

3rd Cuneo City ImmunoTherapy Conference (CCITC)

Immunotherapy in Hematological Malignancies **2023**

CUNEO
May 18-20, 2023
Rondò dei talenti, Cuneo

Organized by Prof. Massimo Massaia, SC Ematologia AO S.Croce e Carle, Cuneo, Italy
and Centro Interdipartimentale di Ricerca in Biologia Molecolare (CIRBM), Torino, Italy

Disclosure of Vincenzo Cerullo

*I am the Scientific founder and shareholder at VALO therapeutics
My lab actively collaborates with*

Company name	Research support	Employee	Consultant	Stockholder	Speakers bureau	Advisory board	Other
VALO therapeutics			X			X	X
Thermo Fisher	X						X

Immunotherapy in Hematological Malignancies 2023

Dressing up viruses to fool cancer: fast pipeline for precision oncolytic immunotherapy

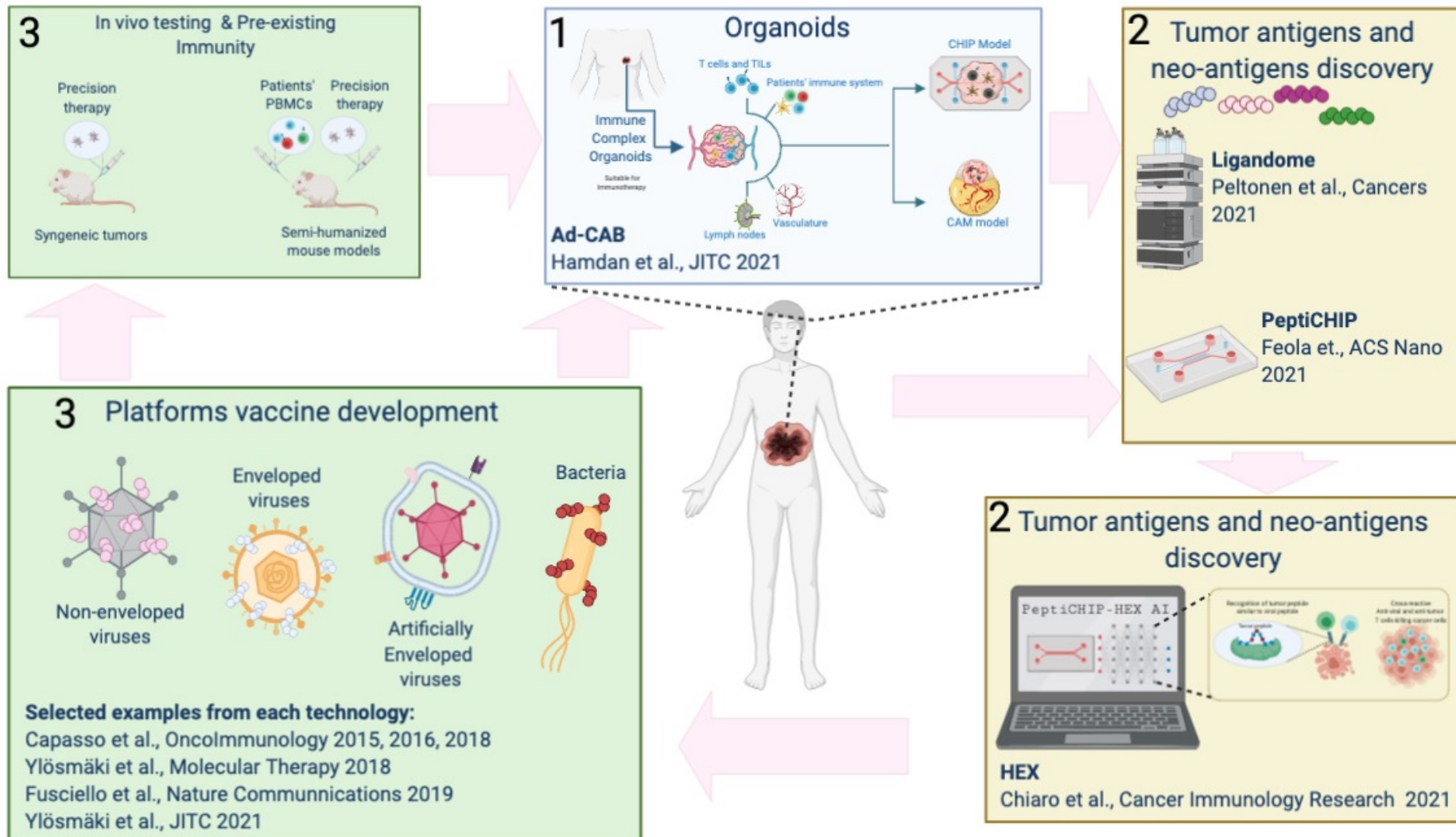


Vincenzo Cerullo, PhD
Head of Drug Research Program
Professor Biological Drug Development
Group leader at IVTLab, University of Helsinki
Dep. Molecular Medicine and Medical Biotechnology and CEINGE
University of Naples Federico II
Scientific founder of VALO therapeutics

