

BRINGING BIOBANKING & PATHOLOGY CLOSER TO CHILDREN AND ADULTS

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BBMRI.AT - MEDICAL UNIVERSITY OF GRAZ



BIOBANKING AND PATHOLOGY UNIVERSITY WORKSHOPS FOR CHILDREN

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BACKGROUND & AIM

The number of biobanks is increasing, accompanied by growing awareness among researchers. However, the public knowledge about biobanks, at least in Austria, is very low.
To increase public awareness, BBMRI.at engages in public events. Particular aim is to address children and familiarize them with the terms biobank and pathology, make the terms tangible and arouse their interest in these disciplines.

METHOD

BBMRI.at partner Medical University of Graz developed a concept for children's "biobanking and pathology workshops" and holds these workshops in collaboration with the Austrian Society of Pathology and the Institute of Pathology, Medical University of Graz.

RESULTS

Concept for Biobanking and Pathology University Workshops for Children under the Title "Ran an die Mikroskope – das gibt es alles in meinem Körper"

Concept with Learning Stations - Children "become" biobankers & pathologists



Concept Variants - For events of different lengths & children of different ages



CONCLUSION

- The workshops are:
- Excellent for introducing biobanking and pathology to children and adults
 - Suitable for different age groups and different event settings and durations
 - Nicely combinable with PR
 - A pleasure for children, teachers, parents and involved staff



PUBLIC ACTIVITIES

BIOBANKING & PATHOLOGY

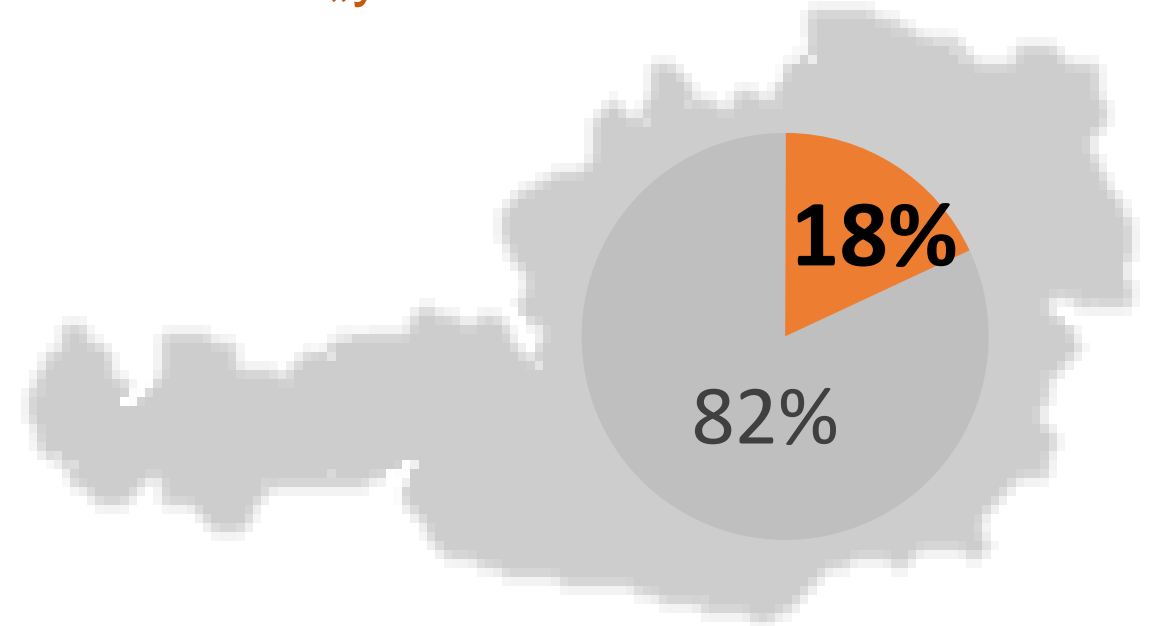
UNIVERSITY HANDS-ON WORKSHOPS

FOR CHILDREN (AND ADULTS)

PUBLIC AWARENESS OF BIOBANKS

- Austria #30 / 32 EU countries (2010)
- 80% - Iceland (#1)
- <20% - Portugal > Austria > Turkey


„yes – heard of biobanks“



Source: Europeans and Biotechnology in 2010,
<https://data.europa.eu/doi/10.2777/23393>

Icon: Thenounproject

Funded by:
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(2018-2023)

 Bundesministerium
Bildung, Wissenschaft
und Forschung

How it started



Lota B. Raphael S.

