JOB DESCRIPTION & PERSON SPECIFICATION

1. Job title: Postdoctoral Research/Senior Postdoctoral Researcher "Applied bioinformatics and comparative genomics"

Centre: GGB   **Location:** East Malling, Kent

Reports to (Job title)**:**   Dr Richard Harrison   **Line Manages** : PhD Students

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2. Main purpose of role:

We are seeking a scientist to play a key role in the Genetics, Genomics and Breeding department (GGB) based in East Malling, Kent carrying out comparative genomics research for the Bill & Melinda Gates funded ENSA project, working closely with the Oldroyd group at the Sainsbury Laboratory, Cambridge University (SLCU) and international partners.

Working with postdoctoral researchers across the ENSA project you will be expected to make significant research contributions in the area of comparative and population genomics of plants, as demonstrated by recent papers in high quality journals.

Key areas of the job include:

- Assembly and annotation of genomes using single molecule sequencing data
- Use of python, R and other scripting languages
- Use of version control software (e.g. github)
- Use of orthology comparison tools
- Use of tools to detect cis-regulatory variation (e.g. meme)
- Analysis of RNA seq datasets
- Phylogenetics approaches to understanding trait evolution
- A sound understanding of statistics is required (ideally both maximum likelihood and Bayesian approaches).

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3. Financial authority/responsibility (e.g. delegated budget, authorisation level, approx value of contracts etc)**:**

The post-holder will be responsible for a budget funding their activities.

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4. Key relationships (external and internal)**:**

Internal: Research staff across NIAB and NIAB EMR

External: Oldroyd Group

Issue Date: 05.07.10
Version: 1

Tasks/responsibilities (in order of priority)	Approx % of time
Comparative genomics of Frankia	30
Comparative genomics of rosaceae	30
RNAseq and genome assembly analysis	30
Writing papers	10

6. Working conditions :
- Based at East Malling, Kent.
- Travel at short notice and to work antisocial hours.
- Travel to NIAB, Cambridge

7. PERSON SPECIFICATION

Education/Qualifications:

Essential:	Desirable:
• BSc in relevant discipline (2.1 or above) • PhD in computer science or significant informatics experience.	• Membership of professional bodies, evidence of recognition within research field through awards and committee membership.

Experience:

Essential:	Desirable:
• An established track record of high quality research output, with publications in high-impact factor journals. • Supervision of undergraduate and postgraduate research projects.	• Line management experience. • PhD student supervision. • Experience preparing successful and/or large bids for UK and EU funding bodies (e.g. BBSRC). • Membership of boards and technical consulting experience.

Specialist Training:

Essential:	Desirable:
• Full UK driving license (required for commuting to Cambridge site) or access to independent means of transport.	

Personal Qualities (skills, behaviours and competencies)

Essential:	Desirable:
• Excellent writing and communication skills evidenced through a substantial number of peer reviewed publications. • A creative research vision for development, implementation and delivery of successful research projects. • An ability to communicate complex conceptual ideas to widelu divergent audiences. • Highly IT literate. • Assembly and annotation of genomes using single molecule sequencing data. • Comparative genomics. • High Performance Computing. • Version Control. • Strong Publication record • High Level computer language (e.g. python). • Collaborative working, particularly on interdisciplinary topics. • Ability to respond quickly to externally imposed deadlines. • Ability to travel at short notice and to work antisocial hours.	• Experience with annotation of complex gene families and development or extensive use of orthology comparison tools. • Experience with lower level languages and GPU computing. • Analysis of RNA seq datasets. • Phylogenetics approaches to understanding trait evolution. • A sound understanding of statistics is required (ideally both maximum likelihood and Bayesian approaches). • Budget control experience. • Working in an open and transparent way, providing information and communicating effectively with colleagues. • Management and leadership experience. • Continuous Professional Development.

Date of description: 18th October 2018   **Compiled by:** Dr Richard Harrison