

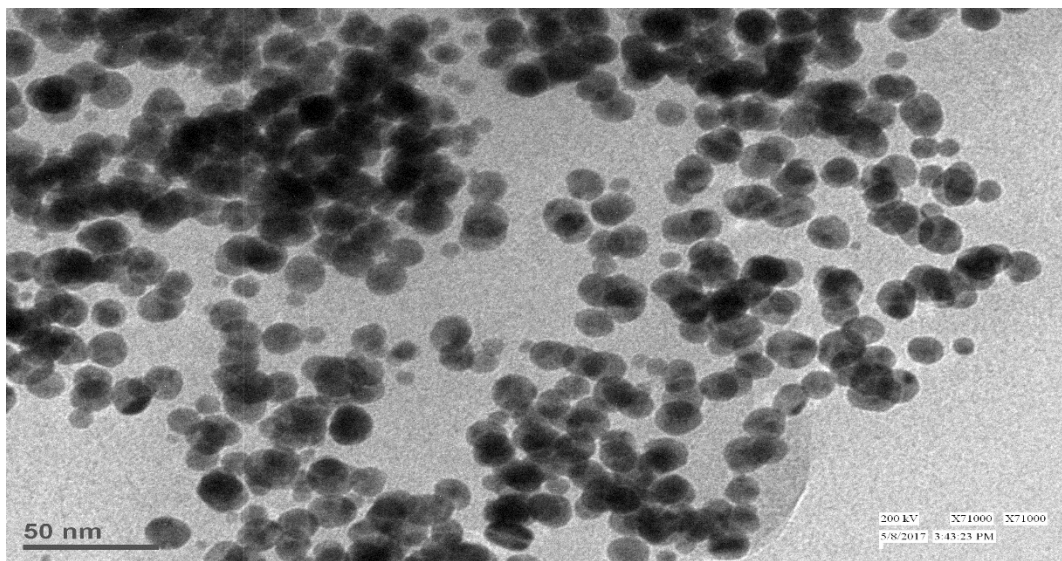
**Title: Laboratory Analysis of Au-Pd Bimetallic Nanoparticles Synthesized with *Citrus limon* leaf extract and its Efficacy on Mosquito larvae and Non-Target Organisms**

**Ref: Submission ID 451f4d21-c0f8-4023-9a7f-50b5ef26c74b**

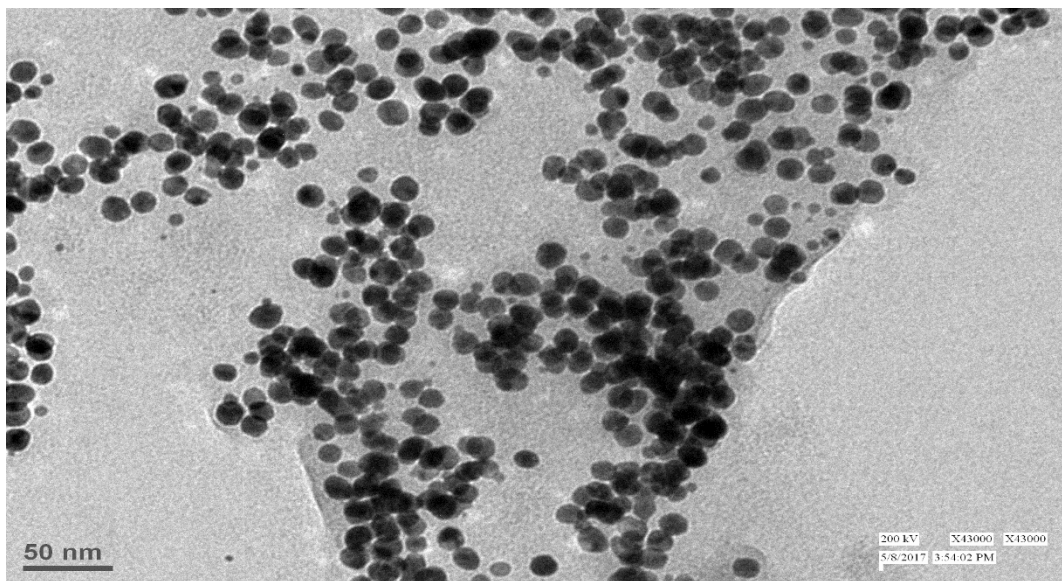
**Savy Panamkuttiyel Minal<sup>1,\*</sup>, and Soam Prakash<sup>1</sup>**

