

சூழலியத் திறனாய்வு நோக்கில் வைரமுத்துவின் முன்றாம் உலகப்போர்

ECO CRITICAL VIEW ON VAIRAMUTHU'S THIRD WORLD WAR

சு. சதிஷ் / S. SATHISH⁴

Abstract: Dalits, women and third sexes have sought to construct their identities as the global and Indian socio-economic and political conditions are reflected in the Tamil literary context. Rescuers have begun to restore human relations that have been devastated by the impact of globalization. As in the land-based traditions, novel literature also had a rise. Novels began to emerge in the context of cultural anthropology, ethnography and ecology. As the conversation on ecological issues began, the question began to arise as to how literature and literary criticism could not respond. In response to these claims, the green literature and the emergence of the Eco Criticism. It is in this context that the article seeks to explore Vairamuthu's Third World War (Moondraam Ulaga Por) novel from an Eco Critical Perspective.

ஆய்வுச் சுருக்கம்: இதுவரை உள்ள திறனாய்வுகள் எல்லாம் மனிதனைப் பற்றி ஆராய்கிற திறனாய்வாகவே மட்டுமே இருந்துள்ளது. உதாரணமாக, பெண்ணியம் பெண்களைப் பற்றியும், தலித்தியம் தலித்துகளைப் பற்றியும், மார்க்சியம் பாட்டாளி வர்க்கத்தை குறித்தும் ஆராய்கிறது. இதற்கு மாறாக இன்று புதிதாக வளர்ந்து வரும் இச் சூழலியத் திறனாய்வு இயற்கையை ஆராய்கிற திறனாய்வாக விளங்குகிறது. இயற்கையைக் பின்னணியாகக் கொண்டு வெளிவந்த வைரமுத்து அவர்களின் முன்றாம் உலகப்போர் நாவலை சூழலியத் திறனாய்வு நோக்கில் இக்கட்டுரை ஆராய முற்படுகிறது.

Key Words: திறனாய்வு, சுற்றுச்சூழலியம், நாடுகள், சூழல், நவீனத்துவம்.

முன்னுரை

உலக, இந்திய சமூகப் பொருளாதார அரசியல் நிலைகளின் மாற்றம் தமிழ் இலக்கியச் சூழலில் எதிரொலித்தபோது தலித்துகள், பெண்கள், முன்றாம் பாலினம் முதலானோர் தங்களின் அடையாளங்களைக் கட்டமைக்க முயன்றனர். உலகமயமாக்கலின் தாக்கத்தால் சிதிலமடைந்த மனித உறவுகளை மீட்கும் முயற்சிகள் துளிர்க்க ஆரம்பித்தன. நிலம்சார் மரபு இலக்கியங்கள் போல நாவல் இலக்கியத்திலும் திணைகளின் எழுச்சி நிகழ்ந்தது. பண்பாட்டு மானிடவியல், இனவரைவியல், சூழலியல் சார்ந்த பின்புலத்தில் நாவல்கள் வெளிவரத் தொடங்கின. சூழலியல் பிரச்சினைகள் குறித்த உரையாடல் தொடங்கியபோது இலக்கியமும், இலக்கியத் திறனாய்வும் இதற்கு என்ன எதிர்வினையை

⁴ முனைவர் பட்ட ஆய்வாளர் (பகுதி நேரம்), தமிழ்த்துறை, அறிஞர் அண்ணா அரசு கலைக் கல்லூரி, விழுப்புரம். உதவிப் பேராசிரியர், தமிழ்த்துறை, ராக் கலை மற்றும் அறிவியல் கல்லூரி, பெரம்பலு, விழுப்புரம். 9994454176, puduvaisathish@gmail.com





தமிழ்மொழி மற்றும் இலக்கிய பன்னாட்டு ஆய்விதழ்
அறிஞர் கலைப் பரிந்துரை செய்யப்படும் அகாசியானது பன்னாட்டு ஆய்விதழ்

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சூழலியத் திறனாய்வு நோக்கில் ஆத்தங்கரை ஓரம் நாவல்

An Eco-Critical Approach on the Novel *Aathankarai Oram*

திரு. ச. சதிஷ், முனைவர் பட்ட ஆய்வாளர், தமிழாய்வுத்துறை, அறிஞர் அண்ணா அரசு கலைக் கல்லூரி, விழுப்புரம்,

திருவள்ளூர் பல்கலைக்கழகத்துடன் இணைக்கப்பட்டுள்ளது, தமிழ்நாடு, இந்தியா.

Mr. S. Sathish, Research Scholar, PG Research Department of Tamil,
Arignar Anna Government Arts College, Villupuram, Affiliated to Tiruvalluvar University, Tamil Nadu, India.

ORCID: <https://orcid.org/0000-0001-9042-2992>

முனைவர் கோ. குணசேகர், உதவிப்பேராசிரியர், தமிழாய்வுத்துறை, அறிஞர் அண்ணா அரசு கலைக் கல்லூரி,

விழுப்புரம், திருவள்ளூர் பல்கலைக்கழகத்துடன் இணைக்கப்பட்டுள்ளது, தமிழ்நாடு, இந்தியா.

Dr. G. Gunasekar, Assistant Professor, PG Research Department of Tamil, Arignar Anna Government Arts College,
Villupuram, Affiliated to Tiruvalluvar University, Tamil Nadu, India.

ORCID: <https://orcid.org/0000-0003-0181-2716>

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Abstract

The ecological complexities facing humanity are becoming more massive and multi-dimensional than ever before, threatening the very existence of the entire planet. We can go on and on about the effects of unprecedented floods, unseasonal rains, and rapid migration of the species. The human race is now beginning to think about the rapid degradation of the environment we need to live in. As a result of this thought, the voice of protecting nature has started to ring. As part of this thinking, they set out to investigate what kind of place nature is given in literature that reflects human society. The researcher entrusts that through this research, ecological concepts can be passed on to the present generation via the analysis of the novel "Aathankarai Oram" (The Boy of the River). This article provides a detailed introduction to environmental analysis and examines the novel "Aathankarai Oram" written by Irai Anbu from the point of Ecocriticism.

Keywords: Ecocriticism, Nature, Tribe, Anthropocentric, *Aathankarai Oram*.

ஆய்வுச் சுருக்கம்

மனித இனம் எதிர்கொள்கின்ற சூழலியல் சிக்கலானது முன்னைக் காட்டிலும் பல பரிமாணங்களைக் கொண்டு மிகப் பிரம்மாண்டமாக எழுச்சி பெற்று ஒட்டுமொத்த புலிக்கோளின் இருப்பை அச்சுறுத்துகிறது. வரலாறு காணாத வெள்ளம், பருவம் தப்பிப் பெய்கிற மழை, உயிரினங்களின் வேகமான இடப்பெயர்வு என இதன் விளைவுகளை நாம் அடுக்கிக்கொண்டே போகலாம். நாம் வாழ்வதற்குத் தேவையான புறச்சூழல் வேகமாகக் கெட்டழிந்து வருவது குறித்து மனித இனம் தற்போது சிந்திக்கத் துவங்கியுள்ளது. இச்சிந்தனையின் விளைவாக இயற்கையைக் காப்போம் என்கிற குரல் ஒங்கி ஒலிக்கத் தொடங்கியுள்ளது. இச்சிந்தனையின் ஒரு பகுதியாக மனித சமூகத்தைப் பிரதிபலிக்கும்

பக்கங்கள் தற்போது பதிப்பு செய்யப்பட்டுள்ளன.



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ஆழுமைத் திணையியல் நோக்கில் லஷ்மி சரவணகுமாரின் கானகன்

திரு. ச. சதிஷ்,
முனைவர் பட்ட ஆய்வாளர் (பகுதி நேரம்),
தமிழாய்வுத்துறை,
அறிஞர் அண்ணா அரசு கலைக் கல்லூரி,
விழுப்புரம், தமிழ்நாடு.

நெறியாளர்
முனைவர் கோ. குணசேகர்
உதவிப்பேராசிரியர்
அறிஞர் அண்ணா அரசு கலைக் கல்லூரி,
விழுப்புரம், தமிழ்நாடு.

