

# Indian Journal of Biochemistry & Biophysics

<http://www.niscair.res.in>; <http://nopr.niscair.res.in>

**Special Issue on**  
**“Molecular Diagnostics and Therapeutics”**

---

<b>VOLUME 57</b>	<b>NUMBER 2</b>	<b>April 2020</b>
CODEN: IJBBQ 57 (2) 117-256 (2020)		ISSN: 0301-1208 (Print); 0975-0959 (Online)

---

## CONTENTS

### A Review

- Trianthema portulacastrum* L.: Traditional medicine in healthcare and biology 117

Uttam Das, Tanmay Saha, Rita Ghosh & Subir Kumar Das\*

### Mini Review

- Biomarkers in Overactive Bladder 146

Manidip Pal & Soma Bandyopadhyay\*

### Papers

- Thiol stabilized copper nanoparticles exert antimicrobial properties by preventing cell division in *Escherichia coli* 151

Ganesh Kumar N, Satya Deo Pandey, Sathi Mallick, Sudip Kumar Ghosh,  
Panchanan Pramanik & Anindya Ghosh\*

- Inflammation: A protagonist in development of carcinogen induced cervical cancer in mice 158

Elizabeth Mahapatra, Souvick Biswas, Madhumita Roy & Sutapa Mukherjee\*

- PEITC by regulating aurora kinase a reverses chemoresistance in breast cancer cells 167

Souvick Biswas, Elizabeth Mahapatra, Madhumita Roy & Sutapa Mukherjee\*

- Effect of Indian honey on expression of p53 and cyclin B1 in HeLa cells 178

Amruta Naik, Sucheta Dandekar\* & Nishigandha Naik

- A Prospective study to evaluate the demographic variation of gender independent sequences in cell-free fetal DNA (cffDNA) concentration and to predict pregnancy outcomes by non-kit based economical method 185

Mriganka Mouli Saha, Subir Kumar Das\*, Madhumita Mukhyopadhyay & Maitree Bhattacharrya

- Association of brain-derived neurotrophic factor (Val66Met) polymorphism with the risk of Parkinson's disease and influence on clinical outcome 192

Syed Tazeem Fathima, Tasneem Fathima SD, Rukmini Mridula Kandadai,  
Vijay Kumar Kutala & Rupam Borgohain\*

Association of SLC6A3 gene polymorphisms with the pharmacokinetics of Levodopa and clinical outcome in patients with Parkinson's disease	202
Tasneem Fatima SD, Syed Tazeem Fathima, Boddupally Sreenu, Rukmini Mridula Kandadai, Rupam Borgohain & Vijay Kumar Kutala*	
Increased erythrocyte osmotic fragility in hypothyroidism	213
Tanmay Saha & Subir Kumar Das*	
Grape extract protect against ionizing radiation-induced DNA damage	219
Indrani Singha, Sudhanshu Saxena, Satyendra Gautam, Abhijit Saha & Subir Kumar Das*	
Important chemical structural features of curcumin and its derivatives: How do they influence their anticancer activity?	228
KI Priyadarsini*, VV Gandhi & A Kunwar*	
Association of vitamin D receptor (VDR) gene polymorphism with blood lead levels in occupationally lead-exposed male battery workers in Delhi – National capital region, India	236
Himani, Raman Kumar, Busi Karunanand & Sudip Kumar Datta*	
Application of machine learning tools for evaluating the impact of premenopausal hysterectomy on serum anti-mullerian hormone levels	245
Boddupally Sreenu, SV Kameswari, Shaik Mohammad Naushad, Vijay Kumar Kutala*	
Instructions to Authors	252
Announcement	255
Plagiarism	256

\*Author for correspondence

---

### Author Index

Bandyopadhyay S	146	Ghosh SK	151	Naik A	178
Bhattacharrya M	185			Naik N	178
Biswas S	158, 167	Himani	236	Naushad SM	245
Borgohain R	192, 202				
Dandekar S	178	Kameswari SV	245	Pal M	146
Das SK	117, 185, 213, 219	Kandadai RM	192, 202	Pandey SD	151
Das U	117	Karunanand B	236	Pramanik P	151
Datta SK	236	Kumar GN	151	Priyadarsini KI	228
Fathima ST	192, 202	Kumar R	236	Roy M	158, 167
Fathima TSD	192, 202	Kunwar A	228		
Gandhi VV	228	Kutala VK	192, 202, 245	Saha A	219
Gautam S	219	Mahapatra E	158, 167	Saha MM	185
Ghosh A	151	Mallick S	151	Saha T	117, 213
Ghosh R	117	Mukherjee S	158, 167	Saxena S	219
		Mukhyopadhyay M	185	Singha I	219
				Sreenu B	202, 245

## Keyword Index

Anthocyanin	219	Dysferlin	213	Parkinson's disease	192
Anti-inflammation	117	Dyskinesia	202	Pharmacokinetics	202
Anti-Mullerian Hormone (AMH)	245	Dysplasia	158	Phenethyl isothiocyanate	167
Antioxidant	117	Flavilium	219	Phytochemicals	117
<i>ApaI</i>	236	<i>FokI</i>	236	Preeclampsia	185
Apigenin	178	<i>Helicobacter pylori</i>	158	Pre-menopause	245
Apoptosis	178	Hemiketal	219	Pro-oxidant	228
Aurora-A	167	Hepatoprotective	117	Quercetin	178
BDNF polymorphism	192	HR-TEM	151	ROS	151
Biopolymers	151	Hypermethylated DNA	185	SLC6A3 polymorphisms	202
Blood lead levels (BLL)	236	Hypothyroidism	213	Stem cell factor	146
Bradykinesia	192	Hysterectomy	245	Structure-activity correlation	228
Brain derived neurotrophic factor	146	Ionizing radiation	219	Synaptotagmin	213
<i>BsmI</i>	236	Levodopa	202	Systemic stress	158
Caffeic acid	178	MCP-1	146	<i>TaqI</i>	236
Cell division	151	Methylcholanthrene	158	Thiobarbituric acid reactive substances	213
Cell-free fetal DNA (cffDNA)	185	MoCA	192	Threonine	167
Cervical cancer	158	Nerve growth factor	146	Thyroid-stimulating hormone	213
Chemoresistance	167	Nocturia	146	<i>Trianthema portulacastrum L.</i>	117
Chronic inflammation	158	Occupational exposure	236	Trophoblast	185
Chrysin	178	Oncogenes	178	Urinary creatinine	146
Cognitive impairment	192	Osmotic fragility	213	Vitamin D receptor (VDR) polymorphism	236
Copper-nanoparticle	151	Ovarian function	245	Vitamin D	236
Curcumin isoxazole	228	Oxidative stress	245		
Cyclin B1	178	Oxonium ion	219		
Cyclooxygenase	146	p53	178		
Cytokines	158	Paclitaxel	167		
Cytotoxicity	151				
Dementia	192				