2015/2016



Med Uni Graz
Kindergarten

BIOBANKING UNIVERSITY COURSES FOR CHILDREN

Concept – modular, flexible hands-on courses

- ✓ Learning objectives
- ✓ Description of stations
- ✓ Procedures
- ✓ Material needed
- ✓ Setup details



Logo: MAKING TREATMENTS, Medical University of Graz, BBMRI.at

Konzept – Details für die Durchführung & Vorbereitung

Ein Vormittag für Junior Biobanker, Patholog:innen oder Forscher:innen
in **Kindergärten**
an **Volksschulen**
in **NMS und AHS Unterstufe**

nach dem Motto

**„Ran an die Mikroskope –
Das gibt es alles in meinem Körper“**



Comella.stumpfner@medunigraz.at Created on 16/01/2023 © KONZEPT_KidsUniWS_JuniorResearcherDay (KGa-
www.bbmr.at Created by CS VS-NMS-AHS)_CS_20230116.docx 1 / 26

Aim:

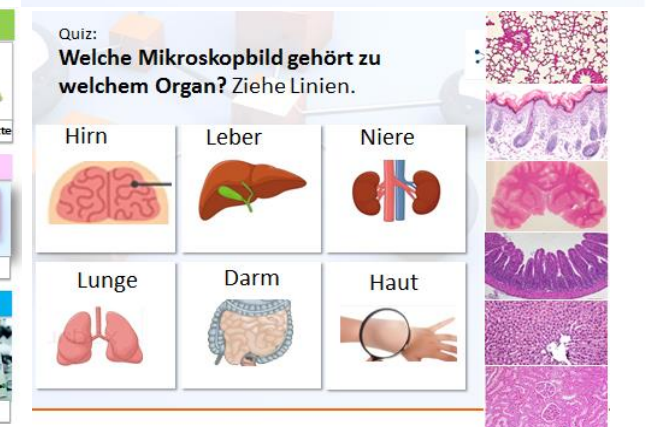
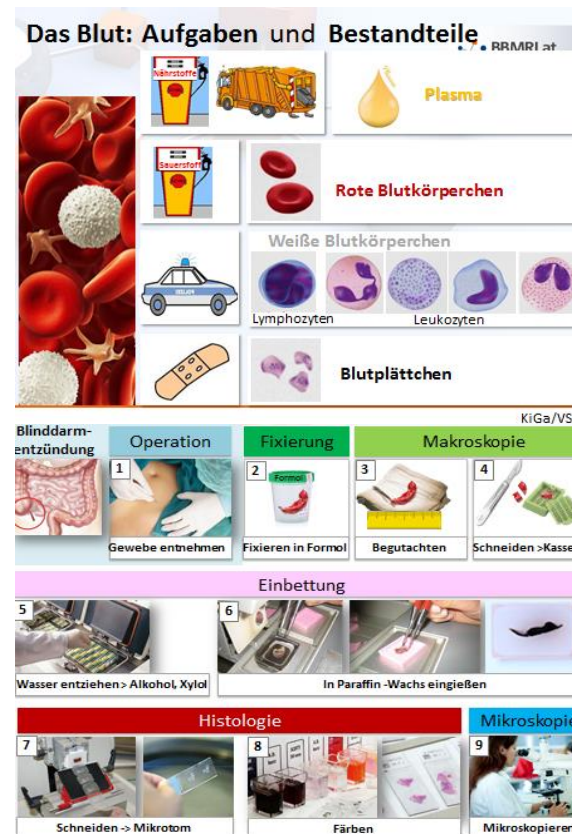
Let children
„experience“
biobanking,
pathology and
research work

