



**CureVac's mRNA based
Vaccine Candidate against
SARS-CoV-2**

Data update September 22nd, 2020
- STRICTLY CONFIDENTIAL -

Project update: Recent Ph1 and hamster results are encouraging and dose escalation continues in order to select the final dose

Previously shared, with data as of September 28th

CureVac's mRNA platform and pre-clinical data

CVnCoV Clinical Development Plan and available clinical data

Manufacturing footprint and delivery plan

CVnCoV presentation and target shelf-life at 2-8°C

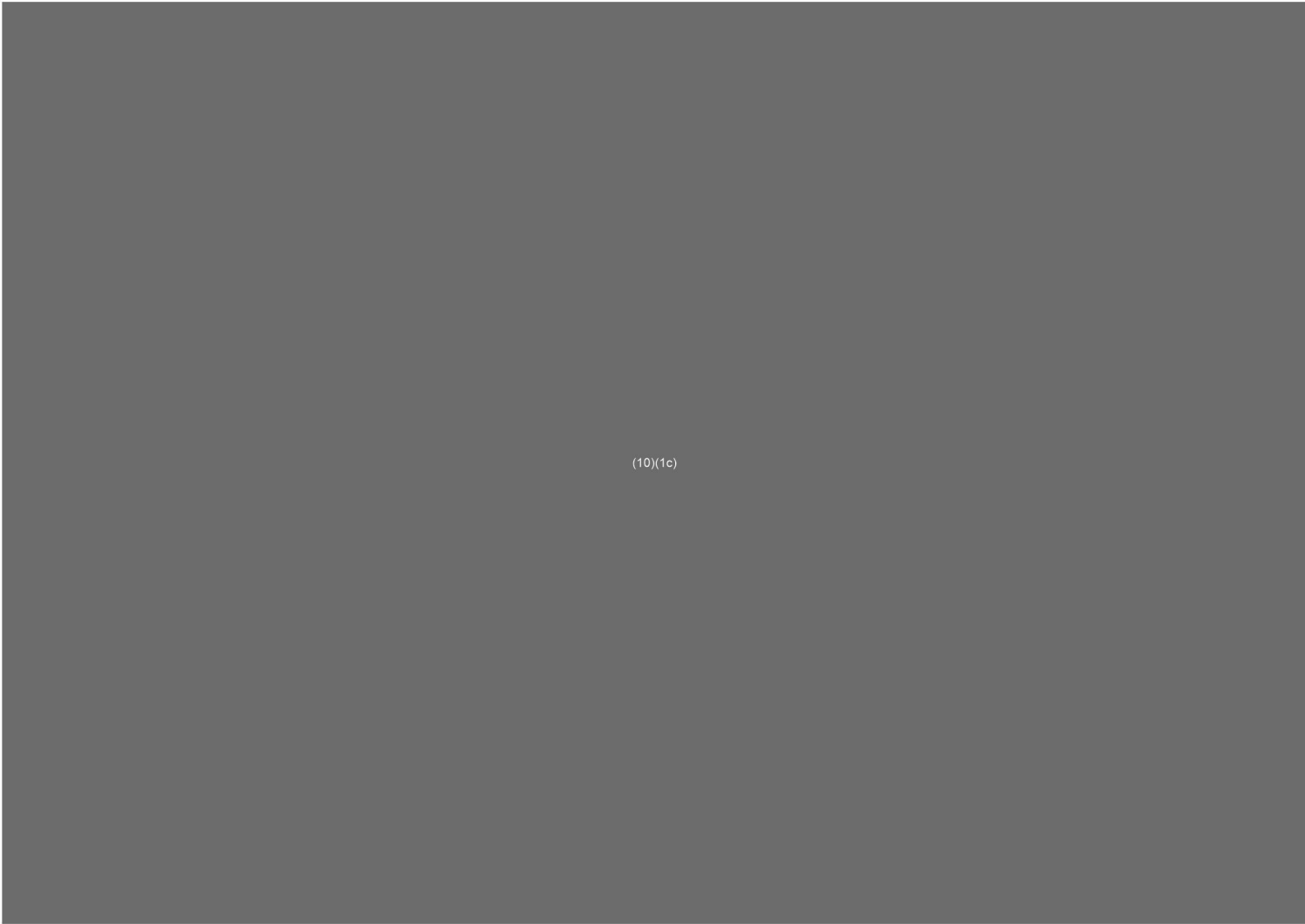
Focus of today's update

1. Update on available Phase 1 data
 - Reactogenicity profile at higher doses
 - IgG titers at higher doses
 - VNTs across the dose range: methodology improvements suggest that dose should be at least 8µg, and require continuing exploration towards higher doses before final dose selection for pivotal trials
2. Hamster data suggest that CVnCoV has the potential to protect lung disease and reduce viral load in nose and throat
3. Clinical development plan supported by EMA feedback
4. Progress on manufacturing network and updated capacity estimates at higher doses