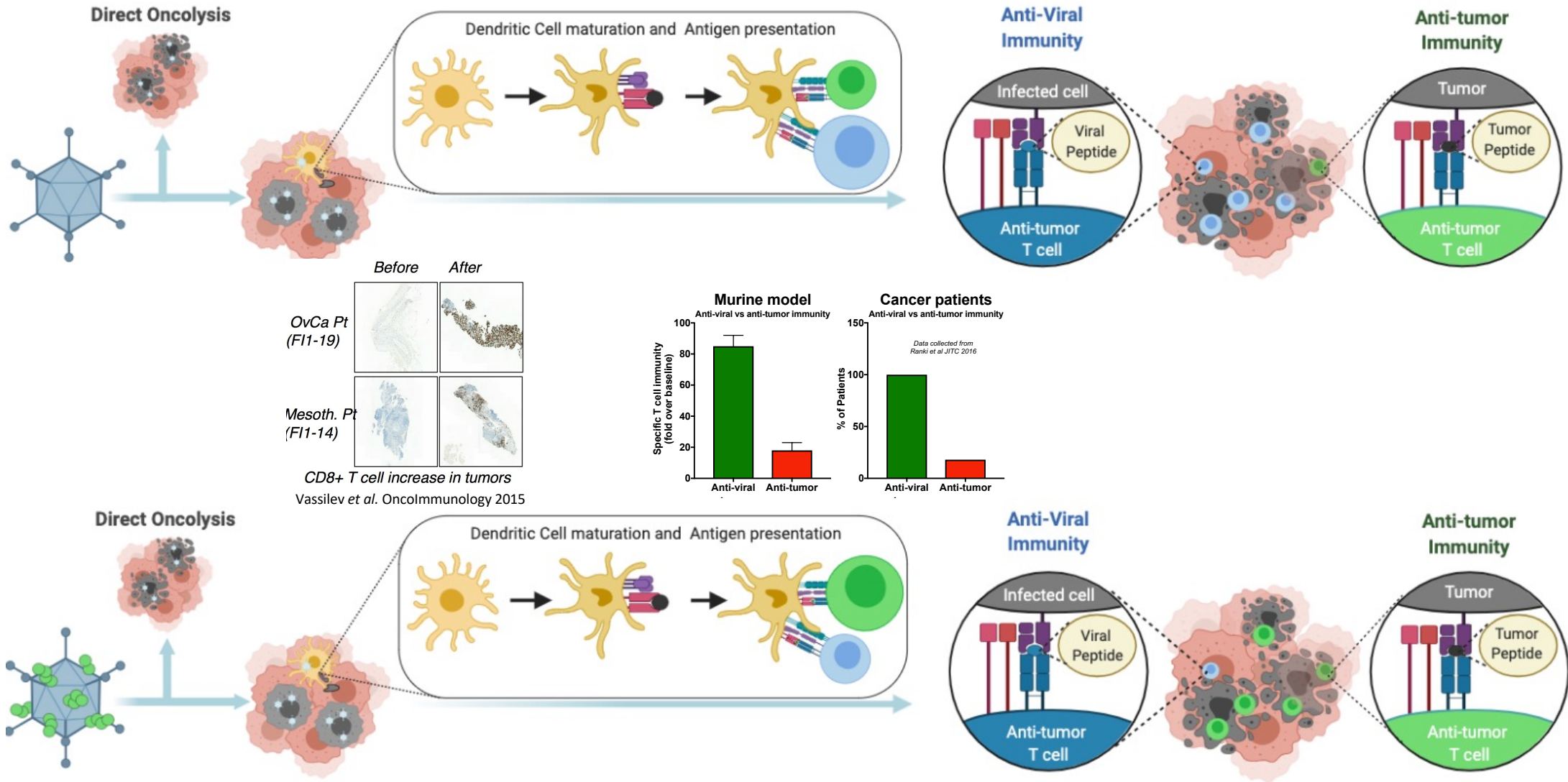
CUNEO, MAY 18-20, 2023

RONDÒ DEI TALENTI

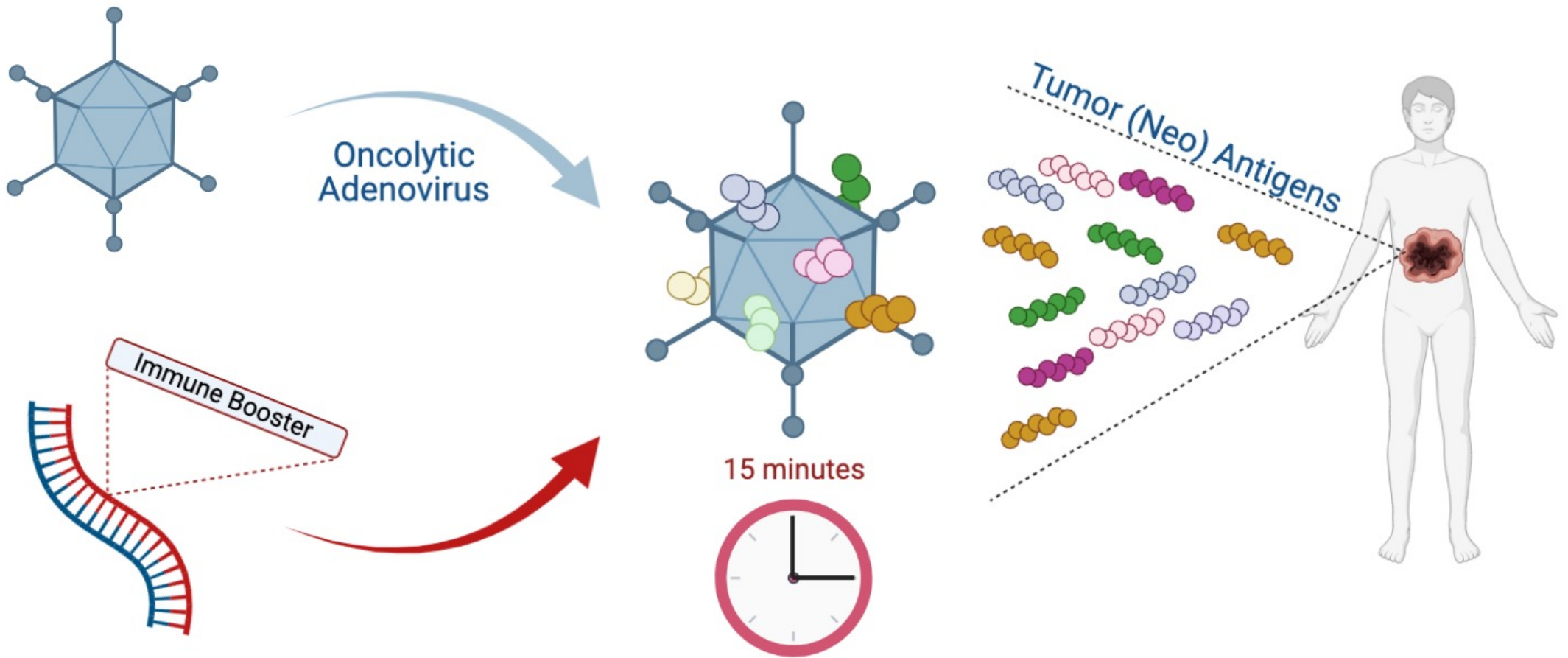
Towards precision cancer oncolytic immunotherapy