Concept – modular, flexible hands-on courses

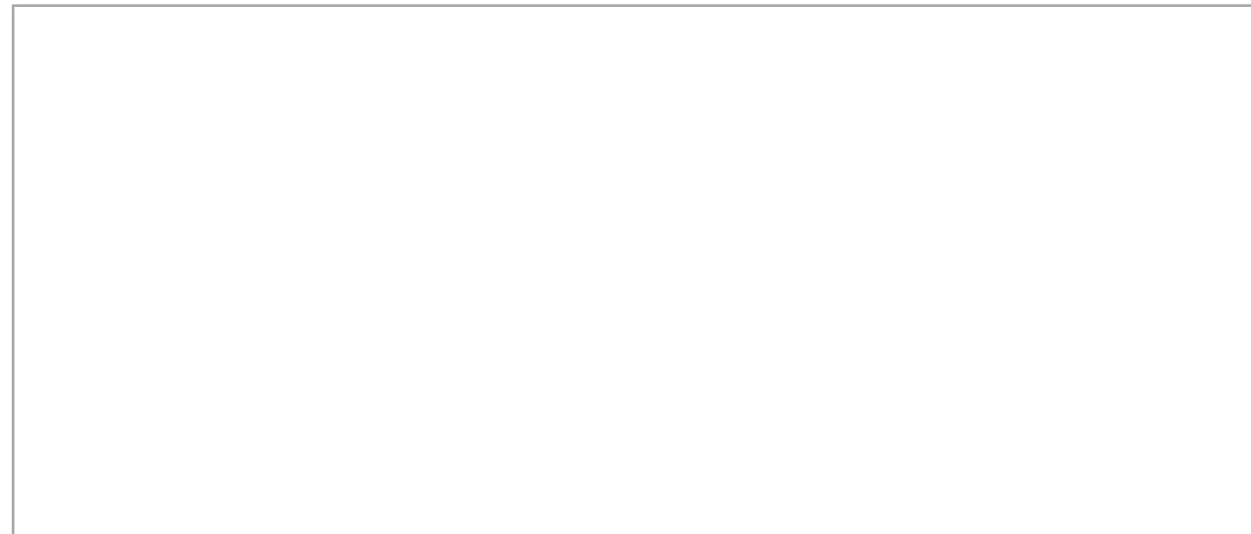
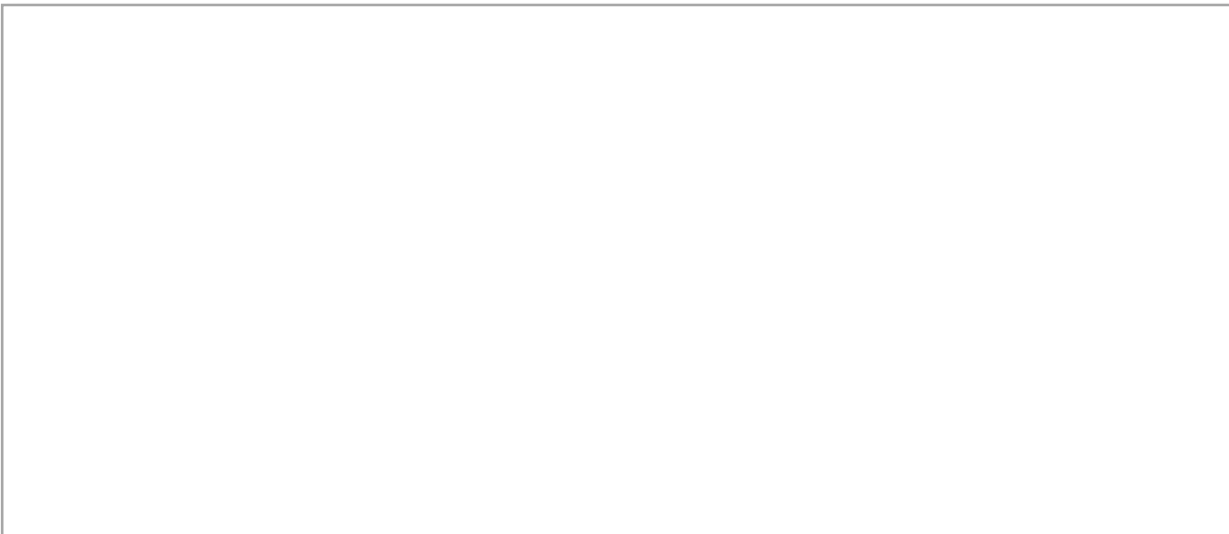
