



SERVICES ASSOCIATED TO DIGITALISED CONTENTS
OF TISSUES IN BIOBANKS ACROSS EUROPE

Updated Dissemination Materials

Deliverable 7.8.2

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Document History

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Approval		
	Name	Date
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1 EXECUTIVE SUMMARY

This document provides an overview of the dissemination materials produced during the first twelve months of the project. In particular, it reports on the BIOPOOL website that was set up at a very early stage of the project, and on other dissemination materials created by the team.

2 PURPOSE OF DISSEMINATION MATERIALS AND TARGET GROUPS

Dissemination materials aim at informing different stakeholders about the scope and results of BIOPOOL project. The various materials produced use different levels of complexity in the terminology, depending on the target audience. As also illustrated in the dissemination plan, target groups for dissemination materials, and more generally for dissemination activities are:

1. *Research/academic community*
2. *Universities and other higher education institutions*
3. *Industrial community*
4. *The wider public.*

In the following, we review all dissemination materials produced so far, also explaining which group they target.

3 DISSEMINATION MATERIALS

This section details dissemination materials produced within the project framework from September 2012 to August 2014 (both included). These consist in production of promotion materials such as project logo, various templates, project website, that were created in the reporting period in order to support the project dissemination, and media appearance.

3.1.1 Logo

The building of the project's image started with the design of a simple and effective logo. This logo has been included in the design and production of BIOPOOL website, factsheet, as well as in all the internal and external communication material produced by the consortium. The logo shows the image of a microscope, to evoke the activities of BIOPOOL project.



Figure 1: BIOPOOL logo

The logo is available on the project document server.

3.1.2 Project website

The project website (www.biopoolproject.eu) is the main dissemination channel to the interested public and a gateway for everyone interested in the project.

A preliminary version was used to provide a temporary source of information during the first weeks of the project. The final version of the website was launched in the 2nd month of the project. Figure 1 shows the homepage of the final website.

In order to have an effective dissemination the website contains several elements that are clearly arranged and can be used intuitively. The website illustrates the main features of the project and introduces the consortium. All public deliverables will be made available on the website, as well as a short “Help guide & demo” which will show how images handled by BIOPOOL look like and can be compared. The website also provides an interactive “News and Events” page, listing relevant events related to the topics of BIOPOOL project.

To enable interested users to get in touch with the project team, contact details of the project coordinator, technical and biobank coordinators are available under the contact “Contacts” page.



Figure 2: BIOPOOL homepage

Tables 1 and 2 show a number of key statistics taken from Google Analytics on the number of visits to BIOPOOL Website in the last twelve months.

Total number of visits	8,980
Pages per visit	2.833
% new visits	77.00

Table 1: Visitors on BIOPOOL Website

Top 10 countries:	% of the 8,980 total number of visits
Spain	38.38
United States	11.22
Italy	5.03
Brazil	4.84
United Kingdom	4.04
Netherlands	3.44
Belgium	2.72
France	2.70
Germany	1.62
India	1.54

Table 2: Statistics on BIOPOOL Website

3.1.3 Templates

A set of templates have been produced in order to maintain a homogeneous look of the materials produced in the project. In particular,

- *Template for reports:* In order to create a corporate identity, WP7 developed a deliverable template which has to be used by the authors of the deliverables
- *PowerPoint template:* A PowerPoint template is provided to be used by all partners of the consortium for all project related presentations
- *Templates for meeting agenda and meeting minutes:* Templates for meeting agenda and meeting minutes have also been created to be used for all Consortium meetings.

All templates are available on the reserved area in the project website.

3.1.4 Deliverables

The project deliverables are used to document the progress of the project. Those deliverables classified as public are published on the public area of the project website to make projects results available to stakeholders and the interested public.

3.1.5 BIOPOOL system handbook

Among the deliverables that have been produced in the first twelve months, a first draft of a handbook on BIOPOOL system has been created (Deliverable 6.2). The handbook explains how to use BIOPOOL system for searching into the biobanks networks' pool of histological images and associated data with

text queries or/and image-upload queries. The manual is meant to give assistance to people using BIOPOOL software, and is written in a very clear, concise manner.

3.1.6 Factsheet

A factsheet summarizing the key points of the project has been produced at a very early stage of the project. This dissemination material is meant to target both highly specialized audience, such as biobanks, pathologists and academics, as well as the general public. The design of the factsheet is similar to that of the website, and has a clear reference to the European Commission's Seventh Framework Programme. The factsheet has been made available on the project website at the address:

<http://www.biopoolproject.eu/project-overview>

The factsheet is reported in Annex I.

