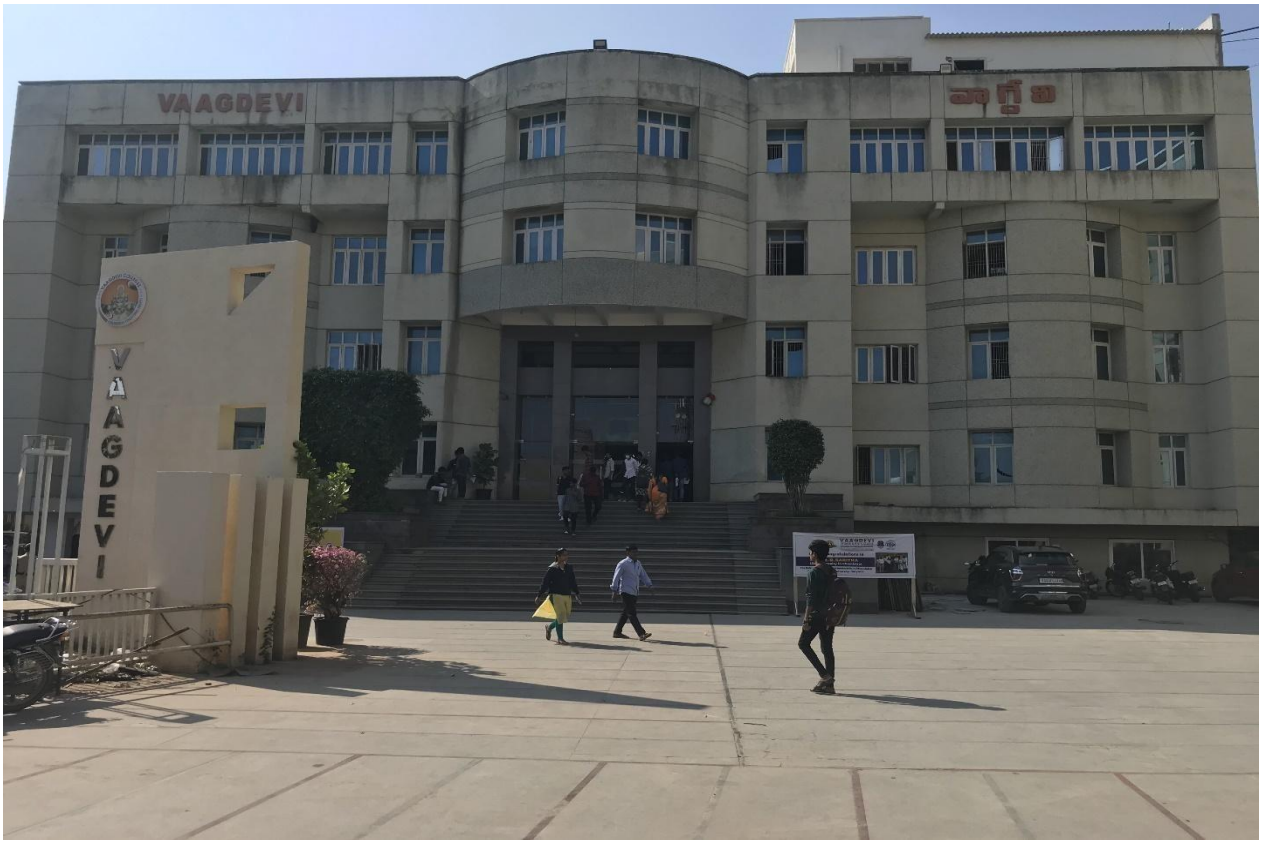
VAAGDEVI DEGREE & PG COLLEGE

DIST:HANUMAKONDA,TELANGANASTATE–506001

(AffiliatedtoKakatiyaUniversity,Warangal)

*(e-mail:*contact@vaagdevicolleges.com

*website:*www.vaagdevicolleges.com *)*



Metric No 3.3.2.1

3.3.2.1 - Number of research papers in the Journals notified on UGC website during the year

Academic Year 2023-2024

Principal
Vaagdevi Degree & PG College
Kishanpura, Hanamkonda

3.3.2.1 - Number of research papers in the Journals notified on UGC website during the year

Summary Sheet

S.No	Name of Faculty	Department	No of Papers Published
1	Dr A.Srinivas Reddy	Chemistry	03
2	Dr Sateesh Sutari	Botany	02
3	V.Raju	Commerce	01
4	Dr PSandhya Rani	Commerce	01
5	C Datatreyulu	Commerce	02
6	T.Rajeshwar	Commerce	01
7	M.Venugopal	Commerce	01
8	G.Laxman	Commerce	01
9	K. Umarani	Commerce	01
10	Safia Sulthana	English	03
11	G Neelima	English	02
12	K Prathiba	English	02
13	Dr.P.Sugunakar Reddy	Management	01
14	G.Chandrkala	Microbiology	03
15	Syed Ishrath Farheen	Microbiology	02
16	M.NarsimhaMurthy	Physics	02
17	M.Gopikrishna	Physics	01
17	Dr P Suresh	Zoology	01

Principal
Vaagdevi Degree & PG College
Kishanpura, Hanamkonda

ISSN 1070-4280, Russian Journal of Organic Chemistry, 2024, Vol. 60, No. 1, pp. 84–92. © Pleiades Publishing, Ltd., 2024.

Microwave-Assisted Synthesis and Evaluation of Bis[(1-benzyl-1*H*-1,2,3-triazol-4-yl)methyl] 7,8′-Methylenebis[2-(*E*)-(benzylideneamino)-4*H*-chromene-3-carboxylates] as Potent Antimicrobial Agents

A. Srinivas[a,*], S. Rajitha[b], E. Kalyan Rao[c], K. Sindhura[d], S. I. Farheen[d], G. Chandrakala[d], and S. Sultana[e]

[a] *Department of Chemistry, Vaagdevi Degree & PG College, Kishanpura, Hanamkonda, Telangana, 506001 India*

[b] *School of Sciences, Career Point University, Kota, Rajasthan, 325003 India*

[c] *Department of Physical Sciences, Kakatiya Institute of Technological Sciences, Hanamkonda, Telangana, 506009 India*

[d] *Department of Microbiology, Vaagdevi Degree & PG College, Kishanpura, Warangal, Telangana, 506001 India*

[e] *Department of Humanities, Vaagdevi Degree & PG College, Kishanpura, Warangal, Telangana, 506001 India*

**e-mail: avula.sathwikreddy@gmail.com*

Received February 9, 2023; revised February 21, 2023; accepted February 23, 2023

Abstract—A series of novel bis[(1-benzyl-1*H*-1,2,3-triazol-4-yl)methyl] 7,8′-methylenebis[2-(*E*)-(benzylideneamino)-4*H*-chromene-3-carboxylates] **6a–6f** were synthesized from di(prop-2-yn-1-yl) 7,8′-methylenebis-[(*E*)-2-(benzylideneamino)-4*H*-chromene-3-carboxylates] **5a–5f** via a one-pot procedure involving 1,3-dipolar cycloaddition catalyzed by $CuSO_4$ and glucose under microwave irradiation at 100°C as a key step. Compounds **6d** and **6f** bearing 4-NO_2 and 4-OH groups exhibited good activity against some fungal strains, and compounds **6b** and **6f** bearing 4-Cl and 4-OH groups exhibited good antimicrobial activity against *S. pyogenes*, *E. coli*, *B. subtilis*, and *S. aureus*.

Keywords: methylenebisheterocycles, Knoevenagel condensation, click reaction, glucose, microwave-assisted synthesis, antimicrobial activity

DOI: 10.1134/S1070428024010123

INTRODUCTION

4*H*-Chromenes are important heterocyclic compounds that play a significant role in biology and medicinal chemistry due to their diverse therapeutic activities such as antiangiogenic [1], antibacterial [2], anticancer [3], anticoagulant [4], anti-inflammatory [5], antitumor [6], antifungal [7], anti-HIV [8], antigenotoxic [9], antioxidant [10], antiviral [11], anti-Alzheimer [12], and other activities [13–19]. 1,2,3-Triazole derivatives also exhibit multiple biological activities such as antibacterial, antifungal, anti-hypoglycemic, antihypertensive, and analgesic [20–33].

Microwave irradiation is a replacement heating system which often increases the rate of chemical reactions [34–37]. Multicomponent reactions (MCRs) have found wide application due to their simplicity, high atomic economy, shortened reaction times, and the possibility of multidisciplinary integration [38–40].

In view of the above stated and in continuation of our work on heterocyclic compounds [41–46], herein we report the microwave-assisted synthesis of novel bis-chromene derivatives containing triazole fragments and their antimicrobial activity.

RESULTS AND DISCUSSION

The key intermediates **5a–5f** were synthesized as outlined in Scheme 1. The Knoevenagel condensation of 3,4′-methylenebis(2-hydroxybenzaldehyde) (**1**) and

*Research Journal of Chemistry and Environment*_____Vol. **28 (3)** March **(2024)**
Res. J. Chem. Environ.

The development, preparation and characterisation of novel pyran derivatives and their biological assessment

Sriramoju Shamili[1], Avula Srinivas[2], Konda Sindhura[2] and Siddoju Kavitha[1*]
1. Department of Chemistry, Chaitanya Deemed to be University, Hanumakonda, Telangana -506001, INDIA
2. Department of Chemistry and Microbiology, Vaagdevi Degree and PG College, Hanumakonda, Telangana-506001, INDIA
*kavithavbr@gmail.com

Abstract
We have synthesized some novel derivatives of 4-(1-(2, 4-dinitrophenyl)-3-phenyl-1H-pyrazol-4-yl)-7,7-dimet hyl-2-(methylamino)-3nitro-6,7,8,8a-tetrahydro-4H-chromen-5(4aH)-one by the multicomponent reaction of pyrazole aldehydes derivatives, N-methyl-1-(methylthio)-2-nitroethenamine (NMSM) and 5,5-dimethylcyclohexane-1,3-dione. The synthesised compounds are confirmed by ^{1}H NMR, IR and Mass Spectroscopy and they were then tested for antioxidant activities.

In terms of antioxidant activity, compounds C-7 and C-1 were found to have the greatest and lowest levels respectively. Against Enterobacter aerogenes, compound C-5 exhibited the lowest minimum inhibitory concentration value.

Keywords: Pyrans, Multicomponent reaction, Antioxidant activities.

Introduction

Many organic and medicinal chemists rely on heterocyclic compounds for their synthesis because of the wide range of therapeutic uses of these compounds.[3] The pyran derivatives are significant compounds with a variety of biological activities including anti-leishmanial, antioxidant, anti-HIV, anti-tumour, Alzheimer's disease and schizophrenia[4,5,7-10].

For example, pyran derivatives were employed to make agrochemicals[11], laser dyes[12] nonlinear optics[13] and photo chromic materials[14]. Synthetic and medicinal chemists are very much interested in finding new ways to synthesise pyran derivatives. These include heterogeneous catalysts, Ionic liquids[15,16] etc.[18]

Complex synthetic procedures with extraction and purification at every stage result in synthetic ineptitude and the generation of enormous quantities of waste due to lengthy reaction times and costly catalysts required for the synthesis of pyran derivatives. To tackle this issue, a multicomponent process was employed to synthesise pyran derivatives[18].

The peculiar structure and therapeutic uses of pyranopyran-based heterocyclic compounds such as anticancer, antiproliferative, anti-inflammatory and antiviral, make them very important. The use of pyranopyran derivatives as medicines has been documented in several studies[20].

Material and Methods

All chemicals were bought and utilised without being purified in any way. Thin-layer chromatography (TLC) using silica gel-G plates (G60 F254 (Merck) of 0.5 mm thickness was used to monitor reactions and ultraviolet light was used to see them (254 and 365 nm). An open capillary apparatus called a Buchi B-540 was used to measure melting points, which were then uncorrected. The IR spectra were collected using an FTIR-8400 S, CE Shimadzu instrument and are represented in cm^{-1} (KBr). NMR spectra were collected in deuterated solvents $CDCl_3$ using a Bruker Avance 400 MHz spectrometer (400 MHz for ^{1}H NMR).

Elemental analysis was performed on a Euro EA 3000 elemental analyzer and the findings are consistent with the structures given. Analytical data was obtained using the Shimadzu QP-2010 mass spectrum analyzer using the ESI (70-eV) model with direct intake probe and the m/z was expressed in elementary charge units. A Buchi rotary evaporator was used to evaporate solvents.

The first step of synthesis was to form acetophenone phenyl hydrazones derivatives (Int-1) by reacting substituted acetophenone, (2,4-dinitrophenyl) hydrazine. At room temperature, 0.032 mol of anhydrous DMF was used to cyclize (Int-1). After agitating the reaction mass for 10–15 minutes at the same temperature as during the addition, 0.032 mol of $AgNO_3$ was added drop-wise while stirring and 0.015 mol of acetophenone hydrazones was added. The reaction mixture was stirred at 70^{0}C and left there for 5 hours to produce pyrazole aldehydes derivatives (Int-2). Then synthesis of the target molecule was achieved by multicomponent reaction of (Int-2), N-methyl-1-(methylthio)-2-nitroethenamine (NMSM) and 5,5-dimethylcyclohexane-1,3-dione. The yields of all the synthesised compounds ranged from excellent to acceptable. IR, NMR and Mass spectrometry were used to analyse all of the produced compounds.

A number of different solvents and bases were put so that the appropriate base and solvent could be chosen for the reaction (Table 1). The reaction proceeded without the need of a catalyst, which is advantageous from both a financial and an environmental point of view (Table 1, entry 1). After that, a number of organic and inorganic bases were put through the process and tested. When piperidine was used as the base and ethanol was used as the solvent, it was discovered that the yield of the product increased significantly (Table 1, entry 11). In comparison to other organic solvents, ethanol is both reasonably inexpensive. As indicated by Berset et al[6], the pyran

https://doi.org/10.25303/283rjce061069

ISSN 1070-4280, Russian Journal of Organic Chemistry, 2024, Vol. 60, No. 1, pp. 84–92. © Pleiades Publishing, Ltd., 2024.