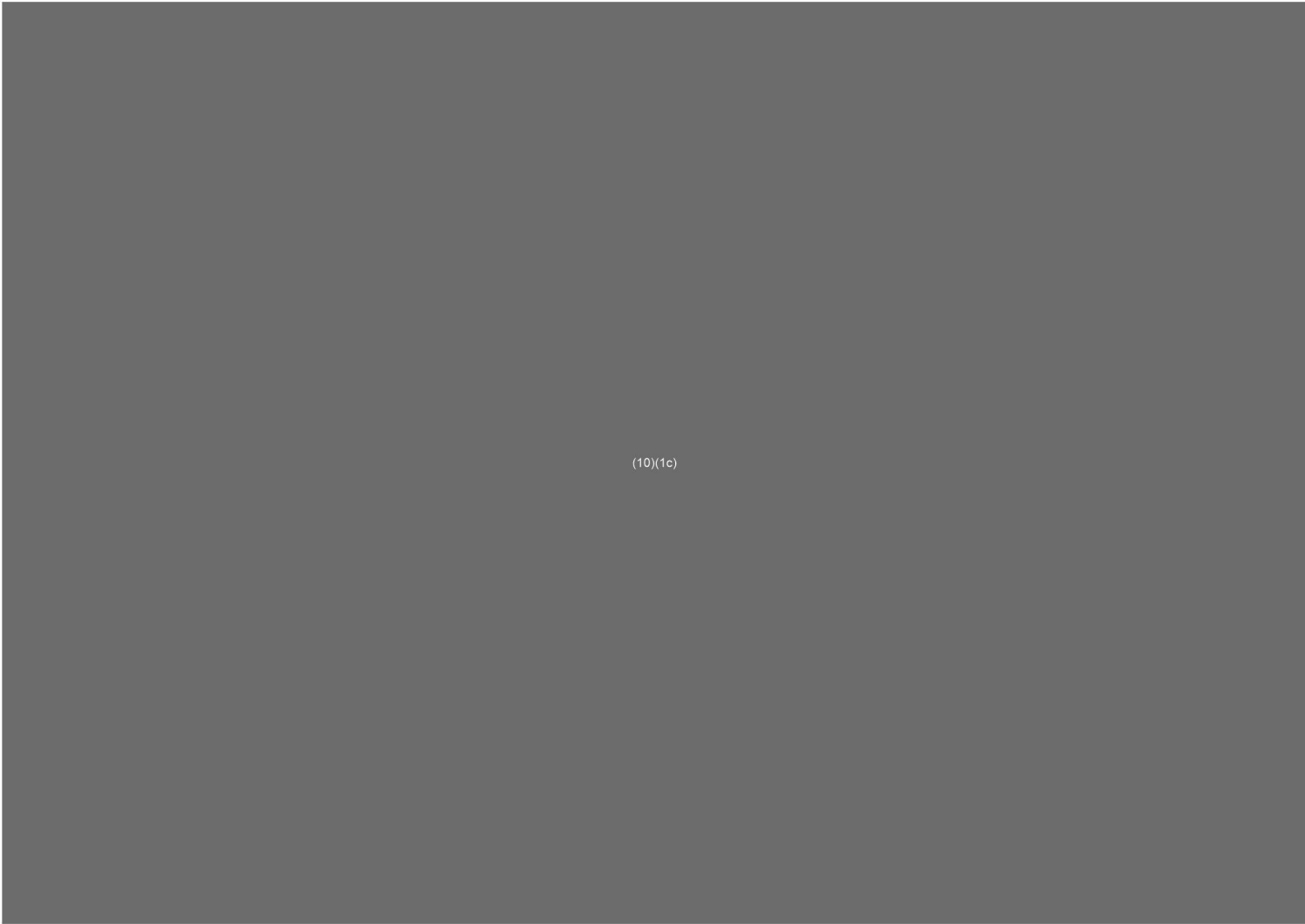




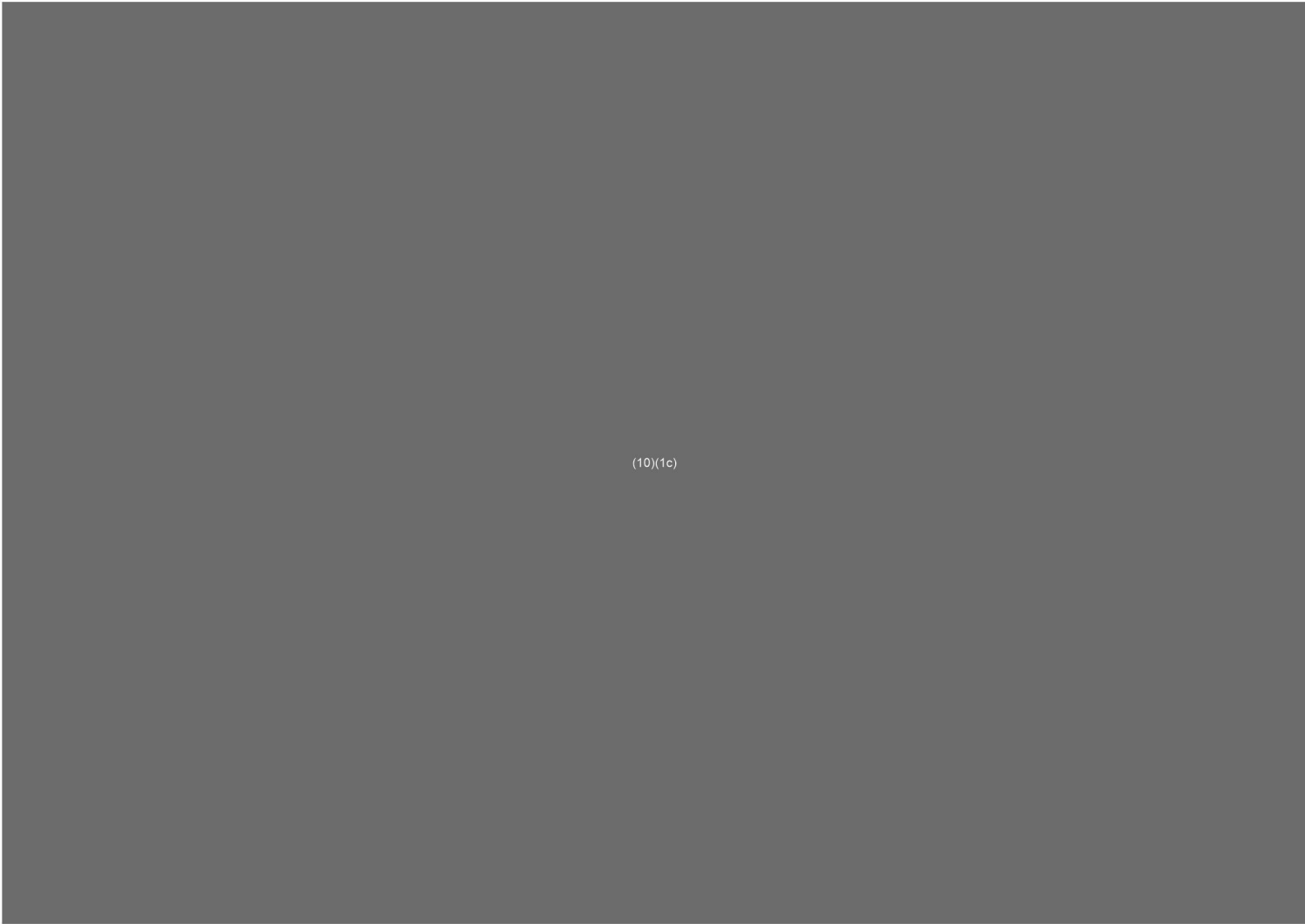
1. Update on available Phase 1 clinical data: reactogenicity and immunogenicity



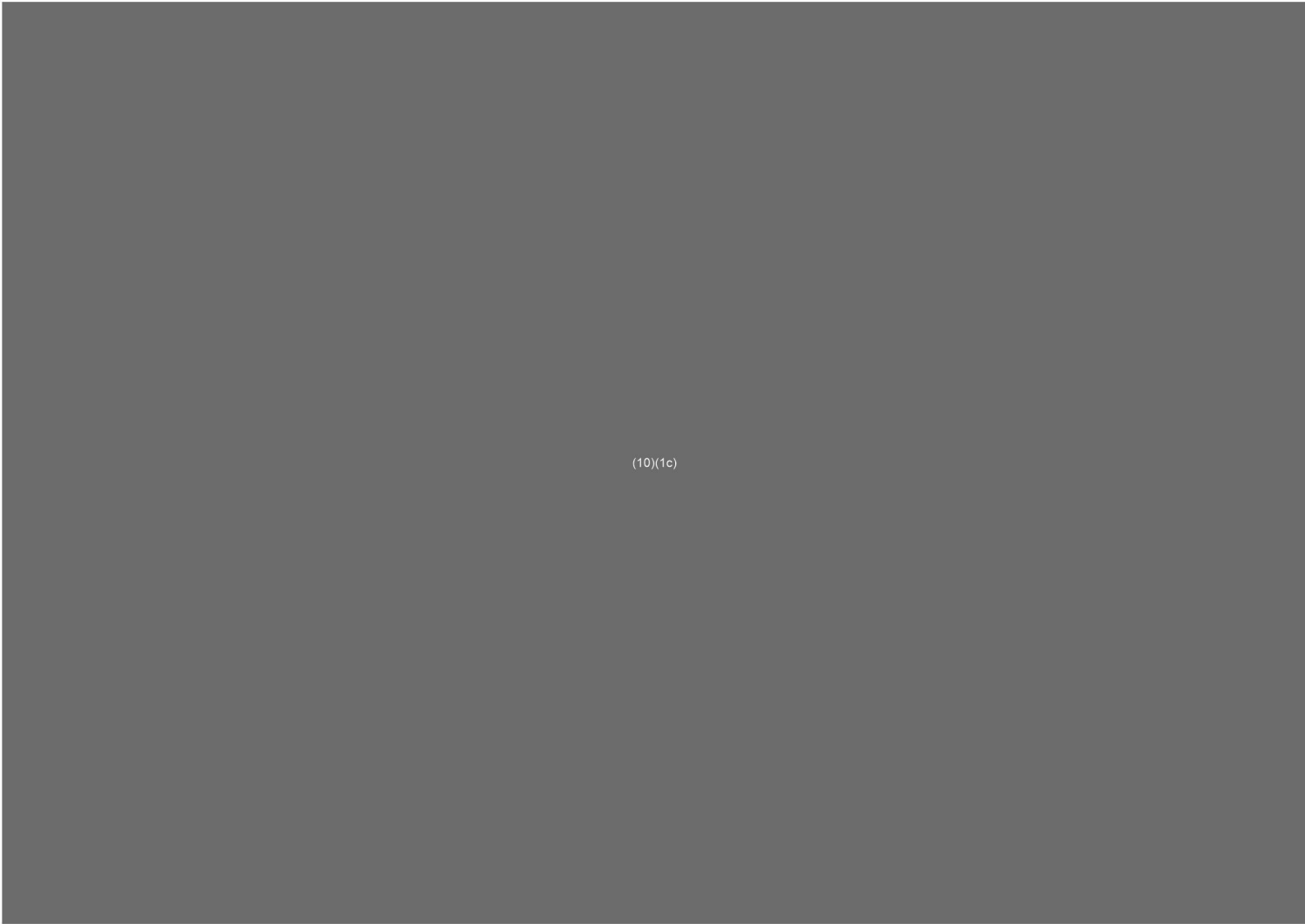
(10)(1e)