3.1.7 Project brochure

Towards the end of the first year of the project, a brochure illustrating in a non-technical fashion the main feature of BIOPOOL software has been designed. This dissemination material is meant to target both highly specialized audience, such as biobanks, pathologists and academics, as well as the general public. The brochure also offers a graphical illustration of how the software works, and gives contact details for biobanks interested in joining BIOPOOL. The brochure briefly answers to the following questions:

- What is BIOPOOL?
- Why using BIOPOOL and what for?
- How can I use BIOPOOL?
- How can I get samples from BIOPOOL?

The brochure has already been distributed at one dissemination event attended in July 2013. It can be downloaded through the website at the address:

<http://www.biopool.org/project-overview>

The brochure is reported in Annex II.

3.1.8 Slides for oral presentations, posters and graphical compositions

Various slide documents, posters and two graphical compositions have been produced and disseminated in conferences and fairs. These have been designed to target the research/academic community, universities as well as biobanks and the industrial community in general.

The poster presented at the Spanish Congress of Anatomopathology was awarded the Pathology association award for the best poster presentation. This poster and the two graphical compositions are reported in Annex III.

3.1.9 Press releases

Objectives and results of BIOPOOL project have disseminated through press articles, press releases and podcasts, published in international journals, national newspapers, magazines, websites, short films,

and blog entries. So far one video lecture has been produced¹ and is available in the project website under the News and Events page. Further, three press releases have been published so far, one in English and two in non-English languages. In particular, one press release has been published in Eurekaalert database, one of the world's leading independent resources for European research news. This press release has been highly cited in news websites, blogs, forums etc. In addition, two press releases in non-English languages, one in Italian and one in Spanish, have been published. Again, these have generated a large number of articles national journals as well as a radio interview about BIOPOOL activities, in Italian and Spanish. The press releases are reported in Annex IV.

¹ Please see http://videlectures.net/dataforum2012_bilbao_biopool.

4 CONCLUSIONS

The BIOPOOL dissemination materials were very recognizable in design and layout, which is very important for the public to soon get acquainted with the consortium and its intentions. The array of dissemination materials designed was comprehensive to cover BIOPOOL's need for dissemination.

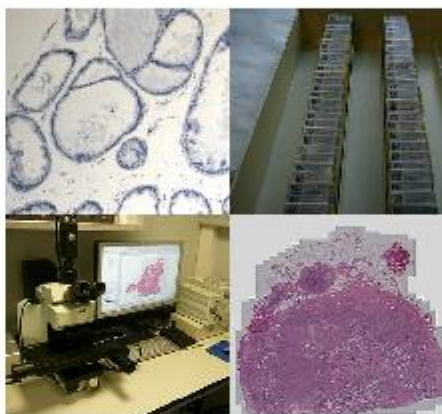
5 ANNEX I: FACTSHEET



SERVICES ASSOCIATED TO DIGITALISED CONTENTS
OF TISSUES IN BIOBANKS ACROSS EUROPE

Project funded by the European Commission's Seventh Framework Programme

The aim of BIOPOOL is to enable biobanks to build a network that links collections of histological digital images of biologic material and associated information managed by biobanks. It will also develop services for exploitation of this network, such as text and image based search queries, region-of-interest extraction and automated pathology information extraction for specific types of cancers. The use of such interconnected sources of data has great potentials for medical research, diagnosis and educational activities. BIOPOOL will enhance pathology research by reducing diagnosis time and related costs.



BIOPOOL objectives

- To provide means for the interconnection of different biobank digital resources, using standard communication protocols
- To build an integrated pool of digital images, including the provision of means for the harmonization of the data provided by different biobanks throughout Europe
- To develop and provide tools for the management and exploitation of digital data

