

# Genomics in foodborne pathogen surveillance and outbreak investigation

**12.Jul - 13.Jul 2017**

**Cód. 012-17**

**Mod.:**

Presencial

**Edición**

2017

**Tipo de actividad**

Curso de Verano

**Fecha**

12.Jul - 13.Jul 2017

**Ubicación**

12 de julio-Centro Investigacion Micaela Portilla-Nieves Cano Kalea, 27, 01006 Vitoria-Gasteiz//13 de Julio Edificio las Nieves-Nieves Cano 33. 01006 Vitoria-Gasteiz

**Idiomas**

Inglés

**Validez académica**

20 horas

**Web**

<https://sites.google.com/site/innuendocon/innuendo-summer-course>



**DIRECCIÓN**

## Comité Organizador



Gipuzkoako Foru Aldundia  
Diputación Foral de Gipuzkoa

# Descripción

The Summer Course **Genomics in foodborne pathogen surveillance and outbreak investigation** is an open teaching action of the European Research Project INNUENDO. The overall objective of the Innuendo international research consortium is to deliver a standardized, cross-sectorial framework for integration of bacterial whole genome sequencing (WGS) in routine surveillance and epidemiological investigations to reduce the burden of disease caused by both epidemic and sporadic food-borne zoonotic infections.

**Up to 40 students** will attend to the course and will receive theoretical and practical training about application of WGS in surveillance of food pathogens. The workshop will be divided in two parts. The first part will be one day of Scientific Symposium during which invited speakers and speakers within Innuendo consortium will present recent advance in the field. The second part will include a practical hands-on course on bioinformatics solution for public health microbiology. During the hands-on students will learn several bioinformatics tools including those developed within the project.

## Objetivos

The aims of the course are to present and discuss recent advances in the fields of genomics and the use of Whole-Genome Sequencing (WGS) in surveillance and outbreak investigation of food pathogens. For this purpose, the INNUENDO research consortium and other invited speakers have organized a two-days theoretical and practical training activity. The first day, *the theory*, a Scientific Symposium will be developed, and the second day, *the practice*, a hand-on course on bioinformatic solutions for public health microbiology will complete training in this emerging field.

## Colaboradores específicos del curso



# Programa

**12-07-2017**

|               |  |
|---------------|--|
| 08:15 - 00:00 | Registration and coffee  |
| 08:40 - 09:00 | "Opening of the course, wellcome"<br><br><b>Javier Garaizar Candina</b> UPV/EHU - Professor of Microbiology<br><b>Gorka Urtaran</b> Ayuntamiento de Vitoria-Gasteiz<br><b>Beatrix Guerra</b> European Food Safety Authority, EFSA - Senior Scientific Officer<br><b>Peli Manterola</b> Basque Government - Quality and Food Industries Director<br><b>Iván Igartua Ugarte</b> UPV/EHU - Vice-rector of Campus of Álava |
| 09:00 - 09:45 | "WGS in surveillance and outbreak detection of foodborne pathogens"<br><br><b>Eduardo N Taboada</b> Public Health Agency of Canada   |
| 09:45 - 10:30 | "WGS and antibiotic resistance"<br><br><b>Martin Cormican</b> NUI Galway Ireland   |
| 10:30 - 11:00 | Coffee break   |
| 11:00 - 11:10 | "EU Capacity-building projects: INNUENDO"<br><br><b>Mirko Rossi</b> University of Helsinki, Finland  |
| 11:10 - 11:30 | "EU Capacity-building projects: ENGAGE & COMPARE"<br><br><b>Valeria Bortolaia</b> Danish Technical University, Denmark   |
| 11:30 - 12:00 | "From reads to profiles to trees: challenges and solutions in high throughput sequencing data analysis"<br><br><b>João Carriço</b> Universidade de Lisboa, Portugal  |
| 12:00 - 12:30 | "Phenotypic prediction using WGS data: virulome and resistome"<br><br><b>Valeria Bortolaia</b> Danish Technical University, Denmark  |
| 12:30 - 13:30 | Lunch  |
| 13:30 - 13:50 | "QA/QC and automatization of whole genome sequence analysis: implementation"<br><br><b>Mirko Rossi</b> University of Helsinki, Finland   |
| 13:50 - 14:10 | "QA/QC and automatization of whole genome sequence analysis: theory"<br><br><b>Miguel Machado</b> Universidade de Lisboa, Portugal   |
| 14:10 - 14:40 | "GScmpare: fast clustering of assembled genomes"<br><br><b>Joseba Bikandi Bikandi</b> University of the Basque Country - Senior Lecturer   |
| 14:40 - 15:00 | "Whole genome MLST: theory"<br><br><b>João Carriço</b> Universidade de Lisboa, Portugal  |