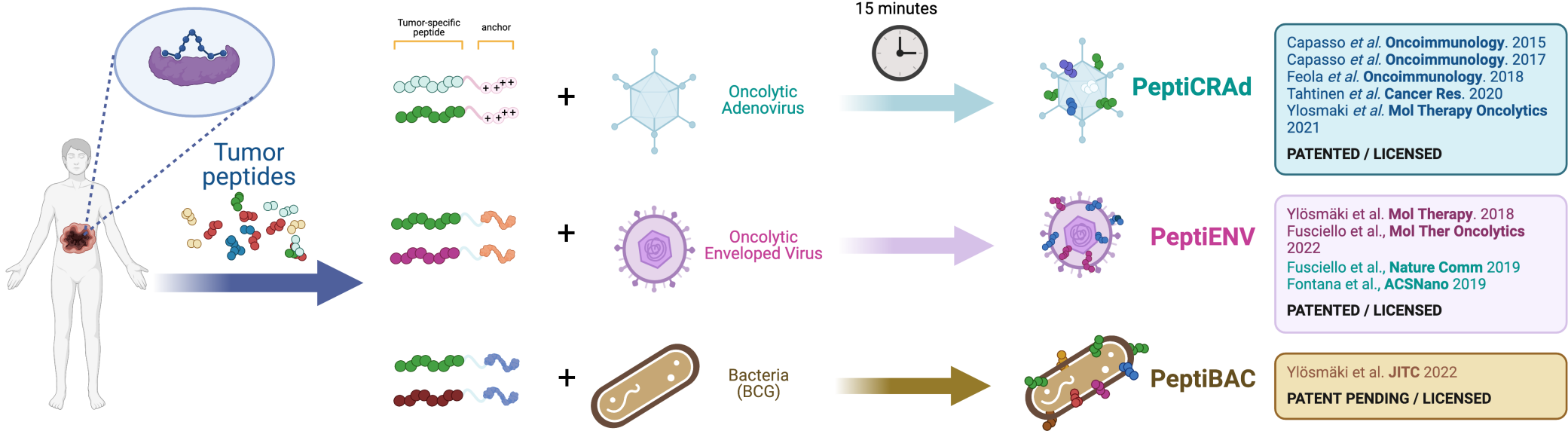
Oncolytic vaccines – Dual Mode of Action



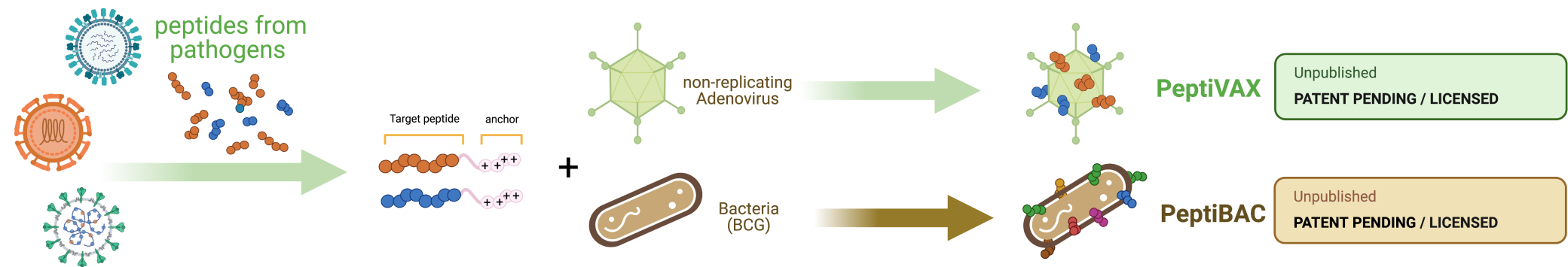
Peptide-coated Conditionally Replicating Adenovirus



Cancer Immunotherapy



Infectious disease Vaccine

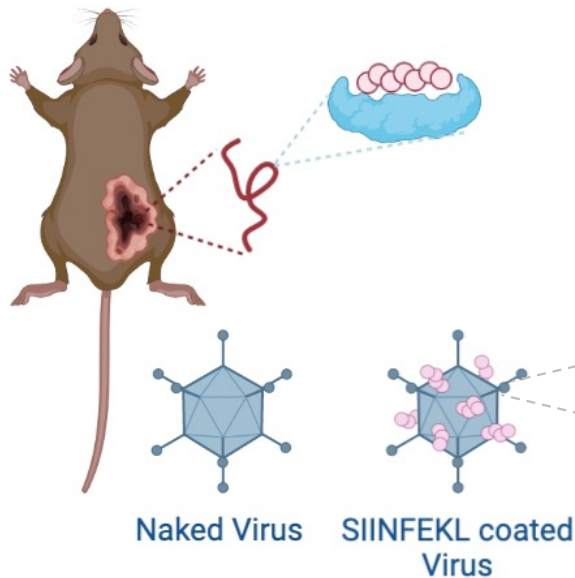




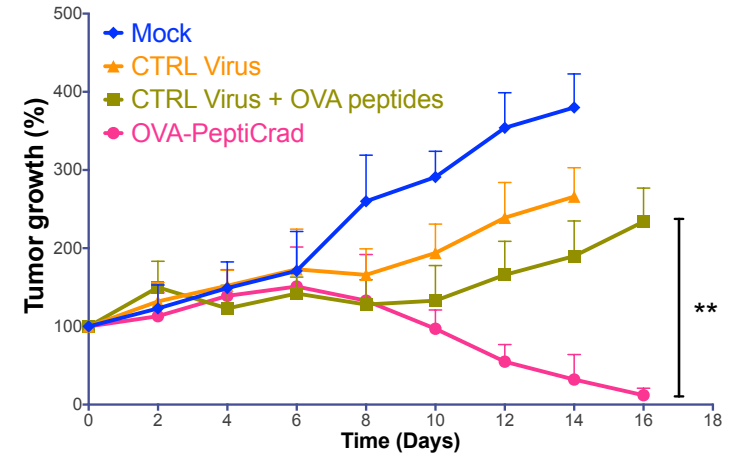
Cristian Capasso, PhD Student

Murine melanoma (B16-OVA)

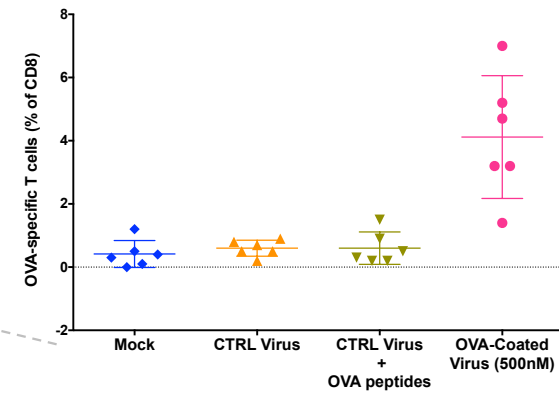
Murine Melanoma expressing chicken ovalbumin and presenting SIINFEKL on its MHC-I