Project details

Project reference: 296162

Duration: September 1, 2012 to August 31, 2014

Home page: www.biopool.org and www.biopoolproject.eu

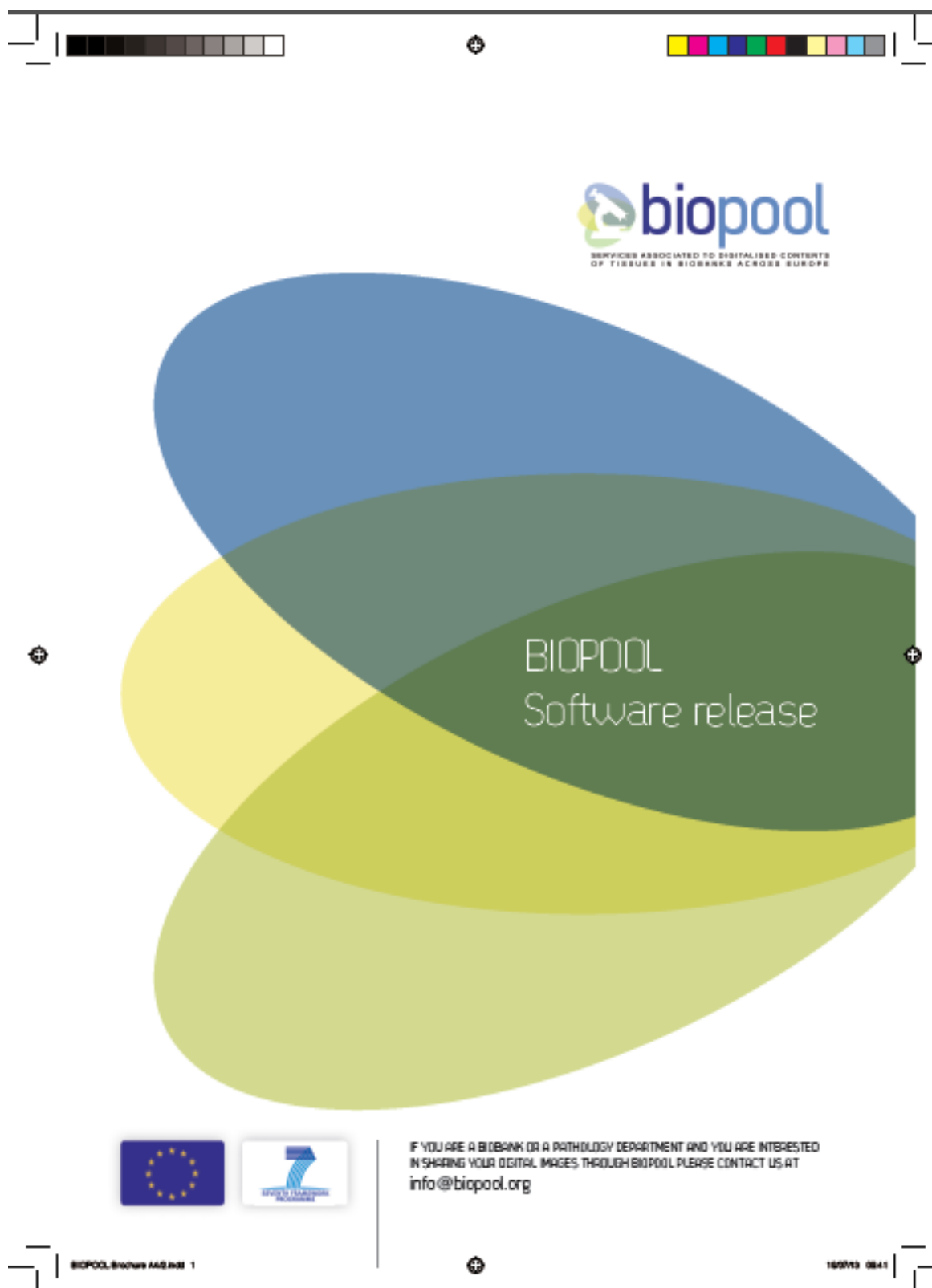
Coordinator: Fundación Vasca de Innovación e Investigación Sanitarias

Partners:

Fundación Tecnalia Research & Innovation
Emedica SL
Pertimm (Pertinent et Immediat) SAS
Brunel University
Erasmus MC Tissue Bank
Cultek SL



6 ANNEX II: BROCHURE



What is BIOPOOL?

BIOPOOL is an **innovative software** for searching and gathering digital pathology slides with associated data from multiple biobanks and pathology archives. The software allows its users to **share, search and request** human sample and/or their corresponding digital images and associated data, which can be used for different purposes. **BIOPOOL** search engine is based on an innovative **Content-Based Image Retrieval system** and allows performing operations such as:

- Text- and image-based search queries, as well as hybrid searches that combine textual and image information as inputs
- Region-of-interest extraction on images
- Score images for similarities with images and data provided by the user

The aim of **BIOPOOL** is to build and provide access to a linked pool of digital data managed by biobanks in order to facilitate the search of tissue samples for research and clinical pharmaceutical trials, **increase awareness and sharing of knowledge** among pathologists and researchers, and improve educational activities.

Why using BIOPOOL and what for?

Biobanks, pathology departments, pharmaceutical companies, universities and research centres may benefit from joining **BIOPOOL**, in many different ways, such as:

- Support to biomedical research, by allowing to gather the required amount of human biological samples located at different biobanks across Europe
- Perform diagnostic comparisons, carry telepathology activities and image analysis
- Facilitate clinical trials
- Support to teaching and other educational activities

BIOPOOL provides an attractive and **intuitive web interface** which makes it easy even for non-technical users to access to its functionalities after completing a registration process.

How can I use BIOPOOL?

