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सौ. प्रतिमा विलास धाकड

स्टॅम्प वेंडर, शिरपूर, जि. धुळे

परवाना क्र. 42080016

20 JUN 2017

उपकोषागार अधिकारी,
शिरपूर, जि. धुळे.

MEMORANDUM OF UNDERSTANDING BETWEEN

RCPET's R. C. Patel Arts, Commerce and Science College, Shirpur - 425405

AND

SES's H. R. Patel Institute of Pharmaceutical Education and Research, Shirpur - 425405

FOR THE DEVELOPMENT OF ACADEMIC AND RESEARCH COOPERATION

The present MoU is signed on **21st November 2018** between **R. C. Patel Arts, Commerce and Science College Shirpur - 425405**, run by **R. C. Patel Educational Trust's Shirpur** and **H. R. Patel Institute of Pharmaceutical Education and Research, Shirpur – 425405,** run by **Shirpur Education Society, Shirpur**.

The MoU has following objectives:

1) To encourage faculty members from both institutes to collaborate research activities.
2) To share the institute's lab and research resources.
3) To assist in faculty and post graduate students training.
4) To carry out multidisciplinary research projects for postgraduate students of both institutes.

R.C.PATEL ARTS, COMMERCE AND SCIENCE COLLEGE SHIRPUR

OFFICE SEAL

Principal
R.C. Patel Educational Trust's
R. C. Patel Arts, Comm. & Sci. College
Shirpur Dist. Dhule 425 405

Duration of the MoU:

The agreement will be in effect for FIVE years, with the possibility of a FIVE year extension after evaluation.

Coordinators:

A person in charge of the MoU who will assume responsibility for the agreement will be appointed by both the institutes.

IPR benefits:

IPR gains from the collaborative research projects will be shared between the two institutes.

For,

SES's H. R. Patel Institute of Pharmaceutical, Education and Research Shirpur – 425405

RCPET's R. C. Patel Arts, Commerce & Science College, Shirpur - 425405

Prin. Dr. S. B. Bari

SES's H. R. Patel Institute of Pharmaceutical, Education and Research Shirpur - 425405

Principal
H.R.Patel Institute of Pharmaceutical Education & Research, Shirpur Dist Dhule (M.S.) 425 405

Prin. Dr. D. R. Patil

RCPET's R. C. Patel Arts, Commerce and Science College, Shirpur – 425405

Principal
R.C.Patel Educational Trust's
R.C.Patel Arts,Comm. & Sci. College
Shirpur.Dist.Dhule 425 405

OFFICE SEAL

Witness Name: 1. Dr. P. D. Pabl Signature:

2. Prof. A. M. Pabl Signature:

R. C. Patel Educational Trust's
R. C. Patel Arts, Commerce and Science College
Karvand Naka, Shirpur 425405, Dist - Dhule, Maharashtra
☎: (02563) 299328
E-mail: principal@rcpasc.ac.in

President
Hon. Bhupeshbhai Patel

Principal
Dr. D. R. Patil

Name of Institute/Industry :- SES'S HR Patel Institute of Pharmaceutical Education and Research, Shirpur

Year of Signing Linkage/ MoU :- 2018

Duration of Linkage/MoU :- 05 Years

List of Activities carried out under MoU with SES'S HR Patel Institute of Pharmaceutical Education and Research

Authorized signatures:

Principal
H.R.Patel Institute of Pharmaceutical Education & Research, Shirpur Dist Dhule (M.S.) 425 405

H.R.Patel Institute of Pharmaceutical Education & Research Shirpur OFFICE SEAL

RCPET's R. C. Patel Arts, Commerce and Science College Shirpur SEAL

PRINCIPAL
R. C. Patel Educational Trust's
R. C. Patel Arts, Commerce and Science College
Shirpur, Dist.-Dhule (M.S.) 425405

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Controlled synthesis of blue luminescent graphene quantum dots from carbonized citric acid: Assessment of methodology, stability, and fluorescence in an aqueous environment

Mahesh P. More[a], Pravinkumar H. Lohar[a], Ashwini G. Patil[c], Pravin O. Patil[b], Prashant K. Deshmukh[a,*]

[a] Post Graduate Department of Pharmaceutics, H. R. Patel Institute of Pharmaceutical Education and Research, Karwand Naka, Shirpur, Dist - Dhule, 425405, M.S, India
[b] Department of Pharmaceutical Chemistry, H. R. Patel Institute of Pharmaceutical Education and Research, Karwand Naka, Shirpur, Dist - Dhule, 425405, M.S, India
[c] Department of Microbiology and Biotechnology, R.C. Patel Arts, Commerce and Science College, Karwand Naka, Shirpur, Dist - Dhule, 425405, M.S, India

HIGHLIGHTS

- Carbonized Citric acid forms self assembly structure at controlled condition.
- Graphene Quantum dots (GQDs) demonstrated efficient and stable fluorescence.
- GQDs has high luminescence at variable pH and Temperature.
- Reproducible fluorescence for prolonged period of time at ambient temperature.

ARTICLE INFO

Keywords:
Graphene quantum dots
Scientific microwave
Blue luminescence
Aqueous synthesis
Carbonization

ABSTRACT

The present investigation deals with a comparative assessment of various techniques for the synthesis of blue luminescence Graphene Quantum Dots (GQDs) using various equipments like furnace, domestic microwave synthesiser and scientific microwave synthesiser using citric acid as a precursor. A bottom–up method was adapted to develop photoluminescent (PL) GQDs and assessed for luminescence intensity of GQDs at different environmental conditions. The methodology requires very less concentration of NaOH to disperse GQDs. The present approach is advantageous over other conventional organic solvent mediated synthesis, as it requires less time, easy to reproduce and disperse in water, furthermore it produces stable fluorescence for a longer period of time at ambient temperature conditions. The synthesized GQDs are primarily characterized by UV for detection of the fluorescence intensity and simultaneously Ultraviolet–Visible (UV–Vis) spectroscopy and Fourier Transform Infra Red (FTIR) Spectroscopy to assess the up conversion from the precursor molecule. Apart from these techniques, Particle Size and Zeta Potential, Scanning Electron Microscopy (SEM), Elemental Analysis (EDX), Raman Spectroscopy and Fluorescence spectrophotometry were used to characterise synthesized GQDs.

1. Introduction

From last few decades when the nanotechnology starts exploring at the edge; becoming a new area that represents small sized materials, structures, devices, and systems. Nanometer scale size ranging between 1 and 100 nm is considered the most promising application in nanomedicine and other technical approaches [1]. Novel technical aspects can be possible with help of Nanomaterials to produce an efficient system with wide range of applications such as drug delivery systems; performance based medical devices, diagnostic materials, etc. [2,3].

The demand of nanomaterials has increased in recent years, due to their unique properties and structural features. The application area is going to increase day by day with varying its phases or in different types of areas such as catalysis, biomedical, drug delivery and many more areas are still exploiting. Few of these materials includes the carbon-based luminescent nanomaterials (CLNMs), carbon quantum dots (CQDs) [4], nanodiamonds [5], Carbon nanotubes (CNTs) fragment and surface functionalized CNTs [6,7], Graphene quantum dots (GQDs) to name a few, are exploring more due to low toxicity, high luminescence, robust material, chemically inertness and ease for

* Corresponding author.
E-mail address: pkdesh@rediffmail.com (P.K. Deshmukh).

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Development of graphene-drug nanoparticle based supramolecular self assembled pH sensitive hydrogel as potential carrier for targeting MDR tuberculosis

Mahesh P. More[a], Ramesh V. Chitalkar[a], Mahesh S. Bhadane[b], Sanjay D. Dhole[b], Ashwini G. Patil[c], Pravin O. Patil[d] and Prashant K. Deshmukh[a]

[a]Post Graduate Department of Pharmaceutics, H. R. Patel Institute of Pharmaceutical Education and Research, Shirpur, India; [b]Department of Physics, SavitribaiPhule Pune University, Pune, India; [c]Department of Microbiology, R. C. Patel Arts, Commerce and Science College, Shirpur, India; [d]Department of Pharmaceutical chemistry, H. R. Patel Institute of Pharmaceutical Education and Research, Shirpur, India

ABSTRACT

The *Mycobacterium tuberculosis* (MTB) resides in mononuclear phagocytes (macrophages) hence selective targeting at the molecular level using Graphene Oxide (GO) Air Dried Hydrogel (ADH) is investigated in present investigation. The GO has capability to form supramolecular self assembly, due to $\pi - \pi$ stacking and hydrogen bonding interactions between surface groups of GO and oppositely charged drug molecule in presence of water. The hydrogel was fabricated using GO and Para-aminosalicylic acid (PAS) in solution phase. The fabricated hydrogel was lyophilized to obtain air dried hydrogel (ADH). The ADH showed potent antimicrobial activity and *in-vitro* cytotoxicity against *S. Aureus* and *E. Coli*, and MCF –7 cells respectively. The Alamar blue assay demonstrated the invasive characteristics of ADH in MTB (H37Rv). From the results obtained so far we lead to conclude that ADH is more invasive compared to the equivalent amount of pure PAS.