ஆய்வுச் சுருக்கம்

நவீன காலங்களில், விவசாயம் மற்றும் விலங்குகள் மேய்ச்சலுக்காக இடத்தை உருவாக்கவும், எரிபொருள் உற்பத்தி, மற்றும் கட்டுமானத்திற்காகவும் காடுகள் அழிக்கப்பட்டுள்ளன. காடழிப்பு உலகெங்கிலும் உள்ள நிலப்பரப்புகளை பெரிதும் மாற்றியுள்ளது. சுமார் 2,000 ஆண்டுகளுக்கு முன்பு, மேற்கு ஐரோப்பாவின் 80 சதவீதம் காடுகளாக இருந்தது; இன்று அந்த எண்ணிக்கை 34 சதவீதமாக உள்ளது. வட அமெரிக்காவில், கண்டத்தின் கிழக்குப் பகுதியில் உள்ள காடுகளில் பாதி 1600 முதல் 1870 வரை மரம் மற்றும் விவசாயத்திற்காக வெட்டப்பட்டது. கடந்த 4,000 ஆண்டுகளில் சீனா தனது பரந்த காடுகளை இழந்துவிட்டது, இப்போது அதில் 20 சதவீதத்திற்கும் அதிகமான காடுகள் உள்ளன. பூமியின் பெரும்பாலான விவசாய நிலங்கள் ஒரு காலத்தில் காடுகளாக இருந்தன. இப்படி நாம்



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நாட்டுப்புறக் கலை மற்றும் நாடகக் கலை

செவ்விகைக் கலைகள் போன்றே நாட்டுப்புறக் கலைகளான பொம்மலாட்டம், தோல் பாலைக் கூத்து, தெருக்கூத்து, கரகாட்டம், காவடியாட்டம், ஓயிலாட்டம், வில்லுப்பாட்டு, கதா காலட்சேபம் போன்றவற்றை ஆதரிப்பதில் மடங்கள் முதன்மையாகத் திகழ்கின்றன. பொம்மலாட்டம், தோற்பாலைக் கூத்து, வில்லுப்பாட்டு, கதா காலட்சேபம், தெருக்கூத்து போன்ற கலைகளை மடங்களின் விழாக்களில் இடம் பெறச் செய்வதன் மூலம் ஆன்மீகத்தையும் கலைகளையும் ஒருங்கே வளர்க்கின்றனர்.

இதே போன்று நாடகங்களையும் இவர்கள் ஆதரித்து வருகின்றனர். உதாரணமாக டி.கே.எஸ். சகோதரர்களின் பிரபல நாடகங்களான ராஜ ராஜ சோழன், ஓளவையார் போன்றவற்றை தருமையாதினத்தில் ஏற்பாடு செய்து அவர்களுக்கான அங்கீகாரத்தை வழங்கிச் சிறப்பித்தனர். மன்னர்களால் ஆதரிக்கப்பட்ட கலைகள் மக்களாட்சியில் மடங்கள் மூலம் ஏற்றம் பெற்றன என்றால் அது மிகையிலலை.

பல்வேறு வகையான கலைஞர்களையும் தமது மடங்களின் விழாக்களுக்கு அழைத்து நிகழ்ச்சிகள் வழங்கச் செய்து அவர்களுக்கு உரிய சன்மானங்கள், சிறப்புகள், பட்டங்கள் மற்றும் ஆதீன விதவான் என்ற கௌரவம் அளித்து பரவல்களாக விளங்கிக் கொண்டிருக்கின்றன இம்மடங்கள். சமுதாயத்தில் நடப்பிலுள்ள கலை, கல்வி, ஆராய்ச்சி போன்ற உயரிய நோக்கங்களுக்காக பாடுபடும் அறிஞர்களுது சேவையை ஊக்குவித்து, அவர்களை ஆதரிப்பதன் மூலம் கலைப் பாரம்பரியத்தை அடுத்த தலைமுறைக்கு எடுத்துச் செல்வதில் இம்மடங்களின் பங்கு அளப்பரியது.



6. பழந்தமிழரின் கட்டிடக்கலை

க.சுதீஷ்
உதவிப் பேராசிரியர், தமிழ்த்துறை
ராக் கலை அறிவியல் கல்லூரி
பெரம்பை.

முன்னுரை

இயற்கையோடு இணைந்த காடுகளிலும், மலைகளிலும் வாழ்ந்த மனிதன் நாகரிகத்தின் வளர்ச்சியால் செயற்கையான இருப்பிடங்களை அமைக்க முயன்றான். அவ்வாறு இருப்பிட வசதியை ஏற்படுத்திக் கொள்ளும்போது கூட்டமாக வாழ்வதற்கான வாய்ப்புகள், இயற்கைச் சீற்றங்களில் இருந்து பாதுகாப்பு முதலானவற்றைக் கருத்தில் கொண்டதன் விளைவாகவே சிறுநூல்களும், பேருருக்களும் தோன்றியிருக்கலாம். தமிழர்கள் கடந்த காலத்தில் இலக்கியம், கலை, இசை, நடனம், சிற்பம், கட்டிடக்கலை, தத்துவம், சமயம், மருத்துவம், வேளாண்மை, பொறியியல், அயலக வாணிகம் ஆகிய பல துறைகளில் வல்லவர்களாக இருந்தனர். அவ்வகையில் குடியிருப்புகள், அரண்கள், நகர் அமைப்புகள் ஆகியவற்றைத் தமிழர்கள் எவ்வாறு அமைத்துக் கொண்டனர் என்பதை வெளிக்கொணர்வதே இக்கட்டுரையின் நோக்கமாகும்.

கட்டிடக் கலைவியல்

மனை வகுப்பதற்கென்று தனி இலக்கண நூலும், அந்நூலில் தேர்ச்சிப் பெற்ற வல்லுநர்களைக் கொண்டும் கட்டிடங்களை அமைத்தனர். இந்த வகையான நூலினைக் கற்று தேர்ச்சிப் பெற்றவரை 'நூலறி புலவர்' என இலக்கியங்கள் குறிப்பிடுகின்றன. நூலை நன்றாக அறிந்த வல்லுநர்கள் சிறந்த முறையில் கட்டிய உயர்ந்த மாடத்தை,

“கால மன்றியும் நூலோர் சிறப்பின்
முகிறோய் மாடத்தில்” (சிலம்பு, 14:97-98)

என்ற பாடல் வரிகள் உணர்த்துகின்றன. கட்டுமான இலக்கணத்தை முறைப்படி கற்றுத் தேர்ந்த அறிஞர்கள் நூல் கயிற்றில் அளவிட்டு மனை வகுத்து கடைக்கால் இட்டனர் என்பதை,

“நூலறி புலவர் நுண்ணிதிற் கயிறிட்டு

பெரும் பெயர் மன்னர்க் கொப்ப மனைவகுத்து”

குடியிருப்புகள்

தெருவின் இரு மருங்கிலும் பெரிய பெரிய பெரிய கட்டிடப்பட்டுந்தன. விண்ணை முட்டும்படி அமைத்த கட்டிடங்களில்

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பொருள் தீர்ந்து போகும் என்று எண்ணாது, மீண்டும் வருகின்ற விருத்தினர்க்கு இல்லை என்று கூறாது விருந்தளிக்கும் பண்பிலும் பழந்தமிழரின் பண்பாட்டுச் சிறப்பையும் மேன்மையையும் தெரிந்துகொள்ளமுடிகின்றது.

இவ்வாறாக, பழந்தமிழரிடையே உணர்வினைப் பொரித்து சாப்பிடும் முறை குறைவாகவும் அதைவிட அதிகமாக சுட்டு உட்கொள்ளும் முறையும் அடிமையான விட அதிகமாக அளித்து உட்கொண்ட உணர்வினை முறைகளையற்றியும் பல்வகையான உணவுகளைச் சமைத்து, தான் மட்டும் உண்ணாது வரக்கூடிய விருத்தினருக்கும் அன்போடு கொடுத்து மகிழ்ந்த விருந்தோம்பல் பண்பினையும் புறநானூற்றின் வழி ஆராய்ந்தறிய முடிகின்றது.



268. சங்கத் தம்ழரின் உணவு முறைகள்:
ஐவகை நலத்தை முன்வைத்து!

