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# A portable sensor kit using Au nanoparticles modified carbon paste electrode for the screening of uricemia patients in rural health care units

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A simple novel electrochemical detecting system to analyze the level of uric acid in human urine has been developed using gold nano particles embedded chemically modified carbon paste electrode. The uric acid level is identified as the main marker in majority of the diseases like urolithiasis, gout, myeloma etc. The present effort is to get the level of uric acid accurately in minimum time. Hence an instant real time monitoring kit has been developed which will give accurate and fast data on the level of uric acid in a real sample. The work involved initially was developing chemically modified gold nanoparticles embedded carbon paste electrode and later on converting the effort into a full detecting kit with a real time display unit to display levels of uric acid and give an indication whether it is normal, low or high. Since the detection kit neither requires sophisticated lab or conditions to work, it will be portable and can be used as a uric acid screening device even in rural health centers. This work can help the medical practitioners as well as the lab technicians to analyze samples quickly and give better support to the patients

## Biography

Reshma Rajan received her Bachelor's degree in Electronics by securing the first rank from the University of Kerala in the year 2010. Thereafter she received her Master's degree in Electronics by securing second rank from VIT University, Vellore, India in the year 2012. She is the merit award winner twice from VIT University. She is now pursuing her PhD degree in 'Various treatment modalities for Urolithiasis', from VIT University under the Division of Photonics and Medical Physics. She won numerous awards for best presentation and best papers across the globe. Her research interest includes development of biosensors and portable gadgets for rural health care centres, orthopaedic biomechanics, laser ablation and medical instrumentation. Apart from research she is the lab tutor for the Bachelor's students and train Master students for various medical instrumentation projects.

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