

SCRiMM Pilot Call 2025



DEFENCE



ROYAL HIGHER
INSTITUTE
for DEFENCE



INTRODUCTION

PROGRAMME

09:30 Registration

10:00 SCRiMM: context and objectives

10:30 Content of the call: timeline and themes

11:00 The rules of the SCRiMM programme

11:15 Evaluation procedure

11:30 Q&A

12:00 End of info moment

Meet the SCRiMM team

RHID Royal Higher Institute for Defence - Scientific & Technological Research of Defence
& **QAMH** Queen Astrid Military Hospital



Lucie Geurts

Research Manager Human
Factors and Medicine

Karen Pieters

Dep. Director STRD
Coordinator national programs
Program Manager DEFRA



Col. Damien Van Tiggelen

Innovation Officer
Medical Component



SCRiMM Context



Strategic Vision for Defence (2016) STAR-plan (2022)

A gradual increase of the R&T contribution for security and defence to reach 2% of defence spending in 2030.

Strengthening the Scientific, Technological and Industrial Potential



Policy Declaration Minister of Defence 31 Oct 2022

”... knowledge centres in Belgium, companies in general and Belgian SME’s,”

“....will flow back to society in the form of knowledge, technology and employment...”



Belgian Defence ‘Research, Technology & Innovation Vision 2030’

5 boosters for Defence Research, Technology and Innovation



Belgian Defence ‘Research, Technology & Innovation Vision 2030’

From an internal scientific and technological research programme
to a research, technology and innovation policy
within a national and European context.



**Structurally reinforce
the Belgian Defence
R&T-capabilities**

(Royal Military Academy,
Defence laboratories,
Military Hospital Queen Astrid)



**Develop a national
broader knowledge
and technological
base**



**Stimulate and
support
international
collaborative
research and
development**

(EDA, EDF, ESA, NATO)



**Facilitate short-
cyclic innovation
projects for
Defence**



**Create ecosystems
for research,
development and
innovation**

SCRiMM Context

- In line with Belgian Defence's aim to reinforce the technological and knowledge base at national level, the Royal Higher Institute for Defence wishes to enhance research collaborations **with the different universities and associated university hospitals in the field of military medicine.**
- The aim is to *create knowledge needed for Belgian Defence*, to compensate for the lack of personnel, materials and infrastructure and because of an insufficient flow of patients.
- **Concept:** Finance a 4–years PhD in co-promotion between a civilian university and Belgian Defence.

CONTENT OF THE CALL: TIMELINE & THEMES

TIMELINE

	DATE	AT / VIA
Information session	30 April 2025 (10h – 12h)	RMA, building I, meeting room Symposium
Expression of Interest	15 May 2025	Mail
Deadline Full proposals	15 June 2025 (14h00)	Mail
Panel evaluation, incl. interviews with the applicants	7-8 July 2025	RHID
Selection proposal formulated by the scientific committee of the RHID	11 September 2025	NA
Final selection of proposals by the board of directors of the RHID	25 September 2025	NA
Communication of results to applicants	30 September 2025	Mail
Signature contracts	14 November 2025	Online E-sign platform



THEMES

- ❑ **Theme 1:** Military physical recruitment and readiness standards
- ❑ **Theme 2:** Eradication of Staphylococcal Skin Colonisation with Phages

THEME 1 :

Military physical recruitment and readiness standards



COMOPSMED
COL VAN TIGGELEN

30 April 2025



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■ **SCRiMM**

Agenda

1

Introduction

2

SCRiMM: Why ?

3

Pilot 1 : Physical/Medical selection criteria

4

Pilot 2 : Eradicate MRSA & MSSA colonization on the skin

5

Conclusion



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SCRiMM

Structures

1

Defence Funded Research program : MHQA projects

Defence

Partners

2

DEFRA

Consortia

3

Structural Collaborative Research in Military Medicine

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Partners



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SCRiMM: Why ?