சு. சதிஷ்
உதவிப் பேராசிரியர், தமிழ்த்துறை
ராக்கலை மற்றும் அறிவியல் கல்லூரி
பெரம்பலை, விழுப்புரம் மாவட்டம்.

முன்னுரை

மனிதன் உயிர் வாழ்வதற்கு இன்றியமையாதது என்று சொல்லப்படுவன உணவு, உடை, உறையுள் ஆகும். திணை இலக்கியத்திற்குப் பிறகு தோன்றிய மணிமேகலை உண்டி, உடை, உறையுள் என உணவையே முதலாவதாகச் சொல்கிறது.

குறிஞ்சி நில மக்களின் உணவு

குறிஞ்சி நில மக்கள் சிலம்பன், குறவன், வெற்பன், வேட்டுவர், கானவர், குன்றவர் என அழைக்கப்பட்டனர். தொடக்கத்தில் வில், அம்பு, வேல் ஆகியவற்றின் துணையுடன் வேட்டையாடி வாழ்ந்தனர். முங்கிலரிசி, திணை, மலைநெல், தேன், கிழங்குகள் ஆகியன உணவாகப் பயன்பட்டன. மான் முதலிய விலங்குகளின் மாமிசத்தோடு முள்எம்பன்றியின் மாமிசத்தையும் இவர்கள் விரும்பி உண்டனர் என்பதை,

வணிகைக் கானவன் வெம்சிலை வணக்கி
உளமிசைத் தவிர்ந்த முளவுமான் ஏற்றையோடு
மனைவாய் குமலி ஓடுங்குபுடை ஆட
வேட்டுவலம் படுத்த உவகையன் காட்ட
நடுகாற் குரம்பைத்தன் குடிவயிற் பெயரும்
(நற்.285: 3-7)

எனும் பாடல்கள் உணர்த்தி நிற்கின்றன. சோழநாட்டு குறிஞ்சி நில மக்கள் கிழங்கையும், தேனையும் மகிழ்வோடு உண்டார்கள். மேலும் இவ்விரு பொருட்களையும் விற்றுவிட்டு அதற்குப் பதிலாக மீன் நெய், நறவை உண்பதற்காக வாங்கிச் சென்றனர் என்பதை,

தேனைய்யொடு கிழங்குமாரியோர்
மீனைய்யொடு நறவுமறுகவும் (பொருந.214 - 215)

என்ற பொருநராற்றுப் பாடல் வரிகள் மூலம் தெரிந்து கொள்ள முடிகிறது. மலையடிவாரத்தில் வாழ்ந்த மக்கள் திணைச்சோறு சமைத்தும், நெய்யில் இறைச்சியை வேகவைத்தும் உண்டார்கள் என்பதை,

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VILLIANUR POST-605 110
PERAMBAL.

Anwer Basha H.
Associate Professor
Department of Computer Application
Raak Arts and Science College, Perambai, India

Bhuwaneshuwaran V.
Student
Department of Computer Application
Raak Arts and Science College, Perambai, India

Priyanga K.
Assistant Professor
Department of Computer Application
Raak Arts and Science College, Perambai, India

Bhanu Prakash J.
Student
Department of Computer Application
Raak Arts and Science College, Perambai, India

Abstract

In this paper we are discussing about custom rom and stock rom. It is focuses on things how to port custom rom, compiling rom, what is rooting advantages and disadvantages of it. A method installing custom rom is provided and it will help pe install custom rom easily.

Keywords: Custom ROM, Booting ROM

I. INTRODUCTION

A. Android

Android is an open source operating system which was founded by Andy Rubin and later developed by Google. Google has the full rights of android it releases every updates and security patches. Android is linux based operating system.

B. ROM

Rom is an operating system which runs android. It is installed in the read only memory of the android Smartphone h. Usually all android devices come up with stock rom which was developed by the manufacturer. If you root your devices install new rom which will changes the look of software. This is the main reason for rooting the android devices.

C. Stock ROM

The rom or operating system which is provided by the manufacture and it is called official operating system of the device we own.

D. Custom ROM

It is not the default rom, it is developed by the third party developers. It can be either modified stock rom of other device rom which was compiled from source codes. Both stock rom and custom rom have some limitations. You can also root but rooting custom rom is always fun.

E. Installing Custom Recovery

Every android devices has default recovery but it doesn't have many options and functions. This is the reason install custom recovery, you can install custom rom using recovery, delete some system files and also you can root android using S-OFF file.

F. Porting the ROM

Porting means changing some files in the system of the port rom and making compatible to run in our device. In simple words we can port other mobile OS to our mobile. Porting is not the toughest job but it requires some knowledge and little patience. I am using Coolpad Note 3 so porting methods are fully for it.

G. Tools Required To Port Rom

- CARLIV image unpack repack tool.
- MTK extractor system image unpack repack tool.
- META-INF Generator
- Notepad ++

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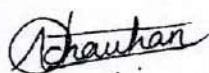
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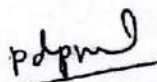
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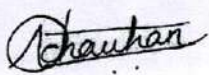
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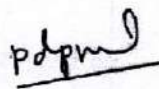
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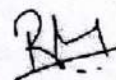
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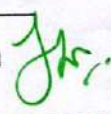


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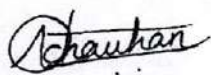
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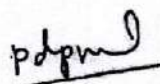
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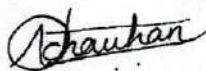
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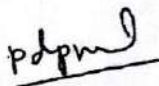
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Online Bill Processing System for Public Sectors in Big Data

H. Anwer Basha
Associate Professor
Department of Computer Applications
Raak Arts & Science College, Perambai-Puducherry India

Jones. J
Student
Department of Computer Applications
Raak Arts & Science College, Perambai-Puducherry India

A. Angayarkanni
Assistant Professor
Department of Computer Applications
Raak Arts & Science College, Perambai-Puducherry India

Mohammadibrahim. U
Student
Department of Computer Applications
Raak Arts & Science College, Perambai-Puducherry India

Abstract

In this generation we have focused for make an improvement and maintain to the government sectors like electric bill, water bill and commercial tax departments. About their bill payment system for each and every house holder in the both urban and rural area. Now-a-days the bill payment system is becoming a huge problem and their records are not easily identifies if there is any emergency needed due to their different area location allocated. So to overcome this kind of problems we can collect and store all necessary information and their payment structure in a single database server using online big data methods.

Keywords: ZooKeeper, Hadoop, MapReduce, HDFS

I. INTRODUCTION

Big data is an electric blanket term for the non-traditional strategies and technologies needed to collect the large amount of information in the different fields. While the problem of working with data that exceeds the computing power or storage of a single computer is not new, the pervasiveness, scale, and value of this type of computing has greatly expanded in recent years.

A. Bigdata V'S:

- 1) *Volume*
 - It consists of terabytes, records, transactions, tables, files
- 2) *Velocity*
 - It consists of batches, near time, real time, streams
- 3) *Variety*
 - It consists of structured, unstructured, semi – structured
 - Structured data consist of table format data
 - Unstructured data is audio, video, log(recent files), multiple format files(.ppt) etc..
 - Semi-structured data is input the file name extensions like text and the output is html format open in browser are under the semi-structured data categories
- 4) *Value*
 - It consists of valuable and invaluable data
- 5) *Veracity*
 - It likes uncertainty of data




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**KLEBSIELLA PNEUMONIAE & THIOSEMICARBAZONE OF [(2-CHLOROPHENYL)
METHYLIDENEAMINO] THIOUREA USING ANTIMICROBIAL ACTIVITY OF ORGANIC
NLO CRYSTALS**

Dr.C.JEEVARATHINAM^a Dr.A.GEETHA^b Dr.G.V.PANDIAN^c

^aDepartment of Chemistry, Raak Arts and Science College, Perambai

^bDepartment of Chemistry, Tagore Institute of Engineering and Technology, Deviyakurichi, TN.