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| 15:00 - 15:15 | "Whole genome MLST: implementation"  |
|               | <b>Mickael Silva</b> Universidade de Lisboa, Portugal                          |
| 15:15 - 15:30 | "Whole genome MLST: phylogenetic inference and metadata visualization"         |
|               | <b>Bruno Gonçalves</b> Universidade de Lisboa, Portugal                        |
| 15:30 - 16:00 | Coffee break   |
| 16:00 - 16:30 | "A road map to national WGS based surveillance of foodborne bacteria, Finland" |
|               | <b>Saara Salmenlinna</b> National Institute for Health and Welfare, Finland    |
| 16:30 - 17:00 | "Standardized communication during outbreak investigation"                     |
|               | <b>Mirko Rossi</b> University of Helsinki, Finland                             |
| 17:00 - 00:00 | Síntesis   |
| 19:00 - 00:00 | Venue and Social event   |

## 13-07-2017

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| 08:40 - 09:40 | "Content of the day, division of groups, setting computer environment"           |
|               | <b>Joseba Bikandi Bikandi</b> University of the Basque Country - Senior Lecturer |
| 09:00 - 09:20 | "Overview of the INNUENDO platform and its modules"                              |
|               | <b>João Carriço</b> Universidade de Lisboa, Portugal                             |
| 09:20 - 09:45 | "The INNUENDO platform: the user interface"                                      |
|               | <b>Bruno Gonçalves</b> Universidade de Lisboa, Portugal                          |
| 09:45 - 10:45 | "The INNUENDO platform: QA/QC analysis - INNUca (Part 1)"                        |
|               | <b>Miguel Machado</b> Universidade de Lisboa, Portugal                           |
| 10:45 - 11:15 | Coffee break   |
| 11:15 - 12:15 | "The INNUENDO platform: QA/QC analysis - INNUca (Part 2)"                        |
|               | <b>Miguel Machado</b> Universidade de Lisboa, Portugal                           |
| 12:15 - 12:45 | "The INNUENDO platform: GScompare for species determination"                     |
|               | <b>Joseba Bikandi Bikandi</b> University of the Basque Country - Senior Lecturer |
| 12:45 - 14:00 | Lunch  |
| 14:00 - 15:30 | "The INNUENDO platform: cg/wgMLST using chewBACCA"                               |
|               | <b>Mickael Silva</b> Universidade de Lisboa, Portugal                            |

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## **Coffee break**

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15:30 - 16:15 "The INNUENDO platform: from analysis to action, interpreting trees"

**Bruno Gonçalves** Universidade de Lisboa, Portugal

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16:15 - 18:00 "Working in groups, self-learning/testing - Free Coffee break"

**Miguel Machado** Universidade de Lisboa, Portugal

**Mickael Silva** Universidade de Lisboa, Portugal -

**Bruno Gonçalves** Universidade de Lisboa, Portugal -

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19:00 - 00:00 Social event

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## **Dirigido por:**



**Javier Garaizar Candina**

UPV/EHU

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Javier Garaizar Candina es Catedrático de Universidad del área de Microbiología en el Departamento de Inmunología, Microbiología y Parasitología de la Facultad de Farmacia del Campus de Álava de la UPV/EHU. Se doctoró en Medicina y Cirugía en el año 1989. Tiene una amplia experiencia docente, investigadora y de gestión en la UPV/EHU. Ha realizado varias estancias investigadoras postdoctorales, destacando las desarrolladas en el Laboratorio Central de Salud Pública de Londres, Reino Unido, el Centro Médico Erasmus de Rotterdam, Holanda, el Centro del Cáncer Sidney Kimmel en San Diego, EEUU, y recientemente la desarrollada en la Universidad de Carolina del Sur, en Columbia, EEUU. Ha sido Vicedecano de Innovación Docente, Relaciones Internacionales y Alumnado y Decano en funciones en la Facultad de Farmacia de la UPV/EHU y Coordinador del Campus de Álava del Servicio de Asesoramiento Educativo y Vicerrector del Campus de Álava.

## **Profesorado**



**Joseba Bikandi Bikandi**

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**Valeria Bortolaia**

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**João Carriço**

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**Martin Cormican**

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**Bruno Gonçalves**

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**Miguel Machado**

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**Mirko Rossi**

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**Eduardo N Taboada**

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**Saara Salmenlinna**

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**Mickael Silva**

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## Precios matrícula

| MATRICULA   | HASTA 31-05-2017 | HASTA 12-07-2017 |
|---|------------------|------------------|
| EXENCIÓN DE MATRÍCULA                             | 20,00 EUR        | 20,00 EUR        |
| <u>GENERAL</u>                                    | -                | 100,00 EUR       |
| <u>Miembros del proyecto Europeo<br/>INNUENDO</u> | -                | 0 EUR            |
| <u>MATRÍCULA ESPECIAL</u>                         | -                | 50,00 EUR        |

## **Lugar**

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Vitoria-Gasteiz//13 de Julio Edificio las Nieves-Nieves Cano 33. 01006 Vitoria-  
Gasteiz**

Araba