B16-OVA - Primary treated tumors



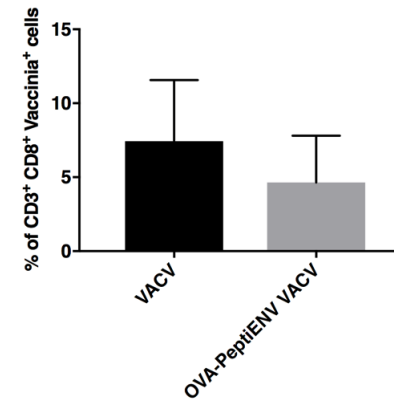
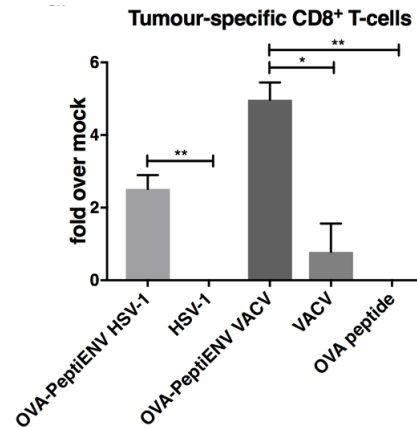
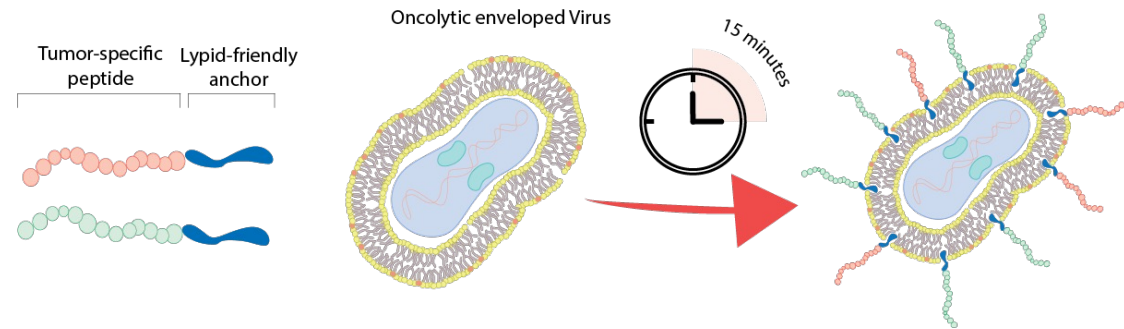
OVA-Specific T cells (Peptide-specific T cells)





Erkko Ylösmäki, Postdoc

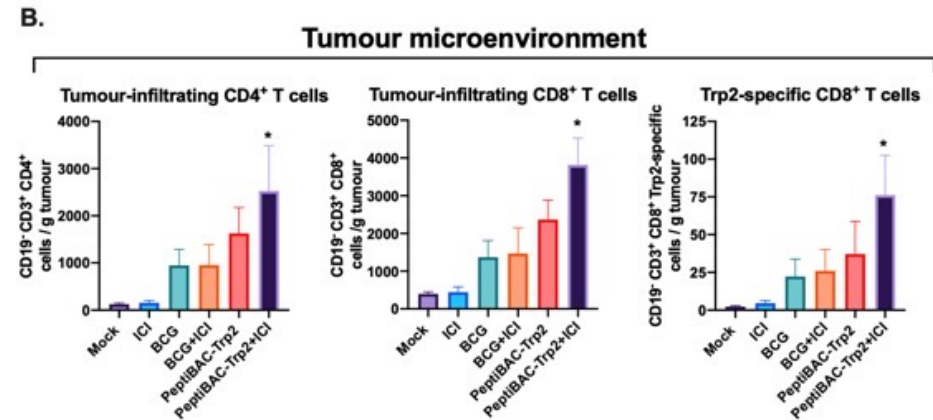
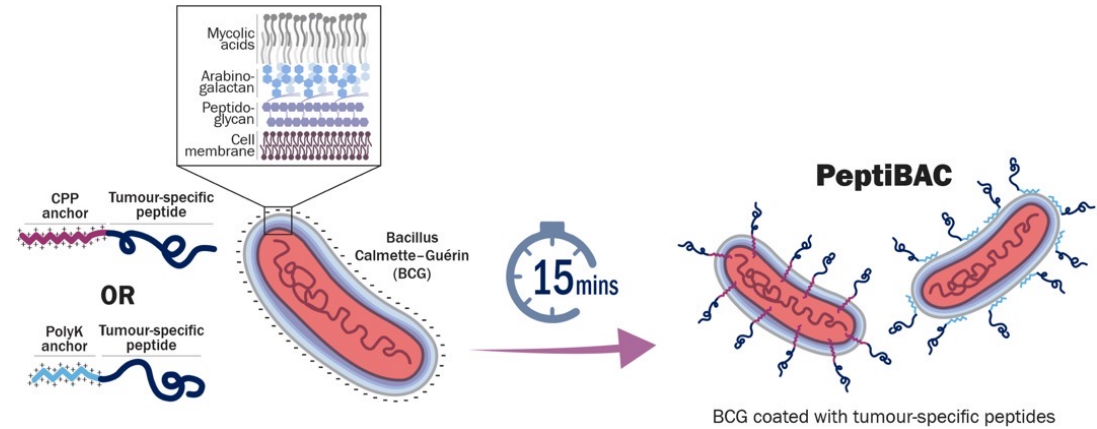
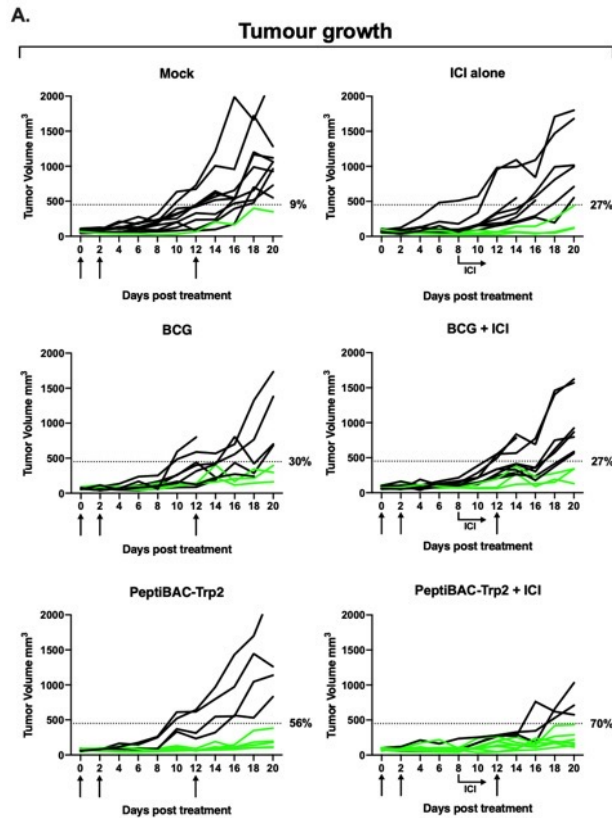
Can we apply our *Pepti-technology* to enveloped viruses?