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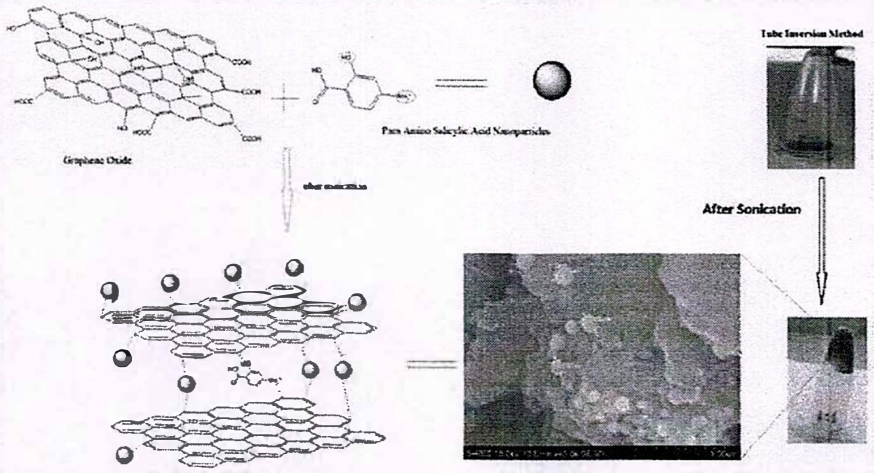
KEYWORDS
Tuberculosis; macrophages; supramolecular hydrogel; antitubercular activity; para amino salicylic acid; cytotoxicity



Introduction

Tuberculosis (TB) is contributing major cause of death amongst global health population Smith [1]. It was considered diseases of the past but eventually about 30% of the global population are affected with TB. The world wide diseases burden comprises major causes of morbidity and mortality is related to TB [2]. It is a chronic, contagious [3], airborne [4], prototypic [5] and fatal respiratory bacterial infection. TB is caused by the rod-shaped, obligate [6], non–spore-forming aerobic bacterium [7]. In 1993, World Health Organization (WHO) declared that TB is a global threat for health community [8].

'Super Carbon' denotes the potential applications of Graphene, it is one-atom thick honeycomb lattice structure, two-dimensional (2D) sheet of carbon atoms and is considered as the potential revolutionary material with electronic potential of zero band gap semimetal [9]. Graphene Oxide (GO), also known as graphitic acid, was discovered long time back [10]. The GO has large number of

CONTACT Prashant K. Deshmukh pkdesh@rediffmail.com Department of Pharmaceutics, H. R. Patel Institute of Pharmaceutical Education and Research, Karwand Naka, Shirpur, Maharashtra Dhule – 425 405, India
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Design and development of thiolated graphene oxide nanosheets for brain tumor targeting

Ajinkya N. Nikam[a], Mahesh P. More[a,b], Abhijeet P. Pandey[c], Pravin O. Patil[d], Ashwini G. Patil[e], and Prashant K. Deshmukh[a]

[a]Post Graduate Department of Pharmaceutics, H. R. Patel Institute of Pharmaceutical Education and Research, Shirpur, India; [b]Department of Pharmaceutics, SVKM's Institute of Pharmacy, Dhule, India; [c]Manipal College of Pharmaceutical Sciences, MAHE, Manipal, Karnataka, India; [d]Department of Pharmaceutical Chemistry, H. R. Patel Institute of Pharmaceutical Education and Research, Shirpur, India; [e]Department of Microbiology and Biotechnology, R.C.Patel Arts, Commerce and Science Collage, Shirpur, India

ABSTRACT

The present investigation emphasizes on synthesis and characterization of thiol functionalized reduced graphene oxide (TrGO) as a novel platform for loading of anticancer drug methotrexate (TrGO-MTX), through amide bonding. Thiolation of graphene oxide (GO) was achieved by transesterification process. The introduction of sulfur containing chemical groups and the partial reduction of GO to TrGO were proven by analytical techniques. Thiol content was found to be 6.98 mM by Ellman's method in a quantitative manner. Furthermore, antineoplastic action of TrGO-MTX against human glioblastoma astrocytom U-373 MG cell line was studied, wherein TrGO-MTX demonstrated significant inhibition rate as compared with pure MTX.

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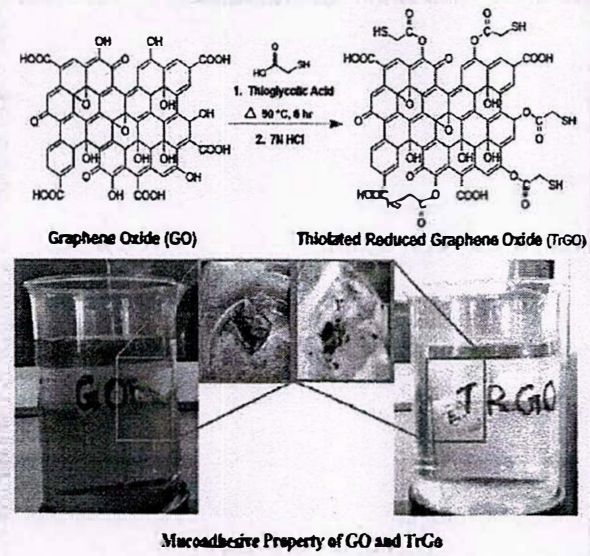
KEYWORDS
Brain tumors; graphene oxide; methotrexate; mucoadhesion; mucociliary clearance; thiolation

GRAPHICAL ABSTRACT



CONTACT Prashant K. Deshmukh pkdesh@rediffmail.com Department of Pharmaceutics, H. R. Patel Institute of Pharmaceutical Education and Research, Shirpur, Maharashtra, 425 405, India.
Color versions of one or more of the figures in the article can be found online at www.tandfonline.com/gpom.
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Graphene-based nanocomposites for sensitivity enhancement of surface plasmon resonance sensor for biological and chemical sensing: A review

Pravin O. Patil[a,*,1], Gaurav R. Pandey[a,1], Ashwini G. Patil[b,1], Vivek B. Borse[c], Prashant K. Deshmukh[a], Dilip R. Patil[b], Rahul S. Tade[a], Sopan N. Nangare[a], Zamir G. Khan[a], Arun M. Patil[b], Mahesh P. More[a], Murugan Veerapandian[d], Sanjay B. Bari[a]

[a] H. R. Patel Institute of Pharmaceutical Education and Research, Shirpur, 425405, Maharashtra, India
[b] R. C. Patel Arts, Science and Commerce College, Shirpur, 425405, Maharashtra, India
[c] Centre for Nanotechnology, Indian Institute of Technology Guwahati, Guwahati, 781039, Assam, India
[d] Council of Scientific and Industrial Research-Central Electrochemical Research Institute, Karaikudi-630003, Tamilnadu, India

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Nanosensor

ABSTRACT

Surface plasmon resonance (SPR) offers exceptional advantages such as label-free, *in-situ* and real-time measurement ability that facilitates the study of molecular or chemical binding events. Besides, SPR lacks in the detection of various binding events, particularly involving low molecular weight molecules. This drawback ultimately resulted in the development of several sensitivity enhancement methodologies and their application in the various area. Among graphene materials, graphene-based nanocomposites stands out owing to its significant properties such as strong adsorption of molecules, signal amplification by optical, high carrier mobility, electronic bridging, ease of fabrication and therefore, have established as an important sensitivity enhancement substrate for SPR. Also, graphene-based nanocomposites could amplify the signal generated by plasmon material and increase the sensitivity of molecular detection up to femto to atto molar level. This review focuses on the current important developments made in the potential research avenue of SPR and fiber optics based SPR for chemical and biological sensing. Latest trends and challenges in engineering and applications of graphene-based nanocomposites enhanced sensors for detecting minute and low concentration biological and chemical analytes are reviewed comprehensively. This review may aid in futuristic designing approaches and application of graphenenous sensor platforms for sensitive plasmonic nano-sensors.

1. Introduction

From its inception, surface plasmon resonance (SPR) technique plays a prevailing role in the field of optical sensors. The SPR has evolved from a moderately impenetrable physical phenomenon to an optical tool that is widely used in chemical and biological investigations (Slavík et al., 1999; Yamamoto, 2008; Zeng et al., 2014) to study the binding events between two molecules of interest. Since its first intervention in 1990 by a Biacore group (GE Healthcare), the technology has established exponential growth in the last years, which is evident from the increase in the number of publications as well as the number of the methodology developed, till 2019, total of 24,148 papers are published as per PubMed search database (Fig. 1).

SPR technique is advantageous in terms of an *in-situ*, label-free methodwitheconomical and ease of fabrications as compared with the electrochemical and other methods (Merwe, 2001). The SPR phenomenon occurs in between the metal surface of sensorgram with specific molecule recognition element and a medium either vacuum/air or liquid. Whenever there is recognition of the particular molecule specific to the site/scaffold/receptor of this element, it results in the change of the surface of the metal, causing an angle shift as shown in Fig. 2(i). The shift resulted due to the changes in the refractive index (RI) at the surface of the metal. A usual SPR sensor either works in the angular interrogation mode or the wavelength interrogation mode. At the resonance wavelength or angle, the dispersion relation of the incident light matches with that of the surface plasmon, at which the reflectance shows a dip as seen in Fig. 2 (ii). The reflectance dip is attributed to the transfer of energy possessed by the photons incident to the surface plasmon and is more sensitive to the changes in the dielectric medium adjacent to the sensor surface (Ekgasit et al., 2004; Vasić et al., 2013).

* Corresponding author.
E-mail address: rxpatilpravin@yahoo.co.in (P.O. Patil).
[1] These authors contributed equally as first authors.