Importance of the Civilian-Military collaboration

Research questions based on eg :

- Insufficient access to patients
- Insufficient access to equipment
- Insufficient access to infrastructure
- Insufficient knowlegde
- **Insufficient time & HR resources**
- Specific needs

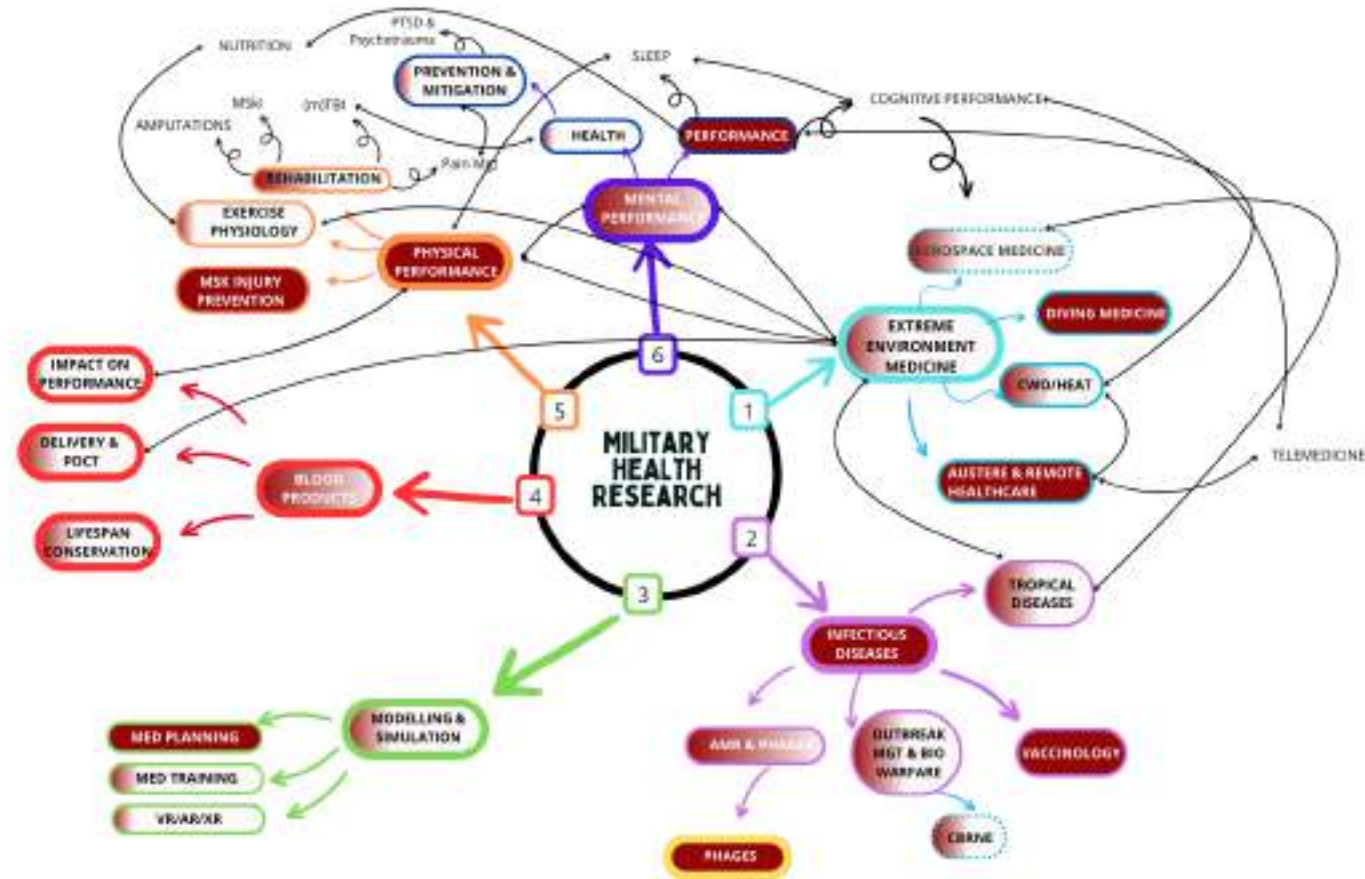


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Our own research focus



- Extreme Environment Medicine
- Infectious Diseases
- Modeling & Simulation
- Blood products
- Physical Performance
- Mental Performance



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Physical Medical Selection Criteria

Reliable – Relevant – Efficient – Effective

Context

Recruiting is important but recruiting the right person for the right job is paramount
We also select medically our recruits

BUT: are the criteria still valid, reliable, ... do we select on the right criteria ?

