



**Aquitaine –Karnataka collaboration
Scientific Project for Pre-PhD student exchange**

Scientific Proposal

Project Title	Investigating copper tolerance in grapevine	
Scientific domain	Agronomy	
Summary (ca. 10 lines)	The use of copper sulfate was introduced in France in 1878 as a preventive treatment against downy mildew. Its continuous use has resulted in the accumulation of high amounts of copper in many vineyards. This may be detrimental to the environment, to viticulture and to wine quality. In this context, it is interesting to investigate the genome of different rootstocks and varieties for the presence of genes involved in copper uptake, transport, complexation and sequestration, in parallel with physiological assays. The project is at a crossroad between the expertise of the Indian laboratory on metal toxicity, and the expertise of the French laboratory on grapevine physiology and genomics	
Student profile wished	Master in plant physiology and molecular biology	
Supervisor Name	Pr. Serge Delrot	
Supervisor @ & phone	serge.delrot@u-bordeaux.fr	Tel:+33 (0)557575900
Institute/laboratory/industry (full address)	UMR Ecophysiology and Grape Functional Genomics, Institut des Sciences de la Vigne et du Vin, 210 Chemin de Leysotte 33882 Villenave d'Ornon, France	
Director Name Institute/ laboratory /industry	Dr. Debasis Chakrabarty Genetics & Molecular Biology Division National Botanical Research Institute Lucknow India	
Director Institute/laboratory/industry @ & phone	chakrabartyd@nbri.res.in	Tel:+91-9451245572
Timing & duration for project (give approximate ranges)	January-june 2016	
Selected Publications	-CAGNAC O, BOURBOULOUX A, CHAKRABARTY D, ZHANG MY, DELROT S (2004) AtOPT6 transports glutathione derivatives and induced by primisulfuron. Plant Physiol.,135: 1378-1387	
Contact Aquitaine: Erick Dufourc @: e.dufourc@cbmn.u-bordeaux.fr tél: +33 5 4000 6818	Contact Karnataka: Dipankar das Sarma @: sarma@sscu.iisc.ernet.in tél: +91 80 2293 2945	
http://www.cbmn.u-bordeaux.fr/aquitaine-karnataka-exchange?lang=2		

	<ul style="list-style-type: none">- KUHN N, GUAN L, DAI ZW, WU B, LAUVERGEAT V, GOMES E, LI S, GODOY F, ARCE-JOHNSON P, DELROT S (2014) Berry ripening : recently heard through the grapevine. J. Exp. Bot, 65, 4543-59- GRIMPLET J, ADAM-BLONDON AF, BERT PF, BITZ O, CANTU D, DAVIES C, DELROT S, PEZZOTTI M, ROMBAUTS S, CRAMER G. (2014)The grapevine gene nomenclature system. BMC Genomics, 15:1077.- DUBEY S, SHRI M, MISRA P, LAKHWANI D, BAG SK, ASIF MH, TRIVEDI PK, TRIPATHI RD, CHAKRABARTY D (2014) Heavy metals induce oxidative stress and genome-wide modulation in transcriptome of rice root. Func Int Genomics, 14:401–417.- GAUTAM N, VERMA PK, VERMA S, TRIPATHI RD, TRIVEDI PK, CHAKRABARTY D (2012) Genome-wide identification of rice Class I metallothionein gene: tissue expression patterns and induction in response to heavy metal stress. Funct Integr Genomics, 12, 635-647.
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Contact Aquitaine:
Erick Dufourc
@: e.dufourc@cbmn.u-bordeaux.fr
tél: +33 5 4000 6818

Contact Karnataka:
Dipankar das Sarma
@: sarma@sscu.iisc.ernet.in
tél: +91 80 2293 2945

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