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Fabrication and characterization of colon specific eudragit coated graphene oxide microsphere for sustained delivery of tramadol hydrochloride

Mahesh P. More[a,b], Ganesh B. Patil*[a], Sanjay D. Thakare[a], Pravin O. Patil[a], Ashwini G. Patil[c], and Prashant K. Deshmukh*[a]

[a]Post Graduate Department of Pharmaceutics, H. R. Patel Institute of Pharmaceutical Education and Research, Shirpur, India; [b]Department of Pharmaceutics, Shri Vile Parle Kelwani Mandals, Institute of Pharmacy, Dhule, India; [c]Department of Microbiology and Biotechnology, R. C. Patel Arts, Commerce and Science College, Shirpur, India

ABSTRACT

Present investigation reports a straight forward method for synthesis of graphene oxide (GO) followed by fabrication of graphene oxide microsphere (GMS) using water in oil (w/o) emulsification technique. For colon specific drug delivery, enteric coating is desirable, which was done using Eudragit S100 and characterized by Fourier transform Infrared Spectroscopy (FTIR). The surface morphology of fabricated microsphere was confirmed using scanning electron microscopy (SEM). Drug loaded microspheres demonstrated a high payload capacity for model drug tramadol hydrochloride (TmH). The comparative *In-vitro* drug release showed around 72.37% release from uncoated microspheres, whereas eudragit coated microspheres retarded the drug release upto 10 h.

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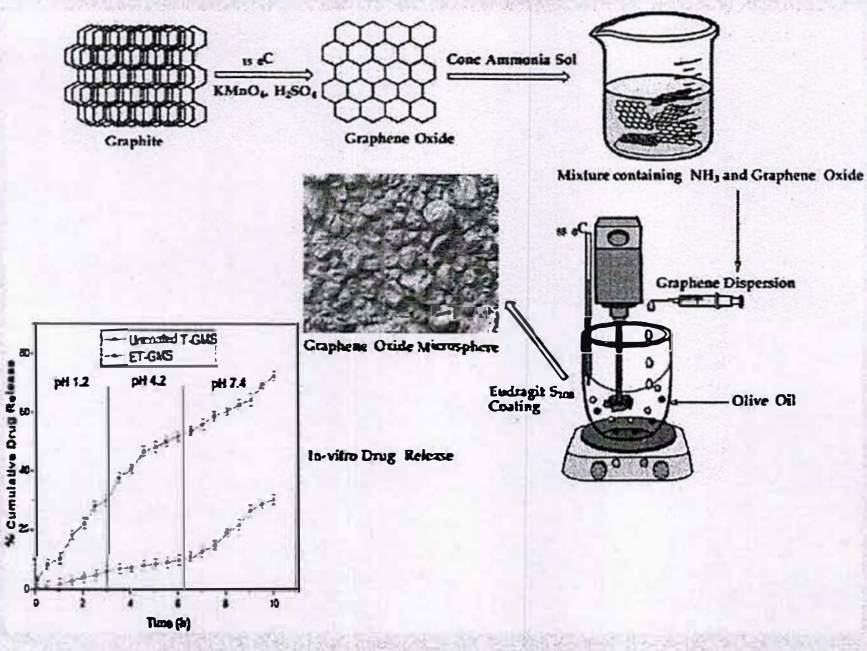
KEYWORDS
Graphene oxide; microsphere fabrication; colon targeted drug delivery system; irritable bowel disease



1. Introduction

An inflammatory Bowel disease (IBD) intensifies in many traumatic conditions such as ulcerative colitis, Crohn's disease, amebiosis, colonic cancer, etc. Specifically, IBD is most common functional disorder in colon region.[1] Due to many transportation barriers such as acid reach environment in stomach, differential pH condition and larger micro flora in small intestine, therapeutic agent is unable to reach at the colon site.[2] It seems to be very difficult for

CONTACT Prashant K. Deshmukh pkdesh@rediffmail.com Department of Pharmaceutics, H. R. Patel Institute of Pharmaceutical Education and Research, Karwand Naka, Dist- Dhule, Shirpur, Maharashtra 425 405, India
*These authors contributed equally to this work.
Color versions of one or more of the figures in the article can be found online at www.tandfonline.com/lpte.

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Topical Review

Recent advancements in bioprecursor derived graphene quantum dots: synthesis, characterization and toxicological perspectives

Rahul S Tade[1], Sopan N Nangare[1], Ashwini G Patil[2], Abhieet Pandey[3], Prashant K Deshmukh[1], Dilip R Patil[2], Tanisha N Agrawal[1], Srinivas Mutalik[3], Arun M Patil[2], Mahesh P More[1], Sanjay B Bari[1] and Pravin O Patil[1]

[1] H R Patel Institute of Pharmaceutical Education and Research, Shirpur, Maharashtra 425405, India

[2] R C Patel Arts, Science and Commerce College, Shirpur, Maharashtra 425405, India

[3] Department of Pharmaceutics, Manipal College of Pharmaceutical Sciences, Manipal Academy of Higher Research, Manipal, Karnataka, India

E-mail: rxpatilpravin@yahoo.co.in

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Abstract

Graphene quantum dots (GQDs), impressive materials with enormous future potential, are reviewed from their inception, including different precursors. Considering the increasing burden of industrial and ecological bio-waste, there is an urgency to develop techniques which will convert biowaste into active moieties of interest. Amongst the various materials explored, we selectively highlight the use of potential carbon containing bioprecursors (e.g. plant-based, amino acids, carbohydrates), and industrial waste and its conversion into GQDs with negligible use of chemicals. This review focuses on the effects of different processing parameters that affect the properties of GQDs, including the surface functionalization, paradigmatic characterization, toxicity and biocompatibility issues of bioprecursor derived GQDs. This review also examines current challenges and the ongoing exploration of potential bioprecursors for ecofriendly GQD synthesis for future applications. This review sheds further light on the electronic and optical properties of GQDs along with the effects of doping on the same. This review may aid in future design approaches and applications of GQDs in the biomedical and materials design fields.

Keywords: bioprecursor, quenching, GQDs, graphene, functionalization of GQDs, hetero-atom doping, fluorescent material

(Some figures may appear in colour only in the online journal)

1. Introduction

With recent advancements in materials sciences and advanced materials, research on the cost of the effective synthesis of materials has gained a lot of attention. Graphene is one of the most celebrated and fascinating 'wonder materials' and is investigated by many branches of science. The graphene family includes graphene, graphene oxide (GO), reduced graphene oxide (rGO) and graphene quantum dots (GQDs). Graphene-based nanomaterials generally exist as

Int. J. Nano Dimens., 12 (3): 211-221, Summer 2021

ORIGINAL ARTICLE

Eco-friendly synthesis of surface grafted Carbon nanotubes from sugarcane cubes for the development of prolonged release drug delivery platform

*Rahul Narkhede[1], Mahesh More[2], Swapnil Patil[1], Pravin Patil[3], Ashwini Patil[4], Prashant Deshmukh[5]**

[1] *Post Graduate Department of Pharmaceutics, H. R. Patel Institute of Pharmaceutical Education and Research, Shirpur, Dhule -425405 (M. S.), India*

[2] *Department of Pharmaceutics, Sanjivani College of Pharmaceutical Education and Research, Kopargaon, Dist – Ahemadnagar - 423 603 (M.S.) India*

[3] *Department of Pharmaceutical Chemistry, H. R. Patel Institute of Pharmaceutical Education and Research, Shirpur, Dhule -425405 (M. S.), India*

[4] *Department of Microbiology and Biotechnology, R.C.Patel Arts, Science, and Commerce College, Shirpur, Dhule -425405 (M. S.) India*

[5] *Department of Pharmaceutics, Dr. Rajendra Gode College of Pharmacy, Malkapur, Dist – Buldhana – 443 101 (M.S.), India*

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Abstract

Surface grafting of nanocarriers could modulate their properties and characteristics. As carbon nanotubes synthesis is a very tricky process and requires high-end methods, hence the present investigation was aimed to develop an eco-friendly method for synthesis carbon nanotubes (CNTs) and subsequent surface grafting for enhanced drug delivery application. The present study elaborates two-step chemical modifications; wherein the first step is catalytic cleavage of natural precursor in the presence of ferrocene and the second step involve chemical grafting of Acyclovir (ACV) as a model drug to understand the drug release behaviour. The catalytic cleavage of sugarcane cubes (natural precursor) was carried out in a closed copper tube, which prevents oxidation and results in a conversion of tubular nanostructures to amorphous carbon. The covalent attachment of ACV on purified CNTs (fCNTs) was done using carbodiimide chemistry. The preliminary Uv-Vis absorbance spectra defined at 260 nm was arised due to π-π^* stacking of aromatic C-C bonds. The Fourier Transforms Infrared Spectroscopy (FTIR) indicates the hydroxyl stretch at 3300 cm-1 while amide I bond formation was observed at 1672 cm^{-1}. The XRD spectra confirmed successful synthesis of CNTs. The calculated average crystallite size (Scherer equation) of synthesized CNTs was found to be 42.84 and 44.45 nm; it was also in accordance with the morphological observation as confirmed simultaneously using SEM analysis. The covalently attached ACV was released up to 80% during 8h of *in vitro* drug release study. The surface grafting potential of CNTs was found to be promising compared to other nanomaterials.

Keywords: *Acyclovir; Amorphous Carbon; Carbodiimide Chemistry; Natural Precursor; Purification.*

How to cite this article

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INTRODUCTION

Even though the investigation on allotropic forms of carbon was begun before 1990, but the most intuitive form of carbon allotrope i.e. carbon nanotubes (CNTs) were reported in 1991[1]. Numerous classical approaches for the synthesis of CNTs are reported by academic researchers and industry experts for their promising physicochemical properties. In case of CNTs, the

* Corresponding Author Email: *pkdesh@rediffmail.com*

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Nano Biomed Eng
2021, 13(2): 179-190. doi: 10.5101/nbe.v13i2.p179-190.