You just need a web browser to access **BioPool** and register yourself at <http://demo.biopoolproject.eu/biopool>. In addition, for those organizations (typically biobanks) that want to share their digital images within the **BIOPOOL Network**, the technical requirements are not complex. These include:

- Automated scanner
- Sufficient storage capabilities, which depend on the size of each image and the annual growth of histological images
- Minimum quality and resolution of the histological images
- Facilities to retrieve the minimum associated data with Digital Pathology Images in an ethically and legally compliant manner

How can I get samples from BIOPOOL?

You can make your requests through the web. **BioPool** can provide two types of samples. You can request for a physical sample or for a virtual slide. If your organization wants to be part of **BioPool Network** and share its samples, please contact info@biopool.org



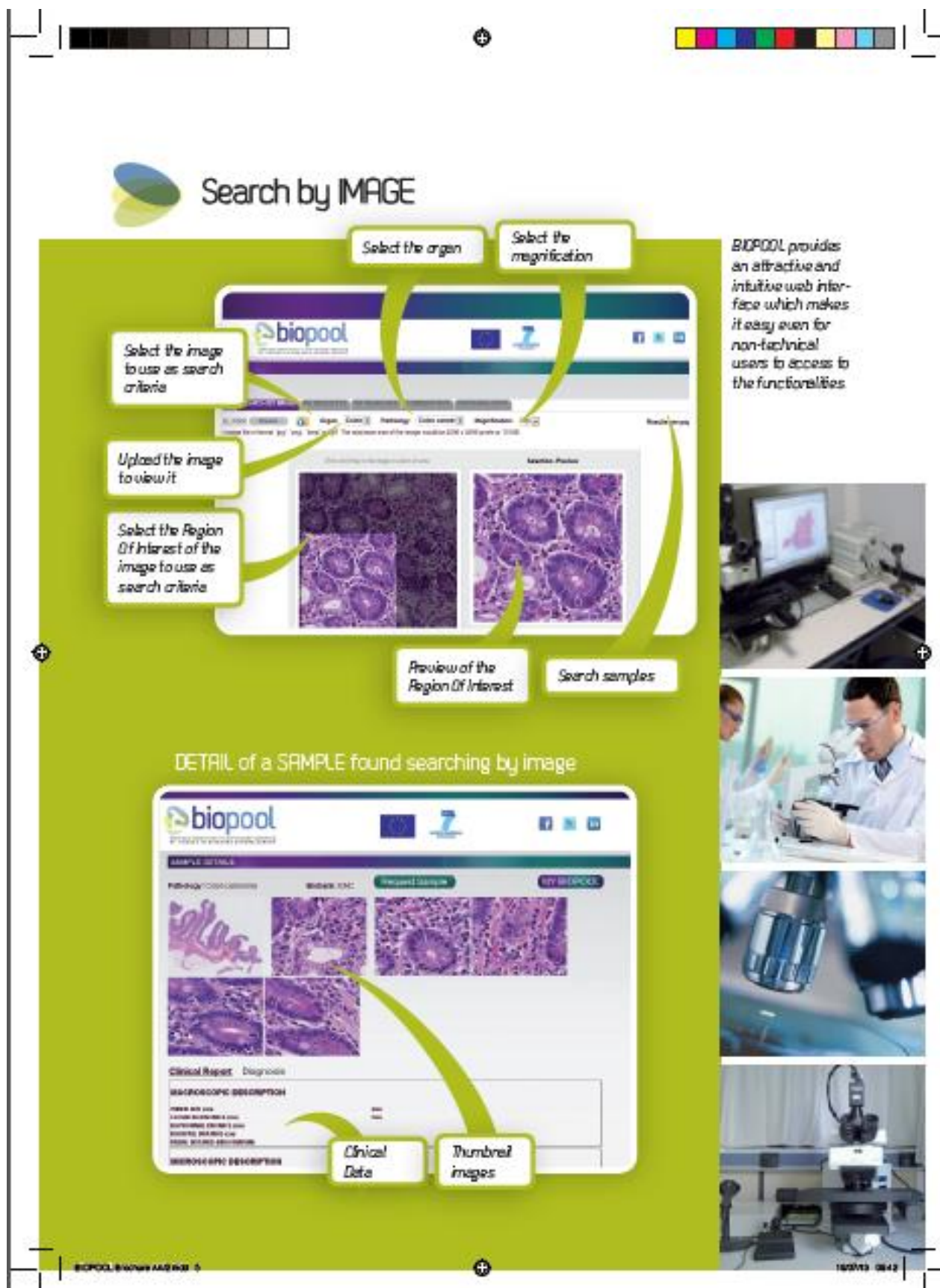
The image displays two screenshots of the biopool website interface, illustrating the search and sample detail functionality.

