

# VIRCHOW 2.0

BERLIN BRANDENBURG INNOVATION CLUSTER FOR CELL-BASED MEDICINE



KONZEPTIONSPHASENPROJEKT



Bundesministerium für Bildung und Forschung

**GEFÖRDERT VOM** 

## **Open call info event** Sonja Hansen & Marie Vidal

8th November 2021











BERLIN BRANDENBURG INNOVATION CLUSTER FOR CELL-BASED MEDICINE

**Aim:** Promote cooperation between regional future-shaping actors from companies, society and science with a long-term perspective via

- (i) R&D projects and
- (ii) innovation-supporting activities
- Transfer the latest technologies, scientific methods and instruments into applications as quickly as possible

Program:

7 clusters will be supported for up to **9 years with 45 M€ each** 





https://www.clusters4future. de/zukunftscluster-initiative





#### **VIRCHOW 2.0 IS THE ONLY FINALIST IN BERLIN!**



VIRCHOW 2.0 BERLIN BRANDENBURG INNOVATION CLUSTER FOR CELL-BASED MEDICINE





May 6<sup>th</sup> 2021: BMBF announced the 15 new finalists (out of 117 submitted sketches)

## 2<sup>nd</sup> ROUND NATIONWIDE OPEN COMPETITION





#### Perspective

# LifeTime and improving European healthcare through cell-based interceptive medicine

https://doi.org/10.1038/s41586-020-2715-9	Nikolaus Rajewsky <sup>1,2</sup>
Received: 29 April 2020	Stein Aerts <sup>6,7</sup> , Ido An Giacomo Cavalli <sup>14</sup> , S
Accepted: 25 August 2020	Angelika Eggert <sup>3,22</sup> , .
	Susan M. Gasser <sup>27,28</sup> , Grietje Krabbe <sup>1</sup> , Pete
Open access Open access Open access Open access	John Marioni <sup>39,40,41</sup> , N Marcelo Nollmann <sup>48</sup>
e check for updates	Inês Pinheiro <sup>5</sup> , Ana F Philip Rosenstiel <sup>56,57</sup>
	Giuseppe Testa <sup>15,63,6</sup>
	Alfonso Valencia <sup>70,4</sup>

Nikolaus Rajewsky<sup>1,2,3,4,204 \veessigned Geneviève Almouzni<sup>5,204 \veessigned Stanislaw A. Gorski<sup>1,204 \ve</sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup></sup>



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Heidelberg, Germany, <sup>61</sup> Genome Biology Unit, European Molecular Biology Laboratory, Heidelberg, Germany. <sup>62</sup> Department of Computer Science and Applied Mathematics, Weizmann Institute of Science, Rehovot, Israel. <sup>63</sup> Department of Oncology and Hemato-oncology, University of Milan, Milan, Italy. <sup>64</sup> Human Technopole, Milan, Italy. <sup>65</sup> Biomedical Research Foundation, Academy of Athens, Athens, Greece. <sup>66</sup> Institute of Computational Biology, Helmholtz Zentrum München - German Research Center for Environmental Health, Neuherberg, Germany, 67 Department of Mathematics, Technical University of Munich, Munich, Germany. 68 Institute of Epigenetics and Stem Cells (IES), Helmholtz Zentrum München - German Research Center for Environmental Health, Munich, Germany, 69 Faculty of Biology, Ludwig-Maximilians, Universität, Munich, Germany. 70 Barcelona Supercomputing Center (BSC), Barcelona, Spain. 71 CNRS UMR3244, Institut Curie, PSL University, Paris, France.\* A list of authors and their affiliations appears at the end of the paper. #These authors contributed equally

## **GROWING NETWORK**



VIRCHOW 2.0 BERLIN BRANDENBURG INNOVATION CLUSTER FOR CELL-BASED MEDICINE





**Nikolaus Rajewsky** Speaker





**Thomas Gazlig** 

Co-speaker



**Marie Vidal** 



## FROM CUTTING-EDGE RESEARCH TO INNOVATION

Technology focus:

- Single-cell multi-omics & advanced imaging
- AI/ML
- Patient-derived disease models

#### **Application areas for implementing cell-based medicine:**

- Al supported single cell technologies for the R&D market & clinical applications
- Al solutions for pathology and precision diagnostics
- Biomarker identification and new monitoring strategies for therapy response
- Novel discovery process for new drug targets
- New business models for clinical single cell data and analytics software







#### <u>Aim:</u> Deliver a detailed cluster strategy including R&D projects <u>Duration:</u> 6 months 01/10/2021 – 31/03/2022 Final proposal: 20 pages and in addition 2.2 pages may per project/project partner

**Final proposal:** 30 pages and in addition 2-3 pages max per project/project partner

Main Tasks:

- 1) Portfolio and SWOT analysis of regional technologies, models and competencies
- 2) Analysis of clinical needs for cell-based precision diagnostics and therapies
- 3) Definition of R&D projects for the implementation phase: match-making and **open-call**
- 4) Planning of a central "Innovation Hub" with technology adoption and development platform
- 5) Sustainable strategy for the long-term establishment of the cluster as public/private partnership
- 6) Strategy for marketing, patient engagement and public dialogue
- 7) Concept for education & training, mentoring, and capacity building
- 8) Management and organization structure



## **OPEN CALL FOR CELL-BASED MEDICINE PROJECT IDEAS**





**Focus:** Innovative R&D collaborative projects in 6 areas

- Innovative single cell and AI technologies
- Predictive personalized disease models
- Precise molecular and cellular diagnostics
- New drugs targets and cellular therapies
- AI-supported clinical decision systems
- Out of the box, emerging fields

**Duration and potential funding:** up-to 3 years with funding in the range of 200-500 k€/year

<u>**Criteria:**</u> (1)Excellence and fit with the cluster vision and mission, (2) novelty, innovation potential and impact, (3) implementation and (4) strength of the applicant team

**Review:** independent and external scoring by 2-3 experts

#### Timeline:

Brokerage events: 19 and 22 November Submission deadline: 12 December Selection of best projects: 31 January Workshop with selected projects: 14 February



Selection of the best project ideas aligned with the cluster vision of implementing cell-based medicine in Berlin-Brandenburg for integration in the final cluster proposal, we look for



Collaborative R&D project ideas from project teams involving academia <u>and</u> industry partners



Projects ideas aiming at further developing, integrating and applying single-cell technologies, artificial intelligence as well as patient derived disease models for R&D applications and/or clinical use



Collaborative R&D project ideas selected by the open call will become part of the Virchow 2.0 cluster application

At this stage the open call aims to select the R&D collaborative projects proposed for the three years of the first implementation phase.

#### **6 APPLICATION TOPICS: IMPLEMENTING CELL-BASED MEDICINE**

- Innovative single-cell and AI technologies
- Predictive personalised disease models

- Precise molecular and cellular diagnostics
- New drugs targets and cellular therapies
- Al-supported clinical decision systems

• Out of the box, emerging fields









## ELIGIBILITY REQUIREMENTS (1/2)





Scope: Applications must propose cell-based medicine collaborative R&D project ideas involving partners from academia and industry.



- Project team: a minimum of two partners from two different organizations
- Please see the section match-making opportunities, if you are looking for a project partner.



- **Co-funding:** Overall the cluster budget has to secure 20% of own contribution from its partners and industry partners are expected to commit to co-funding of their project costs.
- Please see <u>Clusters4Future guidelines from the BMBF</u> (section 5; section 2 of the annex) and Virchow 2.0 <u>Budget plan guidelines</u>



**Regionality:** All partners are expected to be **regional to Berlin-Brandenburg**. **Exceptions may be granted**, if well justified (e.g. no local partner exists).

- Only partners from Germany are eligible for BMBF funding and only contributions of German organizations count towards the overall own contribution of the cluster.
- International partners are welcome as associated partners (need to cover their own cost, no BMBF support, contribution doesn't count towards the overall own contribution of the cluster)





Availability for strategic planning of Virchow 2.0: Applicants must be willing and available to participate in an in-person Virchow 2.0 strategy workshop on February 14, 2022 with partners of all selected project teams. Selected applicants must be willing and available to support the Virchow 2.0 conception phase team in preparing the final Virchow 2.0 cluster proposal, especially regarding all matters related to their project idea.



**Application signature:** Signatories must have the appropriate decision power within their organisation to submit the proposal (e.g. a post-doc from an academic group can participate if their supervisor is signing the application).



Application number: The number of applications per partner and per consortium is not limited.

## **PROCESS AND TIMELINE**





#### Process

- Submissions exclusively to the email address <a href="mailto:opencall@virchow2-0.de">opencall@virchow2-0.de</a>
- As a single pdf including the completed application form and the signed signature pages
- The application must be signed by each involved applicant
- For questions concerning the open call, contact the open call managers at opencall@virchow2-0.de



#### Key dates

- The Open Call for projects ideas launched on **2 November 2021**
- The submission deadline is **12 December 2021**
- Applications will be reviewed and the decision announced by **31 January 2022**
- A workshop with partners of all selected project ideas is planned on **14 February 2022**
- The final Virchow 2.0 cluster strategy including description of the selected projects has to be submitted by **31 March 2022**
- The BMBF will announce the supported clusters in the **middle of 2022**
- The first 3-year implementation phase is expected to start in early 2023

## **DURATION AND POTENTIAL FUNDING**



Project ideas with a duration of **maximum three years** can be submitted. There is no limit to the budget that can be requested per application or applicant. Consider the indicative range of **200 to 500K€ per year for a project budget**.



## Please note that this is not a call for project funding yet.

The selected projects will be included in the final cluster proposal and will receive funding only if Virchow 2.0 is chosen by the BMBF to realize its first implementation phase.

Up to 4.5 million € would be available per year for all R&D collaborative projects in the cluster.