Research Article

Fabrication of N-Doped Graphene@TiO_2 Nanocomposites for Its Adsorption and Absorbing Performance with Facile Recycling

Pravin Onkar Patil[1], Sopan Namdev Nangare[1], Pratiksha Pramod Patil[1], Ashwini Ghanashyam Patil[2], Dilip Ramsing Patil[2], Rahul Shankar Tade[1], Arun Madhukar Patil[2], Prashant Krishnarao Deshmukh[3], Sanjay Baburao Bari[1]

[1]H.R. Patel Institute of Pharmaceutical Education and Research, Karvand Naka, Shirpur, Dist- Dhule, Maharashtra, 425405 India.
[2]R.C. Patel Arts, Science, and Commerce College, Shirpur, Maharashtra, 425405 India.
[3]Dr. Rajendra Gode College of Pharmacy, Malkapur, Dist- Buldhana, Maharashtra, 443101 India.

Corresponding author. E-mail: rxpatilpravin@yahoo.co.in

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Abstract

The present work aims to synthesize nitrogen-doped reduced graphene oxide-titanium dioxide nanocomposite (N-rGO@TiO_2) using a simple, eco-friendly method and its applications in spectroscopic detection of heavy metal ions such as lead (Pb^{2+}), mercury (Hg^{2+}), and chromium-VI [Cr(VI)] in potable water. Initially, TiO_2 nanoparticles loaded N doped rGO sheets were fabricated by an ecological method using *Gossypium hirsutum* (cotton) seeds extract as a green reducing agent. Then, the N-rGO@TiO_2 nanocomposites were subjected for characterizations such as spectroscopic techniques, particle size analysis, zeta potential analysis, and spectroscopic sensing. Notably, the results of this study confirmed that N-rGO@TiO_2 exhibited countless stupendous features in terms of sensing of an analyte. Briefly, the UV-visible spectroscopy and Fourier transform infrared (FTIR) spectroscopy confirmed the successful synthesis of N-rGO@TiO_2. The SEM images showed the wrinkled, folded, and cross-linked network structures that confirmed the surface modification and nitrogen doping in the rGO sheet and synthesis of N-rGO@TiO_2. The EDAX study confirmed the elemental composition of the N-rGO@TiO_2 nanocomposite. Finally, due to the larger surface area, porous nature, high electron mobility, etc. the N-rGO@TiO_2 probe provides the lower detection limit for Pb^{2+}, Hg^{2+}, and Cr (VI) as low as 50 nM, 15 µM, and 25 nM, respectively. Concisely, our study affirms the admirable sensitivity of N-rGO@TiO_2 nanocomposite to the Pb^{2+}, Hg^{2+}, and Cr (VI) in potable water can provide better environmental remediation.

Keywords: Graphene oxide, N-rGO@TiO_2, Nanocomposite, Cotton-seed, Heavy metals, Biodegradable, Sensing

Introduction

Over the past two decades, graphene-based materials are gaining tremendous attention from a scientific fraternity in various fields [1-3]. It may because of its astonishing properties and potential to revolutionize the scientific sector [3-5]. Graphene can be used to fabricate several dimension materials such as 1D nanostructure [6], 2D layer stacked films [7], 3D graphene hydrogel [7-9], and aerogel [10-13], etc. Out

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Review Article

Surface architectured metal organic frameworks-based biosensor for ultrasensitive detection of uric acid: Recent advancement and future perspectives

Sopan N. Nangare [a,1], Premnath M. Sangale [a,1], Ashwini G. Patil [b], Sai HS. Boddu [c], Prashant K. Deshmukh [d], Namdeo R. Jadhav [e], Rahul S. Tade [a], Dilip R. Patil [f], Abhijeet Pandey [g], Srinivas Mutalik [g], Jayvadan K. Patel [h], Arun M. Patil [f], Sanjaykumar B. Bari [a], Pravin O. Patil [a,*]

[a] Department of Pharmaceutical Chemistry, H. R. Patel Institute of Pharmaceutical Education and Research, Shirpur, Dist: Dhule, Maharashtra 425405, India
[b] Department of Microbiology, R. C. Patel Arts, Science, and Commerce College, Shirpur, Dist: Dhule, Maharashtra 425405, India
[c] Department of Pharmaceutical Sciences, College of Pharmacy and Health Sciences, Ajman University, Ajman, UAE and Center of Medical and Bio-allied Health Sciences Research, Ajman University, Ajman P.O. Box 346, United Arab Emirates
[d] Department of Pharmaceutics, Dr. Rajendra Gode College of Pharmacy, Malkapur, Dist- Buldhana, Maharashtra 425405, India
[e] Department of Pharmaceutics, Bharati Vidyapeeth College of Pharmacy, Kolhapur, Maharashtra 416013, India
[f] Department of Physics, R. C. Patel Arts, Science, and Commerce College, Shirpur, Dist: Dhule, Maharashtra 425405, India
[g] Department of Pharmaceutics, Manipal College of Pharmaceutical Sciences, Manipal Academy of Higher Education, Manipal, Karnataka, India
[h] Nootan Pharmacy College, Dean, Sankalchand Patel University, Visnagar, Gujarat 384315, India

ARTICLE INFO

Keywords:
Gout, uric acid
Metal–organic framework
Electrochemical biosensor
Fluorescent biosensor
Colorimetric biosensor

ABSTRACT

Gout is the world's most popular inflammatory arthritis and the prevalence of gout is rapidly rising worldwide. Typically, gout develops in a single joint as excessive swelling and intense pain wherein excessive deposition of uric acid (UA) crystals results in inflammation of the joint. Accordingly, UA is considered an effective biomarker to diagnose gout. Recently, the use of innovative sensors has attracted great attention, as it is effortless, responsive, quick, and powerful. While the traditional sensors for UA assessment are widely used, they pose many limitations and hurdles in terms of sensitivity, selectivity, and simplicity. In this vein, metal ions and organic ligand-based metal–organic framework (MOF) have gained much attention for the recognition of UA due to its larger surface area, porosity, high sensitivity, and defined selectivity. In this review, we provide details on the latest developments of MOF-centered biosensors for sensitive detection of UA. The status of gout, fundamentals of MOF, and MOF availed for detection of UA have been elaborated. Besides, we highlighted the nanoparticles and conjugates that rely on advanced strategies along with MOF that boost the sensitivity and selectivity towards the UA. Interestingly, different surface architectured MOFs biosensors showed a lower detection limit for UA from μM to nM. Finally, the threats and potential opportunities for MOF-based UA biosensors have been summarized. Therefore, based on ongoing research, the commercialization of this advanced platform for the biosensing of diverse biomarkers will open a new door for the *in vitro* diagnosis of assorted diseases.

1. Introduction

From its inception, arthritis is a severe health issue of a joint in almost all developed and developing nations. Arthritis is a term that derives from the Greek word "disease of the joint." Commonly, it can be stated as acute inflammation or chronic inflammation of the joint that is sometimes with the effect of pain and sometimes co-exists with structural damage [1]. As many as 100 classes of arthritis have been characterized according to the research. Generally, it can be classified into two type's namely non-inflammatory arthritis and inflammatory arthritis. In the first category, non-inflammatory arthritis is commonly known as osteoarthritis, while inflammatory arthritis is categorized

* Corresponding author.
E-mail address: rxpatilpravin@yahoo.co.in (P.O. Patil).
[1] These authors contributed equally as first authors.

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Green synthesis of Fe-doped Ag-loaded reduced graphene oxide ternary nanocomposite for efficient photocatalytic degradation of toxic dyes

S N Nangare[1], S Landge[1], A G Patil[2], R S Tade[1], P K Deshmukh[3] and P O Patil[1,*]

[1] Department of Pharmaceutical Chemistry, H. R. Patel Institute of Pharmaceutical Education and Research, Karvand Naka, Shirpur, Dist- Dhule, Maharashtra, -425405, India
[2] Department of Microbiology, R. C. Patel Arts, Science, and Commerce College, Shirpur, Maharashtra, -425405, India
[3] Department of Pharmaceutics, Dr. Rajendra Gode College of Pharmacy, Malkapur, Dist- Buldhana, Maharashtra, 443101, India

E-mail: rxpatilpravin@yahoo.co.in

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Abstract

The green synthesis of iron nanoparticles (FeNPs) doped and silver nanoparticles (AgNPs) loaded reduced graphene oxide (rGO) (Fe-Ag@rGO) nanocomposite and its applications in methylene blue (MB), malachite green (MG), rhodamine B (RB) degradation were reported. Initially, AgNPs loaded rGO (Ag@rGO) nanocomposites were synthesised simultaneously by an ecological method using *Tamarindus indica* shell extract as a green reducing agent. Then, the doping of FeNPs into rGO@Ag nanocomposites afforded Fe-Ag@rGO nanocomposite. Interestingly, the finding of this study confirmed that the Fe-Ag@rGO nanocomposites exhibited countless stupendous features in terms of dye degradation. Briefly, the UV-visible spectroscopy and Fourier-transform infrared spectroscopy (FTIR) study confirmed the synthesis of Fe-Ag@rGO nanocomposite. The scanning electron microscopy (SEM) images showed the spherical shape with cross-linked network structures that confirmed the surface modification and synthesis of Fe-Ag@rGO nanocomposite. Finally, the dye degradation potential of the photocatalyst was found to be 97.20%, 98.43%, and 97.33%, for MB, MG, RB, respectively. Herein, the improved photocatalytic performance of the Fe-Ag@rGO was found due to the larger surface area, porous nature, high electron mobility, and synergistic effect of the Fe-Ag@rGO nanocomposite. Additionally, the effective interfacial hybridisation of 'Ag', and doping of 'Fe' on the rGO sheet extended the duration of the photogenerated electron (e^-) hole pairs that can also be contributing to dye degradation. Conclusively, the present experiment provides the new Fe-Ag@rGO nanocomposite to the dye degradation, which could be improved environmental remediation.