Erkko Ylösmäki, Postdoc

Can we apply our *Pepti-technology* to bacteria?

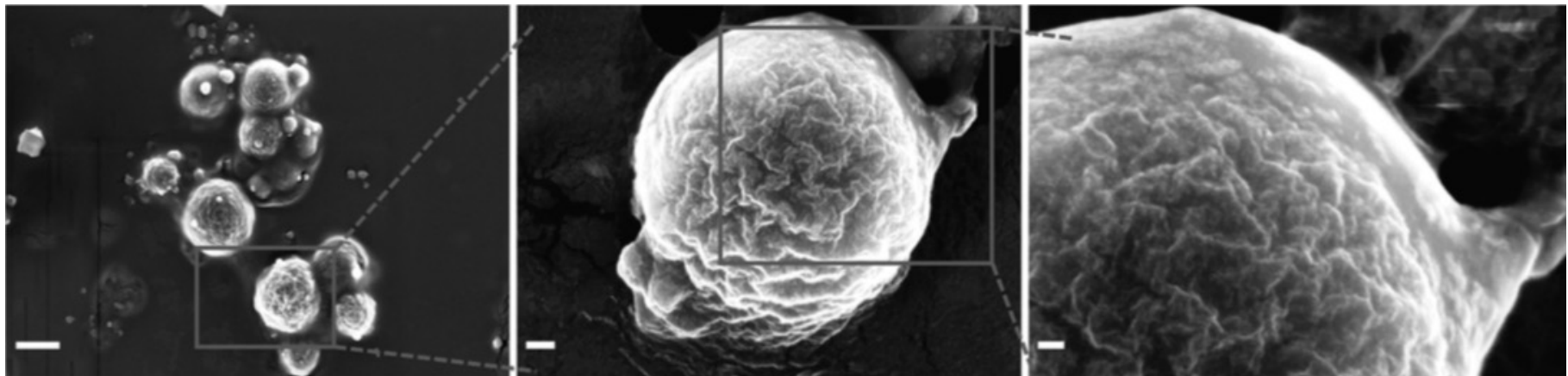
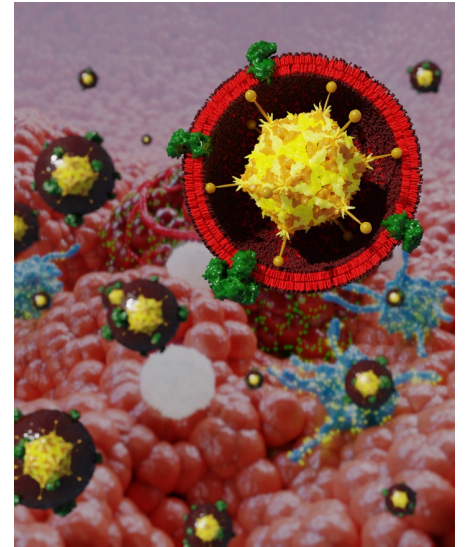
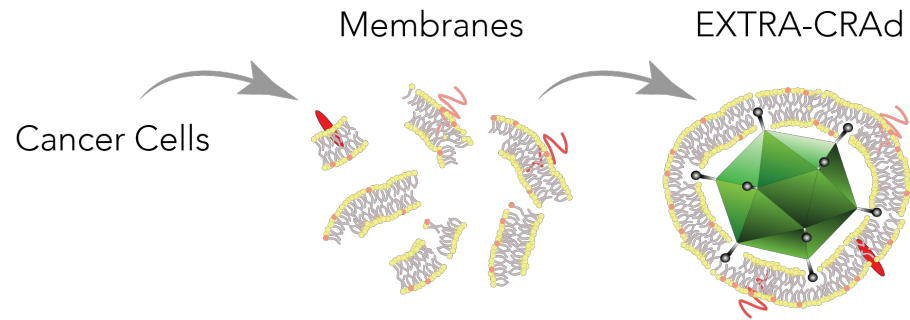


Ylösmäki et al., J Immunother Cancer. 2021 Jul;9(7)

ExtraCrad - *PeptiCrad* 2.0



Manlio Fucciello, PhD student



Fontana & Fucciello et al., ACS Nano. Jun 2019

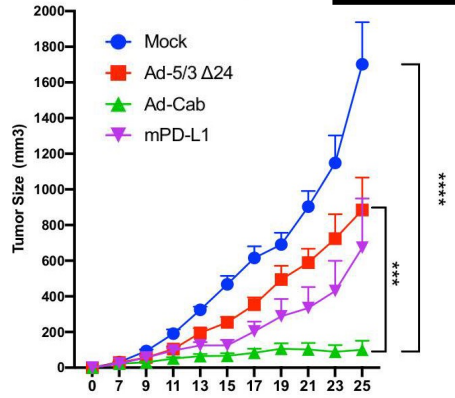
Fucciello & Fontana et al., Nat Commun. Dec 2019

Oncolytic vaccines expressing chimeric antibody

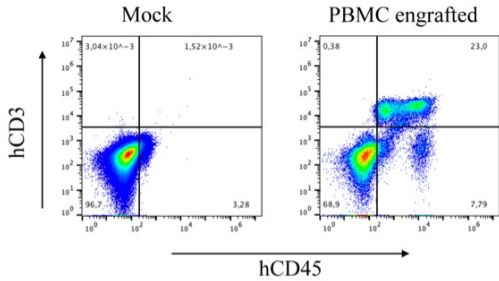
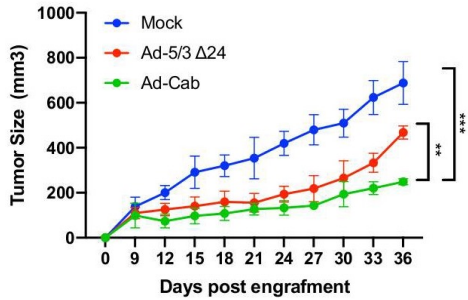


