 Joei Sanjog Subhash	
		6 Phodatare Adesh. Rangnath	
		7 Jaiswal Akshay Bhagwan	
		8 Thopate pallavi Ankush	
		9	

		10	
III	Dr. Smita Pawar	1 Randive Prayakta	
		2 Shevate Tejaswini	
		3 Bankar payal	
		4 Takawane priyanka	
		5 Pawar Pooja	
		6 Jagdale snehal	
		7 kate Satish	
		8 Rane Ganesh	
		9 Kapase Ajit.	
		10 ~~Pawar Pooja~~	
IV	Mrs. Jayashri Jagtap	1	
		2	
		3 Chetan Vishwanath Pawar	
		4 sonal mohan mind	
		5 Mhetre Pooja Bhagvan	
		6 Inamke Tejashri Balasaheb	
		7 Parekar Tejeshvini Dilip	
		8 Ingulkar Komal Ramdas	
		9 Raut Jyoti shivaji	
		10 Pawar Dhanshree Dattatray	

V	Mr. Ganesh Nigade	1 Bhosale Kajal Dashrath	Bhosalekd
		2 Choukhande Komal Ashok	Choukhande
		3 Gade Kishori Nanaso	GadeKN
		4 Bhagat Sunita Satyawan	Bhagat.
		5 Zagade Yogiraj Dilip.	Yzagade
		6	
		7	
		8	
		9	
		10	
VI	Dr. Meenakshi Deodhar	1 Katake Kaveri Lahu	Kkatake.
		2 chikane Jyoti vijay.	Jchikane.
		3 Dipali vijay Gandhi	Dgandhi
		4 Jui Shriprasad Wable	
		5 Kolte Nikita Shripati	Kolte.
		6 Bhite Pratiksha Anil	BhitePA.
		7 Sayyad samiya yusuf	Sayyad.
		8 Panchal Shubham Balaji	Panchal.
		9 Mulik Vishal Hanumant	Mulik
		10	

Pune District Education Association's
Seth Govind Raghunath Sable College of Pharmacy, Saswad

Feedback of students on PBL conducted on **29/07/2016**

Subject: Medicinal Chemistry-II **Class:** Final Yr. B.Pharm.

This questionnaire has been designed to understand the opinion of students involved in the PBL activity so that the activity can be improved in the future. The group leader is advised to answer the questions on behalf of all the group members.

Please **tick** the appropriate box:

Trigger	Yes	No	Can't say
Was the trigger provided to you easily understandable?	✓		
Was the trigger interesting?	✓		
Could you relate the trigger to your curriculum?	✓		
Role of facilitator			
Did you find the role of facilitator useful in understanding the problem?	✓		
Did you take the help of the facilitator in identifying the objectives of the problem?	✓		
Resources			
Did you refer to the books available in the library for compiling the data related to your problem?	✓		
Were there sufficient reference books available in the library for researching the problem?	✓		
Did you find the internet facility and online resources adequate?	✓		
Overall activity			
Do you think PBL is enhancing your comprehension and analytical skills?	✓		
Do you think PBL is enhancing your referencing & researching skills?	✓		
Do you think PBL is contributing towards improving your communication and presentation skills?	✓		
Do you think this activity should be continued in future also?	✓		

Suggestions if any,---------- No any suggestions. ----------

Pl. tear from here before submitting----------

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Suggestions if any,---------- NO ----------

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Do you think PBL is contributing towards improving your communication and presentation skills?	✓		
Do you think this activity should be continued in future also?	✓		

Suggestions if any: We think this type of PBL will conduct in the n this semester & next semester at 2 times with presentation because presentat° is very helpful for the stage daring.

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Do you think PBL is contributing towards improving your communication and presentation skills?	✓		
Do you think this activity should be continued in future also?	✓		

Suggestions if any,---------No.:----------

Pl. tear from here before submitting

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Do you think PBL is contributing towards improving your communication and presentation skills?	✓		
Do you think this activity should be continued in future also?	✓		

Suggestions if any,---

No Any Suggestion.

Please fill this form here before submitting

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Do you think PBL is contributing towards improving your communication and presentation skills?	✓		
Do you think this activity should be continued in future also?	✓		

Suggestions if any, We thint this types of PBL will conduct in one semister at two times because it's very helpful for our stage daringe & English communication, (Personality Development)

---------- Pl tear from here before submitting ----------