#### **SELECTION CRITERIA**





**Excellence of the hypothesis/aims for the cluster strategy:** Preference will be given to project ideas that are (1) scientifically sound and comprehensive and (2) relevant for the Virchow 2.0 strategy. Alignment with the cluster vision of implementing cell-based medicine in Berlin-Brandenburg is a key criterion

**Innovation potential and impact:** Preference will be given to proposals that (1) demonstrate a clear understanding of the problem(s) they are trying to solve; (2) clearly outline the novelty of their approach to solving the problem(s); (3) define the expected societal and/or economic impact and present a promising path to patient and/or marketability/probability of commercialization

**Implementation:** Preference will be given to proposals that have (1) clearly defined objectives, relevant to the hypothesis; (2) a work plan achievable within the scope of the project with appropriate milestones and budget; (3) identify potential challenges and pitfalls

**Strength of the applicant team:** Preference will be given to proposals with applicants who have the necessary competencies, expertise and network to implement the project idea

## **MATCHMAKING OPPORTUNITIES**





Do you have an innovative idea and are you looking for a specific complementary expertise? Do you need additional partner(s) to develop your project proposal?

- $\Rightarrow$  Join our growing network on the <u>Virchow 2.0 match-making platform</u>
- create/update your profile to present your expertise and interests
- search for partners and book meetings with other Virchow 2.0 match-making participants
- register to join our virtual brokerage events scheduled on

Friday 19 November, 4:30-6:00 pm CET Monday 22 November, 4:00-5:30 pm CET and submit your project idea pitch by <u>12 November 2021</u>

For consulting on demand with Open Call managers, write to opencall@virchow2-0.de



## **APPLICATION FORM**

#### **Applicant information**

#### **Project summary**

- Topic
- Indication/disease area (if applicable)
- Summary
- Alignment with cluster vision

#### **Project description**

- Description of the problem
- Description of your new solution (technology/product/service/application)
- Uniqueness of new solution
- Excellence of the project partners

#### Work plan

- Work package and risk assessment
- Timeline
- Budget plan
- Future development plan, exploitation strategy, long term vision

#### **Technology transfer activities**

- Invention disclosure and/or patent(s) related to the proposed project
- Support by technology transfer programs of Virchow 2.0 core partner institutions



VIRCHOW 2.0

BERLIN BRANDENBURG INNOVATION CLUSTER FOR CELL-BASED MEDICINE

## **BUDGET PLAN**

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One budget table to fill in per partner using the Virchow 2.0 budget plan guidelines

Applicant	ХХХ		
Rate of BMBF funding	XXX %	Rate explanation of	code XXX
Cost category	Total planned budget in €	Own contribution in €	Budget requested from BMBF in €
Personnel	XX €	XX €	XX €
Consumables,			
equipment and	XX €	XX €	XX €
instrument		~~ t	77 E
depreciation			
Other direct costs (e.g.			
travel, meeting and	XX €	XX €	XX €
events)			
Indirect costs	XX €	XX €	XX €
TOTAL	XX €	XX €	XX €



#### **BMBF funding rate of eligible cost**

Academia:	100% for basic research
Large enterprises:	50% for industrial research
	25% for experimental development
Medium enterprises:	60% for industrial research
	35% for experimental development
Small enterprises:	70% for industrial research
	45% for experimental development

https://www.bmbf.de/bmbf/shareddocs/bekannt machungen/de/2020/11/3229 bekanntmachung

## **SIGNATURE**



- Information of application shared with Virchow 2.0 conception phase consortium involved in the selection process as well as with external reviewers who have signed a confidentiality agreement
- Confirmation of project team and organisation
- Willingness to co-fund
- Participation in an in-person Virchow 2.0 strategy workshop on 14
   February 2022 with partners of all selected project teams
- Support in preparing the final Virchow 2.0 cluster proposal, in particular regarding the project idea
- No other funding for the project idea applied for exists
- Notification when another application for the same idea is filed and/or funded elsewhere
- Awareness of and compliance with <u>Virchow 2.0 Open Call Information</u>

		FOR CELL-BASED ME	JUNE	
	Open call for cell-	-based medicin	e project ideas	
Signature	page			
Project title (no	n-confidential):			
Please insert your	non-confidential project title (same a	as used in the applicat	ian)	
to Data Subjects, 2.0 cluster strateg the implementatio		ng is to select the pr the final step of the	oject learns that will be included BMBF competition, realize their j	in the Vircho project idea
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### **THANK YOU!!**



## Open call for cell-based medicine project ideas 2021



VIRCHOW 2.0 BERLIN BRANDENBURG INNOVATION CLUSTER FOR CELL-BASED MEDICINE

Submission deadline: 12 December

## wirchow2-0.de @Virchow2\_0



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GEEÖRDERT VOR

#### Unique opportunity to get involved in the cluster

We invite project teams from academia and industry to propose their collaborative R&D project ideas to be included in the final cluster strategy to implement cell-based medicine.

#### Contact: opencall@virchow2-0.de

# We look forward to answering your questions!





#### Sonja Hansen

Marie Vidal