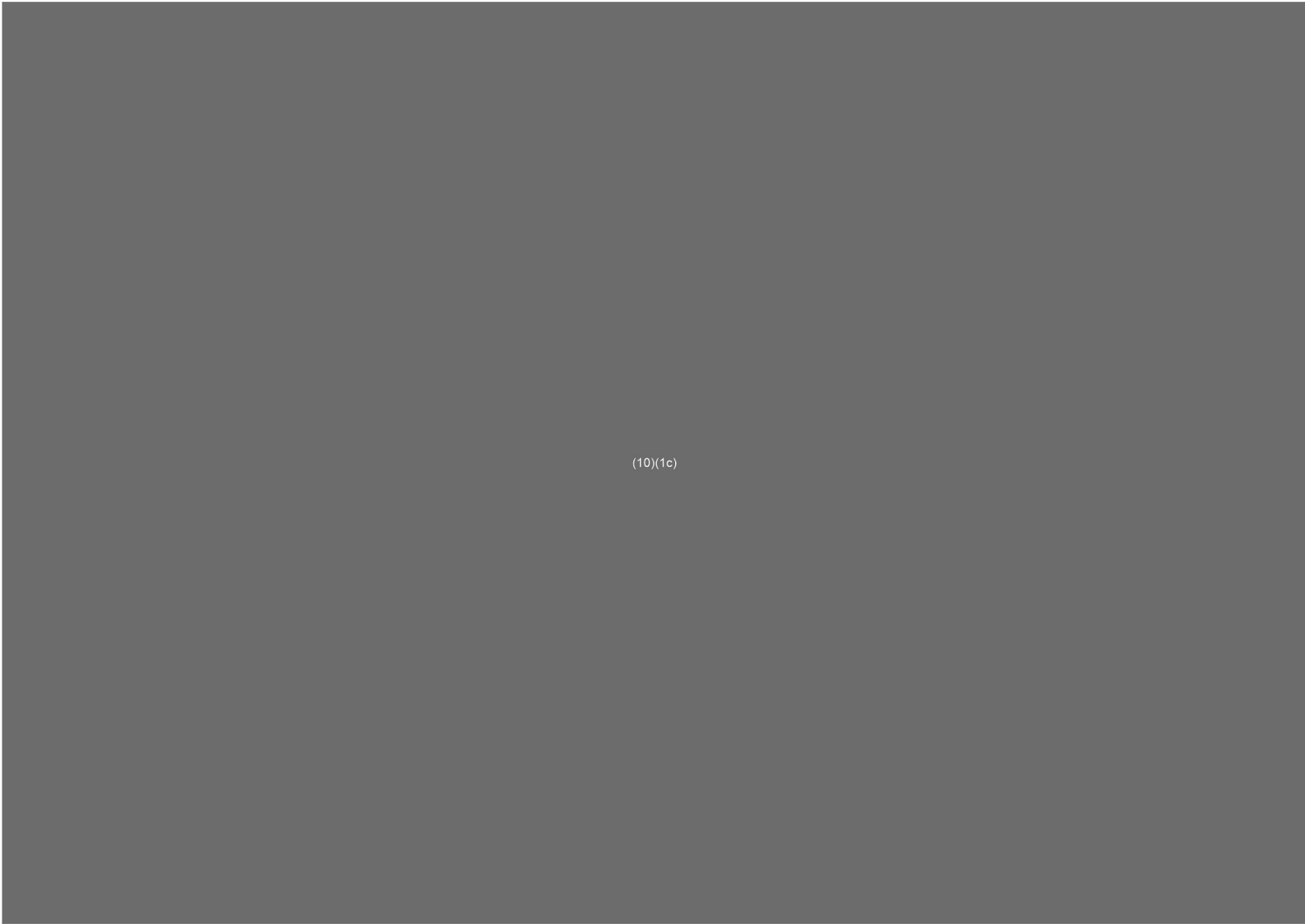
(10)(1e)



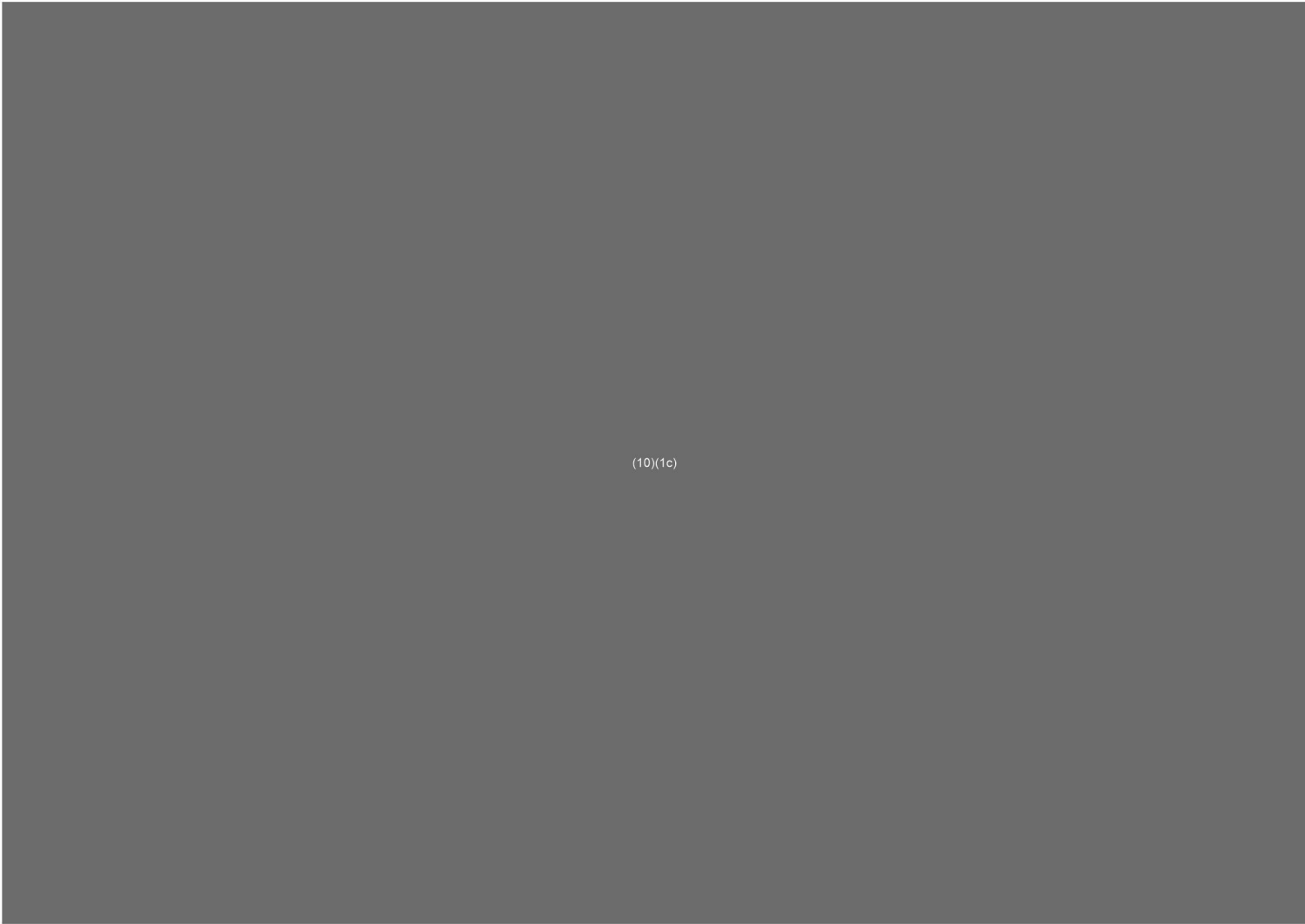
(10)(1e)