^cDepartment of Chemistry, TBML College, Porayar

Abstract

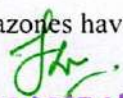
Thiosemicarbazones are having enormous medicine applications due to the presence of hetero atom nitrogen and sulphur in its molecular structure. The carbonyl compounds are also having the largest clinical applications to cure many diseases. We merged these two classes of organic compounds and their substitution by solution growth techniques of crystal growth tested as antibiotic against few non fastidious and fastidious gram -ve and gram +ve organisms. Ortho substituted para substituted and Meta substituted benzaldehydes were merged with thiosemicarbazone and prepared. Thiosemicarbazone of (2-chlorophenyl) methylideneamino thiourea, when compared with linear optical material, these NLO have high medicinal application since it is the photo dynamic therapeutically more active, proved by the early researches mentioned in the experimental part. These one compounds were tested against. Streptococcus Aureus, the following experimental method was adopted find out the antimicrobial activity. MTT assay colorimetric method, Cell viability percentage calculation method, Half inhibitory maximum (IC₅₀) by calculation method. Agar disc diffusion method. Inhibition zone width by agar disc diffusion method, EUCAST and NCCLS database analysis to compare the MIC and inhibition zone width of existing antibiotic against the above said one organism, Graphpad prism software is used to find out the absolute, relative IC₅₀ value and hill slope value, ECOFinder software to find out the epidemiology cutoff value, WHONET 5.6 software analysis is used to find out resistant, susceptible or intermediate nature of commercially existing antibiotics. Size and structure of the newly designed antibiotics compare with the structure of commercially existing antibiotics and structure of organisms.

Keywords: IC 50, Agar Dis Diffusion, Graphpad ,EUCAST,NCCLS,MTT Assay, Cell Viability, EcoF Finder,

1. Introduction

Throughout history, it has been a major worldwide problem to treat microbial diseases caused by bacteria and fungi due to the impetuous development of resistance to antibacterial and antifungal drugs. In recent decades, the incidence of fungal infections has gone up all over the world. The development of new therapeutic agents is one of the essential goals in medicinal chemistry. Thiosemicarbazones have been




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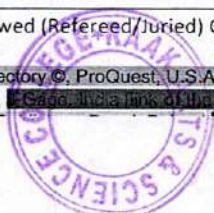


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Acalipha indica leaves as a natural adsorbent for the removal of Cr(VI) from aqueous solutions

A.GEETHA¹, C.JEEVARATHINAM², G.V.PANDIAN³

Department of Chemistry, Tagore Institute of Engineering and Technology, Thalaivasal, Salem¹

Department of Chemistry, Raak Arts and Science College, Perambai, Puducherry²

Department of Chemistry, TBML College, Porayar³

ABSTRACT

In the present study, the removal of hexavalent chromium by adsorption on *Acalipha indica* powder as a natural adsorbent was investigated in batch experiments. The adsorbents were prepared from these plant leaves and the surfaces of these biosorbents were modified with 1N NaOH and 6N HCl. Then, the modified adsorbent was used for the removal of Cr (VI) ions from aqueous solution by batch method. The results showed that *Acalipha indica* exhibited the highest chromium(VI) removal. The Langmuir and Freundlich adsorption isotherms correlate with the equilibrium adsorption data. The adsorption data were well fitted by the Freundlich isotherm. The maximum removal of Cr(VI) was observed at pH 2.

Keywords: Adsorption; batch technique; Isotherms; *Acalipha indica*,

INTRODUCTION

Heavy metal contamination of water is a very serious problem worldwide (Volesky and Holan, 1995). World production of chromium ore is several million tons per year. Water pollution by chromium is of great concern because this metal is widely used in electroplating, leather tanning, metal finishing, nuclear power plants, textile industry, and in the production of chromates. Chromium exists in two oxidation states as Cr(III) and Cr(VI). The hexavalent form is 500 times more toxic than the trivalent form (Kowalski, 1994). It is toxic to microorganisms, plants, animals, and humans. Toxicity to humans includes lung cancer and kidney, liver, and stomach damage (US Department of Health and Human Services, 1991; Cieslak-Golonka, 1995).

Tannery effluents containing chromium are one of the most obvious problems in the leather industry. Although chromium is toxic to humans and the environment, its processing speed, low cost, bright color of the leather and greater stability of the resulting leather are the obvious reasons for its preference over other tanning agents in the processing of hides (Abdulla *et al.*, 2010) (Sreeram and Ramasami, 2003). Its concentration in industrial wastewater ranges from 0.5 mg/L to 270,000 mg/L (Patterson, 1985). The tolerance limit for the discharge of Cr(VI) to inland surface waters is 0.1 mg/L and to drinking water is 0.05 mg/L (EPA, 1990). A wide range of physical and chemical methods are available for the removal of Cr(VI) from wastewater, such as electrochemical precipitation, ultrafiltration, ion exchange, electrodialysis, reverse osmosis, chemical precipitation, and adsorption (Jung and Shiao, 2000, Yan and Viraraghavan, 2001, Balel and Kumiawan, 2004, Donati *et al.*, 2003).

The main disadvantages of these processes are the high cost, the formation of toxic sludge or incomplete metal removal. Several commercial activated carbons have been used for adsorption of Cr(VI) both in their original state and after chemical modifications (Balel and Kumiawan, 2004, Barros *et al.*, 2006). Numerous researchers have used agricultural and industrial waste materials as activated carbon precursors for chromium removal. Feedstocks such as olive pits (Attia *et al.*, 2010), nut shells (Agarwal *et al.*, 2006), cactus, olive pits/cakes, charcoal, oil palm fibres (Dakiky *et al.*, 2002), coconut coir fibre and husk, rice husk, sugarcane bagasse, tulsi leaves and twigs, fly ash (P.K. Shrivastava and S. K. Gupta, 2015), fruit gum dust (Samantaroy *et al.*, 1997) and sugar beet pulp (Atlundogan, 2005) are reported in the literature.

The present study aims to select a natural adsorbent that can adsorb chromium from aqueous chromium solution. In the present study, detailed batch studies were carried out using the selected adsorbent, *Acalipha indica*. The effects of pH, contact time, adsorbent concentration, thermodynamics and metal ion/adsorbent ratio were also studied.

MATERIALS AND METHODS

Preparation of stock solution

Potassium dichromate ($K_2Cr_2O_7$) is used because the supply for chromium stock solution. All the required answers are prepared with analytical reagents and double-distilled water. A 99% ($K_2Cr_2O_7$) (2.835 g) is dissolved in distilled water of one.0 L volumetric flask up to the mark to reap one thousand ppm (mg/L) of Cr (VI) inventory answer. Artificial samples of different concentrations of Cr (VI) are prepared from this inventory solution by means of appropriate dilutions.



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Assessment of Ground Water Quality in Attur Block, Salem District, Tamilnadu, India

A.Geetha¹, C.Jeevarathinam²

Department of Chemistry, Tagore Institute of Engineering and Technology, Salem, Tamilnadu¹
Department of Chemistry, Raak Arts and Science College, Perambai, Pondicherry²

Abstract

Ground water is one of the most important sources of drinking water today. However Groundwater pollution occurs due to the discharge of municipal waste and agricultural waste in to the soil and the discharge of industrial wastewater into rivers. Due to population growth, industrialization, fertilizer use and anthropogenic activities, Water is highly contaminated with various harmful pollutants. A total of 16 water samples were collected and pH, TDS, EC were measured in the field. Samples were also measured for major ions (Ca, Mg, DO, Na, K, HCO₃, Cl, F, SO₄& NO₃) using standard techniques. The test results confirm that the ground water has a higher amount of Total Dissolved Solids, Potassium and alkalinity in some locations. So these locations water unfit for drinking usage. Some samples are not suitable for irrigation purposes due to high salinity, calcium and magnesium concentration. In general, the groundwater of the Salem district was polluted by agricultural activities, anthropogenic activities, ion exchange and weathering.

Key words: Ground water, Water quality parameters, BIS and WHO Standards

INTRODUCTION

Water is the most important in shaping the land and regulating the climate. It is one of the most important compounds that profoundly influence life. There has been a severe shortage of water resources for the last few decades. Many emerging nations, including India, are increasingly at risk from water pollution (Gorde S.Vand M.V. Jadhav 2013). According to WHO organization, about 80% of all the diseases in human beings are caused by water (Kavitha R and Elangovan 2010). Once the groundwater is contaminated, its quality cannot be restored back easily and to device ways and means to protect it. Water quality index is one of the most effective tools to communicate information on the quality of water to the concerned citizens and policy makers. Ground water is used for Agricultural, Industrial, Domestic, Recreational and Environmental activities in Salem district. The most of populations are dependent on ground water as the only sources of drinking water and agricultural uses.