Keywords: dye degradation, nanocomposite, Fe-Ag@rGO, Tamarindus indica shells, graphene oxide, Green synthesisClassification numbers, 2.00, 5.00, 5.11

1. Introduction

Today is the era of accelerated industrialisation, which ha
seen rapid developments and has played an essential role i

* Author to whom any correspondence should be addressed.

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REVIEW

Structural design of nanosize-metal–organic framework-based sensors for detection of organophosphorus pesticides in food and water samples: current challenges and future prospects

Sopan N. Nangare[1] · Sayali R. Patil[1] · Ashwini G. Patil[2] · Zamir G. Khan[1] · Prashant K. Deshmukh[3] · Rahul S. Tade[1] · Mahendra R. Mahajan[1] · Sanjaykumar B. Bari[1] · Pravin O. Patil[1]

Received: 8 July 2021 / Accepted: 30 September 2021

Abstract

Organophosphorus pesticide (OPP) is regarded as an important food-chain and environmental contaminant that causes primary acute toxicity and numerous severe health issues. Therefore, the minute concentration of OPP present in food materials and environments needs to be identified before it causes any brutal harm to lives. Despite the plenty of merits of qualitative and quantitative sensing methods, the lower sensitivity, poor selectivity, detection speed, etc. towards the interest OPP are major drawbacks. Nanoparticles have attracted a lot of attention because of their unique and intriguing features, which have a variety of applications including sensor development as compared to their bulk counterparts. Recently, the structural design of nanosize-metal–organic framework (MOF) is gaining huge consideration from researchers for sensing applications owing to their versatile and tunable properties. Additionally, MOF-based sensors offer the rapid, simplistic, selective, and sensitive sensing of interest analyte. The present review provides brief information about OPPs and their toxicities. The emerging trends of structural design of nanosize-MOF including their properties have been summarized. Finally, nanosize-MOF-based fluorescent sensors, electrochemical sensors, and colorimetric sensors have been discussed with central focus on sensitivity and selectivity to OPPs. Due to the higher surface area, rich topology, ease of structural tunability and functionalization, tunable pore size, plenty of binding sites, good adsorption potential, excellent charge conductivity, and chemical stability, etc., MOF based sensors are endowed with the ability of OPPs detection upto aM. Hence, MOF as nanoporous sensors can be preferred as an excellent alternative for highly sensitive and selective recognition of OPPs in food and water samples.

Sopan N. Nangare and Sayali R. Patil contributed equally as a first author.

✉ Pravin O. Patil
rxpatilpravin@yahoo.co.in

1 Department of Pharmaceutical Chemistry, H. R. Patel Institute of Pharmaceutical Education and Research, Dist: Dhule, Shirpur, Maharashtra 425405, India

2 Department of Microbiology, R. C. Patel Arts, Science, and Commerce College, Dist: Dhule, Shirpur, Maharashtra 425405, India

3 Department of Pharmaceutics, Dr. Rajendra Gode College of Pharmacy, Dist- Buldhana, Malkapur, Maharashtra 425405, India

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Scientific paper

Design of "Turn-Off" Fluorescent Nanoprobe for Highly Sensitive Detection of Uric Acid using Green Synthesized Nitrogen-Doped Graphene Quantum Dots

Sopan Nangare,[1] Shweta Baviskar,[2] Ashwini Patil[3] and Pravin Patil[2,*]

[1] *Department of Pharmaceutics, H. R. Patel Institute of Pharmaceutical Education and Research, Shirpur-425405, Dist: Dhule, Maharashtra state, INDIA-425405*

[2] *Department of Pharmaceutical Chemistry, H. R. Patel Institute of Pharmaceutical Education and Research, Shirpur-425405, Dist: Dhule, Maharashtra state, INDIA-425405*

[3] *Department of Microbiology, R. C. Patel Arts, Science, and Commerce College, Shirpur, Dist: Dhule, Maharashtra state, INDIA-425405*

* *Corresponding author: E-mail: rxpatilpravin@yahoo.co.in*

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Abstract

Green synthesized graphene quantum dots (GQD) have been doped with nitrogen in an attempt to boost their optical characteristics and application sectors. In the present investigation, the blue luminescent nitrogen-doped GQDs (N-GQDs) were synthesized by single-step hydrothermal synthesis using tamarind shell powder as a precursor. The particle size and zeta potential of N-GQDs were found to be 11.40 nm and be –35.53 mV, respectively. A quantum yield as high as 23.78 % was accomplished at an excitation wavelength of 330 nm at neutral pH. It gets quenched sensitively in the existence of uric acid (UA) combining static quenching, electron transfer, and an inner filter effect mechanism. A linear range was obtained for UA from 10 μM to 100 μM, with a limit of detection (LOD) of 401.72 ± 0.04 pM. Additionally, the N-GQDs were selective toward UA in presence of metal ions and biomolecules that indicated its impending use to monitor UA in clinical samples. In conclusion, this work demonstrates that the N-GQDs as a sensing probe for UA recognition with notable advantages including socioeconomic, simple, and less time-consuming methods as compared to other methods. In the future, it can be potentially explored as a biosensor for UA detection in clinical samples.

Keywords: Graphene Quantum Dots; N-GQDs; Uric acid; Biosensor; Tamarind Shell Powder

1. Introduction

Principally, UA (2.6,8-trihydroxypurine) is the primary product of purine synthesis.[1] As per literature, in the general population, UA is referred to between 0.13 mM to 0.46 mM and 2.49 mM to 4.46 mM in serum and urine, respectively.[2] As we know, the abnormal levels of such metabolites in body fluids can cause several diseases.[3] Plentiful literature revealed that the increased UA levels in body samples are indicative of hypertension, gout, cardiovascular disease, kidney disease, high cholesterol, and many more.[4] In comparison, low concentrations of UA are also connected with multiple sclerosis and oxidative stress.[5,6] In diagnosis and healthcare, it is crucial to quantify metabolites in blood or other biological samples. Therefore, a rapid, responsive, precise, and cheap method of assessment must be developed to track such metabolites in body fluids including serum and urine.[5]

Literature survey reported that electrochemical sensing,[7] a colorimetric method,[8] a chromatographic method,[9] etc. are currently engaged detection techniques for UA in different body fluid samples. However, some in-conveniences such as complicated synthesis or challenging extraction, advanced equipment, expensive and tedious limiting their practical uses, are present in these approaches.[5] There are no exceptions for benefit of fluorescence. It is highly sensitive, and it shows a fast reaction, and operative simplicity in contrast to the oth-

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Short communication

Design of graphene quantum dots decorated MnO_2 nanosheet based fluorescence turn "On-Off-On" nanoprobe for highly sensitive detection of lactoferrin

Sopan Nangare [a], Sagar Patil [b], Sairendhri Patil [b], Zamir Khan [b], Ashwini Patil [c], Pravin Patil [b,*]

[a] Department of Pharmaceutics, H. R. Patel Institute of Pharmaceutical Education and Research, Shirpur 425405, Dist: Dhule (MS), India
[b] Department of Pharmaceutical Chemistry, H. R. Patel Institute of Pharmaceutical Education and Research, Shirpur 425405, Dist: Dhule (MS), India
[c] Department of Microbiology, R. C. Patel Institute of Arts, Commerce and Science College, Shirpur 425405, Dist: Dhule (MS), India

ARTICLE INFO

Keywords:
Lactoferrin
Periodontal disease
Graphene quantum dots
Manganese dioxide nanosheet
Fluorescent sensor
Sensitivity

ABSTRACT

Lactoferrin estimation is increasingly acquiring prominence as a novel biomarker for the diagnosis of periodontal disease. To date, diverse lactoferrin detection methods which include electrochemical, surface-enhanced Raman scattering, colorimetric, and others have been extensively portrayed. Unfortunately, these systems have significant shortcomings including low sensitivity, selectivity, high cost, arduous and time-consuming technique, and so forth. Recently, the fluorescence-based method shows remarkable uniqueness that overcomes the demerits of traditionally reported techniques. Therefore, graphene quantum dots (GQDs) and manganese dioxide nanosheets (MnO_2-NS) based simplistic, highly sensitive, and selective fluorescent turn 'Off-On' mediated GQDs@MnO_2-NS nanoprobe was designed. Herein, MnO_2-NS addition demonstrated the quenching of GQDs containing fluorescence through inner filter effects (IFE) and strong interaction between GQDs and MnO_2-NS. The lactoferrin addition destroyed the MnO_2-NS and fluorescence emission of GQDs reappeared which may be because of redox reaction between lactoferrin and prepared MnO_2-NS. Herein, nanoprobe offers a wide concentration range and low limit of detection of 5 to 1600 ng/mL and 1.69 ng/mL, respectively. As fabricated GQDs@MnO_2-NS nanoprobe sensor demonstrated high selectivity, good stability, and reproducibility towards lactoferrin that assuring applicability of biosensor. Therefore, the GQDs@MnO_2-NS nanoprobe will offer a simplistic sensor with adequate sensitivity to achieve highly responsive and selective detection of lactoferrin.