Microwave-Assisted Synthesis and Evaluation of Bis[(1-benzyl-1*H*-1,2,3-triazol-4-yl)methyl] 7,8′-Methylenebis[2-(*E*)-(benzylideneamino)-4*H*-chromene-3-carboxylates] as Potent Antimicrobial Agents

A. Srinivas[a,*], S. Rajitha[b], E. Kalyan Rao[c], K. Sindhura[d], S. I. Farheen[d], G. Chandrakala[d], and S. Sultana[e]

[a] *Department of Chemistry, Vaagdevi Degree & PG College, Kishanpura, Hanamkonda, Telangana, 506001 India*

[b] *School of Sciences, Career Point University, Kota, Rajasthan, 325003 India*

[c] *Department of Physical Sciences, Kakatiya Institute of Technological Sciences, Hanamkonda, Telangana, 506009 India*

[d] *Department of Microbiology, Vaagdevi Degree & PG College, Kishanpura, Warangal, Telangana, 506001 India*

[e] *Department of Humanities, Vaagdevi Degree & PG College, Kishanpura, Warangal, Telangana, 506001 India*

**e-mail: avula.sathwikreddy@gmail.com*

Received February 9, 2023; revised February 21, 2023; accepted February 23, 2023

Abstract—A series of novel bis[(1-benzyl-1*H*-1,2,3-triazol-4-yl)methyl] 7,8′-methylenebis[2-(*E*)-(benzylideneamino)-4*H*-chromene-3-carboxylates] **6a–6f** were synthesized from di(prop-2-yn-1-yl) 7,8′-methylenebis-[(*E*)-2-(benzylideneamino)-4*H*-chromene-3-carboxylates] **5a–5f** via a one-pot procedure involving 1,3-dipolar cycloaddition catalyzed by $CuSO_4$ and glucose under microwave irradiation at 100°C as a key step. Compounds **6d** and **6f** bearing 4-NO_2 and 4-OH groups exhibited good activity against some fungal strains, and compounds **6b** and **6f** bearing 4-Cl and 4-OH groups exhibited good antimicrobial activity against *S. pyogenes*, *E. coli*, *B. subtilis*, and *S. aureus*.

Keywords: methylenebisheterocycles, Knoevenagel condensation, click reaction, glucose, microwave-assisted synthesis, antimicrobial activity

DOI: 10.1134/S1070428024010123

INTRODUCTION

4*H*-Chromenes are important heterocyclic compounds that play a significant role in biology and medicinal chemistry due to their diverse therapeutic activities such as antiangiogenic [1], antibacterial [2], anticancer [3], anticoagulant [4], anti-inflammatory [5], antitumor [6], antifungal [7], anti-HIV [8], antigenotoxic [9], antioxidant [10], antiviral [11], anti-Alzheimer [12], and other activities [13–19]. 1,2,3-Triazole derivatives also exhibit multiple biological activities such as antibacterial, antifungal, anti-hypoglycemic, antihypertensive, and analgesic [20–33].

Microwave irradiation is a replacement heating system which often increases the rate of chemical reactions [34–37]. Multicomponent reactions (MCRs) have found wide application due to their simplicity, high atomic economy, shortened reaction times, and the possibility of multidisciplinary integration [38–40].

In view of the above stated and in continuation of our work on heterocyclic compounds [41–46], herein we report the microwave-assisted synthesis of novel bis-chromene derivatives containing triazole fragments and their antimicrobial activity.

RESULTS AND DISCUSSION

The key intermediates **5a–5f** were synthesized as outlined in Scheme 1. The Knoevenagel condensation of 3,4′-methylenebis(2-hydroxybenzaldehyde) (**1**) and

Madhya Bharti -Humanities and Social Sciences **UGC Care Group I Journal**
(मध्य भारती) ISSN: 0974-0066 Vol-85, No. 12, January–June: 2024

A STUDY ON WOMEN ENTREPRENEUR IN RURAL INDIA

K. Umarani, G. Laxman, Assistant professor of commerce & Business Management, Vaagdevi Degree & P.G College

INTRODUCTION

Women in India now participate fully in areas such as education, sports, politics, business, media, art and culture, service sectors, science and technology. Entrepreneur is not only men but also women. Finally women entered into business successfully last three decades and they are become women entrepreneurs.

In today's world, more and more women are becoming entrepreneurs. There are many reasons for this, but one of the most important is that women can now make their own decisions and control their lives. Whether starting their businesses from scratch or taking new challenges in an existing business, these women make a difference.

Women enter into entrepreneurship due to economic factors which pushed them to be on their own and support them to do something independently. Women prefer to work from their own work residence, difficulty in getting suitable jobs and desire for social appreciation which motivate them towards self-employment.

REVIEW OF LITERATURE

(Dhameja et al 2000).s (Aggarwal & Johal, 2021) .

The year 2020 revealed that women entrepreneurs have a significant relationship with cultural factors, namely income generation and economic resources. The government's role in encouraging entrepreneurship is hoped to impact information technology for women entrepreneurs in rural area.

Women entrepreneurs take conscious decisions in order to manage their enterprise. Women entrepreneurship also leads to social and economic empowerment of women. Women entrepreneurship is more common in younger age groups in comparison to older age groups

Cohoon et al (2010) introduced a point by point investigation of men and women entrepreneur's inspirations, foundation and encounters. This examination distinguished best five money related and psychological components rousing women to end up entrepreneurs. These are want to assemble the riches, the desire to capitalize possess business thoughts they had, the intrigue of startup culture, a long standing want to claim their very own organization and working with another person did not bid them. The examination reasoned that the women are especially worried about ensuring intellectual capital than their partner. Mentoring is vital to women, which gives encouragement and money related help of business accomplices, encounters and all around created proficient system.

Anita Tripathy Lal (2012) principle target of this exploration was to ponder the noteworthy ascent of Women Entrepreneurs in India and how it has developed since the pre-autonomy days (before 1947), amid the British colonial days. The investigation additionally dissected the reasons that have incited the women entrepreneurs to release their entrepreneurial energies into new businesses. In light of both qualitative and quantitative examinations the development of women entrepreneurship in India have been considered into four distinct periods – Pre Independence Period (before 1947), Post-Independence Period (after 1947), Post-Liberalization Period (after 1991) and Post - Global Recession period (2008 onwards). The examination at long last finished up to what degree the different emotionally supportive networks in India can additionally encourage a favorable biological system for the Women Entrepreneurs in India.

Sujatha Mukherjee (2013) in her article titled, "Women Entrepreneurship Changing Status" has examined that women from the low-salary segment take up entrepreneurship as a survival technique. The examination reports that wandering into entrepreneurship affected the women entrepreneurs. The discoveries show that with entrepreneurship development, the respondents built up a positive confidence as they increased self-assurance and were autonomous in settling on their own choices, in this way decreasing their reliance on their life partner/family members. The salary from business had made the respondents monetarily solid, however settled on them leaders. Situations where joint

ISSN 1070-4280, Russian Journal of Organic Chemistry, 2024, Vol. 60, No. 1, pp. 84–92. © Pleiades Publishing, Ltd., 2024.

Microwave-Assisted Synthesis and Evaluation of Bis[(1-benzyl-1*H*-1,2,3-triazol-4-yl)methyl] 7,8′-Methylenebis[2-(*E*)-(benzylideneamino)-4*H*-chromene-3-carboxylates] as Potent Antimicrobial Agents

A. Srinivas[a,*], S. Rajitha[b], E. Kalyan Rao[c], K. Sindhura[d], S. I. Farheen[d], G. Chandrakala[d], and S. Sultana[e]

[a] *Department of Chemistry, Vaagdevi Degree & PG College, Kishanpura, Hanamkonda, Telangana, 506001 India*

[b] *School of Sciences, Career Point University, Kota, Rajasthan, 325003 India*

[c] *Department of Physical Sciences, Kakatiya Institute of Technological Sciences, Hanamkonda, Telangana, 506009 India*

[d] *Department of Microbiology, Vaagdevi Degree & PG College, Kishanpura, Warangal, Telangana, 506001 India*

[e] *Department of Humanities, Vaagdevi Degree & PG College, Kishanpura, Warangal, Telangana, 506001 India*

**e-mail: avula.sathwikreddy@gmail.com*

Received February 9, 2023; revised February 21, 2023; accepted February 23, 2023

Abstract—A series of novel bis[(1-benzyl-1*H*-1,2,3-triazol-4-yl)methyl] 7,8′-methylenebis[2-(*E*)-(benzylideneamino)-4*H*-chromene-3-carboxylates] **6a–6f** were synthesized from di(prop-2-yn-1-yl) 7,8′-methylenebis-[(*E*)-2-(benzylideneamino)-4*H*-chromene-3-carboxylates] **5a–5f** via a one-pot procedure involving 1,3-dipolar cycloaddition catalyzed by $CuSO_4$ and glucose under microwave irradiation at 100°C as a key step. Compounds **6d** and **6f** bearing 4-NO_2 and 4-OH groups exhibited good activity against some fungal strains, and compounds **6b** and **6f** bearing 4-Cl and 4-OH groups exhibited good antimicrobial activity against *S. pyogenes*, *E. coli*, *B. subtilis*, and *S. aureus*.

Keywords: methylenebisheterocycles, Knoevenagel condensation, click reaction, glucose, microwave-assisted synthesis, antimicrobial activity

DOI: 10.1134/S1070428024010123

INTRODUCTION

4*H*-Chromenes are important heterocyclic compounds that play a significant role in biology and medicinal chemistry due to their diverse therapeutic activities such as antiangiogenic [1], antibacterial [2], anticancer [3], anticoagulant [4], anti-inflammatory [5], antitumor [6], antifungal [7], anti-HIV [8], antigenotoxic [9], antioxidant [10], antiviral [11], anti-Alzheimer [12], and other activities [13–19]. 1,2,3-Triazole derivatives also exhibit multiple biological activities such as antibacterial, antifungal, anti-hypoglycemic, antihypertensive, and analgesic [20–33].

Microwave irradiation is a replacement heating system which often increases the rate of chemical reactions [34–37]. Multicomponent reactions (MCRs) have found wide application due to their simplicity, high atomic economy, shortened reaction times, and the possibility of multidisciplinary integration [38–40].

In view of the above stated and in continuation of our work on heterocyclic compounds [41–46], herein we report the microwave-assisted synthesis of novel bis-chromene derivatives containing triazole fragments and their antimicrobial activity.

RESULTS AND DISCUSSION

The key intermediates **5a–5f** were synthesized as outlined in Scheme 1. The Knoevenagel condensation of 3,4′-methylenebis(2-hydroxybenzaldehyde) (**1**) and

Madhya Bharti -Humanities and Social Sciences **UGC Care Group I Journal**
(मध्य भारती) ISSN: 0974-0066 Vol-85, No. 11, January–June: 2024

IN A DEMOCRATIC SOCIAL SYSTEM – WOMEN ARE PRIORITY

Lt.Dr. Sabitha, Lecturer in Chemistry, Vaagdevi Degree & PG College, Hanamakonda, Warangal.
Prof.B Chandramouli, Principal, Pingle Government College for Women (Autonomous), Waddepally, Hanumakonda, Telangana State
B. Jagadish, Librarian, Pingle Government College for Women (Autonomous), Waddepally, Hanumakonda, Telangana State
Dr. Rakki Reddy Adi Reddy, Department of Tourism Public Relation Officer, University Arts and Science College, Warangal.

Introduction:

Women are moving forward with determination in the social, economic and social fields of society worldwide! The extent to which women are treated equally in the society, it will take five or six generations for the equality of men and women to come in the world! A recent survey has revealed that a man who is preparing for an extraterrestrial journey does not see many equals in his own home. What is the meaning of progress! It is said that all countries are committed to equality and must not give their place to women who play a vital role in wealth creation, service and leadership everywhere. These are developments taking place internationally. It can be said that even though women are entering every field in the world, equality is still not achieved at the desired level. The world is moving ahead in science and technology. It can be said that modern science and technology can also help women to reach high positions.

Women have already been among those who have traveled to space many times. Women do all the work that keeps the world healthy, but men stand in front of them and claim to have done it all themselves. The World Health Organization report concluded that 70 percent of the workforce in the medical field is female, but their lack of role in leadership positions is nothing more than a narrow-minded discrimination against masculinity. In short, there are 37 women for every 100 men in medical education leadership. .If you look at this, the equality index is still decreasing as it goes up. Many research institutes are doing research on what can be done to achieve equality. The study institute states that although the constitution states that women get equal rights to men in the society, there is no equality in the society in actual form. It can be said that if the labor of women is shared and given equal opportunities in leadership positions, women will have the opportunity to excel as well as men. There is concern that women are not getting equal opportunities even in rapidly developing countries around the world. We must all support women's determination to continue to hold power in 25 countries in the world under the leadership of women. Denmark, Norway, Sweden, which are known as Finland North countries, the current Prime Ministers of 4 countries are women, these countries in Northern Europe are developing not only geographically, but also economically and culturally. If we turn the history once, we know the history of women fighting heroically in royal systems. .The bravery shown by the women who protested against the British in India is a great inspiration for today's modern women, we also know the history of women showing bravery in the royal, presidential and democratic system and being glorified as the greatest rulers in the world. It can be said strongly that women are progressing in all fields equal to men, but the inequalities in the society still do not support women equally. The criticism is heard that equality is seen everywhere, but it is not seen in practice.

The most terrible virus that occurred in 2019, covid 19, which occurred in 2019, was born to effectively deal with the poor countries looking for help in improving the economic situation, which affects the trade relations of 164 member countries. The challenges facing the prestigious organization World Trade Council are not small. .If two people move forward together in the society, there is a chance to face even difficult problems. The first woman to be the Director-General of the World Trade Organization, O Cam Ja continues to serve as a guide for the world's women. The fact that she reached the highest position after facing many ups and downs in her life is something that every person should think about. She played a key role in providing aid to poor countries during the

Madhya Bharti -Humanities and Social Sciences **UGC Care Group I Journal**
(मध्य भारती) ISSN: 0974-0066 Vol-85, No. 12, January–June: 2024

A STUDY ON WOMEN ENTREPRENEUR IN RURAL INDIA

K. Umarani, G. Laxman, Assistant professor of commerce & Business Management, Vaagdevi Degree & P.G College

INTRODUCTION

Women in India now participate fully in areas such as education, sports, politics, business, media, art and culture, service sectors, science and technology. Entrepreneur is not only men but also women. Finally women entered into business successfully last three decades and they are become women entrepreneurs.