The local climate, geology, and irrigation practices are only a few examples of the natural and human-made factors that affect water quality (Arun *et al.*, 2019) Any groundwater's quality and utility depend on its chemical composition. The quality depends on the physical, chemical, and biological factors and may be arbitrary because it depends on the intended purpose. Salem district is one of the fast developing districts in the State of Tamil Nadu. It has its importance due to the availability of mineral deposits like magnesite, bauxite, limestone, etc. Rate of urbanization is also high and intensive agriculture is also carried out in this district. These amounts to high demand for quality water in this district. So an attempt has been made to assess the quality of groundwater in this district.

MATERIAL AND METHODS

Study Area

The geological formation of Salem district is comprised of hard rock types of gneiss, granites, charnockite, dunite, pyroxenite, and quartzite, and the mineral formations are magnesite, bauxite, quartz, feldspar, soapstone, and limestone (Florence *et al.*, 2013). The study area highly disturbed with a number of folds, lineaments, faults, shears, and joints (Srinivasamoorthy *et al.*, 2011). Fissile Hornblende Biotite Gneiss and Charnockite are the major rock types in the study area.

Salem district lies in the western part of Tamil Nadu, located 11°58' north latitudes and 78°72' east longitudes. The current study was designed to investigate the conditions of ground water contamination in the study areas. The hydro geochemistry study was undertaken by randomly collected 16 ground water samples from bore wells in around Attur region in Salem district, Tamil Nadu, were selected for testing portability of drinking water sources. Samples were drawn with a pre-cleaned plastic polyethylene bottle. Prior to sampling, all the sampling containers were washed and rinsed thoroughly with the ground water. Water quality parameters such as pH and electrical conductivity (EC) were analyzed immediately (Manjappa S, 2005, Oladino *et al.*, 2011, APHA, 2005). The Physico-chemical parameters like pH, Electrical Conductivity, Total Dissolved Solids, Bicarbonate, Sodium, Potassium, Chloride, Nitrate, Calcium Magnesium, Sulphate, DO and Fluoride were analyzed and each parameters was compared with standard values given by BIS (Table 1). In the present investigation the Ground water samples were collected during the month of April to July 2023.

RESULT AND DISCUSSION

Physico-chemical parameters

pH-

The pH values of all water samples in our study were within the allowed range. Ion exchange in rocks and surface areas does not change much. The maximum allowable pH is 8.0-8.5.



Natural adsorbents used to remove the Heavy metal Lead (II) from aqueous solution.

A. Geetha¹, C.Jeevarathinam²

¹Department of Chemistry, Tagore Institute of Engineering and Technology, Thalaivasal, Salem.

²Department of Chemistry, Raak Arts and Science College, Perambai, Puducherry

Corresponding Author – Geetha

Email: geethasri205@gmail.com

DOI- 10.5281/zenodo.10043583

Abstract:

In this work, only removal of Lead (II) from aqueous solution has been investigated by using low cost adsorbent such as Wheat husk Activated Charcoal Powder (WHACP), *Morinda tinctoria* Charcoal Powder (MTCP) as a natural adsorbent. Chemical activation method was used in preparing the activated carbon. Batch mode technique and analyses have performed by using different amounts of adsorbent in solutions with different concentrations of Lead(II). Beside the effect of various amounts of adsorbent used in adsorption efficiency experiments has been studied. The effects of solution pH, adsorbent dose, initial Pb(II) concentration and contact time were examined with aqueous solutions in batch mode. Among Freundlich and Langmuir adsorption models, the Langmuir model provided the best fit to the equilibrium data with maximum adsorption capacity.

Keywords: Adsorption, Wheat husk Activated Charcoal Powder, *Morinda tinctoria* Charcoal Powder, Batch mode experiments

Introduction:

Large-scale freshwater pollution poses a serious and growing threat to sustainable development and environmental protection. Human health, agricultural development, industrial development and ecosystems are threatened if water and soil systems are not successfully managed [1]. Heavy metals are used in industrial applications in many industries. Effective removal of heavy metals from industrial wastewater is among the most important issues for many industrialized countries. Many industries produce wastewater that poses a potential hazard to our environment as it contains various heavy metals such as lead, cadmium, nickel, etc., [2] If left untreated, this wastewater will contaminate soil and water resources. Due to their acute toxicity and accumulation in food chains, water poisoning by heavy metals is a significant ecological disaster. Unlike organic contaminants, which are most likely to be recycled, heavy metals do not break down into safe end products. Even at low concentrations, heavy metals are harmful to the marine environment [3]. Copper (Cu), chromium (Cr), mercury (Hg) and lead (Pb) are heavy metals harmful to humans and the environment.

Lead is one of the toxic heavy metals that can pose risks due to exposure from aquatic and air environments [4]. It is one of the main pollutants responsible for soil, water and atmospheric pollution, which is harmful to aquatic and human life even at low concentration [5]. Lead is a heavy,

soft, ductile, bluish-gray metal. [6] Lead is of particular interest because of its toxicity and its widespread presence in the environment. [7] Lead is a well-known highly toxic metal considered a priority pollutant. [8] It is an industrial pollutant that enters the ecosystem through soil, air and water. Lead is a systemic poison causing anemia, kidney failure, brain tissue damage and, in extreme poisoning, death. [6][9] It is very toxic in nature. Generally speaking, lead pollution that spreads over land and groundwater comes from natural sources and industrial effluents. Lead can affect almost every organ and system in the human body. The human body can absorb, store, and accumulate these metals, resulting in erythrocyte breakdown, vomiting, salivation, diarrhea, muscle spasms, kidney impairment, persistent lung problems, and skeletal deformities. In particular, children under the age of 6 are most sensitive to the effects of lead exposure. Low blood lead concentrations in children can cause hearing and learning problems, anemia, behavioral abnormalities, stunted growth, lower IQ, and hyperactivity [10]. Inorganic lead is an enzyme inhibitor that also affects the nervous system. It is very toxic in nature. According to the WHO, the maximum permissible limit (MPL) for lead in drinking water is 0.05 mg/l. Industrial discharges contain various organic and inorganic pollutants. Among these pollutants are heavy metals, which may be toxic and/or carcinogenic and are harmful to humans and other living species [11, 12, 13].

PRINCIPAL



ANTIMICROBIAL ACTIVITY OF ORGANIC NLO CRYSTALS USING THIOSEMICARBAZONE DERIVATIVE

Dr.A.Geetha¹, Dr.C.Jeevarathinam², Dr.G.V.Pandian³

¹Department of Chemistry, Tagore Institute of Engineering and Technology, Deviyakurichi, TN.

²Department of Chemistry, Raak Arts and Science College, Perambai

³Department of Chemistry, TBML College, Porayar

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ABSTRACT

Thiosemicarbazones are having enormous medicine applications due to the presence of hetero atom nitrogen and sulfur in its molecular structure. The carbonyl compounds are also having the largest clinical applications to cure many diseases. We merged these two classes of organic compounds and their substitution by solution growth techniques of crystal growth tested as antibiotic against few fastidious and non fastidious gram +ve and gram -ve organisms. Ortho substituted para substituted and Meta substituted benzaldehydes were merged with thiosemicarbazone and prepared. Thiosemicarbazone of (2-chlorophenyl) methylideneamino thiourea, when compared with linear optical material, these NLO have high medicinal application since it is the photo dynamic therapeutically more active, proved by the early researches mentioned in the experimental part. These one compounds were tested against. *Streptococcus Aureus*, the following experimental method was adopted find out the antimicrobial activity. MTT assay by colorimetric method, Cell viability percentage calculation method, Half inhibitory maximum (IC₅₀) by calculation method. Agar disc diffusion method. Inhibition zone width by agar disc diffusion method, EUCAST and NCCLS database analysis to compare the MIC and inhibition zone width of existing antibiotic against the above said one organism, Graphpad prism software is used to find out the absolute, relative IC₅₀ value and hill slope value, ECOF finder software to find out the epidemiology cutoff value, WHONET 5.6 software analysis is used to find out resistant, susceptible or intermediate nature of commercially existing antibiotics. Size and structure of the newly designed antibiotics compare with the structure of commercially existing antibiotics and structure of organisms.