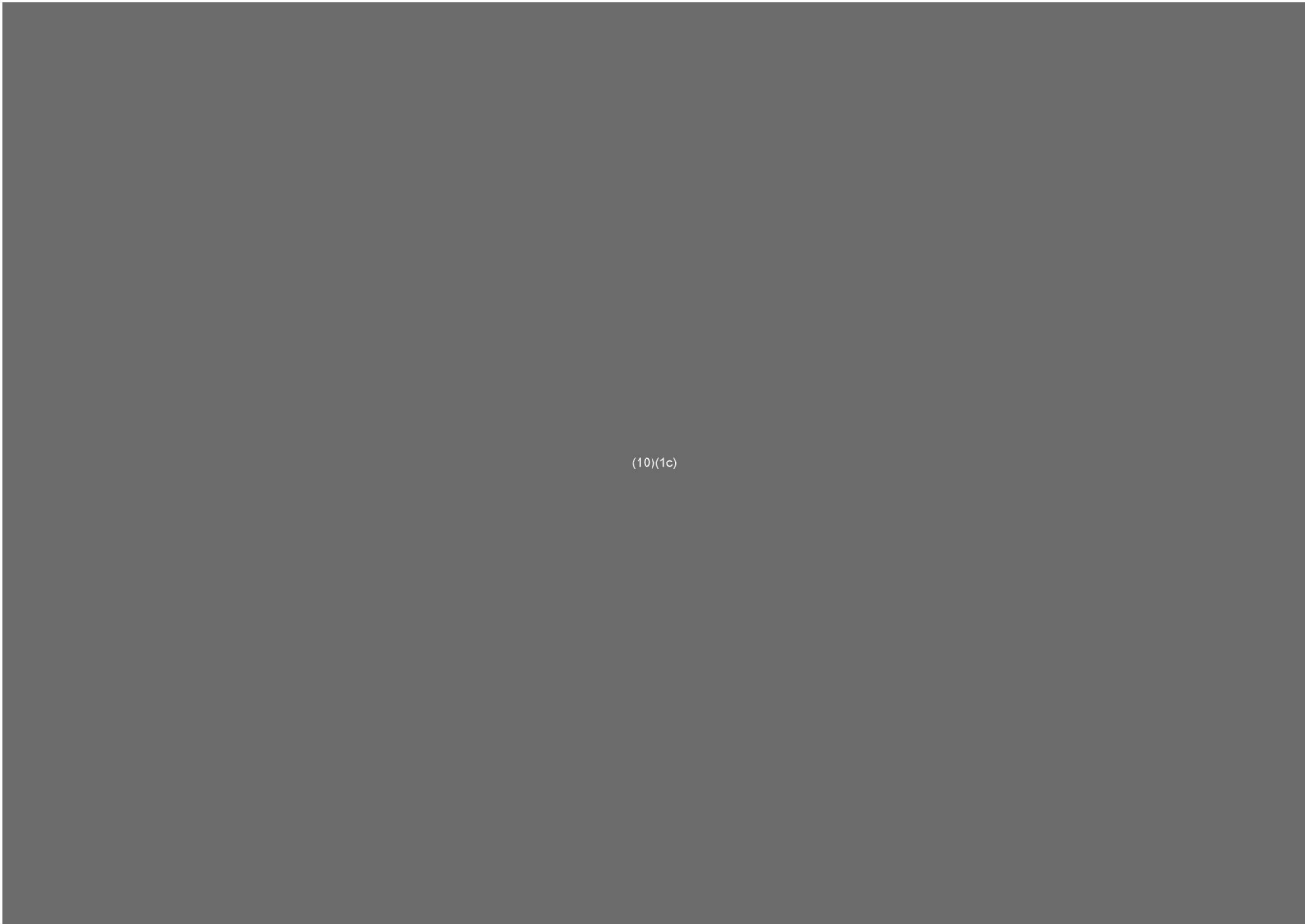
(10)(1e)



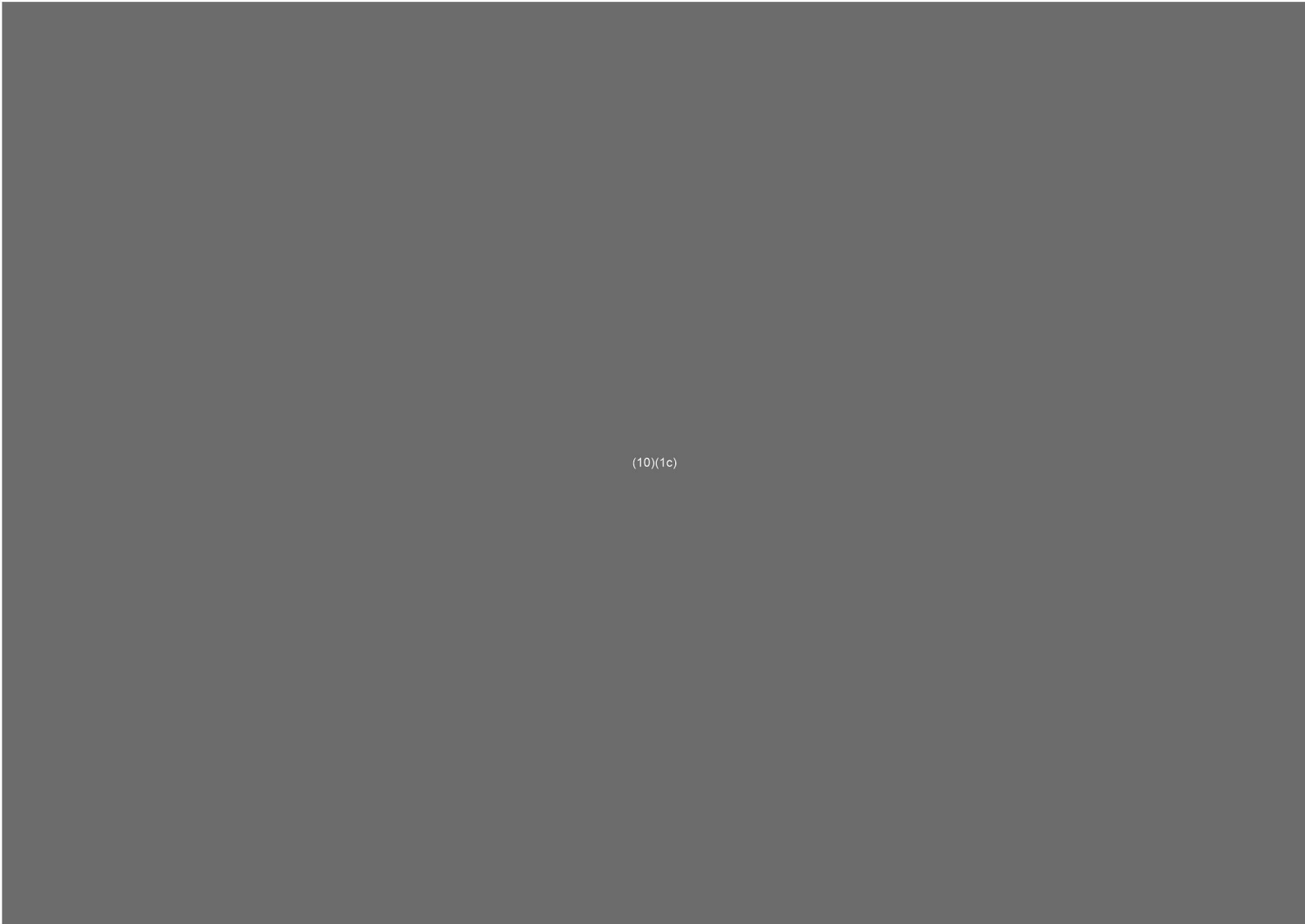
(10)(1e)