In today's world, more and more women are becoming entrepreneurs. There are many reasons for this, but one of the most important is that women can now make their own decisions and control their lives. Whether starting their businesses from scratch or taking new challenges in an existing business, these women make a difference.

Women enter into entrepreneurship due to economic factors which pushed them to be on their own and support them to do something independently. Women prefer to work from their own work residence, difficulty in getting suitable jobs and desire for social appreciation which motivate them towards self-employment.

REVIEW OF LITERATURE

(Dhameja et al 2000).s (Aggarwal & Johal, 2021) .

The year 2020 revealed that women entrepreneurs have a significant relationship with cultural factors, namely income generation and economic resources. The government's role in encouraging entrepreneurship is hoped to impact information technology for women entrepreneurs in rural area.

Women entrepreneurs take conscious decisions in order to manage their enterprise. Women entrepreneurship also leads to social and economic empowerment of women. Women entrepreneurship is more common in younger age groups in comparison to older age groups

Cohoon et al (2010) introduced a point by point investigation of men and women entrepreneur's inspirations, foundation and encounters. This examination distinguished best five money related and psychological components rousing women to end up entrepreneurs. These are want to assemble the riches, the desire to capitalize possess business thoughts they had, the intrigue of startup culture, a long standing want to claim their very own organization and working with another person did not bid them. The examination reasoned that the women are especially worried about ensuring intellectual capital than their partner. Mentoring is vital to women, which gives encouragement and money related help of business accomplices, encounters and all around created proficient system.

Anita Tripathy Lal (2012) principle target of this exploration was to ponder the noteworthy ascent of Women Entrepreneurs in India and how it has developed since the pre-autonomy days (before 1947), amid the British colonial days. The investigation additionally dissected the reasons that have incited the women entrepreneurs to release their entrepreneurial energies into new businesses. In light of both qualitative and quantitative examinations the development of women entrepreneurship in India have been considered into four distinct periods – Pre Independence Period (before 1947), Post-Independence Period (after 1947), Post-Liberalization Period (after 1991) and Post - Global Recession period (2008 onwards). The examination at long last finished up to what degree the different emotionally supportive networks in India can additionally encourage a favorable biological system for the Women Entrepreneurs in India.

Sujatha Mukherjee (2013) in her article titled, "Women Entrepreneurship Changing Status" has examined that women from the low-salary segment take up entrepreneurship as a survival technique. The examination reports that wandering into entrepreneurship affected the women entrepreneurs. The discoveries show that with entrepreneurship development, the respondents built up a positive confidence as they increased self-assurance and were autonomous in settling on their own choices, in this way decreasing their reliance on their life partner/family members. The salary from business had made the respondents monetarily solid, however settled on them leaders. Situations where joint

ISSN 1070-4280, Russian Journal of Organic Chemistry, 2024, Vol. 60, No. 1, pp. 84–92. © Pleiades Publishing, Ltd., 2024.

Microwave-Assisted Synthesis and Evaluation of Bis[(1-benzyl-1*H*-1,2,3-triazol-4-yl)methyl] 7,8′-Methylenebis[2-(*E*)-(benzylideneamino)-4*H*-chromene-3-carboxylates] as Potent Antimicrobial Agents

A. Srinivas[a,*], S. Rajitha[b], E. Kalyan Rao[c], K. Sindhura[d], S. I. Farheen[d], G. Chandrakala[d], and S. Sultana[e]

[a] *Department of Chemistry, Vaagdevi Degree & PG College, Kishanpura, Hanamkonda, Telangana, 506001 India*

[b] *School of Sciences, Career Point University, Kota, Rajasthan, 325003 India*

[c] *Department of Physical Sciences, Kakatiya Institute of Technological Sciences, Hanamkonda, Telangana, 506009 India*

[d] *Department of Microbiology, Vaagdevi Degree & PG College, Kishanpura, Warangal, Telangana, 506001 India*

[e] *Department of Humanities, Vaagdevi Degree & PG College, Kishanpura, Warangal, Telangana, 506001 India*

**e-mail: avula.sathwikreddy@gmail.com*

Received February 9, 2023; revised February 21, 2023; accepted February 23, 2023

Abstract—A series of novel bis[(1-benzyl-1*H*-1,2,3-triazol-4-yl)methyl] 7,8′-methylenebis[2-(*E*)-(benzylideneamino)-4*H*-chromene-3-carboxylates] **6a–6f** were synthesized from di(prop-2-yn-1-yl) 7,8′-methylenebis-[(*E*)-2-(benzylideneamino)-4*H*-chromene-3-carboxylates] **5a–5f** via a one-pot procedure involving 1,3-dipolar cycloaddition catalyzed by $CuSO_4$ and glucose under microwave irradiation at 100°C as a key step. Compounds **6d** and **6f** bearing 4-NO_2 and 4-OH groups exhibited good activity against some fungal strains, and compounds **6b** and **6f** bearing 4-Cl and 4-OH groups exhibited good antimicrobial activity against *S. pyogenes*, *E. coli*, *B. subtilis*, and *S. aureus*.

Keywords: methylenebisheterocycles, Knoevenagel condensation, click reaction, glucose, microwave-assisted synthesis, antimicrobial activity

DOI: 10.1134/S1070428024010123

INTRODUCTION

4*H*-Chromenes are important heterocyclic compounds that play a significant role in biology and medicinal chemistry due to their diverse therapeutic activities such as antiangiogenic [1], antibacterial [2], anticancer [3], anticoagulant [4], anti-inflammatory [5], antitumor [6], antifungal [7], anti-HIV [8], antigenotoxic [9], antioxidant [10], antiviral [11], anti-Alzheimer [12], and other activities [13–19]. 1,2,3-Triazole derivatives also exhibit multiple biological activities such as antibacterial, antifungal, anti-hypoglycemic, antihypertensive, and analgesic [20–33].

Microwave irradiation is a replacement heating system which often increases the rate of chemical reactions [34–37]. Multicomponent reactions (MCRs) have found wide application due to their simplicity, high atomic economy, shortened reaction times, and the possibility of multidisciplinary integration [38–40].

In view of the above stated and in continuation of our work on heterocyclic compounds [41–46], herein we report the microwave-assisted synthesis of novel bis-chromene derivatives containing triazole fragments and their antimicrobial activity.

RESULTS AND DISCUSSION

The key intermediates **5a–5f** were synthesized as outlined in Scheme 1. The Knoevenagel condensation of 3,4′-methylenebis(2-hydroxybenzaldehyde) (**1**) and

Madhya Bharti -Humanities and Social Sciences **UGC Care Group I Journal**
(मध्य भारती) ISSN: 0974-0066 Vol-85, No. 12, January–June: 2024

EMPOWERING WOMEN ENTREPRENEURS: NAVIGATING CHALLENGES AND EMBRACING BEST PRACTICES IN THE BUSINESS LANDSCAPE

C. Dattatreyulu, Department of Commerce, Vaagdevi Degree & PG College , Hanamkonda, Warangal, Telangana, India.
Dr.P. Sugunakar Reddy, Department of Business Management, Vaagdevi Degree & PG College, Hanamkonda, Warangal, Telangana, India.

INTRODUCTION:

As the global business landscape evolves, the role of women in entrepreneurship becomes increasingly significant. This article seeks to address the challenges faced by women entrepreneurs and identify the practices that contribute to their success. The objective is to shed light on the experiences of women in business, offering a comprehensive understanding of the factors influencing their entrepreneurial journey.

LITERATURE REVIEW:

The literature review examines existing research on women entrepreneurship, focusing on key themes such as gender biases, access to funding, mentorship, and work-life balance. It critically analyzes the current state of women in business, drawing on both academic studies and real-world examples to provide a comprehensive overview of the challenges and opportunities they face.

OBJECTIVES:

1. To identify the primary challenges faced by women entrepreneurs.
2. To explore the best practices adopted by successful women entrepreneurs.
3. To understand the impact of gender-related factors on access to funding and resources.
4. To assess the role of mentorship and support networks in women entrepreneurship.

RESEARCH METHODOLOGY:

This study employs a mixed-methods approach, combining qualitative interviews with successful women entrepreneurs and quantitative surveys to gather a broad range of perspectives. The sample will be selected from diverse industries to ensure a comprehensive understanding of the challenges and practices across different sectors. Data analysis will involve both thematic coding and statistical techniques to derive meaningful insights.

WOMEN ENTREPRENEURS FACE SEVERAL PRIMARY CHALLENGES, INCLUDING:

1. Access to Funding: Limited access to capital and funding opportunities compared to their male counterparts hinders the growth and sustainability of women-led businesses.
2. Gender Bias and Stereotypes: Persistent gender biases and stereotypes can affect women entrepreneurs' credibility, making it challenging to gain the respect and trust of investors, clients, and business partners.
3. Work-Life Balance: Balancing business responsibilities with family and personal commitments poses a unique challenge for women entrepreneurs, often requiring effective time management and support systems.
4. Networking and Mentorship: Limited access to influential networks and mentorship opportunities can impede professional development and hinder the acquisition of valuable guidance for business success.
5. Market Perceptions: Some industries may perceive women-led businesses differently, potentially affecting market opportunities and the ability to compete on an equal footing.
6. Lack of Role Models: The absence of visible and successful female role models in certain industries may limit aspirational models for women entrepreneurs.
Addressing these challenges requires a multifaceted approach, involving changes in societal attitudes, policy interventions, and concerted efforts within the business community to create a more inclusive and supportive environment for women in entrepreneurship.

Assessment of the Effect of Covid – 19 Situation on Digital Marketing

Chebolu Dattatreyulu[1, a)], C Balarama Krishna[2, b)] and Manoharan Geetha[3, c)]

[1]*Department of Commerce, Vaagdevi Degree & PG College, Hanamkonda, Warangal, Telangana, India*
[2]*School of Sciences, SR University, Warangal, Telangana, India*
[3]*School of Business, SR University, Warangal, India*

[a)] Corresponding author: cheboludattu@gmail.com
[b)]c.balaramakrishna@sru.edu.in
[c)]geethamanoharan1988@gmail.com

Abstract. When it comes to digital marketing, the global pandemic of Covid-19 has affected the industry at all levels, from global to regional to local. In contrast to other fields such as economics, human resource management, etc., this impact was largely positive. Other than making customers and marketers nervous, the virus caused behavioural changes like working remotely, staying indoors more often, and adopting home-schooling. It also caused people to learn new recipes from the internet and to pay more attention to sanitation and well-being. They also avoided crowded areas and used social media more frequently. All of these changes were a result of the virus, and all of them were positive. Digital platforms and digital content completely dominated the shift in consumer behaviour, offering marketers and brands more opportunities than ever before to connect with customers digitally. It was possible to make money off of social media because of the increased engagement and demand for digital content. This had the unintended consequence of forcing digital marketers to implement their tactics with social responsibility and awareness. This study's goal is to shed light on, analyze, and explain the impact of the covid-19 epidemic on digital media in order to help policymakers make better decisions.

INTRODUCTION

Digital marketing is often used to advance and reach clients through digital media for products or services [1]. Online and off-line marketing tactics are also used in digital marketing ([2], [3]). Examples include mobile phones, social media marketing, advertising for displayed advertising and optimization of search engines [4]. Digital marketing uses the technology and internet to endorse services and products, such as email and other platforms such as computers and mobile phones, websites, advertising and social media platforms, and software applications and services. Since the 1990s and 2000s, brands and marketers have transformed how they employ technology to implement marketing plans and strategies. This is due to the increasing use of Digital Marketing techniques such as Content Marketing (including micro-video marketing), SEO (including search engine marketing), SEM (including social media marketing), SEM (including influencer marketing), In-App Promotional Offers (including in-app purchases), SMO (including social media optimization) and email marketing [5 – 9]. The outbreak of Covid-19 has brought about a huge change in behaviour in the direction of digital media, digital content and digital platforms ([10],[11]). Digital marketing technology focuses on adapting advertising to the demands of individual customers and devices in contrast to traditional marketing tactics aimed at reaching as many people as possible [12]. Thinking process of students, skill enhancement approaches and some credible learning strategies were demonstrated by numerous authors [13 - 15]. The teaching learning process, Collaborative Learning, multi disciplinary skill development, Marketing of educational tools for delivering the contents and promoting the institutions and other things have been discussed by various authors like Balarama Krishna etc. [16 - 25].

International Conference on Research in Sciences, Engineering, and Technology
AIP Conf. Proc. 2971, 060023-1–060023-6; https://doi.org/10.1063/5.0195757
Published by AIP Publishing. 978-0-7354-4866-7/$30.00

Madhya Bharti -Humanities and Social Sciences **UGC Care Group I Journal**
(मध्य भारती) ISSN: 0974-0066 Vol-85, No. 12, January–June: 2024

EMPOWERING WOMEN ENTREPRENEURS: NAVIGATING CHALLENGES AND EMBRACING BEST PRACTICES IN THE BUSINESS LANDSCAPE

C. Dattatreyulu, Department of Commerce, Vaagdevi Degree & PG College , Hanamkonda, Warangal, Telangana, India.
Dr.P. Sugunakar Reddy, Department of Business Management, Vaagdevi Degree & PG College, Hanamkonda, Warangal, Telangana, India.

INTRODUCTION:

As the global business landscape evolves, the role of women in entrepreneurship becomes increasingly significant. This article seeks to address the challenges faced by women entrepreneurs and identify the practices that contribute to their success. The objective is to shed light on the experiences of women in business, offering a comprehensive understanding of the factors influencing their entrepreneurial journey.

LITERATURE REVIEW:

The literature review examines existing research on women entrepreneurship, focusing on key themes such as gender biases, access to funding, mentorship, and work-life balance. It critically analyzes the current state of women in business, drawing on both academic studies and real-world examples to provide a comprehensive overview of the challenges and opportunities they face.

OBJECTIVES:

1. To identify the primary challenges faced by women entrepreneurs.
2. To explore the best practices adopted by successful women entrepreneurs.
3. To understand the impact of gender-related factors on access to funding and resources.
4. To assess the role of mentorship and support networks in women entrepreneurship.

RESEARCH METHODOLOGY:

This study employs a mixed-methods approach, combining qualitative interviews with successful women entrepreneurs and quantitative surveys to gather a broad range of perspectives. The sample will be selected from diverse industries to ensure a comprehensive understanding of the challenges and practices across different sectors. Data analysis will involve both thematic coding and statistical techniques to derive meaningful insights.