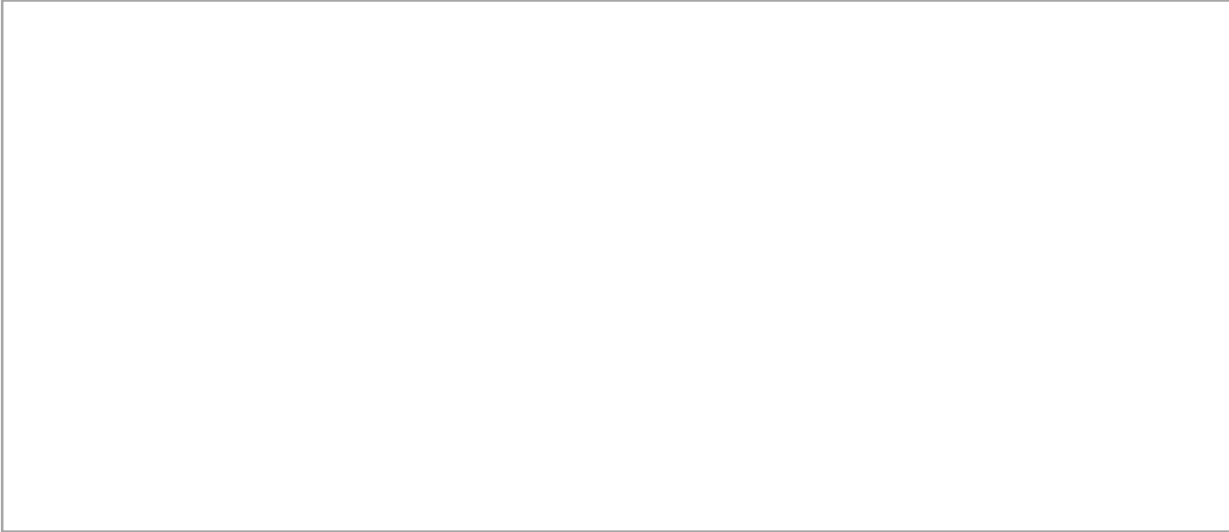
- ✓ Learning objectives
- ✓ Description of stations
- ✓ Procedures
- ✓ Material needed
- ✓ Setup details