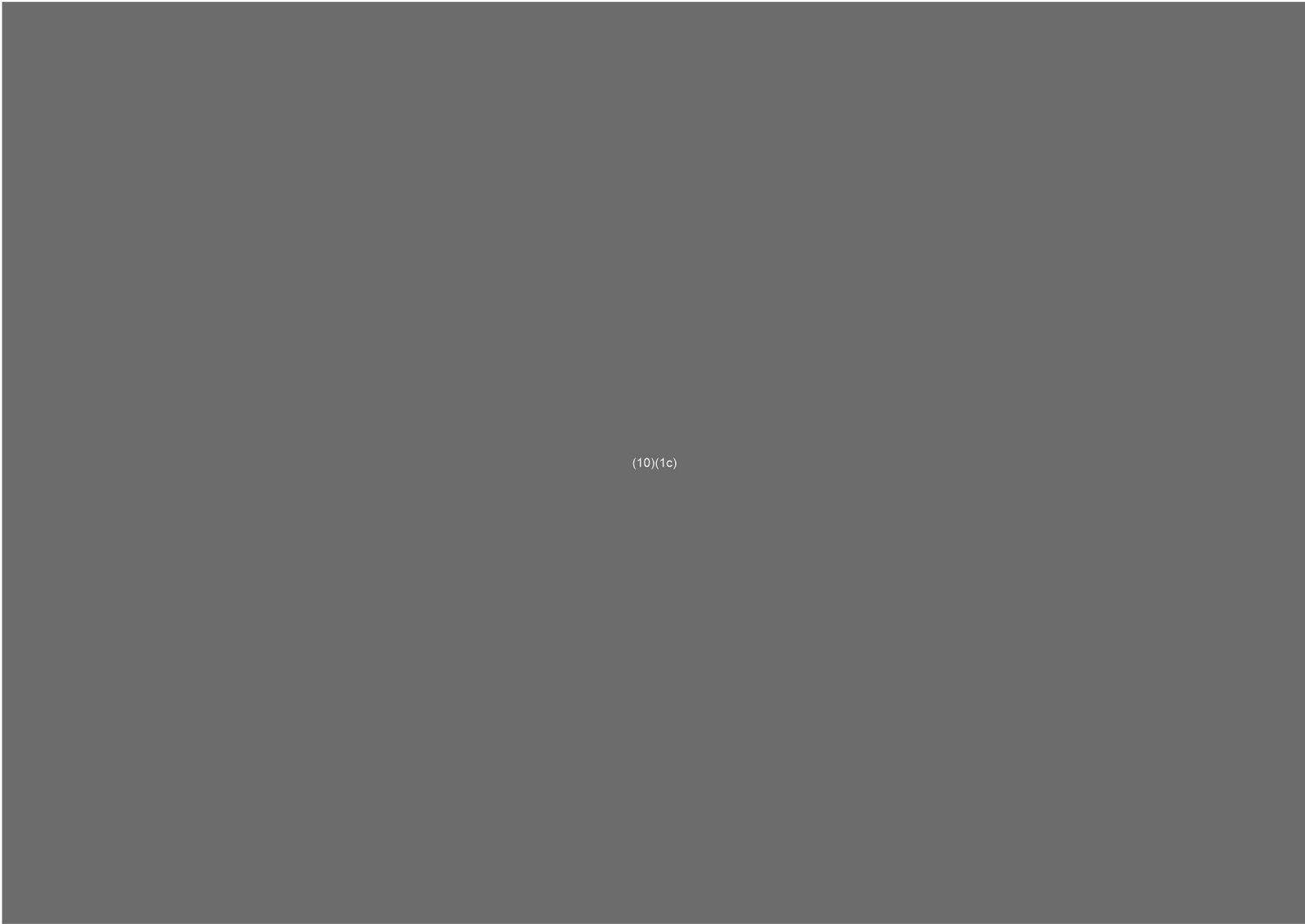
(10)(1e)



(10)(1c)




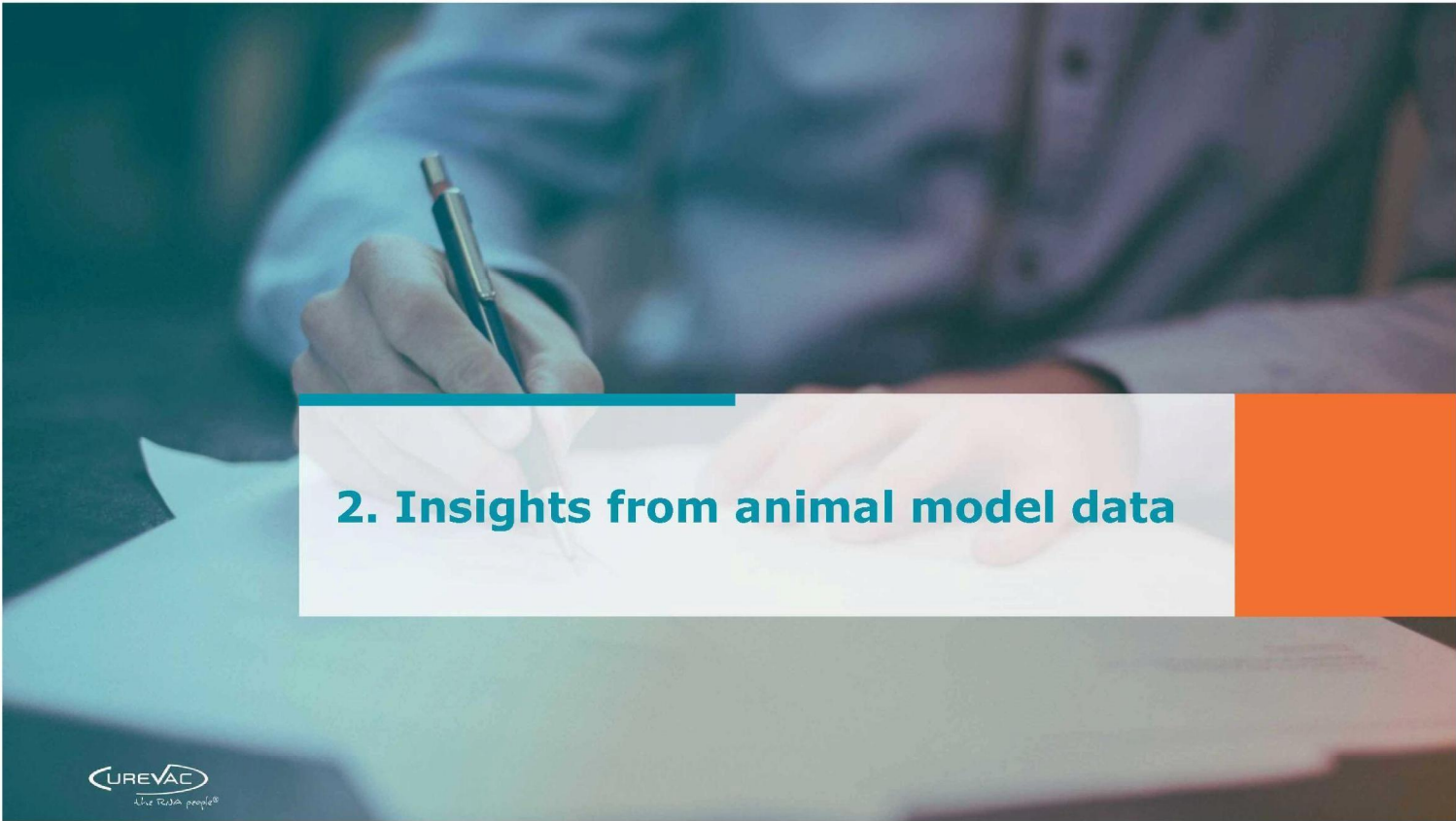
(10)(1c)



(10)(1e)

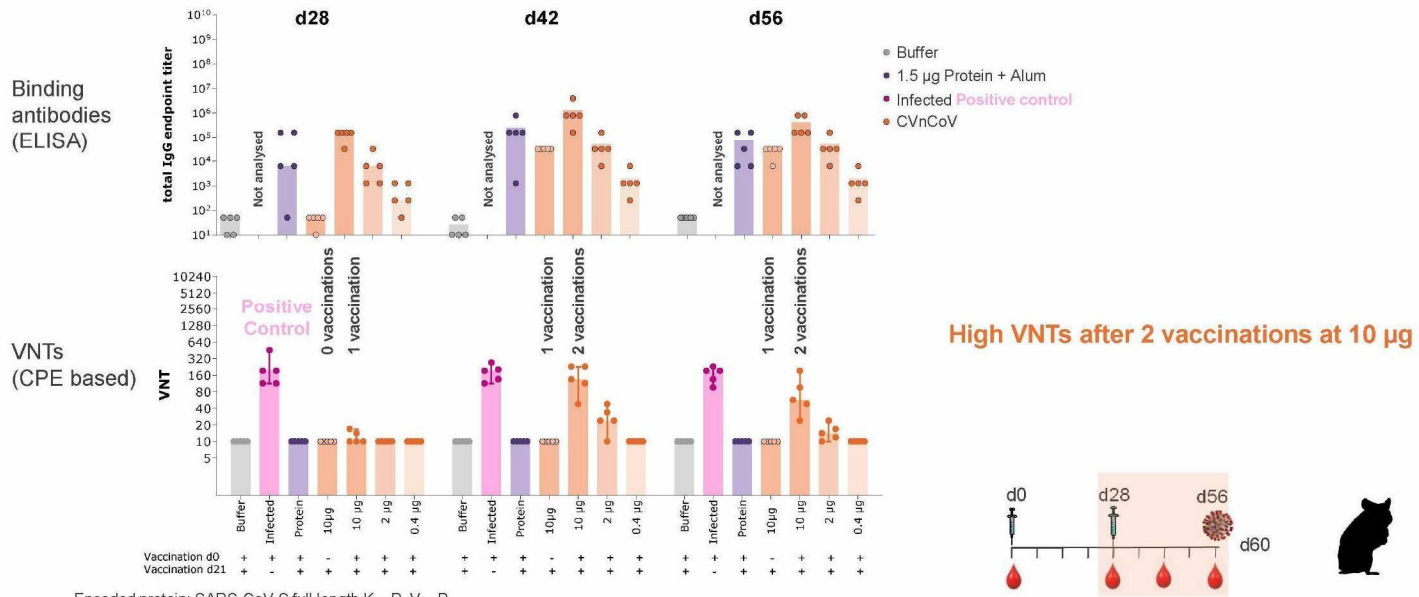
Key next steps – near term events towards dose selection