WOMEN ENTREPRENEURS FACE SEVERAL PRIMARY CHALLENGES, INCLUDING:

1. Access to Funding: Limited access to capital and funding opportunities compared to their male counterparts hinders the growth and sustainability of women-led businesses.
2. Gender Bias and Stereotypes: Persistent gender biases and stereotypes can affect women entrepreneurs' credibility, making it challenging to gain the respect and trust of investors, clients, and business partners.
3. Work-Life Balance: Balancing business responsibilities with family and personal commitments poses a unique challenge for women entrepreneurs, often requiring effective time management and support systems.
4. Networking and Mentorship: Limited access to influential networks and mentorship opportunities can impede professional development and hinder the acquisition of valuable guidance for business success.
5. Market Perceptions: Some industries may perceive women-led businesses differently, potentially affecting market opportunities and the ability to compete on an equal footing.
6. Lack of Role Models: The absence of visible and successful female role models in certain industries may limit aspirational models for women entrepreneurs.
Addressing these challenges requires a multifaceted approach, involving changes in societal attitudes, policy interventions, and concerted efforts within the business community to create a more inclusive and supportive environment for women in entrepreneurship.

Cover Page

DOI: http://ijmer.in.doi./2024/13.4.49

INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY EDUCATIONAL RESEARCH
ISSN:2277-7881; IMPACT FACTOR :8.017(2024); IC VALUE:5.16; ISI VALUE:2.286
UGC Approved (2017), Peer Reviewed and Refereed Journal
Volume:13, Issue:4(3), April: 2024
Scopus Review ID: A2B96D3ACF3FEA2A
Article Received: 2nd April 2024 : Date of Publication:30th April 2024
Publisher: Sucharitha Publication, India
Digital Certificate of Publication: www.ijmer.in/pdf/e-CertificateofPublication-IJMER.pdf
Online Copy of Article Publication Available : www.ijmer.in

ROLE OF MOBILE APPLICATIONS TO ENHANCE ENGLISH SPEAKING PROFICIENCY IN TERTIARY LEVEL LEARNERS

[1]Neelima Gaddam and [2]Dr.Babi Duli
[1]Research Scholar, Department of English, Anurag University, Venkatapur, Ghatkesar, Hyderabad, Telangana
[2]Assistant Professor, Department of English, Anurag University, Venkatapur, Ghatkesar, Hyderabad, Telangana

Abstract

Mobile applications play a crucial role in various aspects of human life, extending beyond education. In today's society, people seek convenient access to perform daily tasks, including learning. Traditional methods, such as lengthy lectures, are being replaced by mobile app-driven learning, offering learners the flexibility to engage with educational content anytime, anywhere. Technology-based learning is particularly evident in language learning, where tertiary learners increasingly opt for mobile apps to improve their speaking skills, rather than relying solely on classroom instruction. Educational apps provide a wide range of resources covering grammar, vocabulary, and pronunciation, and offer interactive features like audio, video, and live interactions, creating a dynamic learning environment. The accessibility of these apps via handheld devices further enhances their appeal, allowing users to easily download content. Moreover, the immediate feedback provided by many applications boosts learners' confidence levels, while interactive elements encourage regular practice, essential for skill development. By empowering learners to personalize their learning experience, mobile apps promote self-directed education. This paper examines two distinct mobile applications designed for language learners, each focusing on enhancing English language proficiency. While one app concentrates solely on speaking skills, the other offers a comprehensive approach to improving various skills beyond spoken English abilities. As education changes, the selection of mobile applications to improve language proficiency is a challenging task for tertiary-level students.

Keywords: Mobile apps, Tertiary-level, Learning abilities, English Speaking skills…etc.,

Introduction

Mobiles can provide various applications to improve the knowledge of the learners. It becomes one of the major parts of every human life as the dependency on information increases every year. Software applications developed for usage in wireless devices including smartphones are termed mobile applications. Mobiles are similar in size and portable in nature. English teaching and learning method based on modern educational technology. Mobile learning is not only online learning but also learning applications that can be used online and offline. Most of the applications are helpful for the learners to promote their self-education.

The most familiar apps used through mobile phones are social media apps, messenger apps, news apps, educational apps, online shopping apps, and so on. Social media apps are vast and varied, but the content is common in each app. It offers various forms of entertainment but some platforms are used for educational purposes. Social media apps provide users with various resources on a wide range of topics including education.

Messenger apps are convenient for mobile users only. These apps allow users to send text messages in real time to individuals or groups. Messenger apps facilitate quick and convenient communications.

News app users can access news updates anytime, anywhere, directly from their smartphones. Online shopping apps are also convenient for users to order any item through mobile phones. It is also one kind of smart business to attract people.

Educational apps are really helpful for learners to be perfect in their field. Many educational apps offer language practice exercises including speaking drills, pronunciation exercises, and conversational simulations allowing learners to practice

Cover Page

DOI: http://ijmer.in.doi./2024/13.4.47

INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY EDUCATIONAL RESEARCH
ISSN:2277-7881; IMPACT FACTOR :8.017(2024); IC VALUE:5.16; ISI VALUE:2.286
UGC Approved (2017), Peer Reviewed and Refereed Journal
Volume:13, Issue:4(3), April: 2024
Scopus Review ID: A2B96D3ACF3FEA2A
Article Received: 2nd April 2024 : Date of Publication:30th April 2024
Publisher: Sucharitha Publication, India
Digital Certificate of Publication: www.ijmer.in/pdf/e-CertificateofPublication-IJMER.pdf
Online Copy of Article Publication Available : www.ijmer.in

MAJOR THEMES IN THE SELECT WORKS OF SUDHA MURTY: A BRIEF STUDY

Kamatam Prathibha[1] and Dr Sridhar M[2]
[1]Research Scholar, Department of English, Anurag University, Ghatkesar, Medchal, India
[2]Associate Professor, Department of English, Anurag University, Ghatkesar, Medchal, India

Abstract

Sudha Murty's writings demonstrate a noticeable change from the other feminine writings. She is one of the pioneer Indian women writers. Her works written in simple words can express views, ideas or thoughts efficiently. Moreover, they reach to a greater extent. The author stands as a role model and inspires young women in the society. As this is a literature study, descriptive and analytical method has been employed to understand the works of the author. This paper elucidates the themes and characters with special reference to women. This paper also aims at how the ethical and moral values are inculcated through some of her works. The budding women try to create their own identity in this male dominated society. Being the Chairperson of an Organization, she manifests women are strong and can make the impossible possible. Her passion to empower girls and women can be witnessed through female characters in her writings. The author elicits the skills and leadership qualities of women even though most of them are illiterate and homemakers in the rural areas, managing their home. Besides fulfilling the needs of the family members, they propose solutions for the unembellished problems in existing circumstances. 'Today's children are tomorrow's citizens.' Children learn many things by observing others and also through stories. They enact elders and unknowingly get along with others and enjoy the life. So, if they are guided in a proper manner, they may develop good habits and moral values like loyalty, humanity, generosity and empathy. The paper enables one to differentiate the difference between human being and being human. One can learn life skills which are essential and also to be practiced a lot in order to build our personality.

Keywords: Sudha Murty, Themes, Women, Education, Identity, Morals

Introduction

Sudha Murty, being the chairperson of Infosys Foundation, is a social worker, an engineering teacher and also a prolific writer. She was born into a Brahmin family on 19th August, 1950 in Shiggaon, Karnataka. Besides her parents Dr. R.H. Kulkarni (surgeon) and Vimala Kulkarni, she was also brought up by her maternal grandparents. She received gold medals for topping the class in B.E (EEE) and M.E (Computer Science). Standing as a topper shows her hard work and commitment in achieving goals. Srinivas Kulkarni, a renowned astronomer and the recipient of Dan David Prize in 2017, is Sudha Murty's brother. Her first notable work "How I Taught My Grandmother to Read", is from her childhood experiences and an affinity for her grandmother. She was the first female engineer at Tata Engineering & Locomotive Company (TELCO), India's largest auto manufacturer. As an engineer, she changed the employment policy of TELCO. She wrote a postcard to the company's chairman complaining of gender bias in recruitment at TELCO. She was then called to an interview, after which she was hired immediately. She started her career in Pune and then moved to Mumbai and Jamshedpur. Later on, she joined Walchand Industries in Pune as a Senior System Analyst. She is a visiting professor at PG Centre, Bangalore University. While as an employee at TELCO, she married N.R. Narayana Murty. She left her job to start Infosys Foundation, a non-profit organization, in 1996 with her husband. She gave Rs.10000/- to start the organization. She is currently the Chairperson and Trustee of the Foundation. Through this foundation, Sudha Murty has built 2,300 houses in the flood-affected areas and 16,000 public toilets in the rural areas, besides several hundred in Bangalore city. Her social work covers healthcare, public hygiene, education, women empowerment, art and culture, poverty alleviation. Her vision for 'a library for each school' has made her build 70,000 libraries so far. The words of J.R.D. Tata still echo in my ears, she says. "*You are only trustee of money and it always changes hands. Give it back to the society that gave you good will*."

111 | Journal of Foundational Research, ISSN: 2395-5635 Volume XXXII, No.1 (II) : January–June : 2024

RISK MANAGEMENT IN FINANCIAL INSTITUTIONS POST-2008 CRISIS

Dr. Padala Sandya Rani Asst. Professor Commerce and Business Management VAAGDEVI DEGREE AND PG COLLEGE Kishanpura, Hanamkonda, Warangal-506001, Telangana State.

Abstract

In the aftermath of the 2008 global financial crisis, financial institutions worldwide faced an unprecedented need to reassess and fortify their risk management practices. This review research paper critically examines the evolution of risk management strategies employed by financial institutions in the post-crisis era. The paper explores the impact of the 2008 crisis on the financial landscape, highlighting the vulnerabilities exposed within the existing risk management frameworks. By synthesizing a wide range of literature, empirical studies, and industry reports, the study provides a comprehensive overview of the lessons learned and the subsequent paradigm shift in risk management within financial institutions. The analysis begins by delineating the key factors that contributed to the 2008 crisis, emphasizing the systemic risks that materialized and the interconnectedness of global financial markets. Subsequently, the paper delves into the regulatory responses implemented post-crisis, such as Basel III and enhanced stress testing, and evaluates their effectiveness in mitigating risks. Furthermore, the study investigates the integration of technological advancements, including artificial intelligence and machine learning, into risk management frameworks, examining their role in enhancing predictive analytics and decision-making processes. The paper also scrutinizes the challenges and opportunities arising from the increased complexity of financial instruments and the interconnected nature of global financial markets. It assesses the efficacy of risk management practices in addressing emerging risks such as cyber threats, climate change, and geopolitical uncertainties. Additionally, the study explores the role of risk culture and organizational governance in shaping the effectiveness of risk management within financial institutions. By providing a nuanced analysis of risk management in financial institutions post-2008, this research paper aims to contribute to the ongoing discourse on the resilience and adaptability of financial systems. Insights gleaned from this review are pertinent for policymakers, financial practitioners, and academics seeking a comprehensive understanding of the evolving landscape of risk management in the wake of significant financial crises.

Keywords:

Risk management, Financial institutions, 2008 financial crisis, Basel III, Systemic risks, Regulatory responses, Stress testing, Technological advancements, Artificial intelligence, Machine learning, Predictive analytics, Financial instruments.

Introduction

The global financial crisis of 2008 has left an enduring imprint on the financial landscape, reshaping the way financial institutions approach risk management. The unprecedented scale of the crisis underscored the vulnerabilities inherent in the financial system, prompting a fundamental reassessment of risk models, regulations, and practices within the industry. In the aftermath of the crisis, financial institutions have faced heightened scrutiny, increased regulatory oversight, and a pressing need to fortify their risk management frameworks.

This review research paper delves into the evolution of risk management in financial institutions in the post-2008 era, exploring the challenges encountered and the opportunities that have arisen in response to the lessons learned from the crisis. The fallout from the financial meltdown prompted a paradigm shift in the understanding of risk, emphasizing the interconnectedness of global financial markets and the necessity for institutions to adopt more comprehensive and dynamic risk management strategies.

The objectives of this paper are threefold. Firstly, it aims to trace the developments in risk management practices, from the pre-crisis period to the present, examining the key drivers that have shaped the evolution of risk management in financial institutions. Secondly, it seeks to analyze the challenges encountered by financial institutions in adapting to the post-crisis landscape, addressing issues such as regulatory compliance, technological advancements, and the changing nature of financial risks. Lastly, the paper explores the emerging opportunities within the realm of risk management, including

Madhya Bharti -Humanities and Social Sciences **UGC Care Group I Journal**
(मध्य भारती) ISSN: 0974-0066 Vol-85, No. 12, January–June: 2024

A STUDY ON FINANCIAL INSTITUTIONS AND WOMEN ENTREPRENEURSHIP IN INDIA

RAJU VEMULA, T. RAJESWAR, Assistant professor of Commerce & Business Management, Vaagdevi Degree & P.G College

INTRODUCTION

Women entrepreneurs are those women who think of a business enterprise, initiate it, organise and combine factors of production, operate the enterprise and undertake risks and handle economic uncertainty involved in running it

The increasing presence of women as entrepreneurs has led to significant business and economic growth in the country. Women-owned business enterprises are playing a prominent role in society by generating employment opportunities in the country, bringing in demographic shifts and inspiring the next generation of women founders.

With a vision to promote the sustainable development of women entrepreneurs for balanced growth in the country, Startup India is committed towards strengthening women entrepreneurship in India through initiatives, schemes, creation of enabling networks and communities and activating partnerships among diverse stakeholders in the startup ecosystem.

A woman entrepreneur is an enterprise owned and controlled by a woman having a minimum financial interest of 51 percent of the capital and giving at least 51 percent of the employment generated in the enterprise to women."

NEED AND IMPORTANCE OF THE STUDY

The importance to study of this paper how the women Entrepreneur enter in to the business. Women entrepreneur in earlier years after independence were confined to entrepreneurship in traditional areas like food, fruits, vegetables, pickles, papads, tailoring, hosiery etc. However, often, Women entrepreneurs have branched out to several new areas like engineering, beauty parlours, jewellery, handicraft, electrical, electronics, chemical and other manufacturing. This shows that entrepreneurial base of women expanded from traditional 3Ps (pickle, powder and papad) to modem 3ES (Engineering, Electrical and Electronics). There are vast numbers of industries under small business sector where women are playing a major role.