Top Screenshot: Search by TEXT

This screenshot shows the main search interface. A callout box points to the "Select the organ and the pathology" section, which includes a dropdown menu for "Organ" and a dropdown menu for "Pathology". Another callout box points to the "Search criteria: Free text and fixed criteria associated to the pathology" section, which includes a text input field for "Free text" and a list of fixed criteria for "Pathology".

Bottom Screenshot: DETAIL of a SAMPLE found searching by text

This screenshot shows the details of a sample found through a text search. A callout box points to the "Search samples" section, which includes a "Sample Request" form with fields for "Sample ID", "Sample Name", "Sample Type", "Sample Source", "Sample Date", "Sample Location", "Sample Status", and "Sample Comments".



Search by IMAGE

Select the image to use as search criteria

Upload the image to view it

Select the Region Of Interest of the image to use as search criteria

Select the organ

Select the magnification

Preview of the Region Of Interest

Search samples

DETAIL of a SAMPLE found searching by image

Clinical Data

Thumbnail images

BIOPOL SWISS AG 2012

10/11/13 08:42

BIOPOL provides an attractive and intuitive web interface which makes it easy even for non-technical users to access to the functionalities



7 ANNEX III: POSTER AND GRAPHICAL COMPOSITIONS



PROYECTO BIOPOOL APLICACIÓN DE LA DIGITALIZACIÓN DE IMÁGENES HISTOLÓGICAS A UN BIOBANCO EN RED

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y consorcio BIOPOOL

¹Biobanco Vasco/Hospital Universitario Araba-Txagorritxu; ²Biobanco Vasco/ Nodo Coordinador BIOEF; ³Biobanco Vasco/Instituto Onkológico, ⁴ Biobanco Vasco/Hospital Galdakao, ⁵ Biobanco Vasco/Hospital Universitario Basurto, ⁶ Biobanco Vasco/Hospital Universitario Cruces, ⁷ Biobanco Vasco/Hospital Universitario Santiago

Introducción

Los servicios de anatomía patológica, así como los investigadores básicos especializados en histología, emplean la imagen del tejido como herramienta básica de trabajo, para identificar, clasificar, diagnosticar y/o llevar a cabo estudios histológicos o moleculares. El Biobanco Vasco, está desarrollando un sistema que permita tanto al clínico como al investigador disponer de una imagen de las muestras de tejido de su interés y ofrecer nuevos servicios de última generación en digitalización y análisis de imágenes histológicas.

Material y Métodos

El Biobanco Vasco dotó a todos sus nodos/ Bancos hospitalarios de tumores y cerebros de un sistema de captación y análisis de muestras de tejido de última generación, el sistema ARIOL (Olympus) (Fig. 1).

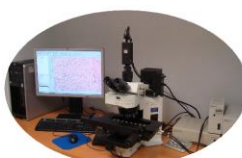


Fig. 1: Microscopio Olympus BX61_Ariol

El proyecto Europeo BIOPOOL (296162) que lidera el Biobanco Vasco tiene como objetivo unificar la información digital gestionada por los biobancos (compuesto por las imágenes histológicas y datos anatomopatológicos) y crear una red de bases de datos de hospitales/biobancos que estén interesados en participar en un sistema de búsqueda basado en imagen y texto, mediante un sistema webserver a través de internet.

El usuario (patólogo, investigador, docente, técnico...) accederá al repositorio de muestras de la red de Biobancos, a través de su página web tras identificarse con sus datos de registro. Tendrá opción de subir la imagen Una vez seleccionadas aquellas muestras o imágenes podrá visualizar y analizar mediante un visor de imágenes on line, o solicitar para poder llevar a cabo sus investigaciones.

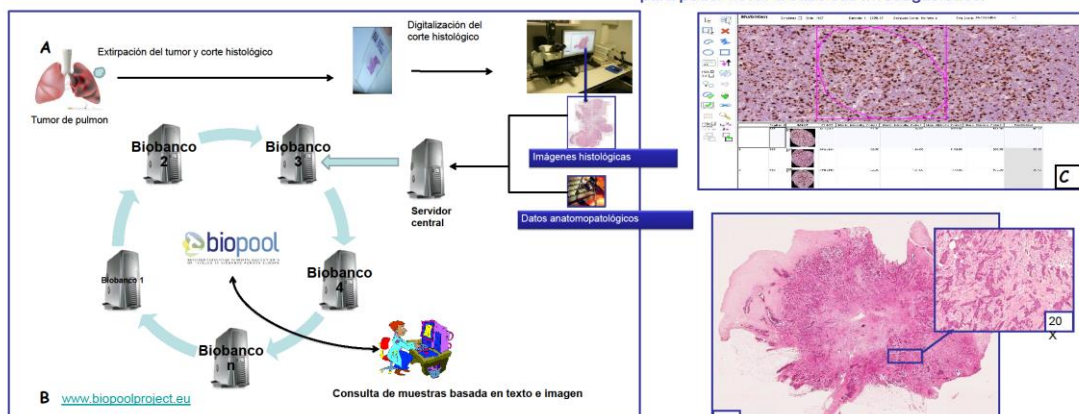


Fig. 2: A, Descripción proyecto BIOPOOL. B, imagen de muestra de tejido teñida con hematoxilina-eosina a 5X y 20X aumentos. C, cuantificación de inmunohistoquímica con tinción nuclear en un tejido tumoral.