KEYWORDS: MTT Assay, Cell Viability, IC₅₀, Agar Dis Diffusion, Graph pad, EcoF Finder, EUCAST, NCCLS.

1. INTRODUCTION

Throughout history, it has been a major worldwide problem to treat microbial diseases caused by bacteria and fungi due to impetuous development of resistance to antibacterial and antifungal drugs. In recent decades, the incidence of fungal infections has gone up all over the world. The development of new therapeutic agents is one of the essential goals in medicinal chemistry. Thiosemicarbazones have been investigated for medicinal studies for a long while due to their wide range of biological activities including antineoplastic, antimycobacterial, antibacterial, antifungal, antiviral, and antimalarial effects and versatility as nitrogen and sulfur donors allowing them to bring on a great variety of coordination modes. The organic crystals of thiosemicarbazone derivatives have high thermal stability and Non-linear optical properties. In addition thiosemicarbazone molecules containing π -electron conjugation system asymmetrized by the electron donor and acceptor groups are highly polarizable entities for NLO applications. Hence, In the present study the preparation, growth and Anti-Microbial efficiency of thiosemicarbazone derivatives of 2 Chloro benzaldehyde crystals is reported.

2. EXPERIMENTAL DETAILS

To a hot solution of 1.82 g of thiosemicarbazide dissolved in a 160 ml of methanol, a solution of 2.8114 g of 2-Chlorobenzaldehyde dissolved in 70 ml of methanol stirred for 30 minutes. The aggregate became stirred and refluxed for 4 hours. Then it become filtered and the filtrate become concerned with 1/2 the volume. The saturated solution was kept in rest and the beaker becomes blanketed with polythene paper. Some holes had been made on the polythene cover to facilitate sluggish evaporation. By means of adopting the



A Study on Evaluation of Anticancer Compounds Behaviour of (E) -2- (3-Nitrobenzylidene) Hydrazinecarbothioamide RNA Synthesis

¹A. Geetha, ²C. Jeevarathinam, ³G. V. Pandian

¹Department of Chemistry, Tagore Institute of Engineering and Technology, Thalavasal, Salem.

²Department of Chemistry, Raak Arts and Science College, Perambai, Puducherry.

³Department of Chemistry, TBML College, Porayar

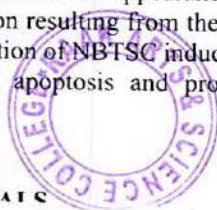
ABSTRACT

Lung cancer is one of the primary causative agents of destruction among all diseases. More than 80% of lung cancer instance are non-small cell lung cancer (NSCLC) cases remaining 20% of lung malignant neoplastic disease are tiny cell lung cancer (SCLC). In operation of potential therapeutics for cancer, we represented herein the synthesis, characterization and *in vitro* anticancer activity of Meta-Nitrobenzaldehyde thiosemicarbazone (NBTSC). Meta-Nitrobenzaldehyde thiosemicarbazone is an gripping case of organic crystal. It has been mature by slow evaporation solution growth technique (SESGT) using wood alcohol as solvent. The MTT assay was practical to determine the IC50 values on A549 lung cancer cell line by NBTSC. Features of apoptosis were discovered by AO/EB and Hoechst staining. The caspase activity, Bcl-2 family, p21 and p53 proteins were calculated by RT-PCR and Western Blot analysis. The NBTSC significantly inhibited the growth of A549 cells and induced apoptosis. The NBTSC was the most potent on A549 cell line with the IC50 value of 50.50% cell viability 6µg/mL. The induction of apoptosis was overserved by chromosomal condensation, cell shrinkage, membrane blebbing and nuclear disintegration. The answers showed that NBTSC induced apoptosis were associated with an upregulation of proapoptotic Bax and down regulation of Bcl2, intemperance of mitochondrial membrane potential and activation of caspase-3. In addition to decreased mitochondrial membrane potential and overproduction of ROS demonstrated the involvement of apoptosis. Mechanistic studies further revealed that NBTSC caused the growth of the intracellular ROS, consequently aggravated the growth in p21 and p53 expression and led to upregulation of Bax, depolarization of mitochondrial membrane potential and caspases cascade (caspase-3/8 and-9). The increase of p53 level by NBTSC results in the inhibition of Ribonucleotide reductase (RR) enzymes and induce programmed cell death. In this survey impart that NBTSC induces apoptosis through ROS-dependent and induce a potential healing effect for lung cancer.

Keywords: Solution Growth, Slow Evaporation Technique, Spectral Characterization, Microbial Activities, Anticancer Activity, Lung Cancer.

INTRODUCTION

Lung cancer is a major health problem of both genders accounting for about 14.1 million new cases diagnosed every year and approximately 8.2 million deaths being recorded worldwide in 2012. An estimated 221200 new instances of lung, malignant neoplastic disease are anticipated in 2015, accounting for about 13% of all cancer diagnoses. The 5-year survival for small cell lung cancer (6%) is get down than that for non-small cell telephone (21%). The two major kinds of lung, cancerous neoplastic disease are small-cell lung cancer (SCLC) and non-small cell lung cancer (NSCLC), which include approximately 15 and 85% of all cases respectively. Despite the role of implanted and novel therapeutic strategies, such as surgery, chemotherapy and ionizing radiation therapy, the prognosis for NSCLC remains understaffed. These data emphasize the need for impressive therapy for this disease. Numerous works have demonstrated that thiosemicarbazones are potent inhibitors of the enzyme ribonucleotide reductase and are capable of interrupting DNA synthesis and repair [12]. The anticancer activities of thiosemicarbazone were closely linked to the parent aldehyde or ketone group, metal chelation ability and terminal amino substitution. Among them, the parent aldehyde or ketone group was considered decisive for the anticancer activity of thiosemicarbazone. Heterocyclic thiosemicarbazone showed higher activity compared with aromatic thiosemicarbazone [22]. An organic M-Nitrobenzaldehyde of thiosemicarbazone is an organic crystal play an essential function in biological. In recent years, consuming research report has been taken out to identify a limited sort of application directed material. Organic compounds are frequently shaped by very weak Vander walls and hydrogen bonds and possess a high degree of delocalization. Hence, they are optically more nonlinear than inorganic crystals. Recent researches have brought up that organic crystals are bulky in size, powerful, constant, and large nonlinear optical susceptibilities compared to the inorganic crystals in this probe, we applied the human A549 non-small cell lung cancer cell line as a model to report the molecular mechanisms of the appearance of Meta-nitrobenzaldehyde thiosemicarbazone (NBTSC) on the stimulation of apoptosis. The raw aggregation resulting from these surveys indicate that ROS generation and MMP decrease are the earliest and necessary events for the initiation of NBTSC induced apoptotic signaling. These findings should support to justify the mechanisms underlying NBTSC induced apoptosis and provide a foundation for the therapeutic function of this compound for the chemotherapeutic factor.



A STUDY ON AWARENESS LEVEL OF INVESTORS' TOWARDS DIFFERENT INVESTMENT AVENUES

(An Empirical analysis with Reference to Selected Residents in Puducherry)

Dr.P.Kathavarayan, Assistant Professor, Department of commerce, RAAK Arts and Science College, [Affiliated to Thiruvalluvar University], Perambai University.

ABSTRACT: This paper is to examine the awareness of investors towards different investment avenues in Puducherry region. This study deals with investors' awareness of Shares, Debentures, Mutual fund, Bank deposits and Life insurance etc. The study is conducted through primary data with a sample of 356 respondents from Puducherry region. The convenience sampling technique has been used for the study. The main objective of this study is to find out awareness level of investors about different investment avenues. The data has been collected through interview schedule from the selected respondents. Chi-square, and percentage analysis have been used for analysis. The results of the study show that Chi square find the awareness level towards investment has association between age, gender, monthly income, marital status; education is significant association at 5% level of significance.

