

Report of Minor Research Project

Financial Assistance Ref. No. MRP- 6442/16 (MRP/UGC-SERO)
[Link No:6442],

Dated:30-06-2017.

A“Click and Cross-Coupling”

Approach in One-Pot Synthesis of Fused 1,2,3-Triazoles

Principal Investigator

Dr. K.KIRAN KUMAR, M.Sc., M.Phil.,Ph.D.,

Department of Chemistry

KBN College

Vijayawada-1

Submitted to

UNIVERSITY GRANTS COMMISSION

South Eastern Regional Office,

Hyderabad.

CC



KAKRAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)

(Sponsored by: S.K.P.V.V. Hindu High Schools Committee)
Kothapeta, VIJAYAWADA – 520 001. ☎: 0866-6699233
"A College with Potential for Excellence" (UGC-CPE Status)

ISO 9001-2015 CERTIFIED INSTITUTION

NAAC 'A' GRADE

Dr.V.NARAYANA RAO, M.Com., Ph.D.
PRINCIPAL-FAC

Ref.No: 97 /2019-20

Dt: 13.07.2019

To,
The Joint Secretary,
University Grants Commission,
South Eastern Regional Office,
A.P.S.F.C. Building (4th Floor) 5-9-194,
P.B.NO.152, Chirac Ali Lane,
HYDERABAD – 500 001.

COMPUTER CODE OF THE COLLEGE APNA006

Sir,

Sub:-Private Aided Colleges – K.B.N. College, Vijayawada - 520 001 Allocation cum Sanction letter for Minor Research Project of Dr.K.KIRAN KUMAR–Submission of Utilization Certificate along with First report of the project – Reg.

Ref: F.MRP-6442/16 (SERO-UGC) [Link No:6442]. Dated:30-06-2017.

In the reference cited above the U.G.C. was kind enough to Allocate an amount of Rs.1,10,000/- for Financial Assistance to Minor Research Projects to K.KIRAN KUMAR, Department of Chemistry in our college for the subject entitled "**A Click and Cross-Coupling Approach in One-Pot Synthesis of Fused 1-2-3- Triazoles**". As 1st Installment we have received Rs.85,000/- on 15/07/2017 through NEFT to our college Canara Bank Account. The allocated Grant has been utilized as per the guidelines of U.G.C. issued in the sanction orders.

We enclose herewith the following documents:

1. Statement of Expenditure in Annexure - III
2. Statement of Expenditure incurred on Field work in Annexure –IV NIL REPORT
3. Utilization Certificate duly signed by the Principal and Chartered Accountant (Annexure-V)
4. Annual Report in Annexure –VI
5. Accession Certificate for books purchased and
6. Assets Certificate for equipment

We request you to consider the documents and arrange the balance grant of Rs.25,000/- as early as possible.

Thanking you.

Yours faithfully,

Encl:As above

Reo
PRINCIPAL –F A C
PRINCIPAL-FAC
K.B.N. COLLEGE
VIJAYAWADA.

Vijayawada
Dt: 11/07/2019

From
Dr. K. Kiran Kumar,
Lecturer,
Department of Chemistry,
KBN College,
KothaPet, Vijayawada-1

To
The Joint Secretary,
UGC-SERO,
APSFC Buldings, 4th Floor
Chirag Ali Lane,
Abids, Hyderabad.

Through the Principal, KBN College, Vijayawada

Respected Sir,

Sub: Submission of Annexures and audited statement of Accounts
Ref: UGC No. MRP-6442/16(SERO/UGC) Link No: 6442 dated
30th JUNE 2017

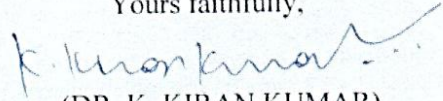
With reference to letter cited above on the subject, I am submitting financial tables expenditure incurred against sanctioned to the respective head of the account and audited statement of expenditure along with utilization certificate for your perusal and necessary action.

We have received an amount of Rs. 85,000/-(Eighty Five thousand rupees only) towards first instalment against original sanction of Rs. 1,10,000(One lakh ten thousand rupees only).