- 
- Oct 9 **VNT re-analyses (MN 25-TCID50) for 6µg, 8 µg and 12µg** all subjects
 - Oct 15 **VNT re-analyses (MN 25-TCID50) for all CureVac Human Convalescent Sera** samples, expand set and compare with NIBSC reference set
 - Oct 15 **T-Cell immuno data (CMI)** analyses for 6 and 8µg subjects
 - Oct 9-16 **Continue to explore higher doses 16 and 20µg**, reactogenicity from first subjects (2nd dose immuno by mid-november)
 - Oct 12-19 **Potential selection of 8 or 12µg dose**
 - Nov 9-23 **Potential selection of 16 or 20µg dose**



2. Insights from animal model data

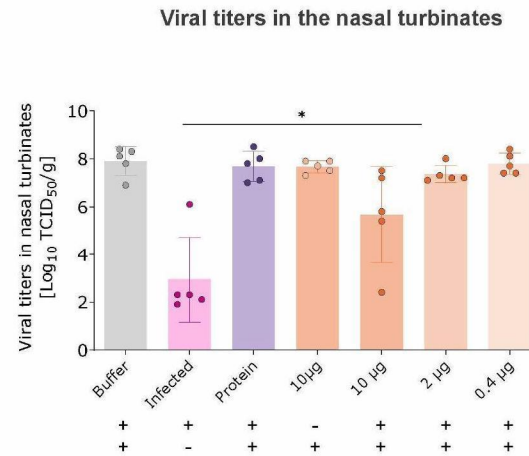
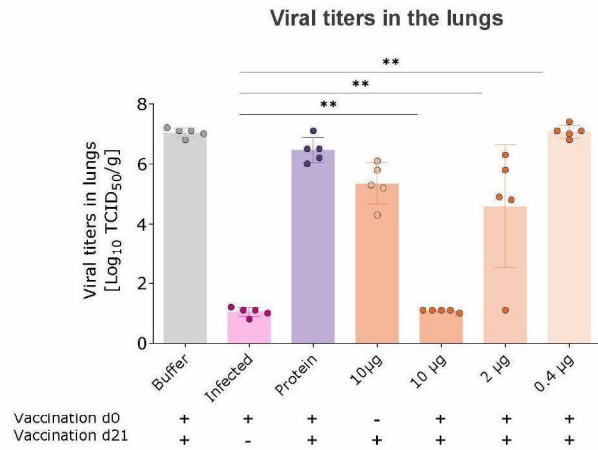
Hamster Challenge Model: ELISA responses are detectable after 1st dose and Virus Neutralizing Titers after 2nd dose in Hamsters



Encoded protein: SARS-CoV-S full length K₉₈₆P, V₉₈₇P

Evaluation: ELISA IgG & VNTs: Cytopathic effect (CPE) based microneutralization at Viroclinics

CVnCoV Provides Protection of the Lungs and Leads to Reduced Viral Titers in Nasal Turbinates

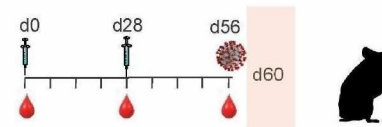


Viral loads in lungs and nasal turbinates

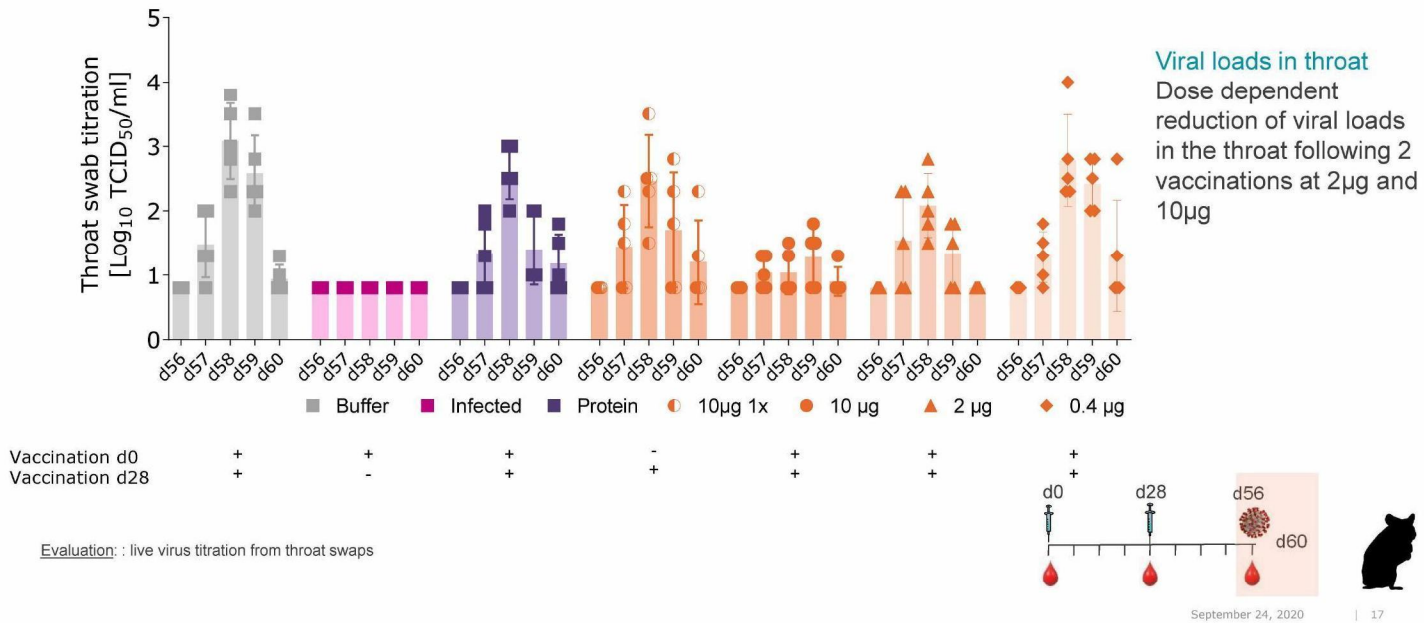
All animals show protection of the lungs comparable to infected positive control at 10 µg

Trend for reduced nasal viral loads in 3 out of 5 animals at 10µg

Evaluation: live virus titration from lung and nasal turbinates homogenates



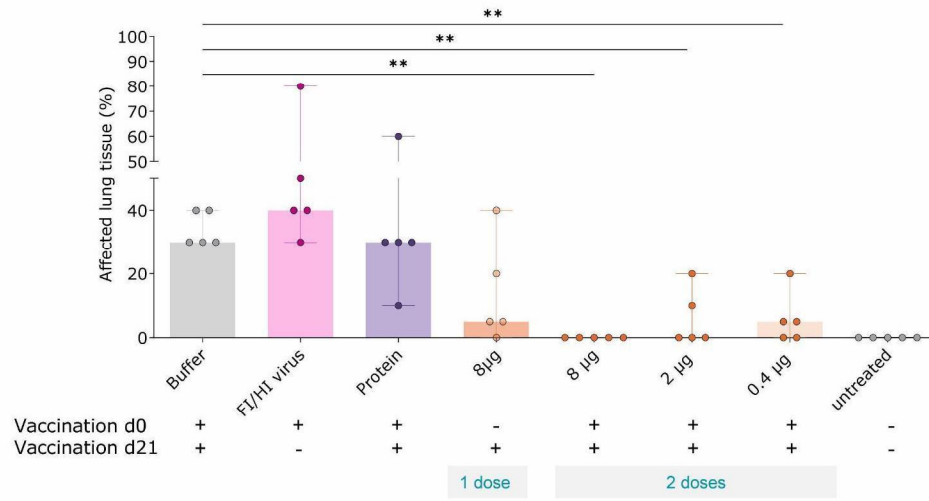
CVnCoV is able to decrease viral levels in the throat



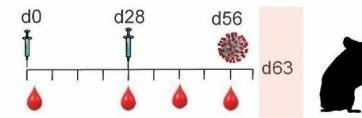
Lung Protection of CVnCoV - Reduced Percentage of Affected Lung Tissue Upon Challenge Infection