Resultados

La red inteligente paneuropea de Biobancos y el desarrollo del sistema BIOPOOL como herramienta de búsqueda innovadora demostrará el potencial de la agrupación de los datos clínicos e histológicos para la investigación médica, el diagnóstico y las actividades educativas.

El sistema Ariol del Biobanco vasco está a disposición de los investigadores que solicitan muestras al Biobanco para distintas aplicaciones.

Escaneo de imágenes: En el biobanco vasco cada muestra tumoral que se almacene en cada nodo será escaneada con el sistema Ariol. Así, se obtiene una imagen de toda la superficie del tejido a 10X aumentos de la que se pueden seleccionar zonas específicas para su escaneo a 20X o hasta 40X aumentos (Fig. 2A). La digitalización de los cortes histológicos de muestras incluidas nos permite crear un escaparate/catálogo de las muestras.

Cuantificación de técnicas de inmunohistoquímica: el sistema Ariol dispone de un escayate para la cuantificación de positividad de tinciones inmunohistoquímicas nucleares, citoplasmáticas y de membrana, tinciones fluorescentes del tipo FISH, etc (Fig. 2B). Esta cuantificación automática tiene la ventaja de que proporciona resultados más fiables y uniformes que la evaluación manual, lo que también incrementa la reproducibilidad. Esta aplicación está disponible para los investigadores que lo soliciten en todos los nodos de Biobanco Vasco.

Escaneo y análisis de TMA: el sistema Ariol tiene una aplicación específica para el escaneo y análisis de TMA. De este modo, se obtiene un portaobjetos virtual con cada muestra escaneada a 20X aumentos, facilitando mucho su visualización (Fig. 2C). A los TMA también se les pueden aplicar las técnicas de análisis mencionadas anteriormente.

Discusión

- La red inteligente paneuropea de Biobancos y el desarrollo del sistema BIOPOOL como herramienta de búsqueda innovadora demostrará el potencial de la agrupación de los datos clínicos e histológicos para la investigación médica, el diagnóstico y las actividades educativas.
- El Biobanco Vasco podrá ofrecer nuevos servicios que darán valor añadido al repositorio de muestras ya disponible en el Biobanco Vasco. Los investigadores podrán disponer de sus muestras asociadas a una imagen histológica que podrán tanto visualizar como analizar.

The research leading to these results has received funding from the European Union Seventh Framework Programme (FP7/2007-2013) under grant agreement n° 296162.





La Sociedad Española de Anatomía Patológica y División Española de la Academia Internacional de Patología

Concede el

PREMIO AL MEJOR PÓSTER

presentado por un médico residente a los Dres.

**M. A. VIGURI DÍAZ⁽¹⁾, O. BELAR BEITIA⁽²⁾,
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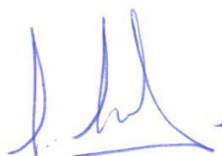
⁽⁴⁾ Hops. Galdakao-Usansolo. ⁽⁵⁾ Hosp. Univ. Basurto. ⁽⁶⁾ Hosp. Univ. Araba-Santiago

por la comunicación

APLICACIÓN DE LA DIGITALIZACIÓN DE IMÁGENES HISTOLÓGICAS A UN BIOBANCO EN RED: PROYECTO BIOPOOL

XXVI CONGRESO NACIONAL DE LA SEAP-IAP

Cádiz, 22-24 de mayo de 2013



Santiago Nieto Llanos
Secretario



Ricardo González Cámpora
Presidente

*A unique initiative to build a large and integrated collection
of histological digital images from biobanks*



Pathologists
Pharmaceutical companies
Researches
Universities

8 ANNEX IV: PRESS RELEASES

Data pooling in biobanks: The BIOPOOL project

February, 20th, 2013

A European consortium of medical, research and higher education institutions is developing a network for banks containing digitalised images of human tissue—"biobanks"— which will help doctors to diagnose different types of possible cancerous tissues taken from patients' biopsies in a shorter time.

The seven partners across four European countries, Spain, the United Kingdom, Netherlands and France are developing the project, known as BIOPOOL, with a budget of €2,500,000 from the European Commission.