It is requested the UGC authorities to release balance amount Rs. 25,000(Twenty Five thousand rupees only) following a receipt of utilization certificate along with financial statement and audited report. Final technical report along with statistical analysis will be submitted within three months of the completion of the project

Thanking you.

Yours faithfully,


(DR. K. KIRAN KUMAR)

Enclosures:

1. Statement of Expenditure in respect of Minor Research Project Annexure III
2. Utilization Certificate duly signed by the Auditor Annexure V
3. Annual Report of Work done on the Minor Research Project. Annexure VI



A/c Dy No. 3346

Date: 29/6/17

UNIVERSITY GRANTS COMMISSIONS -SOUTH EASTERN REGIONAL OFFICE
5-9-194, CHIRAG ALI LANE, IV FLOOR, A.P.S.F.C. BUILDING, HYDERABAD -500 001

Phones: 040 - 23204735, 23200208 FAX: 040 - 23204734, Website: www.ugc.ac.in, email: ugcsero@gmail.com

No.F MRP-6442/16 (SERO/UGC)

Link No:6442.

June,2017

The Accounts Officer
UGC SERO, Hyderabad

Comcode: APNA006
UniqueID:KBNCOLL

30 JUN 2017

Sub: Release of Grants-in-aid to Minor Research Projects for the year 2017-2018.

Sir / Madam,

The has reference to the Minor Research Project proposal submitted by K. Kiran Kumar Department of P.G. Chemistry of "K.B.N College" KOTHAPETA, VIJAYAWADA entitled "A "Click and Cross-Coupling" Approach in One-Pot Synthesis of Fused 1-2-3-Triazoles". The subject expert, who evaluated the proposal, has recommended for financial assistance as detailed below.

Sl No	Item	Amount Allocated (Rs.)	Amount Sanctioned as first installment (Rs.)
1.	Books & Journals	10000.	10000.
2.	Equipment	50000.	50000.
	Total	60000.	60000.
3.	Field work & Travel	0 0	0 0
4.	Chemical & Glass Ware	30000.	15000.
5.	Contingency (incl. Special Needs)	20000.	10000.
6.	Hiring Services	0 0	0 0
	Total	50000.	25000.
	Grand Total	110000.	85000.

I am further to convey the sanction of the University Grants Commission to the payment of Rs.85000. to the principal, K.B.N College, KOTHAPETA, VIJAYAWADA as first installment (100% Non-Recurring and 50% Recurring grants) towards the above project.

Amount Sanctioned	Head of Accounts	Category
Rs. 60000	35-CAP-MRP(50)-3(A)2202.03.102.02.01	GEN
Rs. 25000	31-GIA-MRP(50)-3(A)2202.03.102.02.01	GEN

The above approval is subject to the general conditions of grants prescribed by the UGC for this scheme. The sanctioned amount is debitable to the Head of Accounts 35-CAP-MRP(50)-3(A)2202.03.102.02.01 (General), 31-GIA-MRP(50)-3(A)2202.03.102.02.01(General) and is valid for payment during the financial year 2017-18 only and the amount of the Grant shall be drawn by the Accounts Officer (Drawing and Disbursing Officer) UGC-SERO, Hyd. on the Grants-In Aid Bill and shall be disbursed to and credited to "The Principal, K.B.N College, KOTHAPETA, VIJAYAWADA by Electronic Mode through PFMS Portal at the following details: (a) Name & Address of Account Holder: The Principal, K.B.N College, KOTHAPETA, VIJAYAWADA (b) Account No: 19101020595. (c) Name & Address of Bank Branch: CB, VIJAYAWADA (d) IFSC Code: NRB0000619.

In case the Principal investigator is having ongoing Major/Minor Research Project OR has been transferred/left/retried from the college, the released amount of Rs.85000/- may be returned to UGC-SERO, Hyderabad immediately, failing which action will be initiated against the College for not adhering with the norms of UGC for the scheme.

The grantee institution shall ensure the utilization of grants - in aid for which it is being sanctioned/paid, in case of non utilization /part utilization, interest @ 10% per annum as amended from time to time on utilized amount from the date of drawl to the date of refund as per provision contained in General Financial Rules of Govt. of India will be charged.