<sup>1</sup>Advance Parasitology and Vector Control Nano-Biotechnology Laboratory, Department of Zoology, Dayalbagh Educational Institute (Deemed University), Agra, India - 282005

\*savypanamkuttiyelminal@gmail.com; soamprakash@dei.ac.in



**Figure 2. i.** TEM micrograph of the undiluted sample of the synthesized Au-Pd BNPs



**Figure 2. ii.** TEM micrograph of the undiluted sample of the synthesized Au-Pd BNPs

<b>A. Au-Pd BNPs Bioassay against <i>Anopheles stephensi</i></b>									
Instar	Time	Probit equation ( $\hat{y}$ ) ( $\log_{10}$ )	R <sup>2</sup>	SD	SE	$\chi^2$	LC <sub>50</sub> (mL/L)	95% Fiducial CI (mL/L)	
								Lower	Upper
I	24	$\hat{y} = 4.422x + 1.863$	0.86	0.20	0.05	0.14 (NS)	5.12	4.15	6.33
II	24	$\hat{y} = 3.031x + 2.240$	0.98	0.33	0.07	0.67 (NS)	8.14	5.94	11.16
	48	$\hat{y} = 2.038x + 3.357$	0.89	0.48	0.09	0.67 (NS)	6.40	4.23	9.68
	72	$\hat{y} = 2.166x + 3.699$	0.86	0.45	0.09	0.63 (NS)	3.98	2.695	5.89
III	24	$\hat{y} = 0.780x + 3.416$	0.84	1.28	0.28	-	26.32	14.88	46.55
	48	$\hat{y} = 3.580x + 0.980$	0.89	0.25	0.07	0.01 (NS)	13.27	9.67	18.21
	72	$\hat{y} = 2.823x + 2.447$	0.81	0.34	0.07	0.17 (NS)	8.02	5.81	11.08
IV	24	$\hat{y} = 3.027x + 1.800$	0.84	0.32	0.08	0.03 (S)	11.40	8.06	16.13
	48	$\hat{y} = 3.056x + 2.054$	0.78	0.32	0.07	0.05 (NS)	9.20	6.68	12.68
	72	$\hat{y} = 2.479x + 2.932$	0.82	0.39	0.08	0.40 (NS)	6.83	4.80	9.71
<b>B. Au-Pd BNPs Bioassay against <i>Aedes aegypti</i></b>									
I	24	$\hat{y} = 4.405x + 0.188$	0.95	0.21	0.06	0.07 (NS)	12.37	9.33	16.39
	48	$\hat{y} = 4.220x + 0.909$	0.93	0.22	0.06	0.01 (S)	9.32	7.24	12.00
	72	$\hat{y} = 2.829x + 2.480$	0.64	0.27	0.06	0.06 (NS)	7.78	5.91	10.23
II	24	$\hat{y} = 4.038x + 0.758$	0.97	0.24	0.06	0.14 (NS)	11.24	8.45	14.94
	48	$\hat{y} = 4.746x + 0.552$	0.94	0.20	0.05	0.02 (S)	8.65	6.87	10.90
	72	$\hat{y} = 6.628x - 0.577$	0.98	0.15	0.04	0.10 (NS)	6.94	5.79	8.33
III	24	$\hat{y} = 3.449x + 2.274$	0.95	0.28	0.06	0.90 (NS)	6.17	4.71	8.09
	48	$\hat{y} = 3.123x + 2.857$	0.96	0.31	0.06	0.97 (NS)	4.86	3.63	6.49
	72	$\hat{y} = 4.538x + 2.388$	0.99	0.22	0.05	0.99 (NS)	3.76	2.99	4.74
IV	24	$\hat{y} = 2.083x + 2.846$	0.93	0.47	0.10	0.82 (NS)	10.83	6.99	16.76
	48	$\hat{y} = 2.341x + 2.880$	0.96	0.42	0.08	0.87 (NS)	8.05	5.49	11.80
	72	$\hat{y} = 2.695x + 2.841$	0.96	0.37	0.07	0.84 (NS)	6.32	4.53	8.82

**Table 1.** Statistical analysis of the percent mortality data for the calculation of the LC<sub>50</sub> at 24 h, 48 h, and 72 h of exposure of Au-Pd BNPs test concentration in the bioassay against I-IV instar larval stages of, A) *Anopheles stephensi* mosquito, and B) *Aedes aegypti* mosquito