Firas Handam, PhD student

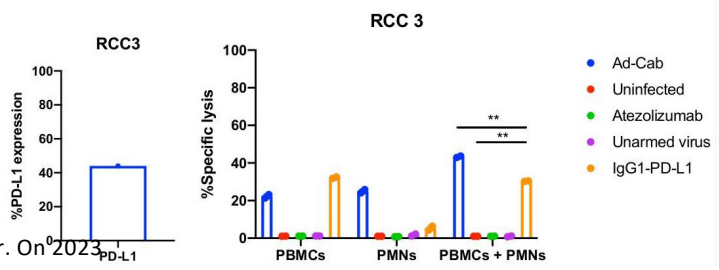
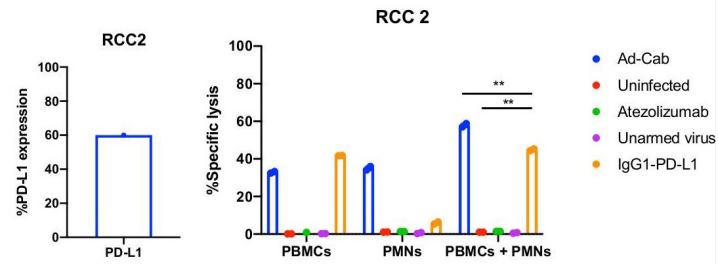
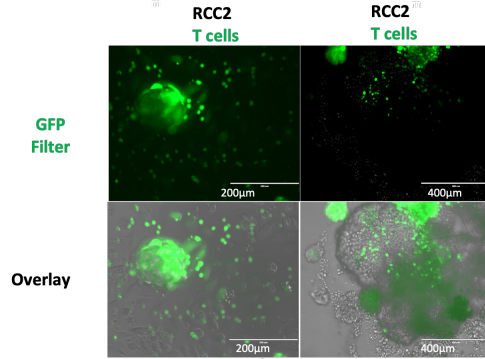
CT26



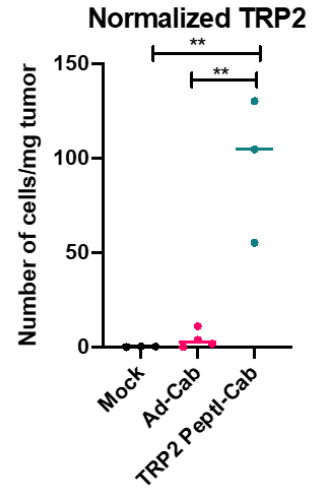
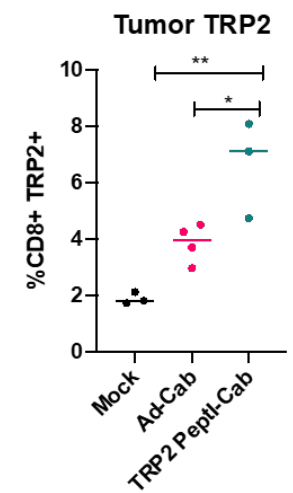
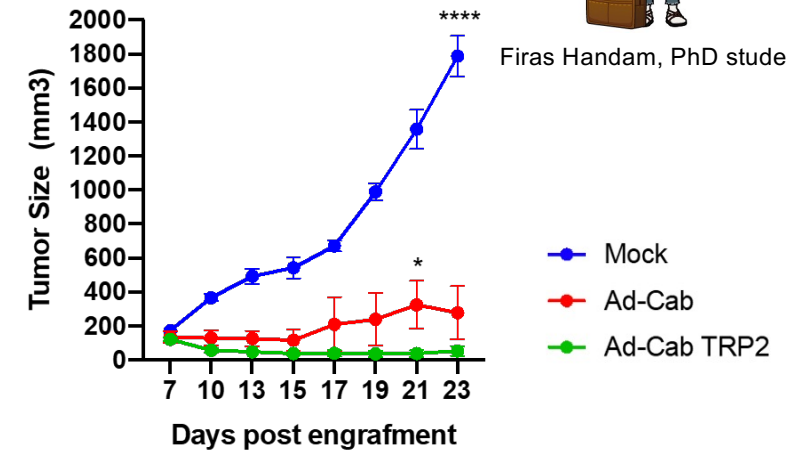
A549



