

Goals of the Congress

Global networking

All partners are focused on modern biotechnology and they want to share their knowledge. The spirit of learning from each other both inspires us and benefits us all.

To come together and work together

Teachers and students from all over the world are coming to Pforzheim to work together hands-on in an innovative field in science. Hands-on lab work such as we will perform is imperative for learning modern science.

Education for responsibility

Students from Czech, Lithuania and Germany will become Mentors, trained by their teachers to be leaders in these innovative labs. The training begins at home schools months before the congress, and finishes with all Mentors during the weekend just before. During the congress, the Mentors will present detailed information and guide both teachers and other students through the workshop.

Education at the frontier of science

Working at the frontier of science motivates and triggers students for a future career in science and technology.

Implementation of new methods in the curricula

We will pioneer hands-on DNA sequencing in high schools.

Supporters



Primary Science Topic Microbiome Analysis by DNA Sequencing

During the last decade scientists discovered that the microbiome in the human gut is correlated to neurodegenerative diseases like Alzheimer, Parkinson, dementia or autism. Sequencing the 16S rRNA gene of bacteria can detect changes in the mixture of bacteria species in the gut microbiome. Analysing these changes could help to develop new treatments against these diseases.

In our project team, we developed a teaching unit for high school students focused on hands-on lab work to intrigue them about this field of biotechnology and neuroscience. The teaching unit includes background information and laboratory protocols about the steps to investigate a microbiome. Raw data of sequencing are evaluated by bioinformatics and aligned with 16S rRNA genes of bacteria in research databases. Results show the quality and quantity of bacteria species in the investigated microbiome.

Donation

Verein der Freunde und Förderer der Johanna-Wittum-Schule

Key word: Biotechnology Congress

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International Biotechnology Congress

at

Johanna-Wittum-Schule
in Pforzheim

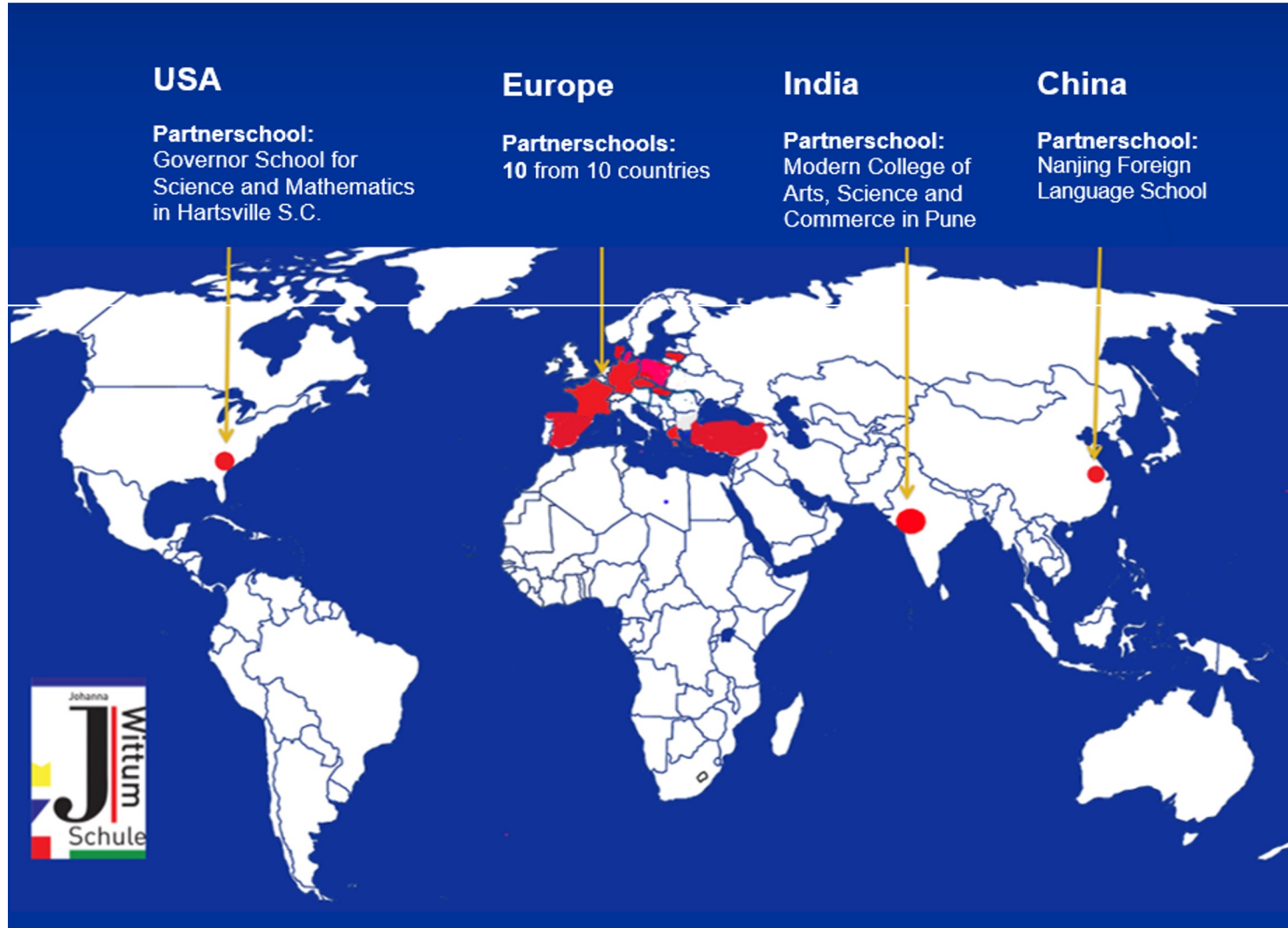
12.01. – 18.01.2025



Erasmus+

Participants

In total we expect 115 participating teachers and students, 90 from abroad.



European Partnerschools:

Name	City	Country
IX Liceum C.K. Norwida	Częstochowa	Poland
Lycée Léopold Sédar Senghor	Evreux	France
Biskupské gymnázium Brno	Brno	Czech
Vilniaus Jėzuitų Gimnazija	Vilnius	Lithuania
Thisted Gymnasium	Thisted	Denmark
Gymnázium sv. Františka Asisského	Levoca	Slovakia
2nd Model General Lyceum	Athens	Greece
Johanna-Wittum-Schule	Pforzheim	Germany
The Koç School*	Istanbul	Turkey
IES Fray Luis*	Granada	Spain

* Spain and Turkey are new partners. They have not yet applied for Erasmus accreditation.

Erasmus support does not cover fees for e.g. German students, chemicals or cultural visits.

Further information see: <http://modernebiotechnologie.de>
<https://www.geneeditingbycrispr.com>