The assets acquired wholly or substantially out of UGC's grants shall not be disposed or encumbered or utilized for the purposes other than those for which the grant was given, without proper sanction of the UGC and should, at any time the college ceased to function, such assets shall revert to the UGC.

K Rao
22/7/17

UNIVERSITY GRANTS COMMISSION
BAHADUR SHAH ZAFAR MARG
NEW DELHI-110 002

STATEMENT OF EXPENDITURE IN RESPECT OF MINOR RESEARCH PROJECT

1. Name of the Principal Investigator : Dr. K. Kiran Kumar
2. Department of Principal Investigator : CHEMISTRY
- Name of the College : K.B.N. College (Autonomous),
Vijayawada.

3. UGC approval Letter No. and Date: No. F-MRP- 6442/16(SERO/UGC), Link No. 6442 dated 30.06.2017.

4. Title of the Research Project: **A "Click and Cross-Coupling" Approach in One-Pot Synthesis of Fused 1,2,3-Triazoles.**

5. Effective date of starting the project: 15.07.2017

6. a. Period of Expenditure : From **JULY 15, 2017** to **JULY 11, 2019**

b. Details of Expenditure

S.No.	Particulars	Amount Approved (Rs.)	Expenditure incurred (Rs.)
i	Books & Journals	10,000-00	10,000-00
ii	Equipment	50,000-00	50,102-80
iii	Field work & Travel	000-00	000-00
iv	Chemicals & Glass Ware	30,000-00	30,354-66
v	Contingency(Inc. Special Needs)	20,000-00	20,000-00
vi	Hiring Services	000-00	000-00
	Total	1,10,000-00	1,10,457-46

i. Brief objective of the project: A "Click and Cross-Coupling" Approach in One-Pot
Synthesis of Fused 1,2,3-Triazoles.


ii. Work done so far and results achieved and publications, if any, resulting from the work
(Give the details of the papers and names of the journals in which it has been published or accepted
or publication) : Nil

iii. Has the progress been according to original plan of work and towards achieving the
objective? If not, state reasons : Yes, efforts have made to complete the research
according to the original plan of work and achieved the objective intended.

iv. Please Enclose a summary of the Findings of the study. One Bound copy of the final
report of work done may also be sent to the concerned regional of the UGC.

v. Any other information.


PRINCIPAL INVESTIGATOR


PRINCIPAL
(Seal) PRINCIPAL-FAC
K.B.N. COLLEGE
VIJAYAWADA.

Annexure- V

UNIVERSITY GRANTS COMMISSION
BAHADUR SHAH ZAFAR MARG
NEW DELHI-110 002

UTILIZATION CERTIFICATE

Certified that the grant of Rs. 1,10,000 (Rupees One Lakh Ten thousand only) received from the University Grants Commission under the scheme of support for Minor Research Project entitled A "Click and Cross-Coupling" Approach in One-Pot Synthesis of Fused 1,2,3-Triazoles vide UGC letter No. F.MRP-6442/16 (SERO/UGC) dated 30th June, 2017 has been fully utilized for the purpose for which it was sanctioned and accordance with the terms and conditions laid down by the University Grants Commission.

[Signature]
PRINCIPAL INVESTIGATOR

[Signature]
PRINCIPAL
(Seal)
PRINCIPAL-FAC
K.B.N. COLLEGE
VIJAYAWADA.