Hamdan et al., J Immunother Cancer. 2021 and Mol Ther. On 2023



B16.K1

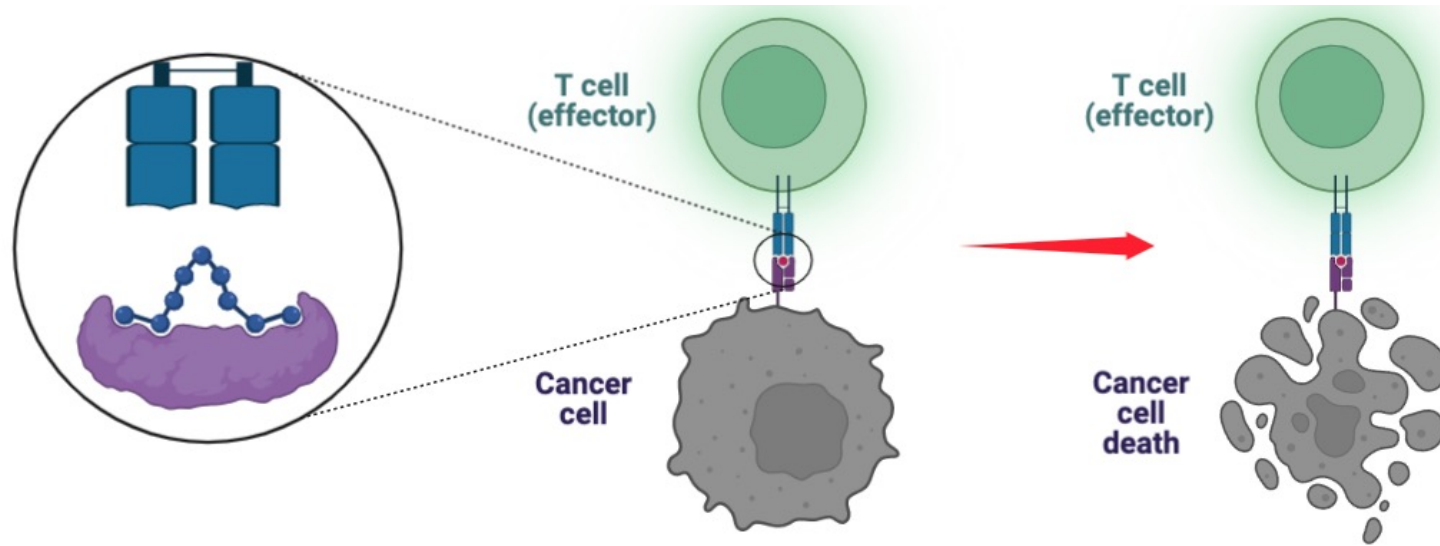




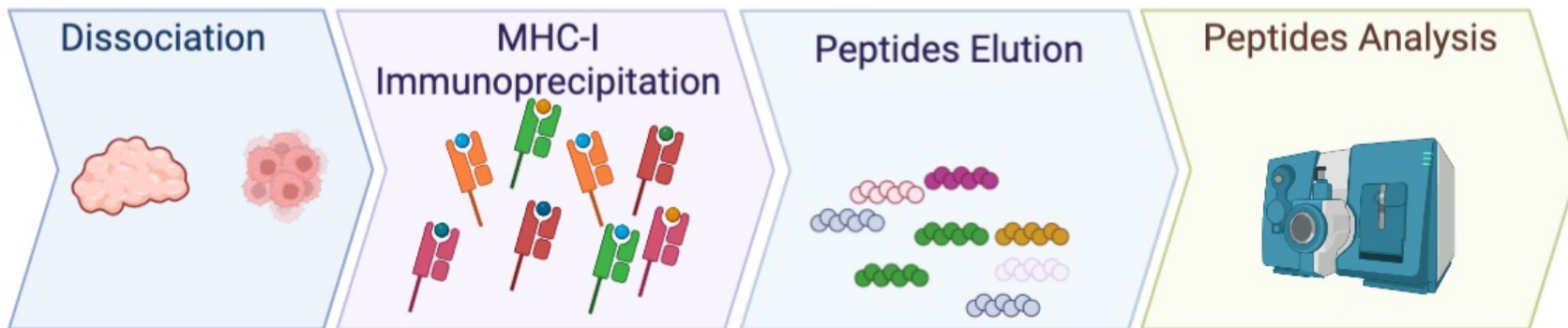
Coated viruses are effective to trigger anti-tumor immune response

What do we coat the viruses with?

Antigen discovery – Tumor-specific Peptides



LIGANDOME & PeptiCHIP





Sara Feola, Postdoc

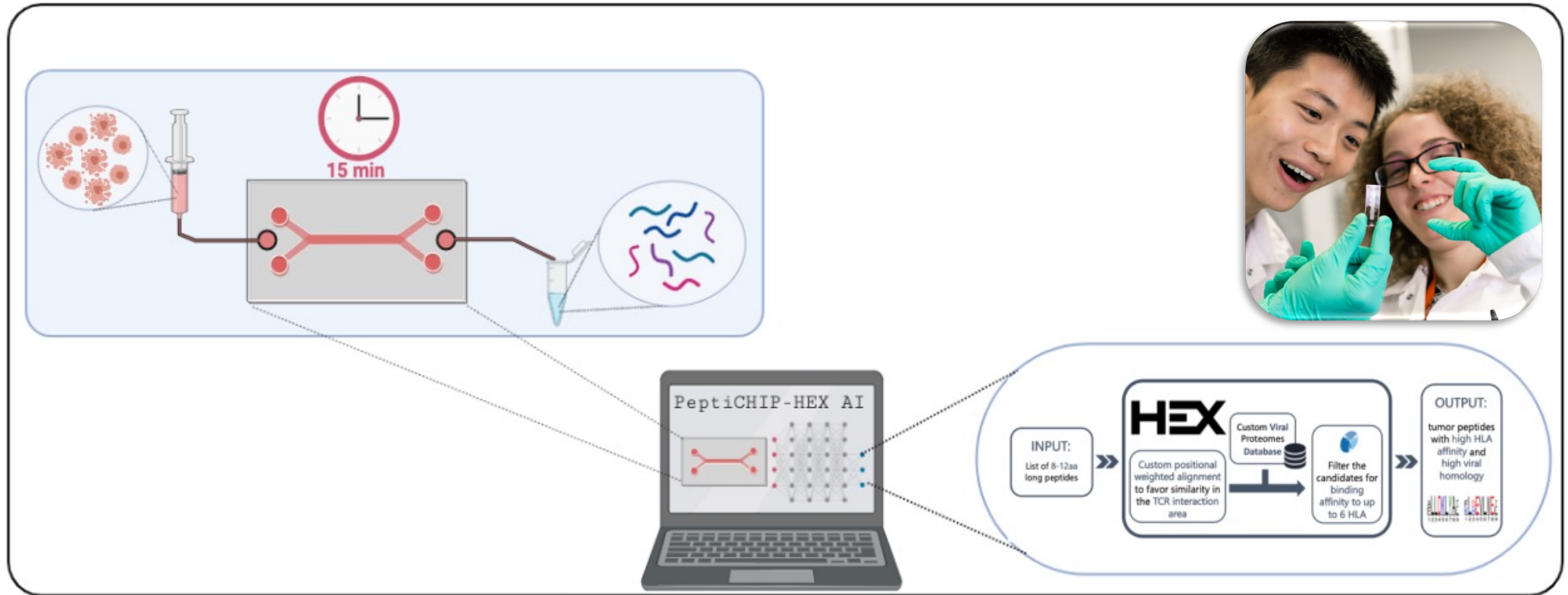
PeptiCHIP

Microfluidic immunopurification & homology modelling algorithm

asdfghijkl;
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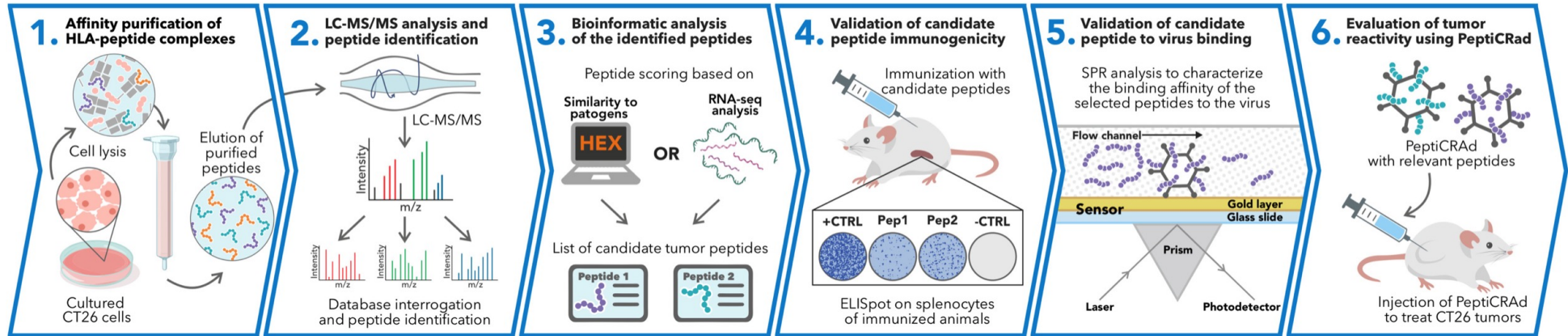