REVIEW OF LITERATURE

Swarnalatha and Anuradha (2014) [19], Women in India face numerous problems and limitations to excel in their life in business. They ought to investigate the possibilities of beginning new venture; embrace risks, present advancements, organize organization and control business and give powerful leadership in all parts of business.

Singh et al (2015) [27] in an exploratory investigation on successful women entrepreneurs analyzed the kinds of problems experienced by them to achieve the dimension of success and to recognize the operational problems they are right now facing.18.7 percent women entrepreneurs saw no operational problems, while 81.3 percent demonstrated problems of differed nature, such as overseeing works (23%) marketing (20.5%) recuperation of levy (17.9%), financial (10.2%) and portability (13%), and so on. Just 44 percent felt that women needed to battle more diligently in the entrepreneurial world to succeed. Just 35 percent experienced job conflict, as these women had youngsters somewhere in the range of 10 and 15 years and were not ready to satisfy their job as a mother.

Promilla Kapur (2016) [24] in her book the changing status of the working women in India has concentrated of women office workers and women in irregular professions and occupations. The book talks about the effect of a wedded women's employment on her military and family connections and recognizes the factors influencing her marital amicability. The book is in two sections initially dependent on the discoveries of the exact investigation managing changing attitudes of instructed working women towards marriage and second talking about their status in principle and reality,

Positif Journal Issn No : 0048-4911

Realisation of Task Based Language Teaching in developing English Language Skills

Safia Sultana[1], Dr. K. Venkat Satish[2].
[1]Safia Sultana, Research scholar,
Bharatiya Engineering Science and Technology Innovation University,
Anantapur, Andhra Pradesh - 515231, India.
Lecturer, Vaagdevi Degree College, Hanamkonda.
[2]Dr. K. Venkat Satish, Research guide, Bharatiya Engineering Science and Technology Innovation University, Anantapur, Andhra Pradesh - 515231, India.
Faculty, Department of English, RGUKT - IIT Nuzvid, Andhra Pradesh.

ABSTRACT

Teaching English in India is a challenging task. The world has become a global village. Today market competition is expanding globally. Effective communication skills are now essential for every graduate to succeed in their chosen professions. Annually, the count of graduation colleges is increasing which is leading to increase in job seeing graduates. Despite having sound knowledge in their subject, their lack of communication skills renders them unemployable. To improve language skills of students, teachers play a vital role. This paper provides an overview of Task-Based Language Teaching and its role in enhancing students' English language proficiency for employment prospects.

Key Words: Challenging, Sound knowledge, Task - Based language Teaching.

I INTRODUCTION

It is evident that in India, the number of colleges for graduation is mushrooming but students are unable to procure suitable jobs and enter into the real world as they lack abilities to speak or write well in English. We are finding ourselves in a world system of globalisation and it is becoming very essential for every individual to have effective communication skills

Madhya Bharti -Humanities and Social Sciences **UGC Care Group I Journal**
(मध्य भारती) ISSN: 0974-0066 Vol-85, No. 12, January–June: 2024

A STUDY ON FINANCIAL INSTITUTIONS AND WOMEN ENTREPRENEURSHIP IN INDIA

RAJU VEMULA, T. RAJESWAR, Assistant professor of Commerce & Business Management, Vaagdevi Degree & P.G College

INTRODUCTION

Women entrepreneurs are those women who think of a business enterprise, initiate it, organise and combine factors of production, operate the enterprise and undertake risks and handle economic uncertainty involved in running it

The increasing presence of women as entrepreneurs has led to significant business and economic growth in the country. Women-owned business enterprises are playing a prominent role in society by generating employment opportunities in the country, bringing in demographic shifts and inspiring the next generation of women founders.

With a vision to promote the sustainable development of women entrepreneurs for balanced growth in the country, Startup India is committed towards strengthening women entrepreneurship in India through initiatives, schemes, creation of enabling networks and communities and activating partnerships among diverse stakeholders in the startup ecosystem.

A woman entrepreneur is an enterprise owned and controlled by a woman having a minimum financial interest of 51 percent of the capital and giving at least 51 percent of the employment generated in the enterprise to women."

NEED AND IMPORTANCE OF THE STUDY

The importance to study of this paper how the women Entrepreneur enter in to the business. Women entrepreneur in earlier years after independence were confined to entrepreneurship in traditional areas like food, fruits, vegetables, pickles, papads, tailoring, hosiery etc. However, often, Women entrepreneurs have branched out to several new areas like engineering, beauty parlours, jewellery, handicraft, electrical, electronics, chemical and other manufacturing. This shows that entrepreneurial base of women expanded from traditional 3Ps (pickle, powder and papad) to modem 3ES (Engineering, Electrical and Electronics). There are vast numbers of industries under small business sector where women are playing a major role.

REVIEW OF LITERATURE

Swarnalatha and Anuradha (2014) [19], Women in India face numerous problems and limitations to excel in their life in business. They ought to investigate the possibilities of beginning new venture; embrace risks, present advancements, organize organization and control business and give powerful leadership in all parts of business.

Singh et al (2015) [27] in an exploratory investigation on successful women entrepreneurs analyzed the kinds of problems experienced by them to achieve the dimension of success and to recognize the operational problems they are right now facing.18.7 percent women entrepreneurs saw no operational problems, while 81.3 percent demonstrated problems of differed nature, such as overseeing works (23%) marketing (20.5%) recuperation of levy (17.9%), financial (10.2%) and portability (13%), and so on. Just 44 percent felt that women needed to battle more diligently in the entrepreneurial world to succeed. Just 35 percent experienced job conflict, as these women had youngsters somewhere in the range of 10 and 15 years and were not ready to satisfy their job as a mother.

Promilla Kapur (2016) [24] in her book the changing status of the working women in India has concentrated of women office workers and women in irregular professions and occupations. The book talks about the effect of a wedded women's employment on her military and family connections and recognizes the factors influencing her marital amicability. The book is in two sections initially dependent on the discoveries of the exact investigation managing changing attitudes of instructed working women towards marriage and second talking about their status in principle and reality,

Cover Page

DOI: http://ijmer.in.doi./2024/13.4.66

INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY EDUCATIONAL RESEARCH
ISSN:2277-7881; IMPACT FACTOR :8.017(2024); IC VALUE:5.16; ISI VALUE:2.286
UGC Approved (2017), Peer Reviewed and Refereed Journal
Volume:13, Issue:4(4), April: 2024
Scopus Review ID: A2B96D3ACF3FEA2A
Article Received: 2nd April 2024 : Date of Publication:30th April 2024
Publisher: Sucharitha Publication, India
Digital Certificate of Publication: www.ijmer.in/pdf/e-CertificateofPublication-IJMER.pdf
Online Copy of Article Publication Available : www.ijmer.in

QUADRATIC RANK TRANSMUTED HALF LOGISTIC PARETO DISTRIBUTION: PROPERTIES AND APPLICATION

[1]**K Balaraju**, HOD of Statistics, Vaagdevi Degree and PG College (autonomous), Kishanpura, Hanamkonda
[2]**Dr. M. Vijaya Lakshmi**, Director, PME Cell,Dr.YSR Horticultural University
[3]**Dr. B. Jhansi Rani,** Principal,TSWRDCW- Khammam
[4]**Dr. G.V. S. R. Anjaneyulu** (Prof.Rtd.), Acharya Nagarjuna University

Abstract:

We introduce new continuous non normal distribution called the Quadratic Rank Transmuted Half Logistic Pareto Distribution (QRTHLPD). We derive some Mathematical properties including explicit expressions such as the Survival and Hazard Rate Function, Quantile, Median, Moments, Generating functions.

Keywords: Quadratic rank Transmuted Half Logistic Pareto Distribution (QRTHLPD), Moments, Generating function.

1.1. Introduction:

Probability models are frequently used for the prediction of lifetime products in various fields of applied models and also used to explain the failure rate and survival rate of a certain product. Therefore, many generalised family of distributions formed from last few decades. Nadarajah *et al* (2013) introduced a family of lifetime models by adding a parameter to the Marshall-Olkin family of distributions, Transmuted Kumaraswamy-G Family of Distributions for Modelling Reliability Data. In literature, there are several generalizations of the Pareto distribution. Abdul-Moniem (2012) developed the Exponentiated Pareto distribution, Al-Awadhi and Ghitany (2001) introduced the discrete Poisson–Pareto distribution by using the Pareto distribution as a mixing distribution for the Poisson Parameter and Cordeiro *et al* (2015) investigated the Gamma-Pareto distribution and studied its Properties. The HLL distribution can also be applied in Medical and Biological sciences and Engineering as the Half Logistic and Pareto distribution and it can be useful as an alternative to other well-known densities in lifetime applications. It is interesting to note that the HLL distribution is a special case of Marshall-Olkin–Pareto distribution introduced by Ghitany *et al* (2007), used in the application of Biological and Engineering sciences there are situations of non-monotone failure rates available to model such data. The Generalized Transmuted-G (GT-G) distribution was introduced by Nofal *et al* (2015). This generalization is adapted to the half logistic distribution and the resulting model is considered in this study. A half logistic model

Education and Society (शिक्षण आणि समाज) ISSN: 2278-6864
(UGC Care Journal) Vol-46, Issue-4, No.09, July-September: 2023

IRON DEFICIENCY AND HEREDITARY ANAEMIA IN ETHNIC TRIBES OF MULUGU DISTRICT, TELANGANA: A CASE STUDY

Sateesh Suthari, Department of Botany, Vaagdevi Degree & PG College, Hanumakonda-506001, Telangana suthari.botany@gmail.com
Omkar Kanneboyena, Department of Botany, Kakatiya Government College, Hanumakonda-506001, Telangana
Boddu Rama Devi, Kakatiya Institute of Technology & Science, Warangal-506015, Telangana
Chittimalla Shyam Prasad Vanavasi Kalyana Parishad, Warangal-506002, Telangana Unit
Lakavath Surya Narayana University College of Pharmaceutical Sciences, Kakatiya University, Warangal-506009, Telangana

Abstract
Iron deficiency and hereditary anaemia are major health issues in India especially in remote areas. The present study was focused on the ethnic tribes of Mulugu district, Telangana to know the health condition of tribal women particularly in Iron (Fe) deficiency and hereditary anaemia during 2021-2022and concentrated to estimate the prevalence of iron deficiency and hereditary anaemia among tribal women in general and reproductive age group (aged 20 to 45 years) in particular. After critical and clinical studies for Fe deficiency, the women were supplemented with fortified Iron for a trial and that was shown a great improvement in the Fe content in the blood of the concerned individuals. The present study suggests and warns the government about the ill health of rural people of Mulugu district and it is highly essential to conduct health camps in every village of remote areas of the district and prepare the complete health profile information from the tribal people of the study area.

Introduction

Poor eating habits play a vital role to enhance the iron deficiency anaemia which is an important indicator of poor health status and economic conditions of the people. Children and adolescent are at increased risk of developing iron deficiency anaemia especially highly in reproductive aged (20-45 years) tribal women. India continues to be one of the nations with very high prevalence and NFHS (National Family Health Survey) reveals the prevalence of anaemia to be around 55%. The deficiency of iron affecting an estimated 2.5 billion people in the World (Camaschella, 2019) though it is one of the most abundant element in the Earth's crust after Oxygen (O_2), Silicon (Si) and Aluminium (Al) (Frey and Reed, 2012; Lynch et al., 2018). Generally, Fe involves in various metabolic activities such as cellular proliferation, synthesis of DNA and neurotransmitter, energy production and oxygen transport and utilization (Lynch et al., 2018; Dev and Babitt, 2017) and excess availability is also lead to adverse effects on the health in different aspects (Gujja et al., 2010; Gan et al., 2012; Montonen et al., 2012; Simcox and McClain, 2013; Torti and Torti, 2013; Basuli et al., 2014; Daugherty and Raz, 2015; Ward et al., 2015; Thévenod, 2018). Low haemoglobin (Hb) was more common in economically and socially poor women in general and tribal women in specific (Nelson et al., 1994; Suthari et al., 2018, 2021). The present study was carried out during 2021-2022 and data collected from the tribal women of Brahmanapalli and Domeda of Mulugu District, Telangana and the survey provides baseline information of the tribal women of reproductive age group.

Material and Methods

The present field explorations were taken up as pilot study during May 2021 to January 2022 in Brahmanapally and Domeda villages of Mulugu district, Telangana and collected data from the tribal women (Figure 1, 2 and 3). Based on preliminary data collection, conducted several medical camps in association with an NGO, namely, Vanavasi Kalyana Parishad (VKP), Telangana Unit (Figure 4 and 5). After thorough blood tests by the qualified pathologist during camps came to know that reproductive age group tribal women were severely suffering from Fe deficiency and they were

Jour Pl Sci Res **39 (2)** 153–166 2023

Natural Gum and Resin Bearing Plant Taxa in Telangana, India: A Qualitative Method of Data Collection

Sateesh Suthari[1], Omkar Kanneboyena[2], E. Kiran[3], M. Tarakeswara Naidu[4], Avire Ramana Rao[2] and Sreeramulu Nallella[5]

[1]*Centre for Floristic & Ethnobotanical Studies, Department of Botany, Vaagdevi Degree & PG College, Hanamkonda, Telangana, India.*

[2]*Department of Botany, Kakatiya Government College, Hanamkonda, Telangana, India.*

[3]*Department of Botany, Telangana University, Nizamabad, Telangana, India.*

[4]*Department of Botany, Andhra University, Visakhapatnam, Andhra Pradesh, India.*

[5]*Department of Botany, Kakatiya Mahila Degree & PG College, Hanamkonda, Telangana, India.*

**Corresponding author email: suthari.botany@gmail.com*

Natural resins, gums (NRGs) are the most extensively used and traded non-timber forest products (NTFPs) other than directly consumed products. The present field-based study reports the natural gum, resin and gum-resin yielding plants and the specific parts from which the products extract from plants by local people in Telangana, India. The result of the present report reveals ninety plant taxa belong to 63 genera and 23 families that predominated by Fabaceae with 36 plant taxa, followed by Malvaceae (12 spp.), Combretaceae, Anacardiaceae and Rubiaceae (5 spp. each), Arecaceae (Palmae) (4 spp.), and about thirteen families with single species each. Telangana is one of the most important contributors and collectors of NRGs from *Firmiana simplex, Anogeissus latifolia, Cochlospermum religiosum* and *Boswellia serrata* in India to generate maximum commerce. The present study outcome can be used by policy makers, scientific community, forest authorities and local people for bio-discovery of plant-based gums and resins sustainably.