1. Introduction

Periodontal disease is common in many countries [1], and is frequently produced by microbial infection. It stimulates the adherence of connective tissue and the prevention of bone surrounding the teeth at the onset of illness [2,3]. Despite this, its following inflammatory response adds to the loss of periodontal tissues in a patient. As a result, it is a prolonged inflammatory illness in people that causes not only regional mouth diseases but also systemic organ abnormalities [3]. Importantly, periodontal disease if remain untreated, the illness progresses to gradual bone damage, resulting in tooth movement and eventual tooth loss. As per literature, periodontal disease affects more than half of the grownup people in the United States, with around 10% suffering from serious disease those results in earlier tooth loss [4]. To prevent additional severances of periodontal disease, it is critical to accurately diagnose it. In this regard, biomarker detection is essential in the prediction of health difficulties, and scientists are presently investigating novel biomarkers for sickness diagnosis. In latest days, advances in the science of diagnosing oral as well as periodontal illness have evolved into ways for measuring periodontal threats employing quantifiable evidence kind of as biomarkers [5].

Lactoferrin (family: transferrin) is an iron-binding glycoprotein found in secondary neutrophil granulocytes [6]. As per literature, it demonstrates responsiveness to acute inflammation [3]. In addition, lactoferrin is observed in tears and saliva [6]. Lactoferrin estimation has received a lot of attention during the last two decades as a new biomarker [7] for the diagnosis of periodontal disease. Furthermore, it may be recommended for the diagnosis of various inflammatory illnesses [8]. Several identification studies have proposed various approaches for lactoferrin detection. Mainly, single radial

* Corresponding author.
E-mail address: rxpatilpravin@yahoo.co.in (P. Patil).

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Bovine serum albumin-derived poly-L-glutamic acid-functionalized graphene quantum dots embedded UiO-66-NH_2 MOFs as a fluorescence 'On-Off-On' magic gate for *para*-aminohippuric acid sensing

Sopan Nangare [a,1], Sairendhri Patil [b,1], Ashwini Patil [c], Prashant Deshmukh [d], Pravin Patil [e,*]

[a] Department of Pharmaceutics, H. R. Patel Institute of Pharmaceutical Education and Research, Shirpur 425405, Dist., Dhule, (MS), India
[b] Department of Quality Assurance, H. R. Patel Institute of Pharmaceutical Education and Research, Shirpur 425405, Dist., Dhule, (MS), India
[c] Department of Microbiology, R. C. Patel Arts, Commerce and Science College, Shirpur 425405, Dist., Dhule, (MS), India
[d] Department of Pharmaceutics, Dr. Rajendra Gode College of Pharmacy, Malkapur 425405, Dist, Buldhana, (MS), India
[e] Department of Pharmaceutical Chemistry, H. R. Patel Institute of Pharmaceutical Education and Research, Shirpur 425405, Dist., Dhule, (MS), India

ARTICLE INFO

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Bovine serum albumin
Para-amino hippuric acid
Poly-L-glutamic acid
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ABSTRACT

Evaluating *para*-aminohippuric acid (PAH) is emerging as a promising biomarker for the diagnostics of renal disease and other kidney-related illnesses. The present study aims to develop novel bovine serum albumin-derived poly-L-glutamic acid (PLGA) functionalized graphene quantum dots (PLGA-fGQDs) embedded in UiO-66-NH_2 metal–organic frameworks (PLGA-fGQDs@UiO-66-NH_2 MOFs) for monitoring of PAH. Initially, GQDs were achieved from bovine serum albumin (green precursor) via the single-step hydrothermal method. Here, functionalization with PLGA offers a tremendous increment in optical properties of GQDs. Then, highly luminescent UiO-66-NH_2 MOFs were achieved using zirconium tetrachloride ($ZrCl_4$) and 2-Aminoterephthalic acid (2-ATA) as a metal ion source and organic linker. Here, surface modification of GQDs with PLGA offered high quantum yield (QY), and responsiveness. Also, luminous UiO-66-NH_2 MOFs afford a wide surface area for decorating of PLGA-fGQDs. The addition of gallium ions (Ga^{3+}) into the probe solution resulted in fluorescence quenching (Turn-Off) whereas the incorporation of PAH resulted in fluorescence recovery (Turn-On). It is because of interaction with carboxylic functionality of PAH to Ga^{3+} followed by Ga-PAH complex formation. Herein, the wide concentration range and lowest limit of detection (LOD) were found to be 10 ng/mL to 900 ng/mL and 15.88 ng/mL, respectively. The specificity and real-time analysis in artificial urine validated the real-time adoption of a sensor for PAH detection. As well, it demonstrated good intraday/interday precision, stability analysis, and repeatability. In near future, the bundled illuminating PLGA-fGQDs@UiO-66-NH_2 MOFs nanoprobe will be an attractive preference for tracking PAH in clinical specimens.

1. Introduction

Renal diseases have already been considered a major public health concern around the globe. In this shade, the scientific community constantly committed to the advancement of screening methods [1]. In this ray, *para*-amino hippuric acid (PAH, 4-amino derivative of hippuric acid) is utilized in the assessment of renal plasma flow (RPF) as a diagnostic agent [2]. Hence, PAH is a valuable agent for accurately measuring effective renal plasma flow (ERPF) in clinical and laboratory research to evaluate renal functioning [3,4]. Basically, PAH is an amide derivative of glycine and *para*-aminobenzoic acid. It doesn't naturally occur in humans. As a result, it must be injected via intravenous (IV) prior to diagnosis. As an outcome, at low plasma concentrations (1 mg to 2 mg/100 mL), the kidneys can remove 90 % of aminohippurate from the renal circulating blood in a single circulation. As a function, PAH can be exploited to examine renal function as an essential indicator [5]. The renal extraction ratio of PAH in a normal individual is between 0.92 and 1.65 mL/min/kg [6]. Traditionally acknowledged indications of renal dysfunction encompass high uric acid levels and an imbalance in PAH levels [7]. In this regard, numerous analytical techniques, such as HPLC with UV detection [6], colorimetric detection [8], tandem mass spectrometry [9], and electrochemical detection [10], have been proposed

* Corresponding author.
E-mail address: rxpatilpravin@yahoo.co.in (P. Patil).
[1] These authors contributed equally as first authors.

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Research Article

Nano Biomed Eng

Graphene Quantum Dots Incorporated UiO-66-NH_2 Based Fluorescent Nanocomposite for Highly Sensitive Detection of Quercetin

Sopan Nangare[1], Sayali Patil[1], Kalyani Chaudhari[1], Zamir Khan[1], Ashwini Patil[2], Pravin Patil[1]*

[1] Department of Pharmaceutical Chemistry, H. R. Patel Institute of Pharmaceutical Education and Research, Shirpur, India

[2] Department of Microbiology, R. C. Patel Arts, Science and Commerce College, Shirpur, India

* Corresponding author. E-mail: rxpatilpravin@yahoo.co.in

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Abstract

Quercetin can help with a variety of health problems. Most methods for measuring quercetin in biological fluids are characterized by low sensitivity and selectivity. The employment of metal–organic frameworks in sensor applications with carbon-based materials ushers in a new era. In this study, blue fluorescent graphene quantum dots (GQDs) embedded in a UiO-66-NH_2 metal–organic framework-based nanoprobe (GQDs@UiO-66-NH_2) were constructed for quercetin sensing. Initially, maize husk was used to produce blue fluorescent GQDs, whereas zirconium tetrachloride and 2-aminoterephthalic acid were used to synthesize extremely luminous UiO-66-NH_2. The addition of quercetin to GQDs@UiO-66-NH_2 leads to fluorescence dampening due to the adsorption potential of UiO-66-NH_2. The complexation of zirconium ions with the 3-OH and 4-C=O functionalities of quercetin resulted in fluorescence quenching. The sensor has a linear concentration range and limit of detection for quercetin of 50–500 and 2.82 ng/mL, respectively. The nanoprobe's usefulness for quercetin detection was then validated by a selectivity investigation in the presence of interfering chemicals. Furthermore, the percentage relative standard deviations were 4.20% and 2.90%, respectively, indicating great stability and repeatability. Fluorescence "Turn-On–Off" nanoprobes provide a simple, quick, sensitive, and selective method for monitoring quercetin.

Keywords: quercetin; graphene quantum dots (GQDs); fluorescence; nanoprobe; metal–organic framework; GQDs@UiO-66 NH_2; sensitivity

Introduction

Quercetin is the most important flavonoid in fruits and vegetables [1]. It does not produce in human bodies [2]. Quercetin is widely reported for antioxidant, antiviral, immunomodulation, antitumor [3], and anti-inflammatory [4] applications. The literature claimed that 945 mg/m² is the safe dose different several health issues including hypertension, a decline in potassium levels in serum, and emesis [2]. Therefore, accurate measurement of the concentration of quercetin is essential in the biomedical field [3]. Moreover, to measure the bioavailability of quercetin, it is essential for pharmacological response [1]. In general, analysis of quercetin with a simplistic, speedy, highly selective,

H. R. Patel Pharmacy College Hosted stress relief workshop: Dr. Milind Bachute from R. C. Patel Arts, Commerce and Science College was the speaker