Jacopo Chiaro, PhD Student



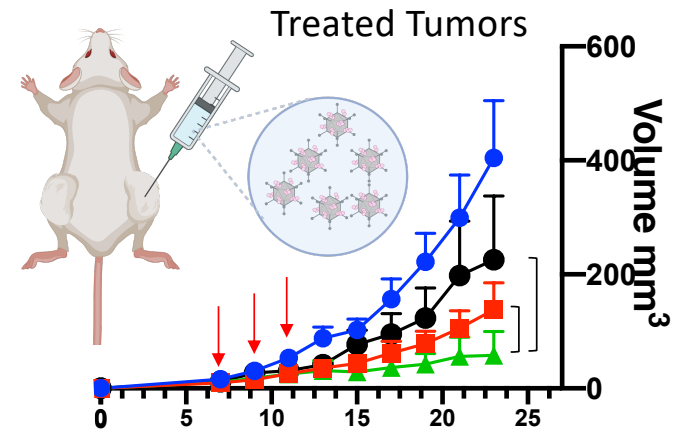
Feola et al., ACSNano 2022; Feola et al., eLife 2022; Chiaro et al., Cancer Immunology Research 2021 – **PATENTED** and **Licensed**

How would the pipeline work all together?



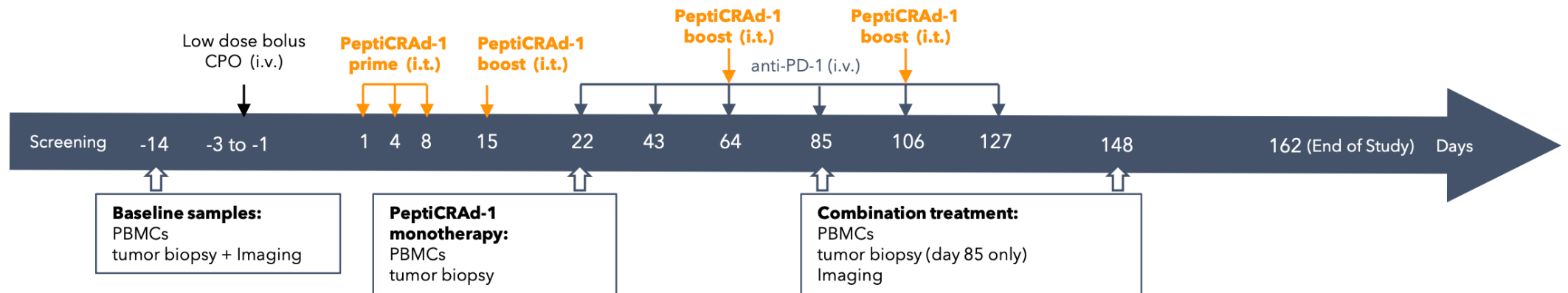
Sara Feola, Postdoc

- Mock
- OV-naked
- ▲ PeptiCRAd-HEX peptide
- PeptiCRAd-AH1 peptide



First in human of PeptiCRAd

PeptiCRAd-1- Phase 1b Study Treatment Schedule and Assessment Plan



Row	Saved	Status	Study Title	Conditions	Interventions	Locations
1	<input type="checkbox"/>	Recruiting	START: Safety and Anti-Tumor Activity of PeptiCRAd-1 in Treatment of Cancer	<ul style="list-style-type: none"> Melanoma (Skin) Triple-Negative Breast Cancer Non-Small Cell Lung Cancer 	<ul style="list-style-type: none"> Drug: PeptiCRAd-1 Drug: Cyclophosphamide Drug: Pembrolizumab 	<ul style="list-style-type: none"> Krankenhaus Nordwest Frankfurt, Germany

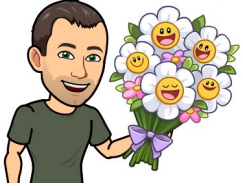


Katarina Fellman, Lab & Finance Coordinator



Beatriz Mertins, Lab manager and technician

THANK YOU!



Manlio Fusciello
PhD student

zzz



Firas Handam
PhD student

Many Thanks!

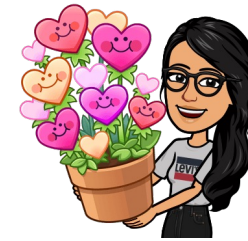


Jacopo Chiaro
PhD student

Thanks.



Mikaela Feodoroff
PhD student



Gabriella Antignani
PhD student



Salvatore Russo
PhD student

DONE



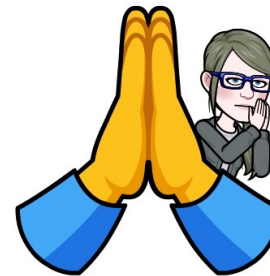
and
DONE

Mikaela Grönhölm,
senior scientists

k, thx



Erkkö Ylösmäki, postdoc



Karita Peltonen, postdoc



Sara Feola, postdoc



Thank you

Collaborators (*only the one involved in the project presented today*):

Tapani Viitala – DRP

Helder Santos, Flavia Fontana – DRP

Janne Lehtio – Karolinska Institute and ScinceLifeLab

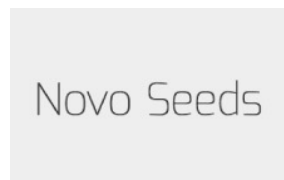
Barbara Szomolay - Cardiff University - Systems Immunity Research Institute

Satu Mustjoki – University of Helsinki – Faculty of Medicine, TRIMM

Antti Rannikko and Vilja Pietilainen – Finnish Institute of Molecular Medicine (FIMM)& HUS



ERC-Consolidator Grant
ERC-PoC Grant – PeptiCHIP
ERC-PoC Grant – GlobeVAC



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