Keywords: Natural gums, resins, gum-resins, qualitative approach, non-timber forest products, eco-friendly, Telangana.

INTRODUCTION

The people who live in all around the forest depend on nature and natural resources. For them, Non-timber Forest Products (NTFPs) are culturally, socially and economically important. NTFPs may in the form of roots, tubers/rhizomes, leaves, flowers, fruits, seeds, gums, resins, herbs, medicinal plants, bamboos, etc. In India, most of the people are living in the villages proximate to the forests and depend on forests for their day-to-day life. In India, ca. 15 to 18 thousand plant taxa were reported, of which 3000 species yield NTFPs (Murthy et al., 2005). Even though, only 126 NTFP species that have been commercialized in India (Yadav et al., 2019) and about 50 million people depend on NTFPs for their subsistence (Bhat, 2012) and ca. 17% of landless people depend on NTFPs collection and provide 50% income for about 25% of labour force (Rasul et al., 2008; Omkar et al., 2022). They used to collect gums and resins along with other NTFPs from the forests. India is one of the largest producers of natural resins, gums and gum-resins (NRGs) in the world among China, Indonesia, Russia and Brazil harvesting about 2.8 lakh tons (Pal, 2013). Of these, about 80% are gums, 19% are resins and left over fraction is of gum-resins. These produce are biodegradable, environmental friendly and non-toxic. NRGs are low quantity and have high value in commerce. These are wonderful source of commerce to local poor people and contribute significantly to poverty alleviation (Gachathi & Eriksen, 2011). Share of NRGs in India's total export 18494.34 billion rupees and 19565.15 billion rupees in 2016-2017 and

DOI:- https://doi.org/10.32381/JPSR.2023.39.02.16

ISSN 1070-4280, Russian Journal of Organic Chemistry, 2023, Vol. 59, No. 11, pp. 1940–1951. © Pleiades Publishing, Ltd., 2023.

Synthesis and in Vitro Anticancer Activity of Triazole Derivatives of Crassalactone B

A. Srinivas[a],*, G. Chandrakala[b], S. Ishrath Farheen[b], K. Sindhura[b], and Safia Sulthana[c]

[a] *Department of Chemistry, Vaagdevi Degree & PG College, Karimnagar-Warangal Rd, Ramnagar, 506001 India*
[b] *Department of Microbiology, Vaagdevi Degree & PG College, Karimnagar-Warangal Rd, Ramnagar, 506001 India*
[c] *Department of Humanities, Vaagdevi Degree & PG College, Karimnagar-Warangal Rd, Ramnagar, 506001 India*
**e-mail: avula.sathwikreddy@gmail.com*

Received January 24, 2023; revised August 3, 2023; accepted August 3, 2023

Abstract—A series of triazole derivatives of crassalactone B were synthesized from the known monosaccharide D-glucose by a multistage procedure. The anticancer activity of the synthesized compounds against various cancer cell lines was evaluated, and most of the compounds exhibited moderate to good activity. Based on the IC_{50} values, (2*R*,3*R*,3a*S*,6a*R*)-2-({(*S*)-[1-(4-chlorophenyl)-1*H*-1,2,3-triazol-4-yl]methoxy}(phenyl)methyl]})-5-oxohexahydrofuro[3,2-*b*]furan-3-yl cinnamate was chosen for further assays to ascertain its effect on DU145 prostate cancer cells and proved to be as potent anticancer agent as the standard drug doxorubicin.

Keywords: D-glucose,crassalactone B isomer, clickreaction, anticancer activity

DOI: 10.1134/S107042802311012X

INTRODUCTION

Nature is an inexhaustible source of natural compounds with interesting biological activities. In general, natural products are an important source of new compounds with a variety of structural arrangements and singular properties. Styryl lactones represent a new class of natural and synthetic compounds with potentialbroad-range cytotoxicity and confirmed antitumor, antifungal, and antibiotic properties [1]. Up to now, more than twenty styryl lactones have been isolated from plants and fungi [2, 3], mostly from *Goniothalamus* (Annonaceae) [4, 5], a genus widespread in Malaysia. A number of these species were used by Malays as traditional medicine to treat various ailments and had been claimed to be related toant fertility effects, such as provoking abortion, post-natal diseases for undefined reasons, and low birth rates. Styryl lactones exhibit interesting biological properties, including antiproliferative activity against cancer cells. In general, the cytotoxicity of styryl lactones targets specifically cancer cells. A large body of evidence suggests that the proliferative activity of styryl lactones in ants is associated with the induction of apoptosis in the target cells. The mechanism of the anticancer effect of styryl lactones involves nonsteroid, receptor-mediated anti-proliferative effects, disruption of the mitochondrial transmembrane potential [6], and apoptosis induction [7]. Thoms [8] investigated the cytotoxicity of styryl lactones against a panel of three hepatocyte cell lines, specifically HepG2, drug resistant HepG2 (HepG2-R), and primary cultured normal mice hepatocyte, with the aim to identify candidates for potential anticancer drugs, with a low toxicity for normal cells and a high toxicity for cancer or drug-resistant cancer cells. The test compounds showed pronounced cytotoxicity against both HepG2 and HepG2-R cell lines. Morphological observation and cell cycle analysis were employed to gain insight into the mechanisms of Cytotoxicity of the test compounds. A conclusion was thus drawn that the investigated compounds are biologically active and deserve future development for potential human health applications.

1,2,3-Triazoles are among the most important classes of heterocyclic organic compounds, which are reported to be present in numerous medicines used in diverse therapeutic areas [9–11]. The 1,2,3-triazole motif is associated with such pharmacological activities as antibacterial, antifungal, hypoglycemic, antihypertensive, and analgesic [12]. Polysubstituted five-membered aza heterocyclic agents rank among the most potent glycosidase inhibitors [13]. Furthermore,

Education and Society (शिक्षण आणि समाज) ISSN: 2278-6864
(UGC Care Journal) Vol-46, Issue-4, No.10, July-September: 2023

SAVING AND INVESTMENT BEHAVIOR OF A SALARIED EMPLOYEES DURING COVID-19 PANDEMIC

M. Venugopal, Assistant Professor, Vaagdevi Degree & PG College, Hanamkonda

Abstract:
The current study, which had 51 respondents, focused primarily on the saving and investing habits of paid workers during the COVID-19 pandemic. At the end of the study, we may infer from the gender chart that male employees are more numerous than female employees, that they have tiny, nuclear families that depend on their wage earners, and that roughly 92.16% of them fit into the 0–4 family size group. 51 participants participated in the current study, and 86.27% of those were willing to save money for future investments. The majority of these replies' (74.51%) yearly family expenses are based on salaries between $30,000 and $50,000 as well as the annual rate of return they received from investing their money in other products like real estate, bank deposits, mutual funds, etc.

Introduction:
The situation of the Covid- 19 epidemic had a significant impact on fitness, the economy, and the markets. Government or the Companies are facing a lot of uncertainty as a result of the Covid- 19 Pandemic. Government or companies must make numerous modifications to their workplaces. At the same time, employees are dealing with feelings of insecurity about their personal well-being. They are considered extrude agents provide an important role because they are well-connected with employees and management. This articles study about the about the Economic variable such has the income; saving; and investment which are included in development of the individual.
Income means an amount of received by a person, group or company for their work or through investment on the regular basis or the amount of money or its equivalent received during a period of time in exchange for the Labour services; sale of property.
saving is the amount of sacrificing the current consumption in order to increase the living standard and fulfilling the daily requirements in future. The saving can be done through different ways such has bank deposit or investments. saving plays an important role in making of the household and the national economy and they also provide financial protection to meet the requirements or emergency in future. It was a necessary for having best saving plan because it will help in meting financial goals like secure future; children education; meetings the demands of the family etc.
Today investment also become an economic activity. Investment means the sacrifice of certain present value for possible uncertain values or future value. We can also say that investment is efficiency use of funds with the expectations of receiving a good return or benefit in the future and the process of investment is mainly done with an objective of wanting a home; creating a regular income after retirement and possessing money for the child's education. The investment pattern and savings habits of employee's sector is determined by their expectation from the various preferred avenues and they may be varying due to various consideration i.e., safety; liquidity and marketability, returns, tax benefits; risk involved; etc. The investment of the also depends upon the awareness, investment opportunities; level of knowledge; and the opportunities that are evaluated and selected and the investment decision also require s to have basic knowledge about the subjects like finance; business law; taxation; accountancy etc. they are different ways of investment opportunity are available to the employees and they are has follow investment in the:

- insurance policies
- Mutual fund
- Post office saving
- Shares/bonds
- Fixed deposit in banks

ISSN 1070-4280, Russian Journal of Organic Chemistry, 2023, Vol. 59, No. 11, pp. 1940–1951. © Pleiades Publishing, Ltd., 2023.

Synthesis and in Vitro Anticancer Activity of Triazole Derivatives of Crassalactone B

A. Srinivas[a],*, G. Chandrakala[b], S. Ishrath Farheen[b], K. Sindhura[b], and Safia Sulthana[c]

[a] *Department of Chemistry, Vaagdevi Degree & PG College, Karimnagar-Warangal Rd, Ramnagar, 506001 India*
[b] *Department of Microbiology, Vaagdevi Degree & PG College, Karimnagar-Warangal Rd, Ramnagar, 506001 India*
[c] *Department of Humanities, Vaagdevi Degree & PG College, Karimnagar-Warangal Rd, Ramnagar, 506001 India*
**e-mail: avula.sathwikreddy@gmail.com*

Received January 24, 2023; revised August 3, 2023; accepted August 3, 2023

Abstract—A series of triazole derivatives of crassalactone B were synthesized from the known monosaccharide D-glucose by a multistage procedure. The anticancer activity of the synthesized compounds against various cancer cell lines was evaluated, and most of the compounds exhibited moderate to good activity. Based on the IC_{50} values, (2*R*,3*R*,3a*S*,6a*R*)-2-({(*S*)-[1-(4-chlorophenyl)-1*H*-1,2,3-triazol-4-yl]methoxy}(phenyl)methyl]})-5-oxohexahydrofuro[3,2-*b*]furan-3-yl cinnamate was chosen for further assays to ascertain its effect on DU145 prostate cancer cells and proved to be as potent anticancer agent as the standard drug doxorubicin.

Keywords: D-glucose,crassalactone B isomer, clickreaction, anticancer activity

DOI: 10.1134/S107042802311012X

INTRODUCTION

Nature is an inexhaustible source of natural compounds with interesting biological activities. In general, natural products are an important source of new compounds with a variety of structural arrangements and singular properties. Styryl lactones represent a new class of natural and synthetic compounds with potentialbroad-range cytotoxicity and confirmed antitumor, antifungal, and antibiotic properties [1]. Up to now, more than twenty styryl lactones have been isolated from plants and fungi [2, 3], mostly from *Goniothalamus* (Annonaceae) [4, 5], a genus widespread in Malaysia. A number of these species were used by Malays as traditional medicine to treat various ailments and had been claimed to be related toant fertility effects, such as provoking abortion, post-natal diseases for undefined reasons, and low birth rates. Styryl lactones exhibit interesting biological properties, including antiproliferative activity against cancer cells. In general, the cytotoxicity of styryl lactones targets specifically cancer cells. A large body of evidence suggests that the proliferative activity of styryl lactones in ants is associated with the induction of apoptosis in the target cells. The mechanism of the anticancer effect of styryl lactones involves nonsteroid, receptor-mediated anti-proliferative effects, disruption of the mitochondrial transmembrane potential [6], and apoptosis induction [7]. Thoms [8] investigated the cytotoxicity of styryl lactones against a panel of three hepatocyte cell lines, specifically HepG2, drug resistant HepG2 (HepG2-R), and primary cultured normal mice hepatocyte, with the aim to identify candidates for potential anticancer drugs, with a low toxicity for normal cells and a high toxicity for cancer or drug-resistant cancer cells. The test compounds showed pronounced cytotoxicity against both HepG2 and HepG2-R cell lines. Morphological observation and cell cycle analysis were employed to gain insight into the mechanisms of Cytotoxicity of the test compounds. A conclusion was thus drawn that the investigated compounds are biologically active and deserve future development for potential human health applications.

1,2,3-Triazoles are among the most important classes of heterocyclic organic compounds, which are reported to be present in numerous medicines used in diverse therapeutic areas [9–11]. The 1,2,3-triazole motif is associated with such pharmacological activities as antibacterial, antifungal, hypoglycemic, antihypertensive, and analgesic [12]. Polysubstituted five-membered aza heterocyclic agents rank among the most potent glycosidase inhibitors [13]. Furthermore,

Solid State Phenomena
ISSN: 1662-9779, Vol. 350, pp 75-82
doi:10.4028/p-Mns91S

Submitted: 2023-04-03
Revised: 2023-06-18
Accepted: 2023-06-20
Online: 2023-10-06

Effect of Annealing Temperature Variation on Al-Doped Nickel Oxide Thin-Film Synthesized by Dip-Coating Technique

S. Anusha[1,a*], M. Narasimha Murthy[2,b] and C.J. Sreelatha[3,c*]

[1,2,.3]Materials research laboratory, Department of Physics, Kakatiya University, Warangal-506009, India

[a]sdl.anusha.26@gmail.com, [b]moramurthy@gmail.com, [c]sree_phy_ku@yahoo.co.in
***Correspondence:** sree_phy_ku@yahoo.co.in; Tel: +919490456764;

Keywords: NiO, Dip coating, Al-doped, Morphological, Transmittance

Abstract: Aluminum-doped NiO thin films were generated on glass substrates by dip coating at different temperatures (400 to 500 °C) using 0.05 M of the precursor nickel acetate. X-ray diffraction (XRD) and scanning electron microscopy (SEM) were used to investigate the structural and morphological aspects of the films. UV-visible spectroscopy was utilized to assess the optical properties of the films, and the energy band gap was confirmed to be 3.42,3.6, and 3.8 eV for as-prepared and thin films, respectively. Photoluminescence (PL) measurements were used to investigate electronic faults. The XRD lines of the transferred Al-doped NiO were strengthened due to the fact the film's temperature content increased due to the improved crystalline structure. This research article focuses on the optical properties and morphologies of thin films which have been deposited. Crystalline proportions of the thin films that were deposited were determined using the Debye-Scherer formula. The outcomes were computed after taking measurements of absorbance (A), transmittance and Band Gap.