Gross lung pathology at day 7 after challenge
% affected lung pathology



Lung protection - no evidence of Enhanced Disease: Reduced gross lung pathology compared to the control groups





3. Clinical development plan supported by EMA feedback

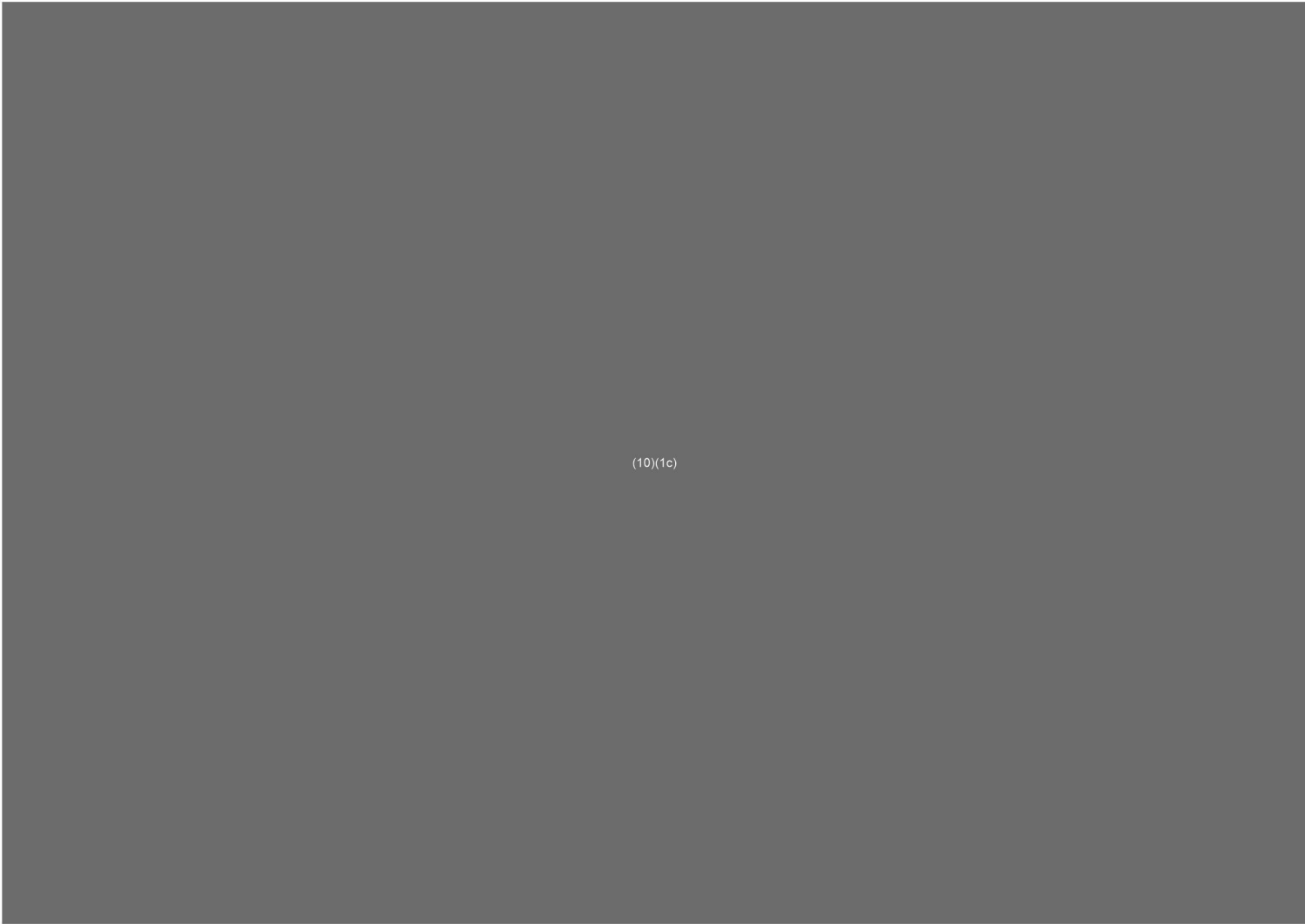
CVnCoV - Progress and path towards EMA approval

- ✓ **Jan 2020** **Design** of multiple vaccine candidates
- ✓ **Mar 2020** Lead candidate **selection** out of several candidates
- ✓ **Jun 2020** **GMP production** of lead candidate
- ✓ **Jun 2020** CTA approval and **start of Phase 1** clinical trial
- ✓ **Aug 2020** **CTA approval of Phase 2a** clinical trial in older adults
- Oct 2020** **Ph1 data** (safety and immunogenicity) - **final dose selection**
- Oct 2020** **CTA submission for Phase 2b/3**
- Q1 2021** **EMA submission** based on safety (n~3,500), immunogenicity and preliminary efficacy.
- Q1/2 2021** Projected **Conditional Marketing Approval** (EMA)
- Q3/4 2021** Projected **Full Marketing Approval** (EMA)

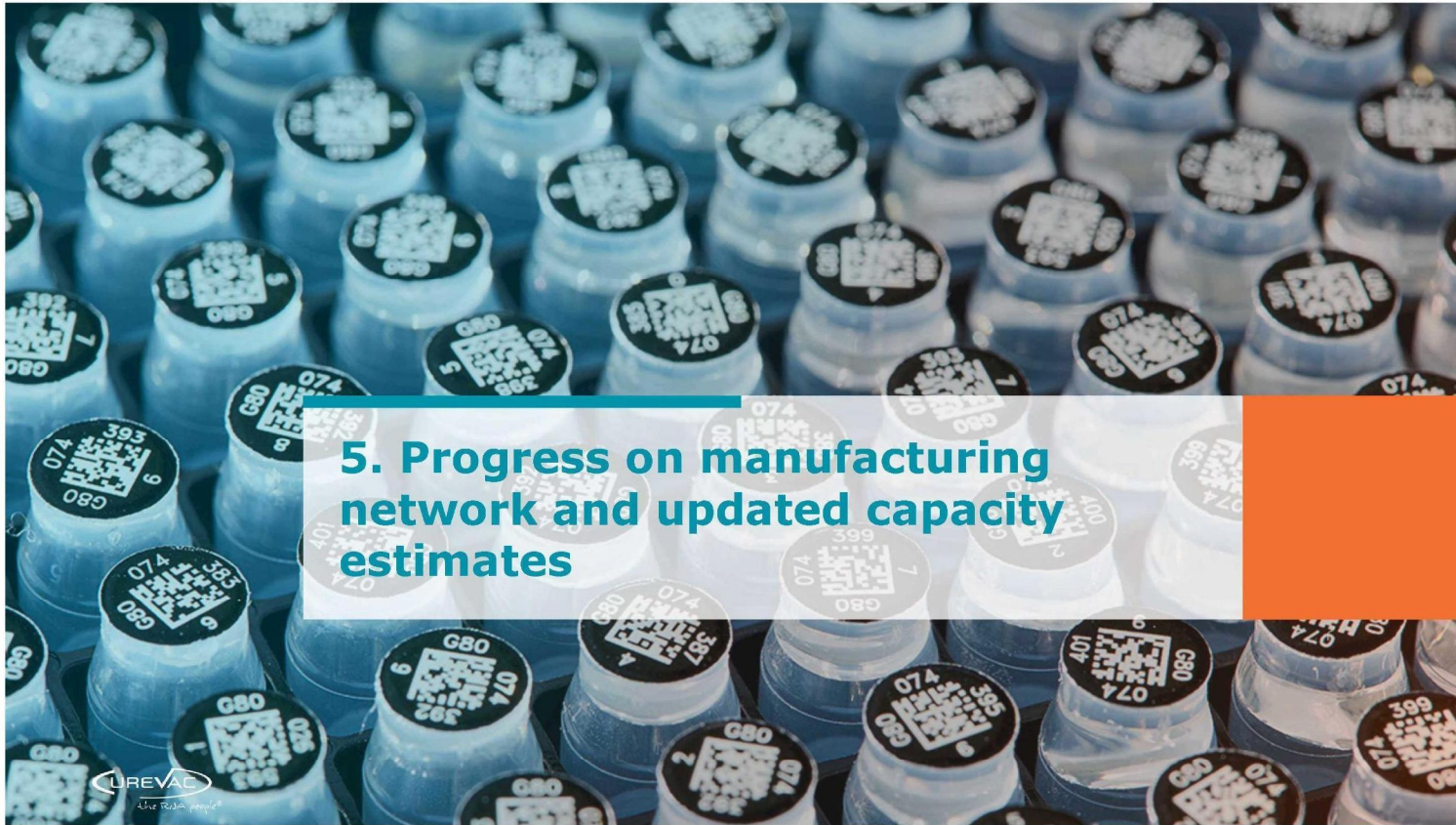
+1 month if
need to
increase to
16µg or
20µg



