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Shibanjan Paul Roy
Freelancer Scientist, Department
of Pharmacology, Race Course
Para, Jalpaiguri, West Bengal,
India

Kamal Deka
Assistant Professor, Royal
School of Pharmacy of The
Assam Royal Global University,
Sivasagar, Sivasagar, Assam,
India

Shyam Prakash Rai
Researcher, CGM Office, Dakra
Khelari, Ranchi, Jharkhand,
India

By using artemesia sieberi and *Lilium candidum* a novel formulation and development of herbal based ointment for deep burn healing

Shibanjan Paul Roy, Kamal Deka and Shyam Prakash Rai

Abstract

Actually we know that Artemesia Siberi which plant we collected from Arabian Peninsula is used for treatment of wormicide effects, burns, ulcers and also used in antifungal activities. So, in this research the plant extract of Artemesia Sieberi is used. For identity we gave it IS in short form. IS means this means Artemesia Sieberi plant extract. But in this research we use mupirosin 2% ointment for burn. This is research is fully guided by Mr. Shibanjan Paul Roy, a Freelancer Scientist and all the written skills done by him. Mr. Kamal Deka Assistant Professor of Royal School of Pharmacy and Fomer Principal of Crescent Institute of Pharmacy and Mr. Shyam Prakash Rai Sub-Rising-Star-Researcher performed plant extractions and others work. This plant from Saudi Arabia collecting is very difficult but after we got it very luckily.

Keywords: Indian mustard, path coefficient analysis

Introduction

Many of the researchers or Scientists did many researchers in every year if some researcher or scientist did any research if individually in whole country 1st time then he is called 1st Indian individual if does 1st time group wise then 1st Indian group wise but in this research we never focus for record break we just focus about our research. For this research we use mupirosin 2% ointment, Arabian artemesia sieberi 0.000001%, *Lilium candidum* flower extract oil 15.8%, both *hippophae rhamnoides* leaf extract 4.1% and kodavan leaf extract 0.19%.

Materials and Methods

In this research the plants artemesia sieberi plant, *Lilium candidum* plant with flower, *hippophae rhamnoides* and kodavan plant also collected. After it was identified by Guide-Mr. Shibanjan Paul Roy after plants useful parts ready for extraction. In this research the plant Artemesia Sieberi collected from Saudi Arabia. After first the plant was dried in the shade at room temperature for 14days before for distillation process. After for backed to a 2L conical flask with a stopper the plant materials 195gm reduced to coarse powder form and with 685 mL distilled water. After to the Clevenger apparatus the flask was connected and fixed over the heating mantel. To boil for a 5h 13min the flask contents were allowed to boil. The over anhydrous sodium sulfate the distilled essential oil of all plant extract collected and in a -21 °C freezer this all are stored in a opaque glass vial.

Methods of Preparation

Arabian artemesia sieberi 0.000001%, *Lilium candidum* flower extract oil 15.8%, both *hippophae rhamnoides* leaf extract 4.1% and kodavan leaf extract 0.1% essential oils strength of ointment formulation were prepared. By using fusion method accoding british pharmacopoeia 1988 the simple ointment base was prepared. As 50gm simple ointment base was prepared by melting hard paraffin 2.5gm in a beaker at 62°C. The other ingredients almond oil 2.5 ml, lanolin wax 2.5gm and soft white paraffin 42.5gm were added as the descending order of melting point. After from the heat the homogenous mixture was removed and stirred until cold. Then after Arabian artemesia sieberi 0.000001%, *Lilium candidum* flower extract oil 15.8%, both *hippophae rhamnoides* leaf extract 4.1% and kodavan leaf extract 0.1% essential oils strength ointment was prepared by incorporating 2.5 gm of the essential oil into 50 gm of simple ointment base by trituration and mixing by using an ointment mortar and pestle.

Corresponding Author:
Shibanjan Paul Roy
Freelancer Scientist, Department
of Pharmacology, Race Course
Para, Jalpaiguri, West Bengal,
India

Finally to a neat and clean container the ointment was transferred but the control ointment only 25gm of whole base ingredients, was treated and taken in the same way to formulate without the essential oils. The prepared ointment of Arabian artemesia sieberi 0.000001%, *Lilium candidum* flower extract oil 15.8%, both *hippophae rhamnoides* leaf extract 4.1% and kodavan leaf extract 0.1% essential oils ointment is named Proseashissouvr and for control-shym82353 for identify was physically examined and was consistent, stable and homogenous for measured 1month 4days.

PH Study

This ointment PH value we studied by using 1gm of this Proseashissouvr 20% ointment in 100ml distilled water and kept for 2hr3min after dip the glass electrode into this ointment it shows the reading between 5-7.