1. Introduction

NiO is a wide spread non-toxic metallic oxide material oxide material with anti-ferromagnetic properties that is of the p-type, semi-transparent, and comprehensive variety. The device's stability, durability, or toughness depends on the thickness of the thin film coating. The device's stability and how very well it functions are both impacted by a decrease in film quality. A high-quality covering requires adhesion between the slim film that was deposited and it is base. Because of this kind, thin film adhesion continues to be crucial .Two similar or dissimilar material areas are adhered together by interfacial forces acting as interlocking forces at their factors of contact [3-6]. The functions within a substrate are noticeably influenced by surface temperature, fresh air partial pressure, and sputtering ability. By spreading a solution on a substrate and enabling volatile compounds (solutions) to evaporate. Liquid deposition methods are extremely adaptable to create homogenous coatings. In the electronics and optical sectors, for example, inorganic layers made from sol-gel solutions are frequently prepared using comparable processes like dip-coating or spin-coating. Each method has benefits and disadvantages. As an illustration, dip-coating , in which the substrate is dipped into the solution repeatedly and drawn out at an even rate, allows excellent control of the thickness and generates no waste[7] .This paper investigates the dip coating technique used to create NiO films to ascertain their chemical type composition. EDAX spectroscopy has revealed the film Ni+2 oxidation process state, which relates to the creation of NiO in the films. Oxygen richness has an impact on morphology. The data from the band diagram is required for adding NiO to various optoelectronic devices. [8-10].We discovered some fascinating phenomena, like the shrinkage of band gaps. It is thought that the ni3 + ion will quickly be replaced. To account for the measured band gap shrinkage, we also calculated the interaction energy between doping impurities and the correlation [11].

ISSN 1070-4280, Russian Journal of Organic Chemistry, 2023, Vol. 59, No. 11, pp. 1940–1951. © Pleiades Publishing, Ltd., 2023.

Synthesis and in Vitro Anticancer Activity of Triazole Derivatives of Crassalactone B

A. Srinivas[a,*], G. Chandrakala[b], S. Ishrath Farheen[b], K. Sindhura[b], and Safia Sulthana[c]

[a] *Department of Chemistry, Vaagdevi Degree & PG College, Karimnagar-Warangal Rd, Ramnagar, 506001 India*
[b] *Department of Microbiology, Vaagdevi Degree & PG College, Karimnagar-Warangal Rd, Ramnagar, 506001 India*
[c] *Department of Humanities, Vaagdevi Degree & PG College, Karimnagar-Warangal Rd, Ramnagar, 506001 India*
**e-mail: avula.sathwikreddy@gmail.com*

Received January 24, 2023; revised August 3, 2023; accepted August 3, 2023

Abstract—A series of triazole derivatives of crassalactone B were synthesized from the known monosaccharide D-glucose by a multistage procedure. The anticancer activity of the synthesized compounds against various cancer cell lines was evaluated, and most of the compounds exhibited moderate to good activity. Based on the IC_{50} values, (2*R*,3*R*,3a*S*,6a*R*)-2-({(*S*)-[1-(4-chlorophenyl)-1*H*-1,2,3-triazol-4-yl]methoxy}(phenyl)methyl]})-5-oxohexahydrofuro[3,2-*b*]furan-3-yl cinnamate was chosen for further assays to ascertain its effect on DU145 prostate cancer cells and proved to be as potent anticancer agent as the standard drug doxorubicin.

Keywords: D-glucose,crassalactone B isomer, clickreaction, anticancer activity

DOI: 10.1134/S107042802311012X

INTRODUCTION

Nature is an inexhaustible source of natural compounds with interesting biological activities. In general, natural products are an important source of new compounds with a variety of structural arrangements and singular properties. Styryl lactones represent a new class of natural and synthetic compounds with potentialbroad-range cytotoxicity and confirmed antitumor, antifungal, and antibiotic properties [1]. Up to now, more than twenty styryl lactones have been isolated from plants and fungi [2, 3], mostly from *Goniothalamus* (Annonaceae) [4, 5], a genus widespread in Malaysia. A number of these species were used by Malays as traditional medicine to treat various ailments and had been claimed to be related toant fertility effects, such as provoking abortion, postnatal diseases for undefined reasons, and low birth rates. Styryl lactones exhibit interesting biological properties, including antiproliferative activity against cancer cells. In general, the cytotoxicity of styryl lactones targets specifically cancer cells. A large body of evidence suggests that the proliferative activity of styryl lactones in ants is associated with the induction of apoptosis in the target cells. The mechanism of the anticancer effect of styryl lactones involves nonsteroid, receptor-mediated anti-proliferative effects, disruption of the mitochondrial transmembrane potential [6], and apoptosis induction [7]. Thoms [8] investigated the cytotoxicity of styryl lactones against a panel of three hepatocyte cell lines, specifically HepG2, drug resistant HepG2 (HepG2-R), and primary cultured normal mice hepatocyte, with the aim to identify candidates for potential anticancer drugs, with a low toxicity for normal cells and a high toxicity for cancer or drug-resistant cancer cells. The test compounds showed pronounced cytotoxicity against both HepG2 and HepG2-R cell lines. Morphological observation and cell cycle analysis were employed to gain insight into the mechanisms of Cytotoxicity of the test compounds. A conclusion was thus drawn that the investigated compounds are biologically active and deserve future development for potential human health applications.

1,2,3-Triazoles are among the most important classes of heterocyclic organic compounds, which are reported to be present in numerous medicines used in diverse therapeutic areas [9–11]. The 1,2,3-triazole motif is associated with such pharmacological activities as antibacterial, antifungal, hypoglycemic, antihypertensive, and analgesic [12]. Polysubstituted five-membered aza heterocyclic agents rank among the most potent glycosidase inhibitors [13]. Furthermore,

RJC

RASĀYAN *J. Chem.*
Vol. 16 | No. 4 |2256-2260| October - December | 2023
ISSN: 0974-1496 | e-ISSN: 0976-0083 | CODEN: RJCABP
http://www.rasayanjournal.com
http://www.rasayanjournal.co.in

SOL-GEL SYNTHESIZED COPPER OXIDE (CuO) NANOPARTICLES AND THEIR PHOTOCATALYSTS AND ANTIBACTERIAL APPLICATIONS.

M. Gopi Krishna[1,✉], M. Narasimha Murthy[1], C. J. Sreelatha[2], K. Rajani Kumar Reddy[3], and G. Chandrakala[4]

[1]Department of Physics, Vaagdevi Degree and P.G. College, Warangal, Telangana, India
[2]Department of Physics, Kakatiya University, Warangal, Telangana, India
[3]Department of Chemistry. Vasavi College of Engineering, Hyderabad, Telangana, India
[4]Department of Microbiology, Vaagdevi Degree and P.G. College, Warangal, Telangana, India
[✉]Corresponding Author: gopikrishnaphy17@gmail.com

ABSTRACT

This study aims to report the synthesis of copper oxide nanoparticles using the Sol-Gel autocombustion technique. According to the diffraction data, a monoclinic crystal structural phase had been formed due to the crystallization process. Electronic microscopic images prove that the nanoparticles are growing in a spherical structure. Using Methylene blue as a pollutant, a study was conducted to determine whether the prepared copper oxide nanoparticles have a photocatalytic activity. A photocatalytic rate constant of 0.011 min^{-1} was obtained for the sample, indicating that the synthesized copper oxide nanoparticles have good photocatalytic activity. During the antimicrobial study, the CuO nanoparticles were found to have significant antimicrobial activity against the selected microorganisms, *S.aureus* and *E.coli*. Furthermore, *E. coli* bacteria have shown the highest sensitivity to the synthesized CuO nanoparticles.

Keywords: Sol-Gel Auto Combustion, Nanoparticles, XRD, SEM, Photodegradation, Antibacterial Activity.

RASĀYAN*J. Chem.*, Vol. 16, No.4, 2023

INTRODUCTION

The majority of people worldwide are presently suffering from health issues as a result of drinking untreated, contaminated water.[1] In this regard, developing drugs manufactured at the nanoscale has proven to be the most effective approach in treating many microbes. The surface area of nanomaterials is exceedingly large in terms of their volume. Due to the increased nanoparticles surface area, microbes can interact with the surface more readily, thus enhancing the antimicrobial properties.[2]As a result of nanomaterials' increased surface-to-volume ratio, they have a large number of active sites that are capable of trapping pollutants.[3]Upon photon exposure, these nanomaterials produce electron-hole pairs that break down the pollutant molecules. Metal oxide nanoparticles are one of the most versatile nanomaterials available. In addition to metal oxide nanomaterials, copper oxide (CuO) is significant. This compound has several uses, including antibacterial, antiviral, antiparasitic, antipyretic, and antiparasitic qualities and antioxidant capabilities.[4]The submitted work used Sol-Gel auto combustion synthesis to make CuO nanoparticles easily and affordably. The Sol-Gel auto-combination process extensively forms extremely porous catalytically active nanomaterials. A good diffusion method and optical absorption measurements were performed to test the prepared monoclinic CuO nanoparticles' antibacterial properties and photocatalytic activity. According to the findings, it was confirmed that the CuO nanoparticles possess significant antibacterial activity against *E. coli* and *S.aureus* microbes, as well as being more effective in reducing MB solution colour.

Synthesis Procedure

The Sol-Gel auto-combustion method was used to create CuO nanoparticles. A 0.2M concentrated copper solution was prepared by adding 4.863grams of copper nitrate salt(starting material) to 100 ml of methanol(solvent). Then, citric acid was added as organic fuel to the obtained copper solution. The

http://doi.org/10.31788/RJC.2023.1618663

ISSN 1070-4280, Russian Journal of Organic Chemistry, 2023, Vol. 59, No. 11, pp. 1940–1951. © Pleiades Publishing, Ltd., 2023.

Synthesis and in Vitro Anticancer Activity of Triazole Derivatives of Crassalactone B

A. Srinivas[a],*, G. Chandrakala[b], S. Ishrath Farheen[b], K. Sindhura[b], and Safia Sulthana[c]

[a] *Department of Chemistry, Vaagdevi Degree & PG College, Karimnagar-Warangal Rd, Ramnagar, 506001 India*
[b] *Department of Microbiology, Vaagdevi Degree & PG College, Karimnagar-Warangal Rd, Ramnagar, 506001 India*
[c] *Department of Humanities, Vaagdevi Degree & PG College, Karimnagar-Warangal Rd, Ramnagar, 506001 India*
**e-mail: avula.sathwikreddy@gmail.com*

Received January 24, 2023; revised August 3, 2023; accepted August 3, 2023

Abstract—A series of triazole derivatives of crassalactone B were synthesized from the known monosaccharide D-glucose by a multistage procedure. The anticancer activity of the synthesized compounds against various cancer cell lines was evaluated, and most of the compounds exhibited moderate to good activity. Based on the IC_{50} values, (2*R*,3*R*,3a*S*,6a*R*)-2-({(*S*)-[1-(4-chlorophenyl)-1*H*-1,2,3-triazol-4-yl]methoxy}(phenyl)methyl]})-5-oxohexahydrofuro[3,2-*b*]furan-3-yl cinnamate was chosen for further assays to ascertain its effect on DU145 prostate cancer cells and proved to be as potent anticancer agent as the standard drug doxorubicin.

Keywords: D-glucose,crassalactone B isomer, clickreaction, anticancer activity

DOI: 10.1134/S107042802311012X

INTRODUCTION

Nature is an inexhaustible source of natural compounds with interesting biological activities. In general, natural products are an important source of new compounds with a variety of structural arrangements and singular properties. Styryl lactones represent a new class of natural and synthetic compounds with potentialbroad-range cytotoxicity and confirmed antitumor, antifungal, and antibiotic properties [1]. Up to now, more than twenty styryl lactones have been isolated from plants and fungi [2, 3], mostly from *Goniothalamus* (Annonaceae) [4, 5], a genus widespread in Malaysia. A number of these species were used by Malays as traditional medicine to treat various ailments and had been claimed to be related toant fertility effects, such as provoking abortion, postnatal diseases for undefined reasons, and low birth rates. Styryl lactones exhibit interesting biological properties, including antiproliferative activity against cancer cells. In general, the cytotoxicity of styryl lactones targets specifically cancer cells. A large body of evidence suggests that the proliferative activity of styryl lactones in ants is associated with the induction of apoptosis in the target cells. The mechanism of the anticancer effect of styryl lactones involves nonsteroid, receptor-mediated anti-proliferative effects, disruption of the mitochondrial transmembrane potential [6], and apoptosis induction [7]. Thoms [8] investigated the cytotoxicity of styryl lactones against a panel of three hepatocyte cell lines, specifically HepG2, drug resistant HepG2 (HepG2-R), and primary cultured normal mice hepatocyte, with the aim to identify candidates for potential anticancer drugs, with a low toxicity for normal cells and a high toxicity for cancer or drug-resistant cancer cells. The test compounds showed pronounced cytotoxicity against both HepG2 and HepG2-R cell lines. Morphological observation and cell cycle analysis were employed to gain insight into the mechanisms of Cytotoxicity of the test compounds. A conclusion was thus drawn that the investigated compounds are biologically active and deserve future development for potential human health applications.