Keywords: Investors, avenues, perception, investment, savings.

INTRODUCTION:

Investment for strategy, generated to motivates on shareholder towards select the utmost of favorable avenues which can support from the fiscal aims in a specific time. Particular kinds of savings deliver additional profits to the shareholder. This research deals with the investment preferences towards different investment avenues.

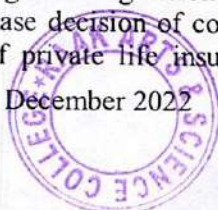
Keynes (1922)¹ has hinted that the bourgeois saving habits, their social function and their persistence actually made things worse, than they need. Benjamin Higgins (1950)² the objective of planning requires a large resource which in turn necessitates the mobilization of income, savings and investment. Any annual review of our economic performance highlights the importance of savings and the investment of the economy.

REVIEW OF LITERATURE

Ankurita and Sunita. (2019)¹ the study titled on "A study on behavior and preferences of individual investors towards investment with special reference to Delhi NCR" and study absorbed on investment preference on investor in Delhi. The researcher collected 500 respondents adopting convenient sampling technique. The data are analysed used in this study are percentage analysis, independent sample t test. The independent sample t test result reveals that there is no significant difference between investors' behavior of Punjab and Haryana.

Bharati et all. (2019)² the study titled on "A study on behavior and preferences of individual investors towards investment with special reference to Delhi NCR" and study absorbed on investment preference on investor in Delhi. The researcher collected 300 respondents adopting convenient sampling technique. The data are analysed used in this study are percentage analysis, Multiple regression analysis, correlation and Chi square test. The chi square result reveals that there is association between demographic variables and investment preference. The study shows that investors are mostly preferred investment pattern is equity and stock.

Guru and Umamaheshewari. (2019)³ the study titled on "A study on factors deciding selection of policies of private life insurance companies among consumers in Thanjavur district" and focused on factors deciding selection of policies of private life insurance companies. The investigators collected 300 respondents adopting random sampling technique. The data are analysed used in this study are percentage and regression analysis. The regression analysis result reveals that there is a positive impact on purchase decision of consumers towards policies of private life insurance. The study concluded that agents of private life insurance companies should provide better services timely and



A STUDY ON IMPACT OF DEMOGRAPHIC VARIABLES AND THE RISK BEARING CAPACITY OF INVESTORS IN PUDUCHERRY REGION
(AN EMPIRICAL ANALYSIS WITH REFERENCE TO SELECTED RESIDENTS IN PUDUCHERRY)

Dr. P. KATHAVARAYAN
ASST. PROFESSOR
DEPARTMENT OF COMMERCE
RAAK ARTS & SCIENCE COLLEGE
PERAMBAI

ABSTRACT

This paper is to study the impact of demographic variables and the risk bearing capacity of investors in Puducherry region. This study deals with investors' pattern of Stocks, Debentures, gold and silver, real estate, Bank deposits and Life insurance etc. The study is conducted through primary data with a sample of 356 respondents from Puducherry region. The convenience sampling technique has been used for the study. The core objective of this study is to analysis demographic variables and the risk bearing capacity of investors. The data has been collected done by interview schedule from the selected respondents. Chi-square, and percentage analysis have been used for analysis. The results of the study show that Chi square find the demographic variables and risk bearing capacity association between age, gender, monthly income, marital status; education is significant association at 5% level of significance.

KEYWORDS

Investors, demographic, perception, investment, savings.

JEL CODES

G11, G21, G40, G41.

INTRODUCTION

Investment for strategy, generated to motivates on shareholder towards select the utmost of favorable avenues which can support from the fiscal aims in a specific time. Particular kinds of savings deliver additional profits to the shareholder. This research deals with the investment preferences towards different investment avenues.

Natarajan (2005) "the investment purchase of assets which are expected to yield a certain stream of income. Purchase of assets like shares and securities as investments aims at stable return over a period of time". Avadhani (1996) "investment refers to the acquisition of some assets. It also means the conversion of money into claims on money and use of funds for productive and income earning assets. In essence, it means the use of funds for productive purpose, for securing some objective like income, appreciation of capital or capital gains, or for further production of goods and services with the objectives of securing profits".

REVIEW OF LITERATURE

Bertha and Yohanes. (2018) the study titled on "Demography factors, financial risk tolerance, and retail investors" and absorbed on investors' awareness level towards capital market. The investigators collected 162 respondents adopting convenient sampling technique. The data are analysed used in this study are percentage analysis and Chi square test. The chi square result exposes that there is association demographic variables on financial risk tolerance on investors. The study inferred that income variable has a significant positive partial influence on financial risk tolerance.

Chhapra and Kashif. (2018) the study titled on "An empirical investigation of investor's behavioral biases on financial decision making" and study absorbed on investment preference on investor. The researcher collected 250 respondents adopting convenient sampling technique. The data are analysed used in this study are percentage analysis and multiple regression analysis. The multiple regression analysis result reveals that there is no significant impact between investors' behavior and investment decision. The study inferred that five independent variables two variables overconfidence and hindsight biases have impact on investment decision.

Dickason and Ferreira (2018) titled on "A study on the awareness of mutual funds investment in India Establishing a link between risk tolerance, investor personality and behavioural finance in South Africa" The researcher collected 1171 respondents adopting random sampling technique. The data are analysed used in this study are simple percentage method and ANOVA. The ANOVA result there is a significant difference between investor personalities and behavioural finance. The study concluded that behavioural finance within investor profiling is becoming eminent to financial companies.

Pokharel (2018) the study titled on "A Survey of Investors Preference on Stock Market: A Case of Nepal Stock Exchange" and study absorbed on investment preference on investor in Nepal. The researcher collected 106 respondents adopting convenient sampling technique. The data are analysed used in this study are percentage analysis. The result reveals that investors' perception regarding the influencing factors for the investment decision in secondary market of NEPSE is the advice of brokers and then movement of indices. The study shows that demonstrated that investors were found to have investment interest in secondary market.

Heena and Baser (2019) the study titled on "Interactive Impact of Demographic Variables and Personality Type on Risk Tolerance" and study absorbed on demographic variables impact on investors risk tolerance. The investigators collected 329 respondents adopting convenient sampling technique. The data are analysed used in this study are percentage analysis and multiple regression. The multiple regression result reveals that there is significant impact between demographic variables and risk tolerance. The study indicates that personality type and demographic variables such as gender, marital status, occupation and income are found significant and age and education are found insignificant.

Shilpa and Umamaheswari (2019) titled on "An Analytical Study on Investors Perception towards Mutual Funds" and study absorbed on investors' preference on mutual fund. The investigators collected 103 respondents adopting convenience sampling technique. The data are analysed used in this study are percentage analysis, chi square and correlation. The correlation result reveals that there is significant relationship between influencing factor and investors' perception. The study inferred that investor of middle-income level agrees that regular income and liquidity of the investment in mutual fund.

Athira and Kakkakunnan (2020) titled on "Impact of Demographic Traits and Personality Traits of Investors on Their Risk-Bearing Capacity: A Study with Special Reference to Investors of Kerala" and study focused demographic traits on risk bearing capacity. The investigators collected 120 respondents adopting convenient sampling technique. The data are analysed used in this study are percentage analysis, Chi square test and correlation. The correlation result reveals that there is a significant relationship demographic traits and personality traits. The study inferred demography and personality have a strong influence on an investors risk bearing capacity.

Solanki. (2020) the study titled on "An Analytical Study Of Investors' Preference Towards Different Investment Avenues - With Reference To Saurashtra Region" and focused on investors preference on investment pattern. The investigators collected 452 respondents adopting convenient sampling technique. The data are analysed used in this study are percentage, t-test and ANOVA. The ANOVA result reveals that there is a significant difference between demographic variables and preference of investment avenues. The study concluded that majority of the respondents preferred gold and silver followed by bank deposit for their investment".

DEVELOPMENT OF THE PHARMACEUTIC CRYSTALLIZATION PROCESS USING *PLASMODIUM FALCIPARUM*, A DERIVATIVE OF THIOSEMICARBAZONE

GEETHA A^{1*}, JEEVARATHINAM C², PANDIAN GV³

¹Department of Chemistry, Tagore Institute of Engineering and Technology, Salem, Tamil Nadu, India. ²Department of Chemistry, Raak Arts and Science College, Perambai, Puducherry, India. ³Department of Chemistry, TBML College, Porayar, Tamil Nadu, India.