Occupations change, people change, equipment changes, missions change, adversaries change, tactics change...



Aim

This project aims to **optimize** Belgium's Defence recruitment process by integrating advanced technologies, such as sensor data and benchmarking the NATO **physical employment standards** (PES). By enhancing the reliability and relevance of physical selection criteria, the project aims to **smoothen medical selection and impacting injury rates**, ensuring that (only the most suitable) recruits are better prepared for the physical demands of military service. This will lead to a more **efficient and effective** selection process, ensuring that the PES are adapted for Defence medical selection.



Potential WP

- **Systematic Review of Military Recruitment Standards**
- **Analysis of International Practices – Criteria, Attrition, and Injury Rates**
- **Sensor-Based Physical Performance Profiling**
- **Evaluating the Validity and Reliability of the Current Physical & Musculoskeletal Recruitment Tests & assessments**
- **Refining Selection Criteria Based on International Insights and Scientific Evidence + Integrating Innovative Technologies**
- **Task-Specific Physical Demand Characterization**
- **Injury Risk Stratification Framework**
- **Pre-Selection Training Protocol Design**
- **Cost-Benefit Analysis of Process Reforms**
- **Policy Integration and NATO Collaboration**





References:

- NATO STO documents
- BEL military Regulations (J11 and J20 + annexes)
- Mil Med literature



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■ Questions

THEME 2 :

Eradication of Staphylococcal Skin Colonisation with Phages



QAMH BRUSSELS INFECTIOUS DISEASES

PROF DR PATRICK SOENTJENS

MED COL MD, INTERNAL MED, INFECT DIS, PHD

30 April 2025



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■ SCRIMM Decolonisation ESCAPES

ESCAPES TRIALS

ERADICATION OF **S**TAPHYLOCOCCAL SKIN **C**OLONIZATION **A**PPLYING **P**HAGE **E**MULSION AND **S**PRAY.

TRIAL

PILOT

MODEL FOR DECOLONIZATION OF WAR WOUNDS IN FUTURE SETTINGS



Context

War infections

AMR

Phage Therapy



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The number of drug-resistant infections is rising in western Europe,
and a significant proportion of those affected are Ukrainians



Financial Times Oct 2023.

Increased reports of AMR in many countries receiving Ukrainian refugees and war-wounded patients



European Centre for Disease Prevention and Control. (2024). Emergence of hypervirulent *Klebsiella pneumoniae* ST23 carrying carbapenemase genes in EU/EEA countries, first update. Publications Office. <https://data.euro.who.int/dataset/10.2900/993023>

Zwitsink, R. D., et al. (2022). Multidrug-resistant organisms in patients from Ukraine in the Netherlands, March to August 2022. *Eurosurveillance*, 27(50). <https://doi.org/10.2607/1560-7917.ES.2022.27.50.2200896>

Muresu, N., et al. (2023). Infection Prevention Control Strategies of New Delhi Metallo- β -lactamase Producing *Klebsiella pneumoniae*. *Healthcare*, 11(18), 2792. <https://doi.org/10.3390/healthcare11182792>

Fukushima, S., et al. (2024). Detection of imported clinical strain of bla_{NDM-1} harboring ST147 *Klebsiella pneumoniae* from a Ukrainian immigrant. *Journal of Travel Medicine*, *tas011*. <https://doi.org/10.1093/jtm/taad011>

Bernaldez-García, M., et al. (2024). First detection in Spain of NDM-1-producing *Pseudomonas aeruginosa* in two patients transferred from Ukraine to a university hospital. *Journal of Global Antimicrobial Resistance*, 38, 105–111. <https://doi.org/10.1016/j.jgar.2023.12.027>

Sandfort-Wirco, et al. Increase in NDM-1 and NDM-1/OMX-48-producing *Klebsiella pneumoniae* in Germany associated with the war in Ukraine, 2022. *Euro Surveill*. 2022;27(50):pii=2200016. <https://doi.org/10.2807/1560-7917.ES.2022.27.50.2200016>

* Information to link cases in this multicountry cluster incomplete; 4 out of 25 isolates were from patients who had travel, hospitalization, or birth, in Ukraine.