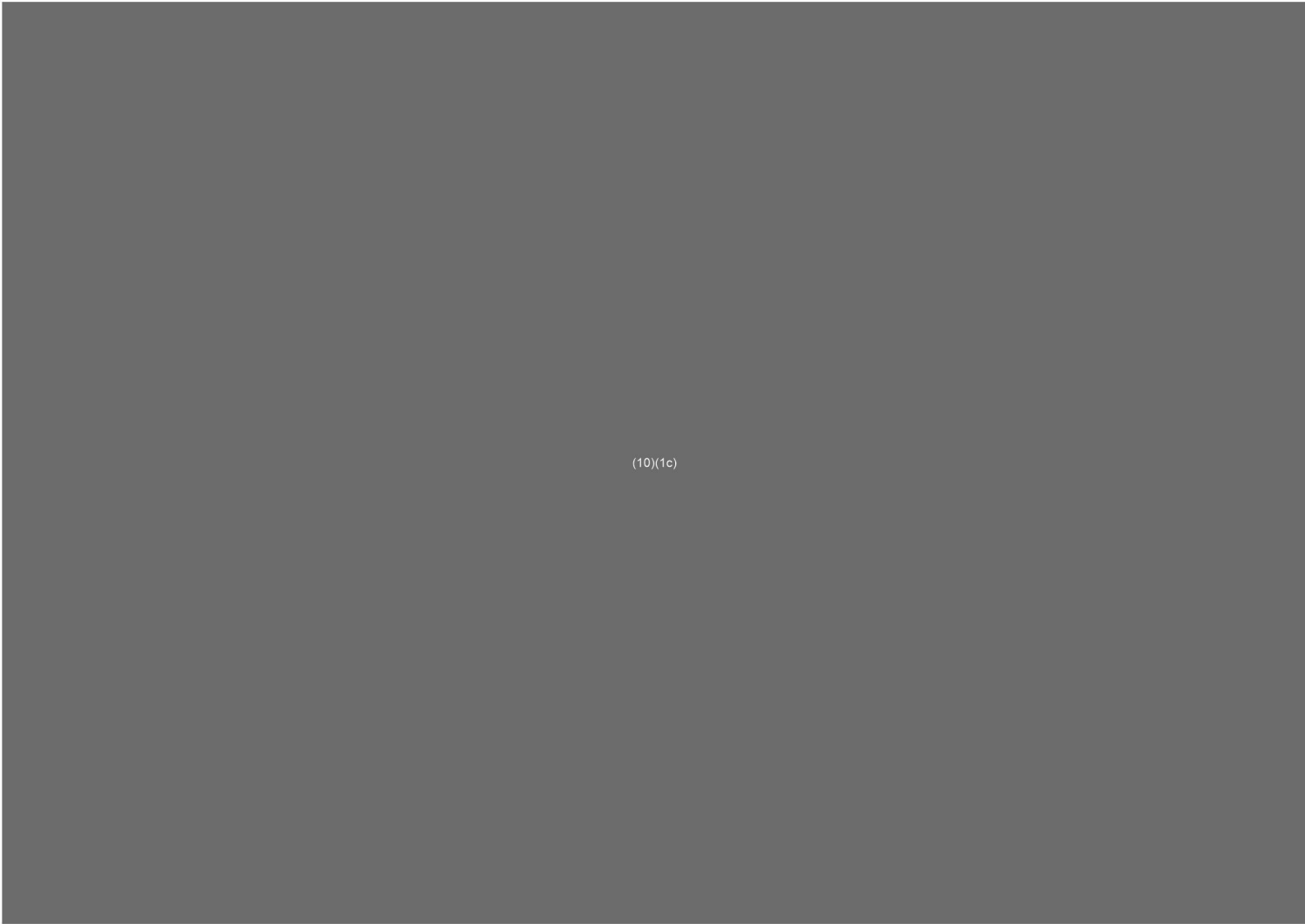
- Strictly confidential -



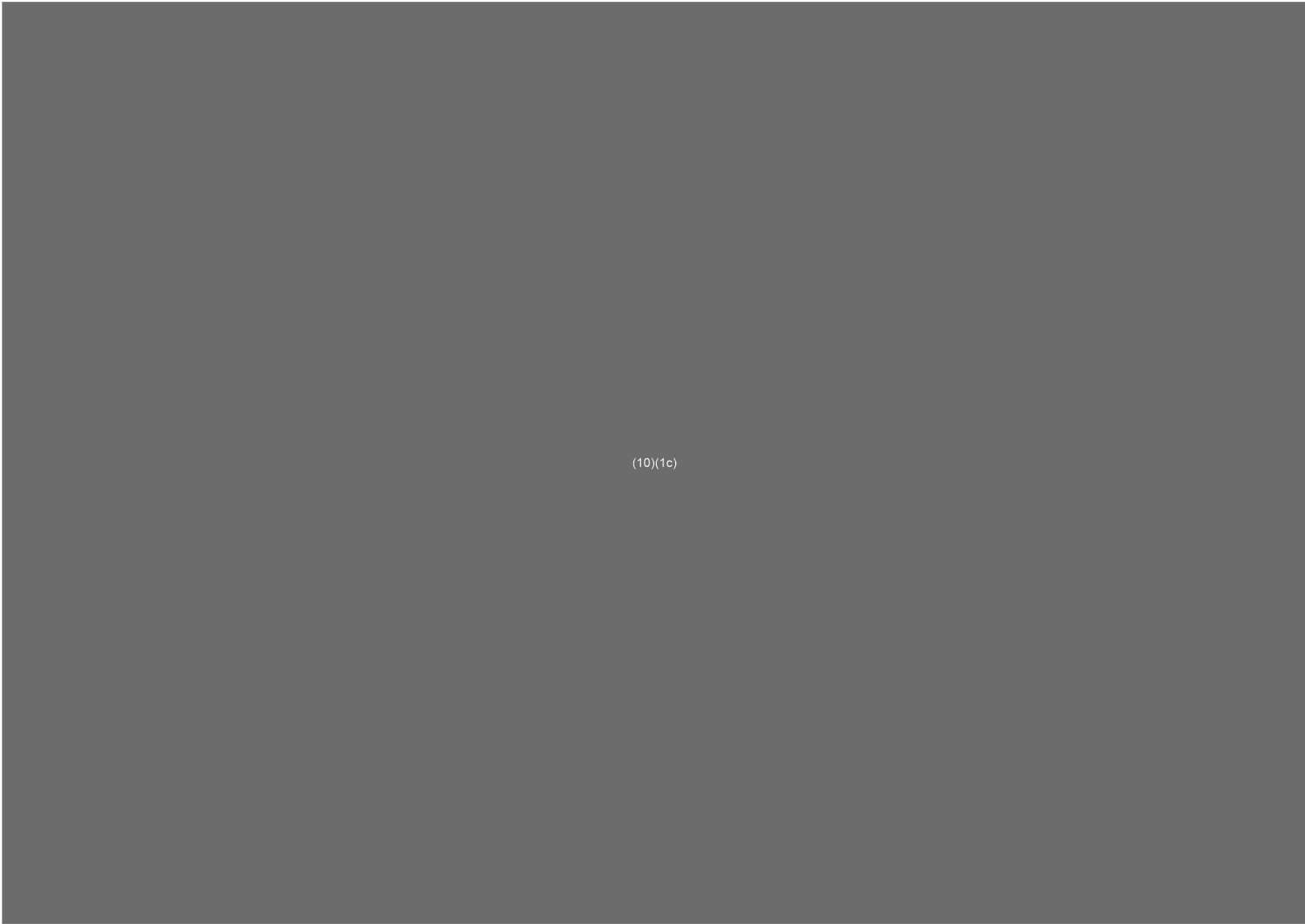
(10)(1e)




5. Progress on manufacturing network and updated capacity estimates




(10)(1e)



(10)(1e)



CUREVAC
the RNA people®



CureVac AG
Friedrich-Miescher-Strasse 15
72076 Tübingen, Germany
T +49 7071 9883-0
www.curevac.com

RNAActive® RNArt® RNAdjuvant® PureMessenger® RNAntigen® RNAntibody® RNAnimal® CVCM® The RNA Printer®