"The network will enable clinicians to compare the image of a biopsy for a patient with biopsy images of a large number of other patients across Europe," explained Francesco Moscone, Professor of Business Economics at Brunel University, west London, who is responsible for the business impact of this project.

"The benefits mean that there would be a faster and more accurate diagnosis of diseases, thereby preventing, or reducing, the need for multiple invasive tests."

"Fast and accurate diagnosis will also help in identifying the more appropriate medical treatment, as well as reduce the length of hospital stay."

The existing biobanks are organised collections of biological material and associated health information, for medical-scientific research and diagnostic purposes. In the recent years, biobanks have started digitalising their material, by scanning their samples and storing images and associated information in databases.

But the digital images are usually collected in various different formats, and stored in separated databases and facilities. While image collections carry very valuable knowledge in several fields, their exploitation requires tools to gather, access, visualise, and process large images.

Professor Moscone added: "From the point of view of medical research, the large amount of data shared within BIOPOOL will allow the scientific community to conduct more meaningful clinical trials, especially with respect rare diseases."

"The use of such interconnected sources of data is very promising, as it is expected to reduce diagnosis time and related costs," he said. Roberto Bilbao, Director of the Basque Biobank for Research and coordinator of BIOPOOL project explained that the project involves a significant number of challenges, both technical and non-technical.

It manages very large images, as digitalised bio-images are stored in huge files, even reaching 10-15 GB per image.

The scheme will aggregate data from biobanks until August 2014.

Notes to Editors:

BIOPOOL will offer services such as on text- and image-based search queries, region-of-interest extraction and automated pathology information extraction for specific types of cancers. It will provide tools for the interconnection of different biobank digital resources, using standard communication protocols. The use of these protocols will allow acquiring, storing and exchanging images and associated data. The project will use storage formats such as OME-XML, OME-TIFF, that are compatible with existing systems. In order to include already existing images, auxiliary modules will be developed to convert images into standard formats.

The challenges include scalability problems and different acquisition protocols for different types of tissues. Furthermore, the comparison between different images of the pool is very complex due to different scales and formats of images, and the biological variability of samples.

The partners involved in the project are: Basque Biobank for Research, Tecnia Research & Innovation, Emedica SL, Cultek SL (Spain), Pertimm SAS (France), Brunel University (United Kingdom), and Erasmus MC (Netherlands).

For further information please visit the website www.biopoolproject.eu

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Source: EurekAlert!

Medicina: EU, nata rete biobanche, sara' 'Google' delle biopsie

February, 22nd, 2013

ROMA, 22 FEB - Creata una rete virtuale di biobanche di diversi paesi europei che funziona come un motore di ricerca per vedere biopsie di interesse, e facilitera' lo scambio dati tra medici e ricercatori e accelerera' le diagnosi di tumori, soprattutto di quelli piu' rari e difficili da scovare, permettendo rapidi avanzamenti sia nell'ambito della ricerca oncologica, sia clinici. La costruzione della rete, Biopool, finanziata dall'Unione Europea per 2,5 milioni di Euro, muove ora i suoi primi passi, spiegano all'ANSA i due coordinatori del progetto, gli italiani Francesco Moscone ed Elisa Tosetti della Brunel University in Gran Bretagna. Biopool raccoglie e analizza, attraverso l'interconnessione di varie biobanche, immagini di tessuto istologico, e informazioni cliniche su di esse e sui pazienti cui appartiene il referto. Inoltre, funziona come motore di ricerca con cui cercare e confrontare immagini trovando caratteristiche simili, e diagnosticare malattie. "Fondamentalmente Biopool tratta immagini di biopsie per la diagnosi e la cura del cancro", spiega Moscone. Biopool e' un progetto destinato a crescere ma inizialmente consentira' l'accesso a circa 7000 immagini (e relative informazioni testuali) a diverse tipologie di utenti: biobanche, patologi e altri medici ospedalieri, compagnie farmaceutiche, universita' e istituti di ricerca. In particolare, le compagnie farmaceutiche potranno sfruttare il software per selezionare in modo appropriato il campione di pazienti da includere nelle sperimentazioni cliniche, mentre le universita' potranno utilizzarlo come supporto all'insegnamento. Infine ricercatori e accademici avranno modo di utilizzare i dati estratti attraverso Biopool per effettuare studi epidemiologici o rispondere a quesiti di economia sanitaria di carattere generale. Allo stato attuale Biopool coinvolge otto biobanche europee, di Spagna e Olanda. Tuttavia, molte altre biobanche, anche al di fuori dell'Europa, hanno mostrato interesse a partecipare al progetto.