1,2,3-Triazoles are among the most important classes of heterocyclic organic compounds, which are reported to be present in numerous medicines used in diverse therapeutic areas [9–11]. The 1,2,3-triazole motif is associated with such pharmacological activities as antibacterial, antifungal, hypoglycemic, antihypertensive, and analgesic [12]. Polysubstituted five-membered aza heterocyclic agents rank among the most potent glycosidase inhibitors [13]. Furthermore,

International Research Journal of Humanities, Language and Literature
ISSN: (2394-1642)
Impact Factor 6.972 Volume 10, Issue 9, September 2023
Association of Academic Researchers and Faculties (AARF)
Website-www.aarf.asia, Email : editor@aarf.asia , editoraarf@gmail.com

Empowering Women and Challenging Stereotypes: A Study of Sudha Murty's 'Mahashweta'

Kamatam Prathibha, Research Scholar
Department of English, Anurag University, Hyderabad
&
Dr. M. Sridhar
Associate Professor, Department of English,
Anurag University, Hyderabad

Abstract

Sudha Murty is a highly esteemed figure in the realm of Indian literature written in the English language. The primary objective of her literary works is to empower women by instilling confidence and educating them about their own rights. *Mahashweta* serves as a compelling exemplification for the exploration of the concept of the "new woman," characterized by her superior power and agency in comparison to males. The primary objective of this paper is to portray women as exemplary figures for other women within their community. The novel demonstrates that women have transcended their historical role as subordinates to male authority and have emerged as autonomous and innovative individuals. One prominent issue pertaining to womanhood is the disproportionate worry exhibited by women towards their husbands, while husbands, in turn, display a lack of regard towards their wives and subject them to mistreatment within the familial context. This is the period during which women reject their husbands and establish their own individual identities. The novel *Mahashweta* serves as a significant critique of patriarchal societal structures. In the literary work, Anupama demonstrates a conscious decision to reject her spouse and embrace a newfound existence that is self-determined, stemming from her educational pursuits. The present paper studies Sudha Murthy's novel '*Mahashweta*' serves as a prime illustration for challenging stereotypical perceptions of women and highlighting their integral role within society.

Keywords: new woman, historical role, autonomous, individual identity, patriarchal structures, societal norms etc.

© 2023 IJRAR October 2023, Volume 10, Issue 4 www.ijrar.org (E-ISSN 2348-1269, P- ISSN 2349-5138)

IJRAR.ORG E-ISSN: 2348-1269, P-ISSN: 2349-5138

INTERNATIONAL JOURNAL OF RESEARCH AND ANALYTICAL REVIEWS (IJRAR) | IJRAR.ORG

An International Open Access, Peer-reviewed, Refereed Journal

Role of Hello English Application to Enhance English Speaking Skills

Neelima Gaddam

Research Scholar, Anurag University, Venkatapur, Ghatkesar, Hyderabad, Telangana.

Dr Babi Duli

Assistant Professor, Department of English, Anurag University, Venkatapur, Ghatkesar, Hyderabad, Telangana.

Abstract

Proficiency in the English language is a fundamental requirement for undergraduate students seeking employment in their respective careers. While many of these students come from English-medium backgrounds, a significant number struggle to articulate their thoughts confidently and accurately, especially when it comes to pronunciation. Mobile app-based learning has gained popularity among students who are hesitant to express their opinions to others. This research primarily focuses on the Hello English app as a means to enhance students' speaking skills. The study explores five key parameters within the app's practice course, encompassing lessons in conversations, articles, audio, video, and interactive games. The researcher selected a sample of 40 students and employed an experimental approach, utilizing a speaking test as the primary assessment tool. To collect data, the researcher recorded the students' voices and administered questionnaires. The data collection process involved two phases: a pre-test and a post-test. The study was conducted among undergraduate students pursuing a Bachelor of Computer Application (BCA) program at a private degree college in Warangal. In both the pre-test and post-test, students were asked to read a paragraph, engage in conversations with a partner while focusing on pronunciation, and evaluate their pronunciation through audio and video lessons. The study observed the students' progress across the five parameters offered by the Hello English app. Mobile app-based learning is particularly appealing to students due to its user-friendly and engaging content, which aids in enhancing their speaking abilities without the pressure of traditional classroom instruction. The app also provides notifications and alerts to keep learners on track, making it a comfortable and confidence-boosting tool for English language development.

Keywords: English Speaking, Hello English App, Mobile App Learning, Practice Course, Tertiary-Level Learners."

RJC

RASĀYAN *J. Chem.*
Vol. 16 | No. 4 |2256-2260| October - December | 2023
ISSN: 0974-1496 | e-ISSN: 0976-0083 | CODEN: RJCABP
http://www.rasayanjournal.com
http://www.rasayanjournal.co.in

SOL-GEL SYNTHESIZED COPPER OXIDE (CuO) NANOPARTICLES AND THEIR PHOTOCATALYSTS AND ANTIBACTERIAL APPLICATIONS.

M. Gopi Krishna[1,✉], M. Narasimha Murthy[1], C. J. Sreelatha[2], K. Rajani Kumar Reddy[3], and G. Chandrakala[4]

[1]Department of Physics, Vaagdevi Degree and P.G. College, Warangal, Telangana, India
[2]Department of Physics, Kakatiya University, Warangal, Telangana, India
[3]Department of Chemistry. Vasavi College of Engineering, Hyderabad, Telangana, India
[4]Department of Microbiology, Vaagdevi Degree and P.G. College, Warangal, Telangana, India
[✉]Corresponding Author: gopikrishnaphy17@gmail.com

ABSTRACT

This study aims to report the synthesis of copper oxide nanoparticles using the Sol-Gel autocombustion technique. According to the diffraction data, a monoclinic crystal structural phase had been formed due to the crystallization process. Electronic microscopic images prove that the nanoparticles are growing in a spherical structure. Using Methylene blue as a pollutant, a study was conducted to determine whether the prepared copper oxide nanoparticles have a photocatalytic activity. A photocatalytic rate constant of 0.011 min^{-1} was obtained for the sample, indicating that the synthesized copper oxide nanoparticles have good photocatalytic activity. During the antimicrobial study, the CuO nanoparticles were found to have significant antimicrobial activity against the selected microorganisms, *S.aureus* and *E.coli*. Furthermore, *E. coli* bacteria have shown the highest sensitivity to the synthesized CuO nanoparticles.

Keywords: Sol-Gel Auto Combustion, Nanoparticles, XRD, SEM, Photodegradation, Antibacterial Activity.

RASĀYAN*J. Chem.*, Vol. 16, No.4, 2023

INTRODUCTION

The majority of people worldwide are presently suffering from health issues as a result of drinking untreated, contaminated water.[1] In this regard, developing drugs manufactured at the nanoscale has proven to be the most effective approach in treating many microbes. The surface area of nanomaterials is exceedingly large in terms of their volume. Due to the increased nanoparticles surface area, microbes can interact with the surface more readily, thus enhancing the antimicrobial properties.[2]As a result of nanomaterials' increased surface-to-volume ratio, they have a large number of active sites that are capable of trapping pollutants.[3]Upon photon exposure, these nanomaterials produce electron-hole pairs that break down the pollutant molecules. Metal oxide nanoparticles are one of the most versatile nanomaterials available. In addition to metal oxide nanomaterials, copper oxide (CuO) is significant. This compound has several uses, including antibacterial, antiviral, antiparasitic, antipyretic, and antiparasitic qualities and antioxidant capabilities.[4]The submitted work used Sol-Gel auto combustion synthesis to make CuO nanoparticles easily and affordably. The Sol-Gel auto-combination process extensively forms extremely porous catalytically active nanomaterials. A good diffusion method and optical absorption measurements were performed to test the prepared monoclinic CuO nanoparticles' antibacterial properties and photocatalytic activity. According to the findings, it was confirmed that the CuO nanoparticles possess significant antibacterial activity against *E. coli* and *S.aureus* microbes, as well as being more effective in reducing MB solution colour.

Synthesis Procedure

The Sol-Gel auto-combustion method was used to create CuO nanoparticles. A 0.2M concentrated copper solution was prepared by adding 4.863grams of copper nitrate salt(starting material) to 100 ml of methanol(solvent). Then, citric acid was added as organic fuel to the obtained copper solution. The

http://doi.org/10.31788/RJC.2023.1618663

RJC

RASĀYAN *J. Chem.*
Vol. 16 | No. 4 |2256-2260| October - December | 2023
ISSN: 0974-1496 | e-ISSN: 0976-0083 | CODEN: RJCABP
http://www.rasayanjournal.com
http://www.rasayanjournal.co.in

SOL-GEL SYNTHESIZED COPPER OXIDE (CuO) NANOPARTICLES AND THEIR PHOTOCATALYSTS AND ANTIBACTERIAL APPLICATIONS.

M. Gopi Krishna[1,✉], M. Narasimha Murthy[1], C. J. Sreelatha[2], K. Rajani Kumar Reddy[3], and G. Chandrakala[4]

[1]Department of Physics, Vaagdevi Degree and P.G. College, Warangal, Telangana, India
[2]Department of Physics, Kakatiya University, Warangal, Telangana, India
[3]Department of Chemistry. Vasavi College of Engineering, Hyderabad, Telangana, India
[4]Department of Microbiology, Vaagdevi Degree and P.G. College, Warangal, Telangana, India
✉Corresponding Author: gopikrishnaphy17@gmail.com

ABSTRACT

This study aims to report the synthesis of copper oxide nanoparticles using the Sol-Gel autocombustion technique. According to the diffraction data, a monoclinic crystal structural phase had been formed due to the crystallization process. Electronic microscopic images prove that the nanoparticles are growing in a spherical structure. Using Methylene blue as a pollutant, a study was conducted to determine whether the prepared copper oxide nanoparticles have a photocatalytic activity. A photocatalytic rate constant of 0.011 min^{-1} was obtained for the sample, indicating that the synthesized copper oxide nanoparticles have good photocatalytic activity. During the antimicrobial study, the CuO nanoparticles were found to have significant antimicrobial activity against the selected microorganisms, *S.aureus* and *E.coli*. Furthermore, *E. coli* bacteria have shown the highest sensitivity to the synthesized CuO nanoparticles.

Keywords: Sol-Gel Auto Combustion, Nanoparticles, XRD, SEM, Photodegradation, Antibacterial Activity.
RASĀYAN*J. Chem.*, Vol. 16, No.4, 2023

INTRODUCTION

The majority of people worldwide are presently suffering from health issues as a result of drinking untreated, contaminated water.[1] In this regard, developing drugs manufactured at the nanoscale has proven to be the most effective approach in treating many microbes. The surface area of nanomaterials is exceedingly large in terms of their volume. Due to the increased nanoparticles surface area, microbes can interact with the surface more readily, thus enhancing the antimicrobial properties.[2]As a result of nanomaterials' increased surface-to-volume ratio, they have a large number of active sites that are capable of trapping pollutants.[3]Upon photon exposure, these nanomaterials produce electron-hole pairs that break down the pollutant molecules. Metal oxide nanoparticles are one of the most versatile nanomaterials available. In addition to metal oxide nanomaterials, copper oxide (CuO) is significant. This compound has several uses, including antibacterial, antiviral, antiparasitic, antipyretic, and antiparasitic qualities and antioxidant capabilities.[4]The submitted work used Sol-Gel auto combustion synthesis to make CuO nanoparticles easily and affordably. The Sol-Gel auto-combination process extensively forms extremely porous catalytically active nanomaterials. A good diffusion method and optical absorption measurements were performed to test the prepared monoclinic CuO nanoparticles' antibacterial properties and photocatalytic activity. According to the findings, it was confirmed that the CuO nanoparticles possess significant antibacterial activity against *E. coli* and *S.aureus* microbes, as well as being more effective in reducing MB solution colour.

Synthesis Procedure

The Sol-Gel auto-combustion method was used to create CuO nanoparticles. A 0.2M concentrated copper solution was prepared by adding 4.863grams of copper nitrate salt(starting material) to 100 ml of methanol(solvent). Then, citric acid was added as organic fuel to the obtained copper solution. The

http://doi.org/10.31788/RJC.2023.1618663

Principal
Vaagdevi Degree & P.G. College
Kishanpura, Hanamkonda

Positif Journal Issn No : 0048-4911

AQUATIC AVIFAUNAL DIVERSITY IN AND AROUND PROF GV SUDHAKAR RAO LOWER MANAIR DAM, KARIMNAGAR DISTRICT, TELANGANA.

Swaroopa Rani. V[1]., Balakrishna. D[2], Alaveni. M[1], Srinivas Reddy. G[1], Suresh. P[3].

#1: Department of Zoology, Kakatiya University, Warangal.

#2: Department of Zoology, University Arts and Science College((Autonomous), Warangal.

#3: Department of Zoology, Vaagdevi Degree and Pg College (Autonomous), Warangal.

Abstract:

Lower Manair dam is one of the major fresh water ecosystems in Karimnagar district. It serves as for agricultural irrigation and also the recreation spot in surrounding people. The total twenty eight bird species belongs to sixteen families of aquatic birds were observed in the selected study area during the year 2021-22. Among the total species three species were noticed from Rallidae family, seven species were noticed from Ardeduae family, two species from Ciconiidae, Recurvirostridae, Alcedinidaeand Motacillidaefamilies respectively. The remaining families are individually represented one species each. The dominant species is *Fulicaatra* from Rallidae family and low abundant species are Accipitridae and Corvidae family species. In all the observed species one species is in vulnerable status, one species in threatened status, one species is in threatened status and remaining all are in least concern status of IUCN. The diversity indices such as Shannon, Simpson and dominance indices were calculated in the present study. The diversity indices clearly indicates that the aquatic avifauna is rich in summer season and less in south west monsoon season.

Corresponding author: kittuzooku@gmail.com

Key words: species, avifauna, diversity, manair dam, season

INTRODUCTION:

Aquatic birds play an important role in almost all aquatic food webs and occupies in vital position. Most of the aquatic birds are in colourful forms, looking attractive and maintains the ecological balance by control pest and diversity of other organism in the surrounding aquatic ecosystem. Aquatic birds live in and near to the water, so it is also called water birds and they can able to fly from water to air and again to the water to catch the prey. The diversity of water birds is altered by huge anthrapogenic activities and climate change (Sekerciogl*u et al.,* 2012).

India has rich biodiversity and recognised as the biodiversity hot spot among the seven mega biodiversity hot spots of the world. Telangana has more diverse to live the bird species because of its good climatic condition and neat geographical location (Balakrishna *et al.,* 2017). The total 2094 bird species were identified throughout the India, in this 417 bird species are belongs to aquatic forms. Analysis of different diversity indices will expose the relative abundance of the species in the community (Balakrishna *et al.,* 2013).

Professor GV Sudhakar Rao lower Manair Dam is located at Algunoor village of Thimmapur mandal of Karimnagar district. It is very near to the Karimnagar district headquarters distancing06 kilometres away from the city and surrounded by Chinthakunta,