- ✓ Educational material
- ✓ PowerPoint
- ✓ Quizzes

- ✓ Teachers/parents information
- ✓ Consent form
- ✓ Feedback forms



Hands-on stations - to “become” biobanker & pathologist



Hands-on stations - to “become” biobanker & pathologist

Interactive Introduction

In hospital



Organs & functions



Blood

Pipetting & freezing



Components & functions



Tissue

Cutting & freezing



Paraffin embedding



Microscopy

H&E staining



Microscopy



BIOBANKING UNIVERSITY COURSES FOR CHILDREN







Knowledge checks (print, digital)



Quiz:
Was ist bzw. was macht eine Biobank?
Kreuze die richtige Antwort an!

- Sammelt und lagert Bio-Lebensmittel
- Sammelt und lagert Gewebe- und Blutproben von PatientInnen, damit daran geforscht werden kann
- Ist eine Sitzbank aus biologischem Material

Quiz:
The journey of tissue in a hospital
Bring the pictures into the correct order and label them with 1 to 6.

Microscopy  Microscope work	Histology  Staining	Fixation  Fixing in formalin
Embedding  Embedding in paraffin	Surgery  Remove tissue	Cutting  Cutting > cassette



Biobank & Pathologie Kids Universitäts-Workshop - Quiz #1 (VS+AHS)

7 Spiele · 25 Spieler

[Start](#) [Zuweisen](#) Übung

Quiz #1 zum Biobank & Pathologie Kids
Universitäts-Workshop "Ran an die
Mikroskope, das gibt es alles in meine...
MEHR ANZEIGEN

Ein privates Kahoot

BBMRI.at
Aktualisiert vor 6 Monaten

Fragen (10) [Antworten anzeigen](#)

- 1 - Quiz
Was ist bzw. was macht eine Biobank?
30 Sekunden
- 2 - Quiz
Was macht eine Pathologie im Krankenhaus?
30 Sekunden
- 3 - Quiz
Welche Zelle ist KEINE Blutzelle?
30 Sekunden
- 4 - Quiz
Welche Aufgabe haben rote Blutkörperchen (Erythrozyten)?
30 Sekunden
- 5 - Quiz
Wie macht man Organstücke (Gewebe) für die Forschung haltbar?
30 Sekunden
- 6 - Quiz
Wie viel Grad Celsius hat flüssiger Stickstoff?
30 Sekunden
- 7 - Quiz
In welchem Material wird fixiertes Gewebe eingegossen, um es haltbar z...
20 Sekunden

Different public events & target groups

Same concept for events of different lengths & age groups



Kindergarten
(age: 4-6.5)



Primary school
(age: 7-10)



Secondary school
(age: 11-14)



Public
(age: 4-99)

.....1.5h to 3h courses continuous loop
.....typically 20 – 30 kids..... several 100

- Slightly adapted content for different ages
- Setup in stations gives flexibility in length

Different public events & target groups



Organization & Partners

Children

- ‚Junior‘ courses (4-14)
- ‚Kids University Workshops‘ (9-14)
- Summer school courses (7-14)



Nursery schools
Elementary schools



Different public events & target groups

Organization & Partners

Children

- ‚Junior‘ courses (4-14)
- ‚Kids University Workshops‘ (9-14)
- Summer school courses (7-14)

Public (4-99)

- Long Night of Research
- Open house / opening events
- Guided biobank tours



24 May 2024 (17:00 – 23:00)



ZWT Zentrum für Wissens- und Technologietransfer in der Medizin

ZWT Zentrum für Wissens- und Technologietransfer in der Medizin

DER LANGE NACHT DER FORSCHUNG

DER LANGE NACHT DER FORSCHUNG

Warum ist Graz Europas „Biobanken-Hauptstadt“?

Bei der Führung durch die Biobank am ZWT können Sie selbst sehen, wie Millionen von Blut-, Gewebe- und anderen Proben aufbewahrt werden. Und Sie erfahren, wie diese Proben ganz konkret zum Einsatz kommen und für den medizinischen Fortschritt genutzt werden.

Führungen um 17:00, 17:30, 18:00, 18:30, 19:00, 19:30, 20:00, 20:30, 21:00, 21:30, 22:00, 22:30 Uhr

Anmeldung hier!


Wie können Sie selbst dabei helfen, neue Therapien zu entwickeln?

Einmal selbst Blut pipettieren und Gewebe einfrieren, so wie man es in einer Biobank macht – das ist bei dieser Station von BBMRI.at möglich. Schließlich befindet sich im ZWT eine der größten Biobanken Europas und mit BBMRI auch die Europa- und Österreich-Zentrale, die dazu beiträgt, dass mehr als 100 Millionen Proben für den medizinischen Fortschritt genutzt werden können. Und man erfährt, warum man Menschen beim Gesundwerden helfen kann, wenn man im Krankenhaus seine Proben freiwillig zur Verfügung stellt.