एच. आर. पटेल फार्मसीत ताण-तणाव व्यवस्थापन कार्यशाळा संपन्न

शिरपूर येथील एच. आर. पटेल औषधनिर्माणशास्त्र महाविद्यालय व कवयीत्री बहिणाबाई चौधरी उत्तर महाराष्ट्र विद्यापीठ, जळगाव यांच्या संयुक्त विद्यमाने आयोजित एक दिवशीय ताण-तणाव व्यवस्थापन कार्यशाळा नुकतीच संपन्न झाली. कार्यशाळा विद्यापीठाच्या अंतर्गत येणाऱ्या महाविद्यालयातील शिक्षकेतर कर्मचाऱ्यांसाठी आयोजित करण्यात आली. कार्यशाळेत विविध महाविद्यालयाच्या सुमारे पन्नास शिक्षकेतर कर्मचाऱ्यांनी उस्फुर्तपणे सहभाग नोंदविला. कार्यक्रमाचे उद्घाटन बोराडी येथील आयुर्वेद महाविद्यालयाचे प्रा. डॉ. गणेश कोल्हे यांच्या हस्ते झाले. यावेळी शिरपूर येथील आर्ट ऑफ लिविंगचे मार्गदर्शक विकास पाटील, आर. सी. पटेल कला, विज्ञान व वाणिज्य महाविद्यालयाचे मानसशास्त्र विभागप्रमुख डॉ. मिलिंद बचुटे, महाविद्यालयाचे प्राचार्य डॉ. एस. बी. बारी, कार्यक्रमाचे संयोजक डॉ. व्ही. के. चटप, समन्वयिका सौ. सोनल शहा, डॉ. डी. डी. पाटील, डॉ. पी. ओ. पाटील, डॉ. पी. के. देशमुख, आदी उपस्थित होते. महाविद्यालयाचे प्राचार्य डॉ. एस. बी. बारी कार्यक्रमाच्या अध्यक्षस्थानी होते. डॉ. चटप यांनी कार्यक्रमाची पार्श्वभूमी सांगितली. सौ. सोनल शहा यांनी सूत्रसंचलन व आभारप्रदर्शन केले. प्राचार्य डॉ. एस. बी. बारी यांनी कार्यशाळेची प्रस्तावना केली. महाविद्यालयाच्या प्रगतीत शिक्षकेतर कर्मचाऱ्यांची भूमिका उल्लेखनीय आहे. दैनंदिन कार्यप्रणालीत येणाऱ्या तणावाचे कलात्मक व शास्त्रोक्त पध्दतिने व्यवस्थापन केल्यास कर्मचाऱ्यांची कार्यक्षमता व गुणवता यातील विकास सहज श्यक्य असल्याचे प्राचार्य डॉ. बारी यांनी सांगितले. डॉ. गणेश कोल्हे यांनी विनोदी शैलीने भावनिक चिकित्सा व ताण-तणाव व्यवस्थापन यावर उपस्थितांना मार्गदर्शन केले. कौटुंबिक व कार्यालयीन तणाव या भिन्न बाबी असून त्यांची स्वतंत्रपणे उपाययोजना करणे गरजेचे आहे. आपला ताण दुर्बल व्यक्तीवर न देता तणाव मुक्ती करणे अधिक लाभदायक असल्याचे डॉ. कोल्हे यांनी सांगितले. विकास पाटील यांनी व्यायामांच्या सहाय्याने तणाव व्यवस्थापनाचे प्रात्यक्षिक सादर करून जगण्याची कला यावर मार्गदर्शन केले. डॉ. मिलिंद बचुटे यांनी ताण-तणावाचे व्यवस्थापनाचा विचार न करता स्वयं व्यवस्थापन करण्याचा संदेश दिला. स्वयं-व्यवस्थापणासाठी मानसशास्त्रीय प्रयोग यावर डॉ. बचुटे यांनी शास्त्रोक्त व सखोल मार्गदर्शन केले. कार्यक्रमाच्या आयोजनाबद्दल संस्थेचे अध्यक्ष आमदार अमरिशभाई पटेल, नगराध्यक्षा जयश्रीबेन पटेल, संस्थेचे कार्याध्यक्ष तथा उपनगराध्यक्ष भूपेशभाई पटेल, संस्थेचे उपाध्यक्ष राजगोपाल भंडारी, नगरसेवक तपनभाई पटेल, सचिव प्रभाकर चव्हाण, उमवीचे माजी कुलगुरू ड़ॉ. के. बी. पाटील, प्राचार्य डॉ. एस. बी. बारी यांनी कौतुक केले.

EVENT DETAIL

Detailed Report on North Maharashtra University, Jalgaon sponsored One day Seminar at H. R. Patel Institute of Pharmaceutical Education & Research, Shirpur, Dist- Dhule (Maharashtra)

Type of Activity: Activity for Non-teaching Staff

Description of Activity: One day Seminar on "**Stress Management for non-teaching staff**" at H. R. Patel Institute of Pharmaceutical Education & Research, Shirpur, Dist-Dhule (Maharashtra).

Purpose of Activity: Activity for non-teaching staff to make them relax from their day to day work.

Place: H. R. Patel Pharmacy College, Shirpur-425405, Dist- Dhule (M.S.).

Date & Day: 12th March 2019

Time: 9.00 AM to 5.30 PM.

Organizer: H. R. Patel Institute of Pharmaceutical Education & Research, Shirpur.

One day Seminar on "**Stress Management –for Non-teaching staff**", sponsored by North Maharashtra University, Jalgaon was organized at H. R. Patel Institute of Pharmaceutical Education & Research, Shirpur, Dist-Dhule (Maharashtra) on 12th March 2019. More than 50 delegates including non-teaching staff of various institutes had participated in the seminar.

The program was inaugurated by Chief Guest of function Dr. Ganesh Kholhe, Assistant Professor, Ayuevedic College, Boradi with President of function Mr.Vikas Patil, member of Art of Living by lighting the lamp and garlanding to Goddess Maa Saraswati. Dr. S. B. Bari, Principal and Chairman of the seminar, Dr. V.K.Chatap, Convener of the seminar, Mrs.S.s.Shah Coordinator of seminar accompanied for lighting the lamp to inaugurate the function.

Dr. Sanjay B. Bari gave the information about the various activities, achievements and future plans of the institute. Dr. Vivekanand K.Chatap, convener of seminar highlighted important of the non –teaching staff for the development of any institute.

The First session began with the very enlightening lecture on topic "Stress Management", delivered by Dr. Ganesh Kolhe, Assistant Professor, Ayurvedic College, Boradi.

He advised to staff members to manage the balance between your work and personal life. Never affect your daily work due to your personal life. He also gave the simple example for how to release our stress.

The second section began with the practical session by Mr. Vikas Patil, Members of the group of Art of living. He also performed the simple exercised to release our stress & explain the various simple tricks to release our stress.

In third session, Dr. Milind Bachute, Assistant Professor, R. C. Patel Arts, Sci & Comm College, Shirpur had discussed about self-management, further he added that if we planned our self-management than there is on need of stress management. We manage our time, wealth but stress is not an important thing to manage. He also showed small activity we can perform at our work place to release the stress.

At the end of all session, open question and answer session was organized.

All the delegates, resource persons, guests, committee members & participants discussed many issues related to stress management.

Afterwards, Mrs. Sonal S. Shah Coordinator of seminar expressed vote of thanks and congratulated to organizing team for timely completion of all the schedule and conclusion of function in time. He paid his gratitude towards North Maharashtra University, Jalgaon for sponsoring this seminar on "Stress Management"

Prepared By

Mrs. S. S. Shah
Coordinator

Dr. V. K. Chatap
Convener

Dr. S. B. Bari
Chairman

PRINCIPAL
H. R. Patel Institute of Pharmaceutical Education & Research
Shirpur Dist. Dhule (M.S.) 425 405

H. R. Patel Institute of Pharmaceutical Education and Research

"Serving Nations' Health"

Approved by AICTE, PCI, Delhi, Govt. of Maharashtra, Mumbai, Affiliated to NMU, Jalgaon, & An ISO 9001:2008 Certified Institute

Shri. Amrishbhai R. Patel
President (M.L.A.)

Dr. Sanjaykumar B. Bari
Principal (M.Pharm., Ph.D.)

Date 12/03/2019

To,

Dr.Milind Bachute,

Asst.Professor,

R.C.Patel Arts, Sci. & comm College,

Shirpur.

Subject: Thanks for Guest Lecture...

Dear Sir,

It is our privilege to listen your lecture on the topic of **"Stress Management"** on 12/03/2019. The lecture was fully understood by our non-teaching staff members & they were very much satisfied in your session.

On behalf of management & teaching staff, I am thankful to you for giving time from your busy schedule.

Received copy

Yours Faithfully,

Dr.S.B.Bari
PRINCIPAL
H. R. Patel Institute of Pharmaceutical Education & Research,
Shirpur Dist. Dhule (M.S.) 425 405

Address: Karwand Naka, Shirpur Dist. Dhule (425 405) M.S. (India)
Contact: +91 2563-257599; +91 9049032111; +91 9850223277
Email: principal@hrpatelpharmacy.co.in; registrar@hrpatelpharmacy.co.in

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Shri. Amrishbhai R. Patel
President (M.L.A.)

Dr. Sanjaykumar B. Bari
Principal (M.Pharm., Ph.D.)

Date : – 09/03/2019

To,

Dr. Milind Bachute,

Asst. Professor,

R.C.Patel Arts, Sci. & comm College,

Shirpur.

Subject – Invitation as a Speaker for One Day Workshop....

Dear Sir,

I am pleased to inform you that KBC North Maharashtra University (NMU), Jalgaon has offered us a grant to organized one day workshop on "**Stress Management**" for our non-teaching staffs. In this regard, we have organized the event on 12th March 2019 Tuesday at our institute.

We are inviting expertise to address the staffs with recent updates in the topic. We will feel privileged if a widely acclaimed & experienced person like you accepts our invitation as a speaker for this workshop.

Theme of Workshop : - "Stress Management"

Venue :- H. R. Patel Pharmacy College,Shirpur

Time :- 11.00 am

Thanking you.