For BONDADA AND ASSOCIATES
CHARTERED ACCOUNTANTS
(FRN: 11655S)

[Signature]
(CA.B.V.S. LINGA MURTY)
PROPRIETOR.
(MEM No: 075606)

STATUTORY AUDITOR
(Seal)



UDIN = 19075606AAAA BKV704

**UNIVERSITY GRANTS COMMISSION
BAHADUR SHAH ZAFAR MARG
NEW DELHI-110 002**

**Annual Report of the work done on the Minor Research Project.
(Report to be submitted within 6 weeks after completion of each year)**

1. Project Report No. 1st / Final : First
2. UGC Reference No. : No. F- MRP-6442/16(SERO/UGC) Link
No. 6442 dated 30th june 2017
3. Period of Report : From 15.07.2017 to 11.07.2019
4. Title of research project : A "Click and Cross-Coupling" Approach
in One-Pot Synthesis of Fused 1,2,3-
Triazoles.
5. (a) Name of the Principle Investigator : Dr. K. Kiran Kumar
- (b) Dept. and College where work has progress : Department of Chemistry
K.B.N. College(Autonomous),
Vijalyawada-1.
6. Effective date of starting of the project : 15th July, 2017
7. Grant approved and expenditure incurred during the period of the report:
 - a. Total amount approved : 1,10,000
 - b. Total expenditure : 1,10,000
 - c. Report of the work done : Sheet attached

8. It is certified that the grant of Rs. 1,10,000 (Rupees One Lakh Ten Thousand rupees only) received from the University Grants Commission under the scheme of support for Minor Research project entitled **A “Click and Cross-Coupling” Approach in One-Pot Synthesis of Fused 1,2,3-Triazoles** vide UGC letter No.F-MRP-6442/16(SERO/UGC) dated June 30, 2017 has been fully utilized for the purpose for which it was sanctioned and in accordance with the terms and conditions laid down by the University Grants Commission.

K. Chonpurna
PRINCIPAL INVESTIGATOR

/ Rao
PRINCIPAL

PRINCIPAL-FAC
K.B.N. COLLEGE
VIJAYAWADA.

For BONDADA AND ASSOCIATES
CHARTERED ACCOUNTANTS
(FRN: 11655S)

B.V.S. Linga Murty
(CA. B.V.S. LINGA MURTY)
PROPRIETOR
(MEM. No. 074406)



A "Click and Cross-Coupling" Approach in One-Pot Synthesis of Fused 1,2,3-Triazoles.

Present Research related to Research Plan

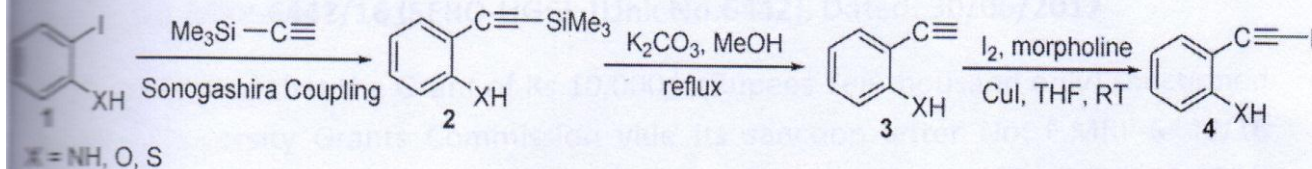
Cross-Coupling chemistry is one of the important areas for the construction of diversified moieties, in which two hydrocarbon fragments are coupled in the presence of metal catalyst. In recent times the formation of Carbon-Carbon and carbon-hetero atom bonds has been developed through intra and inters molecular cross-coupling reactions using various transition-metals. In this context, over the year's intra molecular version has been successfully explored for the synthesis of plentiful heterocyclic compounds that are of great biological, pharmaceutical and material interest. In this connection, in continuation, I would like to pursue the formation of fused 1,2,3-Triazoles from the appropriate starting precursors through intra molecular cross-coupling reaction

Proposed work

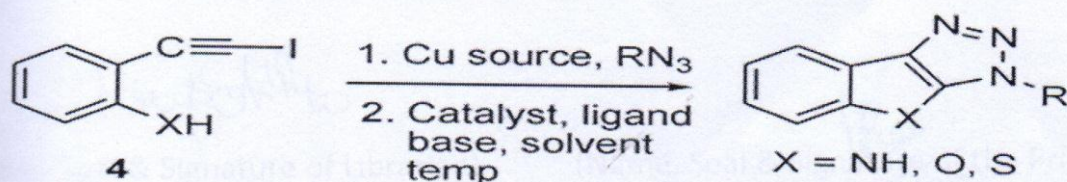
1,2,3-Triazoles are important nitrogen heterocyclic compounds, which have a broad range of many industrial applications such as dyes, agrochemicals and biologically active agents. Many methods for the synthesis of Triazoles have appeared during the past few years. These triazoles are used as synthons for the fused 1,2,3-Triazoles, that are of high synthetic demand. To illustrate, some examples for preparation of fused 1,2,3-Triazoles are shown in Scheme!