** For additional publications linking additional cases in Germany: <https://doi.org/10.3211/002908210667>, <https://doi.org/10.1016/j.jgar.2023.04.004>, <https://doi.org/10.2807/1560-7917.ES.2023.28.13.2300085>, <https://doi.org/10.1007/s12086-023-02061-4>



Antimicrobial resistance in bacterial isolates from nine Ukrainian war casualties: a retrospective bicentric observational study



D.I. Costescu Strachinaru, F. Lestin-Bernstein, A. Stoefs, Y. Van Der Beken, F. T'sas, M. Beynsberger, T. Rose, P.M. François, S. Schulz-Drost², L. Briedigkeit, N. Pfennigwerth, P. Vanbrabant, H. Rodriguez-Villalobos, P. Soentjens, A. Verroken.

Queen Astrid Military Hospital - Brussels (Belgium), Helios Clinics of Schwerin - University Campus of Medical School Hamburg - Hamburg (Germany), Nationales Referenzzentrum für Gram-negative Krankenhauserreger - Bochum (Germany), Cliniques Universitaires Saint-Luc, Université Catholique de Louvain - Brussels (Belgium), Institut of Tropical Medicine - Antwerp (Belgium).

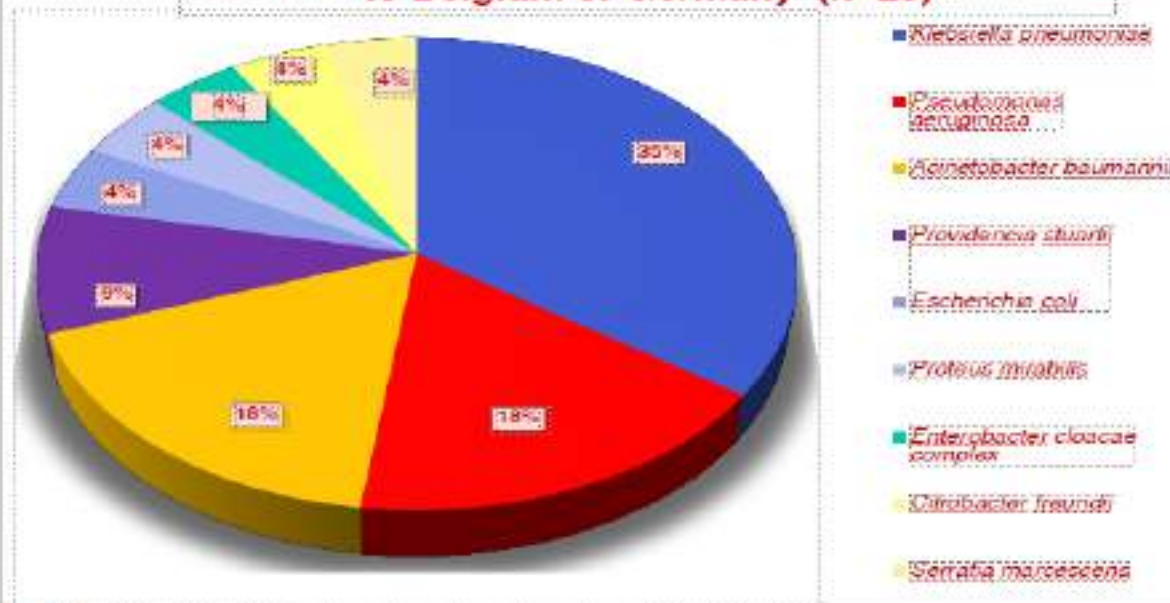
Results

Demographic characteristics of patients (N=9)

