## EMBnet/CNB Centro Nacional de Biotecnología, CSIC C/Darwin, 3. 28049. Madrid, Spain

## Advanced UNIX EMBnet/CNB course

This is to certify that <u>Alexandro Rodríguez Rojas</u> attended and satisfactorily completed the EMBnet (European Molecular Biology Network) course **Advanced UNIX**, which took place February to June 2009, at the *Centro Nacional de Biotecnología*, *Consejo Superior de Investigaciones Científicas*, Madrid, Spain.

This is a course on Advanced UNIX, oriented to scientists with an interest in learning advanced usage of scientific computing equipment. The course lasts **30 hours** evenly split in theory and practice, and relies on use of Linux and various other UNIX variants, covering

- A crash introduction to ancient UNIX (v5, v6, v7)
- Installing a Linux System
- Basic UNIX commands
- Basic UNIX tools (ssh, VNC, NX, rsync, ecryptfs)
- Editing files
- Shell Programming
- UNIX Programming
- Advanced UNIX tricks
- Parallel and cluster computing (torque/PBS, MPI)

There was considerable emphasis on developing first-hand experience through practical sessions using professional tools.

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