



**EuroClot project Contract No. LSHM-CT-2004-005268
6th Framework Programme Priority 1
Life Sciences, Genomics and Biotechnology for Health**

EuroCLOT

**Year 1 Publishable Report
1st January to 31st December 2005**

Project Co-ordinator:
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Filename: EuroClot publishable summary year 1

Project Facts and Consortium Information

Project No:	LSHM-CT-2004-005268
Project Acronym:	EuroClot
Project Full title:	Genetic regulation of the end-stage clotting process that leads to thrombotic stroke
Start Date:	1 st January 2005
End Date:	31 st December 2007
6th Framework Programme Priority 1	Life Sciences, Genomics and Biotechnology for Health
Total EC Contribution:	€1,500,000
Project Type:	Specific Targeted Research or Innovation Project
Project Objectives:	To unravel the genetic basis of thrombotic stroke leading to new diagnostics and drug targets.
Keywords:	Genetics, clotting, thrombotic stroke, twins, families
Project Co-ordinator:	<p>Professor Tim Spector St Thomas' Hospital Twin Research Unit Lambeth Palace Road London SE1 7EH United Kingdom</p> <p>Tel: +44 207 188 9055 Fax: +44 207 188 6718 E-mail: tim.spector@kcl.ac.uk</p>
Project Participants:	<p>St Thomas' Hospital, London (UK) Leeds University (UK) Leiden University Medical Centre (NL) University of Helsinki (FI) Queen's University, Belfast (UK) National Center of Epidemiology, Rome (IT) Karolinska Institute, Stockholm (SW) Hospital de la Santa Creu i Sant Pau, Barcelona (SP)</p>
Project Website:	http://www.twin-research.ac.uk/euroclot.html

1. Publishable Executive Summary

Project no.	2004-005268 (LSHM-CT)
Project acronym	EuroClot
Project Title	Genetic regulation of the end-stage clotting process that leads to thrombotic stroke
Instrument	Sixth Framework Programme – Specific Targeted Research or Innovation Project
Thematic Priority	Life Sciences, Genomics and Biotechnology for Health: Molecular basis of vascular events leading to thrombotic stroke

Overview of objectives and major achievements

EuroClot is a three year Specific Targeted Research or Innovation Project (STREP) funded by the European Commission Sixth Framework Programme Priority 1 – Life Sciences, Genomics and Biotechnology for Health – to the value of €1,500,000 focusing in particular on LSH-2003-2.1.1-6 'Molecular basis of vascular events leading to thrombotic stroke'.

The specific objective of the project is to research the genetic regulation of the end-stage clotting process that leads to thrombotic stroke by identifying and validating loci and genes that determine the speed and magnitude of clot formation and clot lysis and testing these genes against clinical stroke. This aims to lead ultimately to improved diagnostic assessment and novel evidence-based targets for intervention.

The objectives of EuroClot are ambitious and achievable through the mobilisation and integration of a large number of multidisciplinary research centres across Europe and the use of existing European clinical research populations. The Consortium is made up of eight leading multinational academic institutions at the top level of international research. St Thomas' Hospital in London is co-ordinating the project (see Appendix I for contact details).



- Partner 1 – Guy's & St Thomas' Hospital, London, UK
- Partner 2 – Leeds University, Leeds, UK
- Partner 3 – Leiden University Medical Centre, Leiden, Netherlands
- Partner 4 – University of Helsinki, Helsinki, Finland
- Partner 5 – Queens University, Belfast, UK
- Partner 6 – National Center of Epidemiology, Rome, Italy
- Partner 7 – Karolinska Institute, Stockholm, Sweden
- Partner 8 – Hospital de la Santa Creu i Sant Pau, Barcelona, Spain

Figure 1 Map of partner locations

Work packages

There are 5 work packages covering the following stages:

- Identification of novel genes and genetic loci
- Confirmation of the role of known candidate genes and validation of genes against the clinical end point of stroke
- Exploration of gene interactions and geographical variations
- Management of the project

Stage	WP No	WP title	Type of Activity
Stage 1	WP1	Sample Collection	RTD/innovation activities
	WP2	Phenotyping	RTD/innovation activities
Stage 2	WP3	Genotyping	RTD/innovation activities
Stage 3	WP4	Analysis	RTD/innovation activities
Stage 4	WP5	Project Management	Management

Progress in year 1

A standardized approach to collecting plasma citrate and serum from 3550 mono- and dizygotic twins has been the main focus during the first year of the Project. Sample and data collection in unselected twin populations began in January 2005 for London, January 2005 for Helsinki, October 2005 for Sweden and December 2005 for Italy and these have already been genotyped. In parallel similar samples have been collected from extended families from Leeds and Spain. The blood samples continue to be sent for phenotyping to Leeds where end-stage clotting markers and clot lysis will be assayed. Blood vessel risk factors will be assayed in partner locations wherever possible. Extensive power calculations have been performed to determine which of the available samples would provide the best likelihood for locus and subsequent gene identification. The initial framework of a website has been set up at <http://www.twin-research.ac.uk/euroclot.html>. We have also established strong links with other EU projects including GenomeEUtwin, MolPage and MORGAM.

Plans for the future

To phenotype the twin, family and case control subjects for indicators of activation of coagulation and fibrinolysis, tests of fibrin structure/function and local vessel risk factors. From month 18 the remaining clinical and population samples taken during the first 18 months of the Project will be genotyped. At the same time the statistical analysis will embark on dissecting out the genes involved in the end-stage of clotting and lysis and stroke using a variety of statistical genetic techniques. The website will be developed to raise awareness of the Project to both public and scientific audiences through press releases, poster presentations and oral presentations at scientific meetings as well as the publication of articles in scientific journals.

Project co-ordinator contact details

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