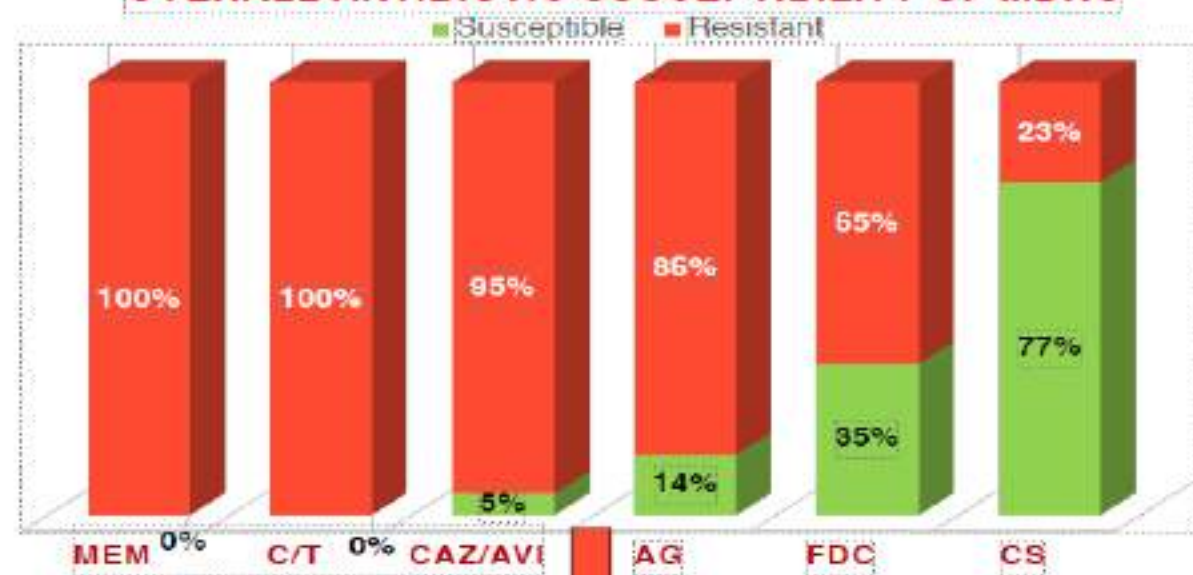
War-related traumas
(extensive burn wounds and fracture-related osteomyelitis)
Initially hospitalised in Ukrainian hospitals
Subsequently transferred to Belgium or Germany.

Median age at admission in Belgium / Germany	38 years
Gender	8 M / 1 F
Median hospitalisation in Ukraine	42 days
Mean MDROs per patient at arrival in Belgium / Germany	2.6

MDROs Isolated within 48 hours following transfer to Belgium or Germany (n=23)



OVERALL ANTIBIOTIC SUSCEPTIBILITY OF MDRO



MDRO	Carbapenemases	FDC	COL	TGC
<i>K. pneumoniae</i>	NDM-1, KPC-3	ATU	S	S
<i>K. pneumoniae</i>	NDM-1, OXA-48	R	R	S
<i>K. pneumoniae</i>	Oxa 48	R	R	R
<i>K. pneumoniae</i>	Oxa 48	R	R	R
<i>K. pneumoniae</i>	Oxa 48	R	R	R
<i>K. pneumoniae</i>	NDM	ATU	S	R
<i>K. pneumoniae</i>	NDM	ATU	S	R
<i>K. pneumoniae</i>	OXA-48	R	R	R
<i>K. pneumoniae</i>	NDM	R	R	S
<i>E. cloacae</i>	NDM	R	R	S
<i>P. stuartii</i>	NDM	R	R	R
<i>P. stuartii</i>	NDM-5, NDM-20	R	R	R
<i>C. freundii</i>	NDM-1	R	R	R
<i>P. mirabilis</i>	NDM	R	R	R
<i>E. coli</i>	NDM-5	ATU	S	R
<i>S. marcescens</i>	NDM	R	R	S
<i>P. aeruginosa</i>	VIM-2	R	R	S
<i>P. aeruginosa</i>	IMP	R	R	S
<i>P. aeruginosa</i>	IMP	R	R	S
<i>P. aeruginosa</i>	IMP	R	R	S
<i>A. baumannii</i>	Oxa-72	R	R	S
<i>A. baumannii</i>	NDM	R	R	S
<i>A. baumannii</i>	IMP, OXA-23	R	R	S
<i>A. baumannii</i>	Negative	R	R	S