Proposed plan

Following the available literature, 2-thio-1-Iodo phenyl Acetylene was prepared from starting material 2-thio-1-Iodo benzene(1) which reacts with trimethylsilyl acetylene through Sonogashira cross-coupling reaction, producing the adduct 2-thio-1-trimethyl silyl acetylene Benzene(2), which would further provide product 2-thio- Acetylene Benzene, by refluxing with K_2CO_3 in methanol. Further, carried the reaction of 2-thio- Acetylene Benzene(3) with iodine and morpholine in the presence of CuI in THF yielded 2-thio-1-Iodo phenyl Acetylene(4) till now done.



This compound(4) together reacts with azides in one pot reaction will be studied for the synthesis of fused 1,2,3-Triazoles(Scheme). The effect of solvent, bases temperature and concentration of the catalyst will be systematically pursued to lead an effective system.



Expected Results and Impacts

Since Cross-coupling is the central issue in both academic institutions as well as industry, the discovery and development of methods for the synthesis of heterocyclic compounds by cross-coupling reactions are in demand. The present methodology shall provide an important route to heterocyclic compounds in the presence of metal catalyst.

University Grants Commission
South Eastern Regional Office
Hyderabad

**ACCESSION CERTIFICATE FOR BOOKS PURCHASED OUT OF UGC – FINANCIAL
ASSISTANCE FOR MINOR RESEARCH PROJECT TO COLLEGE TEACHERS –**

Dr.K.KIRAN KUMAR, Faculty , Department of Chemistry.

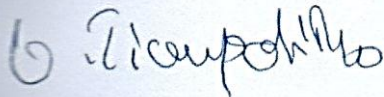
Name of the Scheme : Minor Research Project to College Teachers-

Dr.K.KIRAN KUMAR, Faculty , Department of Chemistry

Sanction Order No & Date:

1. F.MRP-6442/16 (SERO-UGC) [Link No:6442], Dated: 30/06/2017

It is certified that the Grant of Rs.10,000/- (Rupees Ten thousand only) sanctioned by the University Grants Commission vide its sanction letter No: F.MRP-6442/16 (SERO-UGC) [Link No:6442], Dated: 30/06/2017, has been utilized Rs. 10,000/- (Rupees Ten thousand only) for the purchase of Journals and the same have been Accessioned and noted in the Accession Register from Accession No: 0 to 0 being maintained by the College.




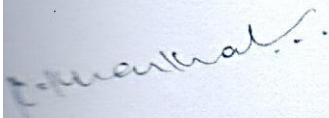
(Name, Seal & Signature of Librarian)

LIBRARIAN

Kalkandarti Bhavanarayana College Library
VIJAYAWADA-520 001.

(Name, Seal & Signature of the Principal)


PRINCIPAL-PAC
K.B.N. COLLEGE
VIJAYAWADA.



University Grants Commission, South Eastern Regional Office
Hyderabad

ASSETS CERTIFICATE FOR EQUIPMENT

Name of the Scheme: Minor Research Project to College Teachers –
Dr.K.KIRAN KUMAR, Faculty , Department of Chemistry


Name of the College: KAKARAPARTI BHAVANARAYANA COLLEGE, VIJAYAWADA-1

Sanction Order No & Date:

1. F.MRP-6442/16 (SERO-UGC) [Link No:6442], Dated: 30/06/2017

It is Certified that inventories of permanent or semi permanent assets created / acquired wholly or substantially out of the grants given by the University Grants Commission are being maintained in the prescribed form and are being kept up-to-date.

(Name, Seal & Signature of the Principal)


PRINCIPAL-FAC
K.B.N. COLLEGE
VIJAYAWADA.

K. Kiran Kumar