*Corresponding author: Geetha A; Email: drageetha306@gmail.com

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ABSTRACT

Objective: The current study was designed with the goal of analyzing novel derivatives of organic and semi-organic NLO molecules that are just entering this field as the foundation for future therapeutic development.

Methods: Thiosemicarbazones (TSC) are semicarbazide analogs that have sulfur atoms in place of oxygen atoms. The greatest number of therapeutic treatments for various disorders are also being used carbonyl compounds. These two types of organic compounds were combined, and their replacement with crystal growth procedures using solution growth was tested as an antibiotic for a few fastidious and nonfastidious species. The preparation of meta-substituted benzaldehydes using TSC. Tests were conducted with this single component. The following experimental technique was used to determine the antibacterial activity of *Plasmodium falciparum*. Half-inhibitory maximum (IC_{50}) by calculation technique, cell viability % calculation method, and MTT assay by colorimetric method.

Results: Method using agar discs. Using the agar disc diffusion method to measure the inhibition zone width and comparing the minimal inhibitory concentration (MIC) and inhibition zone width of available antibiotics against the aforementioned organism using data from the EUCAST and NCCLS databases, The absolute, relative, and mound slope values of an antibiotic that is currently on the market may be determined using the GraphPad Prism software; the epidemiological cutoff value can be determined using the ECOF Finder software; and the nature of the antibiotic can be determined using the WHONET 5.6 software. The newly developed antibiotics' size and structure are contrasted with the structures of commercially available antibiotics and living organisms.

Conclusion: The design of new drugs using novel derivatives of organic and semiorganic NLO molecules is based on the in vitro method of analysis, which has recently been introduced to this field. *P. falciparum* has an extremely low MIC value (0.625 $\mu\text{g}/\text{mL}$) against TSCMNB. The MIC break points are always larger than, not equal to, the MIC values and fall within the range of 110 $\mu\text{g}/\text{mL}$ –130 $\mu\text{g}/\text{mL}$. We concluded that all of the novel compounds exhibit a susceptible form of inhibition.

Keywords: MTT Assay, Cell viability, IC_{50} , Agar dis diffusion, Graph pad, ECOF finder, EUCAST, NCCLS.

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INTRODUCTION

Due to the rapid emergence of antibacterial and antifungal treatment resistance, treating microbiological diseases brought on by bacteria and fungus has become a significant global issue. The resistance of numerous targets to the current medications and the mutations of bacteria and viruses have emerged as major issues in the medical industry. To address these dangers, new treatments and medicines are therefore required. It has been observed that metal complexes with thiosemicarbazone (TSC) ligands and their derivatives exhibit good medicinal properties and seem advantageous in terms of generating less toxic and more potent medications. A review of the literature reveals that metals are selective for target cells and that their coordination affects how well ligands bind to proteins [1].

Metals have proven to be quite useful in the fields of medical chemistry and drug creation. The bonding of metal atoms or ions with ligands forms coordination complexes [2]. The prevalence of fungus infections has increased globally in recent decades. One of the main objectives of medicinal chemistry is the creation of novel therapeutic agents. Due to their extensive range of biological activities, which include antimycobacterial, antibacterial, antifungal, antiviral, and antimalarial effects, as well as their adaptability as nitrogen and sulfur donors, which enables them to bring on a great variety of coordination modes, TSCs have long been studied for medicinal studies.

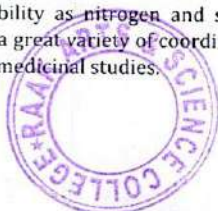
Due to their tendency to react with a variety of metals, TSCs are a crucial class of N and S donor ligands [3]. Schiff bases have biochemical and pharmacological applications because they may be effective antibacterial and anticancer agents [4,5]. The efficacy of second harmonic generation in free TSC ligands and their metal complexes has been hypothesized to be aided by significant electron delocalization in the TSC moiety [6,7]. We describe the crystal structure of a novel Schiff base compound generated from thiosemicarbazide and 3-nitrobenzaldehyde here as part of research on non-linear optical materials, notably TSCs and their metal complexes.

TSC organic crystals exhibit strong heat stability and non-linear optical characteristics. TSC compounds that have an asymmetrized electron conjugation system between the electron donor and acceptor groups are also extremely polarizable substances that can be used in NLO applications. The production, growth, and anti-microbial effectiveness of TSC derivatives of 2 chlorobenzaldehyde crystals are thus reported in the current work.

METHODS

Chemicals used for the study

The solution-growth technique Crystals of TSC of 2-chlorobenzaldehyde have been grown in the supersaturated solution at room temperature. The structures of these crystals are crystallized below.



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MARKETING USING SOCIAL MEDIA ERA: SOCIAL STRATEGY CUSTOMERS RELATIONSHIP MANAGEMENT HOUSE

Dr. P. Kamaludeen¹ and Mr. R. Pradap²

¹Research Guide ,Professor & Head , Department of Business Administration ,RAAK Art& Science College , (Affiliated Thiruvalluvar University) ,Perambai – Pondicherry.

²Research Scholar &Assistant Professor,Department of Business Administration ,RAAK Art& Science College ,(Affiliated Thiruvalluvar University),Perambai – Pondicherry.

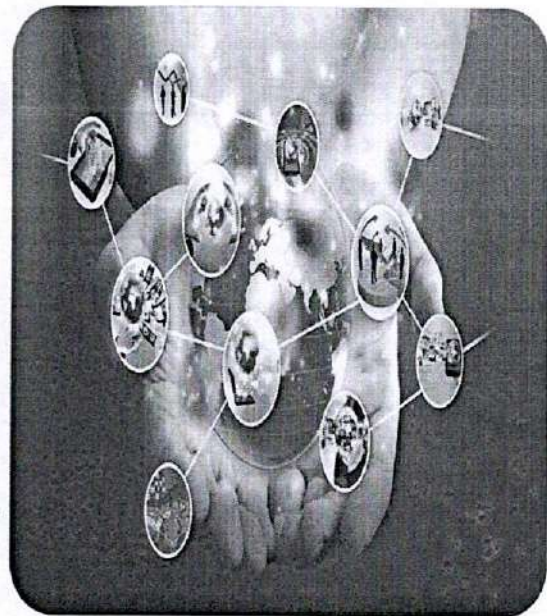
ABSTRACT

CRM has traditionally referred to a company managing relationships with customers. The rise of social media, which has connected and empowered customers, challenges this fundamental reason. This paper examines how CRM needs to adapt to the rise of social media. The convergence of social media and CRM creates pitfalls and opportunities, which are explored. We organize this discussion around the new “social CRM house,” and discuss how social media engagement affects the house's core areas (i.e., acquisition, retention, and termination) and supporting business areas (i.e., people, IT, performance evaluation, metrics and overall marketing strategy). Pitfalls discussed include the organization's lack of control over message diffusion, big and unstructured data sets, privacy, data security, the shortage of qualified manpower, measuring the ROI of social media marketing initiatives, strategies for managing employees, integrating customer touch points, and content marketing.

KEYWORDS :Customer relationship management; Social media; Engagement; Information technology; Customer insight; Employees; Key performance indicator.

INTRODUCTION:

The rise of social media is challenging the traditional notion of customer relationship management (CRM). In a traditional CRM framework, the organization



possesses substantial information about its customers, which it uses to manage its relationships with them (Payne and Frow 2005; Verhoef, Venkatesan, et al. 2010). Reinartz, Krafft, and Hoyer (2004, p 295) define CRM as a process that “entails the systematic and proactive management of relationships as they move from beginning (initiation) to end(termination), with execution across the various customer-facing contact channels.” Specifically, the company seeks to leverage customer information in order to maximize customer lifetime value (CLV) and the resulting customer equity (Berger and Nasr 1998; Malthouse 2013; Schulze, Skiera, and Wiesel 2012). For example, an organization might maintain a database of customers and prospective customers, segmented according to various characteristics, and target