Human application of phages in 100 consecutive cases coordinated by QAMH

nature microbiology



Article

<https://doi.org/10.1038/s41564-024-01705-x>

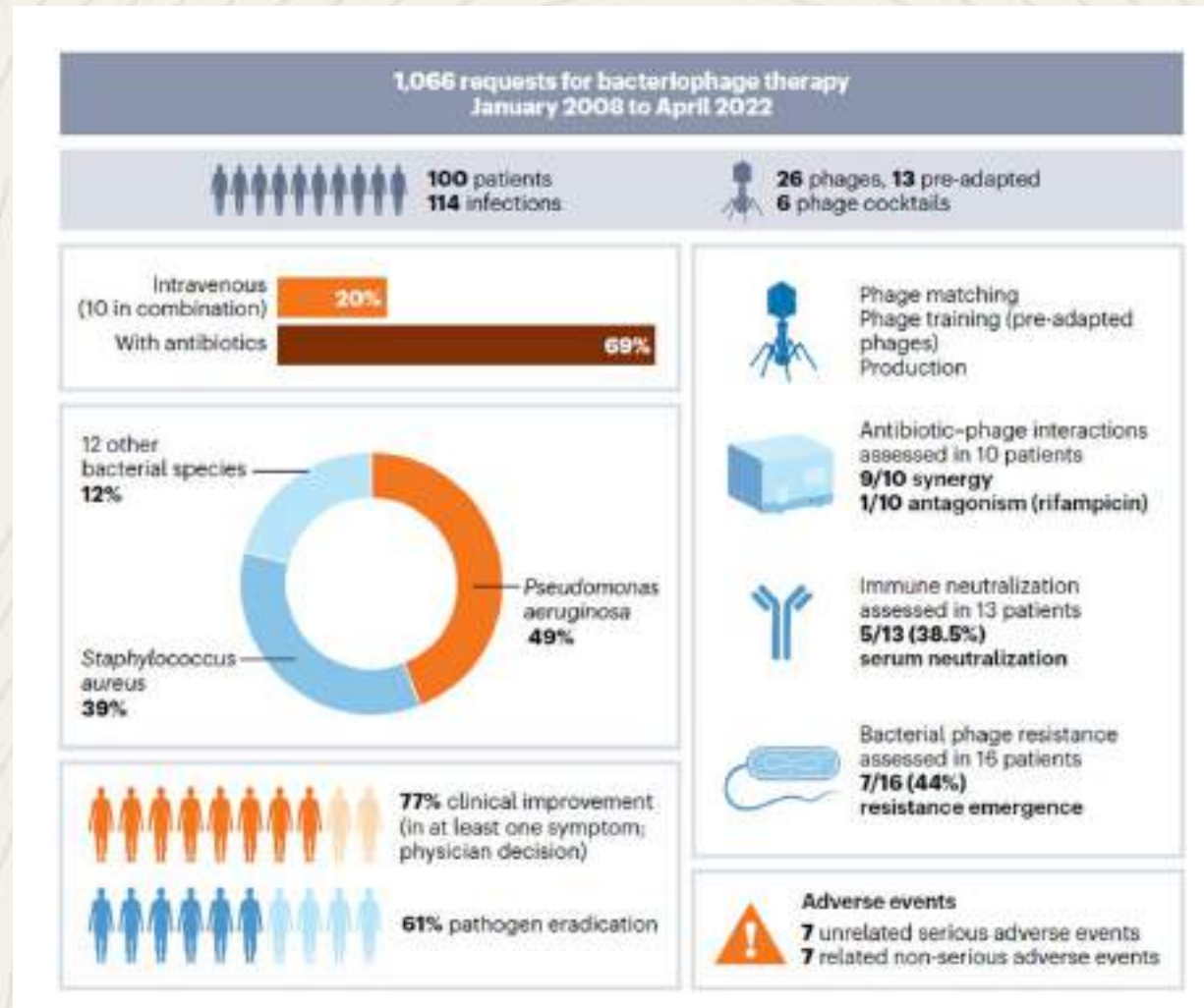
Personalized bacteriophage therapy outcomes for 100 consecutive cases: a multicentre, multinational, retrospective observational study

JP Pirnay et al. Nature Microbiol 2024.



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Human application of phages in 100 consecutive cases coordinated by QAMH



Nature Microbiol 2024.



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Aim

This project aims to evaluate if the ISP phage, a phage with antistaphylococcal activity, could be used safely and effectively in the eradication of staphylococcal colonization in humans.



Potential WPs

1

ISP Phage compounding: body spray and nose emulsion

2

Phase 1 study in healthy volunteers

3

Phase 2 study in MSSA/MRSA colonized participants



Eradication of Staphylococcal Skin Colonisation with Phage Therapy

1

ISP Phage compounding:

Body spray

Nose emulsion

- validate magistral preparations for both products
- stability testing



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Eradication of Staphylococcal Skin Colonisation with Phage Therapy

2

Phase 1 study in healthy volunteers

N = 20?