Source: ANSA

NOTA DE PRENSA

Su objetivo es crear un innovador buscador informático de muestras biológicas para investigación biomédica que permitirá crear una red de biobancos europeos

EL BIOBANCO VASCO LIDERA UN PROYECTO EUROPEO DE TECNOLOGÍAS DE LA INFORMACIÓN

- El proyecto representa un avance en buscadores y comunicaciones que permitirá llevar a cabo proyectos de investigación multicéntricos europeos con mayor celeridad y posibilidades de éxito.
- En el proyecto participan Tecnia, eMedica y Cultek. Además del liderazgo del Biobanco Vasco para la Investigación, también colaboran los hospitales de Cruces, Basurto, Galdakao-Usansolo, Araba-Txagorritxu, Araba-Santiago e Instituto Onkologikoa.
- El proyecto cuenta con 2,5 millones de euros de presupuesto y es cofinanciado por el séptimo programa marco de la Unión Europea.

Bilbao, marzo de 2013.- El Biobanco Vasco para la Investigación (o+ehun) lidera el proyecto BIOPOOL financiado por la Comisión Europea que tiene como objetivo desarrollar un buscador informático de muestras biológicas en una red de biobancos a partir de la imagen histológica y los datos clínicos asociados. En el proyecto BIOPOOL participan entidades de diversos países europeos, entre los que se encuentran Francia, Reino Unido y los Países Bajos.

Los Biobancos son las entidades que almacenan y suministran muestras biológicas como por ejemplo tejidos tumorales. Para realizar sus proyectos, los investigadores necesitan muestras de características específicas o/y en gran número. Para conseguir la totalidad de las mismas deben contactar con varios biobancos, especialmente en el caso de las enfermedades raras. Actualmente, no existe un mecanismo que facilite esta búsqueda. El proyecto Biopool permitirá que un investigador pueda buscar en cualquier biobanco del mundo, las muestras biológicas que necesita para investigar, independientemente del lugar, idioma, etc., en base a la imagen histológica que el tumor tiene, aprovechando las tecnologías de la información y comunicación existentes. Estas imágenes se generan cuando se hace el diagnóstico del tumor y posteriormente se digitaliza. Tal y como ha explicado Roberto Bilbao, director científico del Biobanco Vasco para la Investigación, "Es una tecnología semejante a Google imágenes, en que "subes" una foto de un edificio al buscador, y el sistema te dice dónde está, pero aplicado a imágenes histológicas de tumores e investigación biomédica. De hecho, vamos a establecer una red inteligente internacional de biobancos, lo que demuestra el potencial de los datos clínicos e histológicos para la investigación médica." Asimismo, este sistema será una herramienta útil a nivel universitario, mejorando los recursos didácticos de los profesores y estudiantes para la enseñanza y aprendizaje

Representa el primer proyecto europeo del séptimo programa marco liderado por la sanidad vasca y está enmarcado en la apuesta de la Unión Europea de explotación de grandes bases de datos. En el proyecto participan diversas empresas y centros tecnológicos entre los que figuran Tecnia Research & Innovation, eMedica y Cultek junto con otros socios internacionales que son Pertimm SAS (Francia), la Universidad de Brunel (Reino Unido), y el Biobanco Erasmus EMC (Países Bajos).

Además del liderazgo del Biobanco Vasco para la Investigación, también colaboran en el proyecto los Servicios de anatomía patológica de los hospitales de Cruces, Basurto, Galdakao-Usansolo, Araba-Txagorritxu, Araba-Santiago e Instituto Onkologikoa.

Biopool cuenta con 2,5 millones de euros de presupuesto y está cofinanciado por el séptimo programa marco de la Unión Europea. Además, el proyecto cuenta con financiación de la Diputación Foral de Bizkaia y del Gobierno Vasco.

De este modo, el proyecto BIOPOOL se constituye como "una iniciativa única para construir una gran colección de imágenes de tejidos humanos y los datos asociados, en red, y para desarrollar un conjunto de funcionalidades avanzadas para la gestión y explotación de estas imágenes". Según ha explicado Roberto Bilbao, "Biobancos de otras comunidades autónomas y de otros países como Alemania, Francia o Australia nos han comunicado su interés en participar en la red".

Según indica la investigadora Arantza Bereciartua de Tecnia, el proyecto Biopool afronta un gran número de desafíos, tanto técnicos como no técnicos, “ya que debe ser capaz de manejar imágenes digitalizadas de diferente formato y de gran tamaño, llegando incluso a 10-15 GB por imagen. También hay problemas de escalabilidad y diferentes protocolos de adquisición de diferentes tipos de tejidos. Finalmente, la comparación entre diferentes imágenes es muy complejo debido a las diferentes escalas y formatos de imágenes, y la variabilidad biológica de muestras”.

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