Yours sincerely

Received copy

Dr. S. B. Bari

PRINCIPAL
H. R. Patel Institute of Pharmaceutical Education & Research, Shirpur Dist. Dhule (M.S.) 425 405

Address: Karwand Naka, Shirpur Dist. Dhule (425 405) M.S. (India)
Contact: +91 2563-257599; +91 9049032111; +91 9850223277
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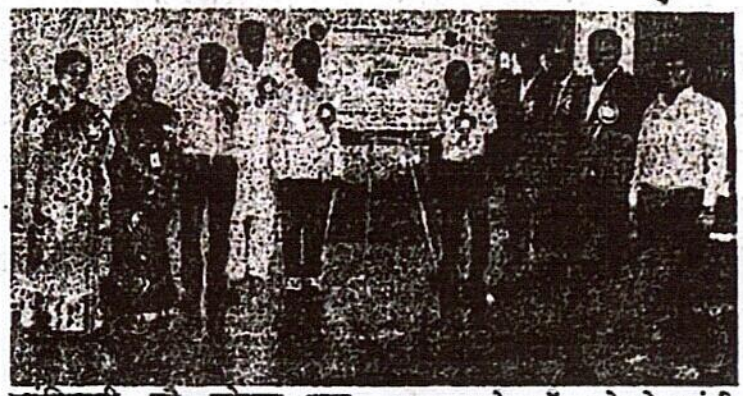
सोमवार दि.१८ मार्च २०१९

कर्मचाऱ्यांनी व्हावे तणावमुक्त : शिरपुरातील कार्यशाळेत आवाहन



शिरपूर

येथील एच. आर. पटेल औषधनिर्माणशास्त्र महाविद्यालय व कवयित्री बहिणाबाई चौधरी उत्तर महाराष्ट्र विद्यापीठ, जळगाव यांच्या संयुक्त विद्यमाने आयोजित एक दिवशीय ताण-तणाव व्यवस्थापन कार्यशाळा नुकतीच संपन्न झाली.

कार्यशाळा विद्यापीठाच्या अंतर्गत येणाऱ्या महाविद्यालयातील शिक्षकेतर कर्मचाऱ्यांसाठी आयोजित करण्यात आली. कार्यशाळेत विविध महाविद्यालयाच्या सुमारे पन्नास शिक्षकेतर कर्मचाऱ्यांनी उस्फुर्तपणे सहभाग नोंदविला. कार्यक्रमाचे उद्घाटन बोराडी येथील आयुर्वेद महाविद्यालयाचे प्रा. डॉ. गणेश कोल्हे यांच्या हस्ते झाले. यावेळी शिरपूर येथील आर्ट ऑफ लिविंगचे मार्गदर्शक विकास पाटील, आर. सी. पटेल कला, विज्ञान व वाणिज्य महाविद्यालयाचे मानसशास्त्र विभागप्रमुख डॉ. मिलिंद बचुटे, महाविद्यालयाचे प्राचार्य डॉ. एस. बी. बारी, कार्यक्रमाचे संयोजक डॉ. व्ही. के. चटप, समन्वयिका सौ. सोनल शहा, डॉ. डी. डी. पाटील, डॉ. पी. ओ. पाटील, डॉ. पी. के. देशमुख, आदी उपस्थित होते. महाविद्यालयाचे प्राचार्य डॉ. एस. बी. बारी कार्यक्रमाच्या अध्यक्षस्थानी होते. डॉ. चटप यांनी कार्यक्रमाची पार्श्वभूमी सांगितली. सौ. सोनल शहा यांनी सूत्रसंचलन व आभारप्रदर्शन केले. प्राचार्य डॉ. एस. बी. बारी यांनी कार्यशाळेची प्रस्तावना केली. महाविद्यालयाच्या प्रगतीत शिक्षकेतर कर्मचाऱ्यांची भूमिका उल्लेखनीय आहे. दैनंदिन कार्यप्रणालीत येणाऱ्या तणावाचे कलात्मक व शास्त्रोक्त पध्दतिने व्यवस्थापन केल्यास कर्मचाऱ्यांची कार्यक्षमता व गुणवत्ता यातील विकास सहज शक्य असल्याचे प्राचार्य डॉ. बारी यांनी सांगितले. डॉ. गणेश कोल्हे यांनी विनोदी शैलीने भावनिक चिकित्सा व ताण-तणाव व्यवस्थापन यावर उपस्थितांना मार्गदर्शन केले. कौटुंबिक व कार्यालयीन तणाव या भिन्न बाबी असून त्यांची स्वतंत्रपणे उपाययोजना करणे गरजेचे आहे. आपला ताण दुर्बल व्यक्तीवर न देता तणाव मुक्ती करणे अधिक लाभदायक असल्याचे डॉ. कोल्हे यांनी सांगितले. विकास पाटील यांनी व्यायामांच्या सहाय्याने तणाव व्यवस्थापनाचे प्रात्यक्षिक सादर करून जगण्याची कला यावर मार्गदर्शन केले. डॉ. मिलिंद बचुटे यांनी ताण-तणावाचे व्यवस्थापनाचा विचार न करता स्वयं व्यवस्थापन करण्याचा संदेश दिला. स्वयं-व्यवस्थापणासाठी मानसशास्त्रीय प्रयोग यावर डॉ. बचुटे यांनी शास्त्रोक्त व सखोल मार्गदर्शन केले. कार्यक्रमाच्या आयोजनाबद्दल संस्थेचे अध्यक्ष आमदार अमरिशभाई पटेल, नगराध्यक्षा जयश्रीबेन पटेल, संस्थेचे कार्याध्यक्ष तथा उपनगराध्यक्ष भूपेशभाई पटेल, संस्थेचे उपाध्यक्ष राजगोपाल भंडारी, नगरसेवक तपनभाई पटेल, सचिव प्रभाकर चव्हाण, उमवीचे माजी कुलगुरू डॉ. के. बी. पाटील, प्राचार्य डॉ. एस. बी. बारी यांनी कौतुक केले.

सुटी द्यावी : जिल्हाधिकाऱ्यांची सूचना

(पान १ वरुन)तासांची सवलत मिळेल याची दक्षता संबंधित

लोकमत

शिक्षकेतर कर्मचाऱ्यांसाठी विद्यापीठस्तरीय कार्यशाळा

शिरपूर : ताण-तणाव व्यवस्थापनावर तज्ज्ञांकडून मार्गदर्शन

लोकमत न्यूज नेटवर्क

शिरपूर : शहरातील एच.आर. पटेल फार्मसी महाविद्यालयात विद्यापीठस्तरीय ताण-तणाव व्यवस्थापन कार्यशाळा उत्साहात पार पडली.

येथील एच.आर. पटेल औषधनिर्माणशास्त्र महाविद्यालय व कवयीत्री बहिणाबाई चौधरी उत्तर महाराष्ट्र विद्यापीठ यांच्या संयुक्त विद्यमाने विद्यापीठाच्याअंतर्गत येणाऱ्या महाविद्यालयातील शिक्षकेतर कर्मचाऱ्यांसाठी एकदिवसीय ताण-तणाव व्यवस्थापन कार्यशाळेचे आयोजन करण्यात आले होते. कार्यशाळेत विविध महाविद्यालयाच्या सुमारे पन्नास शिक्षकेतर कर्मचाऱ्यांनी उस्फुर्तपणे सहभाग नोंदविला.

कार्यक्रमाचे उद्घाटन बोराडी येथील आयुर्वेद महाविद्यालयाचे प्रा.डॉ.गणेश कोल्हे यांच्याहस्ते करण्यात आले.

यावेळी येथील आर्ट ऑफ लिविंगचे मार्गदर्शक विकास पाटील, डॉ.मिलिंद बचुटे, प्राचार्य डॉ.एस.बी.बारी, डॉ.व्ही.के. चटप, सोनल शहा, डॉ.डी. डी.पाटील, डॉ.पी.ओ.पाटील, डॉ.पी.के. देशमुख आदी उपस्थित होते.

दैनंदिन कार्यप्रणालीत येणाऱ्या तणावाचे कलात्मक व शास्त्रोक्त पध्दतीने व्यवस्थापन केल्यास कर्मचाऱ्यांची कार्यक्षमता व गुणवत्ता यातील विकास सहज शक्य असल्याचे प्राचार्य डॉ.बारी यांनी सांगितले.

डॉ.गणेश कोल्हे यांनी विनोदी शैलीने भावनिक चिकित्सा व ताण-तणाव व्यवस्थापन यावर उपस्थितांना मार्गदर्शन केले. कौटुंबीक व कार्यालयीन तणाव या भिन्न बाबी असून त्यांची स्वतंत्रपणे उपाययोजना करणे गरजेचे आहे. आपला ताण दुर्बल व्यक्तीवर न देता तणावमुक्ती करणे अधिक लाभदायक असल्याचे डॉ.कोल्हे यांनी सांगितले.

विकास पाटील यांनी व्यायामांच्या सहाय्याने तणाव व्यवस्थापनाबाबत प्रात्यक्षिक सादर केले. तसेच जगण्याची कला यावर मार्गदर्शन केले.

डॉ.मिलिंद बचुटे यांनी ताण-तणावाचे व्यवस्थापनाचा विचार न करता स्वयंव्यवस्थापन करण्याचा संदेश दिला.

डॉ.चटप यांनी कार्यक्रमाची पार्श्वभूमी सांगितली. कार्यक्रमाचे सूत्रसंचालन सोनल शहा यांनी केले. याप्रसंगी शिक्षकेतर कर्मचारी उपस्थित होते.

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