- possible intervention groups: ISP and ISP + SOC
- safety evaluation



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Eradication of Staphylococcal Skin Colonisation with Phage Therapy

3

Phase 2 study in MSSA/MRSA colonized participants

N = 60-80?

- possible intervention groups:
 - ISP and ISP + SOC and placebo
- cross-over design
- safety
- efficacy
- compliance rates, ease of use, acceptability of use



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■ Questions

THE RULES OF THE SCRIMM PROGRAMME

Who can participate? Eligibility criteria for partners.

The call is open to **Belgian** Universities and University Hospitals

! Foreign partners: only as **non-funded** partners. They must be registered in a country of the EU or of the EFTA or in a NATO member country.

RESEARCH ETHICS

It is the responsibility of the applicant to consult the relevant Ethical Board for their organisation before submitting a proposal.

- Full proposal contains an **ethics self-assessment**.
- The Ethical Advisory Board of the RHID will assess this information and can advise the partnership how to deal with ethical aspects of the proposal.

BUDGET RULES

Partner budget FINANCED BY DEFENCE	Public Research Institute and Private non-profit research centre
	100% eligible costs



BUDGET RULES

Category of expenditure	Rules
STAFF	<ul style="list-style-type: none">• Preferably under labour contract• ! Non-employee staff costs (management company, free-lance, interim staff)• Maximum amounts for persons to be hired for the project• NO tax-free scholarships!
GENERAL OPERATING COSTS	<ul style="list-style-type: none">• For the coordinator: max 15% of staff costs• For other partners: max 10% of staff costs
SPECIFIC OPERATING COSTS	<ul style="list-style-type: none">• Described in the proposal• Justified by invoices during project
OVERHEAD	<ul style="list-style-type: none">• 10% of total staff and operating costs

BUDGET RULES

Category of expenditure	Rules
EQUIPMENT	<ul style="list-style-type: none">• Described in the proposal• Justified by invoices during project
SUBCONTRACTING	<ul style="list-style-type: none">• <i>Max 25% of partner's budget</i>• <i>! Subcontractors must be registered in Belgium</i>• <i>! If applicable, obtain security clearance</i>

SCRIMM WEBSITE

[SCRiMM Website](#)

Available documents:

- Information document, incl. submission & evaluation guidelines and budget rules *uploaded early May*
- FAQ - *uploaded early May*
- Expression of interest one-pager template - *available*
- Structure full proposals – *uploaded early May*
- General conditions contract - *uploaded ASAP*



SUBMISSION

1. Submission of an expression of interest:

- One-pager template

scrimm@mil.be

2. Submission full proposals:

- Full Proposal template (Word file)
- Gantt chart (Excel file)
- Cash or in-kind commitment letter – non mandatory (Word file)

EVALUATION PROCEDURE FULL PROPOSALS

- **Step 1** – Scientific Experts Committee (SEC) evaluation, incl. interviews with the applicants (45 minutes per proposal)
 - Funding scenario per theme
- **Step 2** - Selection proposal formulated by Scientific Committee RHID
 - Proposed funding scenario
- **Step 3** - Final decision by Board of Directors RHID

AFTER SELECTION

- Signature of contract (at least basic contract) in November 2025
- First advance payment → follow invoicing instructions of the RHID
- Selected projects start as from 1ST of March 2026
- Provide technical sheets with project description (for website)
- Kick-off meetings (after signature of the Basic contract) in the beginning of 2026

CONTRACTS

3 parts	Content	Who signs?
Basic contract	<ul style="list-style-type: none">• Designates the contracting parties• Contains the general obligations applicable to the project• Defines the contract duration and budget	Heads of the partners: directors, rectors
Annex I: technical specifications	<ul style="list-style-type: none">• Operational implementation of the project• Work description and planning• Details on funding by expenditure category	Persons in charge of the realisation of the project (principal investigators, “promotor”)
Annex II: General conditions applicable to the contract	<ul style="list-style-type: none">• General provisions applicable to all contracts (incl. IPR rules)	Must not be signed – will be soon available on the SCRiMM website



CONTACT

For any questions

scrimm@mil.be