Animal Study

The male wistar rats of 6 in each group, under standard conditions 200±30gm were kept of 26±1 °C, humidity (54%±9%), and 12 hours light and 12hours in a light cycle with full access to the standard pellet diet with tap water. In accordance animals were kept in with the instructions provided by the Lab and the experiments were performed following the approval of Lab. Animals were anaesthetized by intra-peritoneal injection of propofol. After shaved the dorsal part of the skin and washed with chlorhexidine for Burn was made by contact of a round 1cm diameter of full thickness circular and second degree burn wound created by using electric heater 110°C heat for 10sec. Rats were divided into

each groups including Mupirosin 2% as reference standard, shym82353 as the control and Proseashissouvr 20% for the treatment groups. After burn starting right for wound induction. Over the wounds everyday for 9days ointments were used topically. After the wound areas were cleaned and calculated. The wound contraction was measured by using the formula-

$$100 \times [(1^{\text{st}} \text{ day wound area} - \text{Specific Wound area}) / 1^{\text{st}} \text{ day wound area}]$$

Result and Discussion

During 9days of study the percentage of wound healing enhanced in all animal treated groups. In wistar rats the wound area was significantly reduced treated with Proseashissouvr ointment compared with both of the positive and negative controls ($p < 0.001$). On the 9th day, 20% extract group exhibited best wound healing effect in comparison with other groups ($p < 0.001$). Below the Table1 shows the rate of wound healing in Proseashissouvr ointment treated groups. From traditional time the derivative products and abundant plants have been used in traditional and new medicine for wound healing. In this study we known that this ointment Proseashissouvr is potent for the burn, wound etc.

Table 1: Experimental Group wound healing percentage by using

Groups	9 th day
Control	34.08±1.46
Mupirosin 2%	57.75±0.014a
Proseashissouvr 20%	96.35±0.049a,b,c

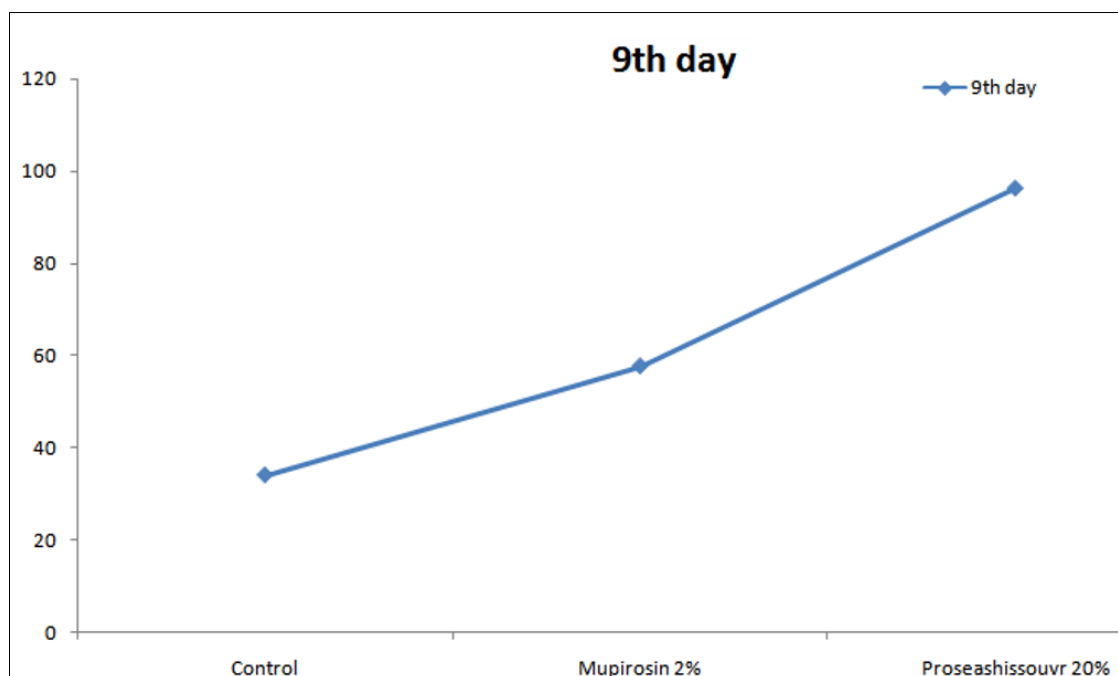


Fig 1: Experimental Group wound healing percentage by using Control, Mupirosin 2%, Proseashissouvr 20%

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This research is guided and written skills done by Mr. Shibanjan Paul Roy who is a Freelancer Scientist cum Author cum Inventor who lives in Race course para, Jalpaiguri. He has 7 international individual research publications with 1book individual publication with 3individual patents with 1groupwise publication with he guided in 2researchs which

also published and he has 2international awards-INSO award, Young Scientist Award with Asian Best Scientist Award and 1National Award. He guided Mr. Kamal Deka M.Pharm (Pharmaceutics) who is working as a Assistant Professor of Royal School of Pharmacy and Former Principal of Crescent Institute of Pharmacy with more than 6years experience has 4 research publications with 1patent and 3 books chapters and

Mr. Shyam Prakash Rai completed B.Pharm from Assam downtown University 2019 and now working in Bokaro. In this research total works done under the guidance of Guide-Mr. Shibanjan Paul Roy. Mr. Satyabrat Sarma and Mr. Shyam Prakash Rai Sub-Rising-Star-Researcher performed for the plants extraction and others work and note the reading.

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