 **EFRE**

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 **EFRE**
Bundesministerium
Bildung, Wissenschaft
und Forschung

BIOBANKING UNIVERSITY COURSES FOR CHILDREN

Communication – publication, media articles, award

PUBLIC OUTREACH

- **Videos** from/about events
- **Podcasts** for children
- **TV/radio** reports
- **Newspaper & magazine** articles
- **Animated videos** for patients (adults, minors) ... presented at EBW by **Monika VALJAN**
- **Citizen-Expert-Discussions**
- **EU Project „SCIBIOEU“** ... presented at EBW + poster P4 by **Vasileios ZOGOPOULOS**

Examples

[Biobanking at the Long Night of Research](#)>



[Biobanking podcast](#)>

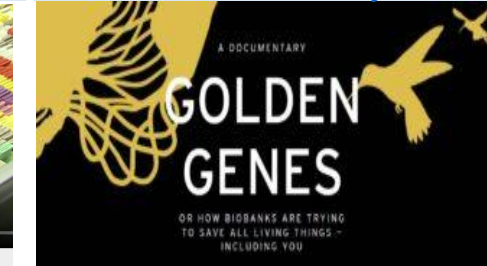


[EuroNews TV](#)>

European researchers tackle cancer with Biobanks euronews.next



[ORF \(about Biobank Graz\)](#)> [Cinema documentary movie](#)>



DERSTANDARD

KLEINE ZEITUNG

KURIER

ServusTV

ORF ORF St

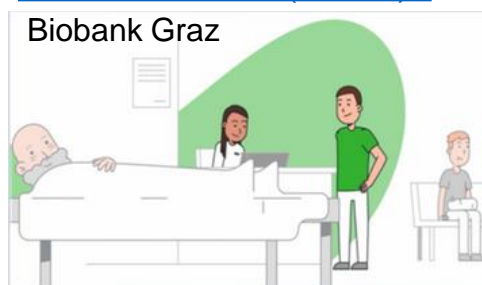
RTV SLO

europa news

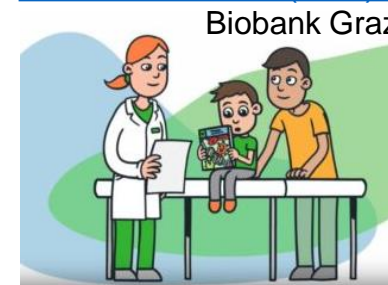
Die Presse

R T L

[Animated video \(adults\)](#)>



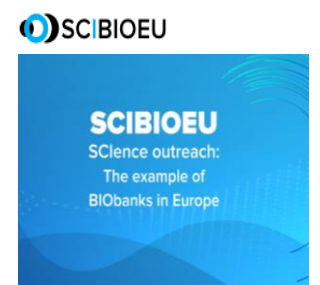
[Animated video \(kids\)](#)>



[Citizen discussions](#)>




[Erasmus project](#)>



<https://bbmri.at/>

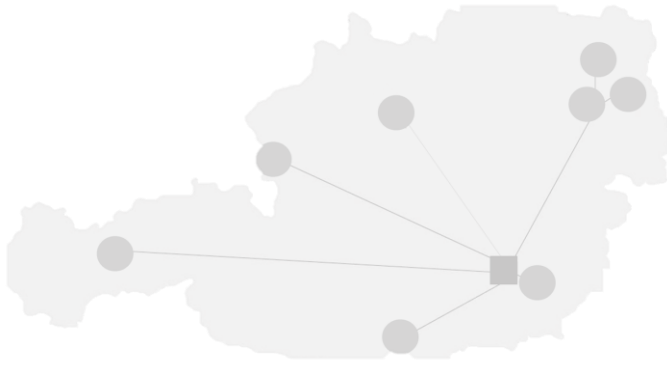
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CONCLUSION - PUBLIC EVENTS FOR KIDS & ADULTS

Courses:

- Excellent for introducing biobanking, pathology & research to children and adults
- Suitable for different age groups
- Suitable for different event settings and durations
- Nicely combinable with PR
- Possible: awards & publications
- **A pleasure for kids, adults & involved staff**



THANK YOU!



Team:

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Daniela Papst
Martin Zacharias
& others

Partners



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